ANALYTICAL REPORT

Job Number: 280-116270-1

Job Description: Leidos RFP# 001088 - Ravenna AAP-66

For:
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Picatinny Arsenal
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Attention: Rita Schmon-Stasik

Approved for release.
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12/7/2018 8:34 AM

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12/07/2018

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The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
H	Sample was prepped or analyzed beyond the specified holding time
M	Manual integrated compound.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
Q	One or more quality control criteria failed.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

GC Semi VOA

Qualifier	Qualifier Description
Q	One or more quality control criteria failed.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Leidos, Inc.

Project: Leidos RFP# 001088 - Ravenna AAP-66

Report Number: 280-116270-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/27/2018 at 8:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 8 coolers at receipt time were 1.0º C, 1.2º C, 1.5º C, 2.3º C, 2.8º C, 3.2º C, 4.8º C and 5.0º C.

Receipt Exceptions

One of Two Sodium Hydroxide Bottles Received were labeled with a container label stating unpreserved, for Hexavalent Chromium. The Hexavalent Chromium analysis has been performed by TA Canton with the received unpreserved volume.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples FWGmw-018-181001-GW (280-116270-1),and FWGmw-020-181001-GW (280-116270-9) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 11/09/2018 and 11/12/2018.

Samples FWGTB-181006 TB (280-116270-2) was analyzed outside of analytical holding time due to the laboratory being over capacity in the volatile department. This sample expired on 11/9/18 and was analyzed on 11/12/18, The client was notified and the data was reported and flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS

Samples FWGmw-018-181001-GW (280-116270-1), FWGmw-016-181001-GW (280-116270-8), FWGmw-020-181001-GW (280-116270-9), LL3mw-244-181001-GW (280-116270-12), SCFmw-004-181001-GW (280-116270-13) and LL1mw-087-181001-GW (280-116270-14) were analyzed for Semivolatile organic compounds in accordance with SW-846 8270D. The samples were prepared on 10/31/2018 and analyzed on 11/13/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)

Samples FWGmw-018-181001-GW (280-116270-1) and FWGmw-020-181001-GW (280-116270-9) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 10/29/2018 and analyzed on 11/02/2018.

Phenanthrene was detected in method blank MB 280-435408/1-A at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged “J” in accordance with the DoD QSM.

The recover for surrogate 2-Fluorobiphenyl failed the surrogate recovery criteria low in sample FWGmw-018-181001-GW (280-116270-1). Any re-analysis would be performed outside hold times. Data was reported and flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ORGANOCHLORINE PESTICIDES (GC)

Samples LL3mw-244-181001-GW (280-116270-12) and SCFmw-004-181001-GW (280-116270-13) were analyzed for Organochlorine Pesticides (GC) in accordance with SW 846 8081B. The samples were prepared on 11/01/2018 and analyzed on 11/14/2018.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Samples FWGmw-018-181001-GW (280-116270-1) and FWGmw-020-181001-GW (280-116270-9) were analyzed for polychlorinated biphenyls (PCBs) in accordance with SW-846 8082A. The samples were prepared on 11/05/2018 and analyzed on 11/27/2018.

The initial calibration verification (ICV) result for batch 280-438794 was above the upper control limit for surrogate DCB Decachlorobiphenyl. This surrogate in the associated samples was in control. Sample results were non-detects, and have been reported as qualified data.

The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: FWGmw-018-181001-GW (280-116270-1), FWGmw-020-181001-GW (280-116270-9), (LCS 280-436278/2-A), (MB 280-436278/1-A) and (280-116303-B-1-A). Acid Lot: 161554

The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: FWGmw-018-181001-GW (280-116270-1), FWGmw-020-181001-GW (280-116270-9), (LCS 280-436278/2-A), (MB 280-436278/1-A) and (280-116303-B-1-A). The reagent lot number used was: T31E034.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROAROMATICS AND NITRAMINES (HPLC)
Samples FWGmw-018-181001-GW (280-116270-1), FWGmw-016-181001-GW (280-116270-8), FWGmw-020-181001-GW (280-116270-9), LL3mw-237-181001-GW (280-116270-11), LL3mw-244-181001-GW (280-116270-12), SCFmw-004-181001-GW (280-116270-13) and LL1mw-087-181001-GW (280-116270-14) were analyzed for Nitroaromatics and Nitramines (HPLC) in accordance with 8330B. The samples were prepared on 10/30/2018 and 11/01/2018 and analyzed on 11/02/2018, 11/03/2018, 11/06/2018 and 11/07/2018.

The recovery for surrogate 1,2-Dinitrobenzene was outside the recovery criteria low in sample FWGmw-018-181001-GW (280-116270-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The %RPD between the primary and confirmation column exceeded 40% for RDX for the following sample: LL3mw-244-181001-GW (280-116270-12). Both values have been reported and qualified in accordance with the laboratory's SOP.

The LCS spike recovery for 3-Nitrotoluene was outside control limits on the primary column (71%- lower limit 73%). The LCS was in control on the confirmation column. The outage is a marginal exceedance. Samples are all non-detect for the analyte. Data was reported and flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)
Samples FWGmw-018-181001-GW (280-116270-1), FWGmw-016-181001-GW (280-116270-8), FWGmw-020-181001-GW (280-116270-9), LL3mw-244-181001-GW (280-116270-12), SCFmw-004-181001-GW (280-116270-13) and LL1mw-087-181001-GW (280-116270-14) were analyzed for Total Metals (ICP) in accordance with 6010C. The samples were prepared on 11/02/2018 and analyzed on 11/05/2018 and 11/06/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)
Samples FWGmw-018-181001-GW (280-116270-1), FWGmw-016-181001-GW (280-116270-8), FWGmw-020-181001-GW (280-116270-9), LL3mw-244-181001-GW (280-116270-12), SCFmw-004-181001-GW (280-116270-13) and LL1mw-087-181001-GW (280-116270-14) were analyzed for total metals (ICP/MS) in accordance with 6020A. The samples were prepared on 11/07/2018 and analyzed on 11/12/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples FWGmw-018-181001-GW (280-116270-1), FWGmw-016-181001-GW (280-116270-8), FWGmw-020-181001-GW (280-116270-9), LL3mw-244-181001-GW (280-116270-12), SCFmw-004-181001-GW (280-116270-13) and LL1mw-087-181001-GW (280-116270-14) were analyzed for total mercury in accordance with 7470A. The samples were prepared and analyzed on 11/12/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CYANIDE, TOTAL
Samples FWGmw-018-181001-GW (280-116270-1), LL2mw-264-181001-GW (280-116270-4), CBPmw-008-181001-GW (280-116270-5), CBPmw-009-181001-GW (280-116270-6), LL1mw-089-181001-GW (280-116270-7), FWGmw-020-181001-GW (280-116270-9), LL3mw-234-181001-GW (280-116270-10) and LL4mw-200-181001-GW (280-116270-15) were analyzed for Cyanide, Total in accordance with 9012B. The samples were prepared and analyzed on 11/08/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116270-1

Client Sample ID: FWGmw-018-181001-GW — Lab Sample ID: 280-116270-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.68	J	1.0	0.40	0.17	ug/L	1		8260B	Total/NA
Calcium	91000		1000	140	35	ug/L	1		6010C	Total/NA
Iron	540		100	85	22	ug/L	1		6010C	Total/NA
Magnesium	27000		500	40	11	ug/L	1		6010C	Total/NA
Potassium	2200	J	3000	940	240	ug/L	1		6010C	Total/NA
Sodium	16000		5000	350	120	ug/L	1		6010C	Total/NA
Arsenic	23		5.0	1.0	0.33	ug/L	1		6020A	Total/NA
Barium	70		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Cobalt	2.3		1.0	0.20	0.054	ug/L	1		6020A	Total/NA
Manganese	170		3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Nickel	3.2		3.0	1.0	0.30	ug/L	1		6020A	Total/NA

Client Sample ID: FWGTB-181006 TB — Lab Sample ID: 280-116270-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.33	J H	5.0	0.80	0.32	ug/L	1		8260B	Total/NA

Client Sample ID: LL2mw-264-181001-GW — Lab Sample ID: 280-116270-4

No Detections.

Client Sample ID: CBPmw-008-181001-GW — Lab Sample ID: 280-116270-5

No Detections.

Client Sample ID: CBPmw-009-181001-GW — Lab Sample ID: 280-116270-6

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.0022	J	0.010	0.0050	0.0020	mg/L	1		9012B	Total/NA

Client Sample ID: LL1mw-089-181001-GW — Lab Sample ID: 280-116270-7

No Detections.

Client Sample ID: FWGmw-016-181001-GW — Lab Sample ID: 280-116270-8

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Calcium	100000		1000	140	35	ug/L	1		6010C	Total/NA
Iron	680		100	85	22	ug/L	1		6010C	Total/NA
Magnesium	28000		500	40	11	ug/L	1		6010C	Total/NA
Potassium	2200	J	3000	940	240	ug/L	1		6010C	Total/NA
Sodium	11000		5000	350	120	ug/L	1		6010C	Total/NA
Arsenic	4.0	J	5.0	1.0	0.33	ug/L	1		6020A	Total/NA
Barium	49		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Manganese	200		3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Nickel	0.88	J	3.0	1.0	0.30	ug/L	1		6020A	Total/NA

Client Sample ID: FWGmw-020-181001-GW — Lab Sample ID: 280-116270-9

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.45	J	1.0	0.40	0.17	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: FWGmw-020-181001-GW (Continued) — Lab Sample ID: 280-116270-9

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Calcium	100000		1000	140	35	ug/L	1		6010C	Total/NA
Iron	890		100	85	22	ug/L	1		6010C	Total/NA
Magnesium	34000		500	40	11	ug/L	1		6010C	Total/NA
Potassium	4400		3000	940	240	ug/L	1		6010C	Total/NA
Sodium	16000		5000	350	120	ug/L	1		6010C	Total/NA
Arsenic	27		5.0	1.0	0.33	ug/L	1		6020A	Total/NA
Barium	81		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Cobalt	3.8		1.0	0.20	0.054	ug/L	1		6020A	Total/NA
Manganese	72		3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Nickel	2.3	J	3.0	1.0	0.30	ug/L	1		6020A	Total/NA

Client Sample ID: LL3mw-234-181001-GW — Lab Sample ID: 280-116270-10

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.0023	J	0.010	0.0050	0.0020	mg/L	1		9012B	Total/NA

Client Sample ID: LL3mw-237-181001-GW — Lab Sample ID: 280-116270-11

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
2-Amino-4,6-dinitrotoluene	0.26		0.22	0.13	0.055	ug/L	1		8330B	Total/NA
4-Amino-2,6-dinitrotoluene	0.37		0.22	0.13	0.062	ug/L	1		8330B	Total/NA

Client Sample ID: LL3mw-244-181001-GW — Lab Sample ID: 280-116270-12

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
2-Amino-4,6-dinitrotoluene	0.38		0.21	0.13	0.053	ug/L	1		8330B	Total/NA
4-Amino-2,6-dinitrotoluene	0.33		0.21	0.13	0.060	ug/L	1		8330B	Total/NA
RDX	0.084	J M J1	0.21	0.13	0.054	ug/L	1		8330B	Total/NA
RDX	0.14	J J1	0.21	0.13	0.054	ug/L	1		8330B	Total/NA
Calcium	23000		1000	140	35	ug/L	1		6010C	Total/NA
Magnesium	7400		500	40	11	ug/L	1		6010C	Total/NA
Potassium	1300	J	3000	940	240	ug/L	1		6010C	Total/NA
Sodium	3200	J	5000	350	120	ug/L	1		6010C	Total/NA
Antimony	0.54	J	6.0	1.0	0.40	ug/L	1		6020A	Total/NA
Barium	17		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Manganese	0.50	J	3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Nickel	3.6		3.0	1.0	0.30	ug/L	1		6020A	Total/NA
Zinc	3.0	J	20	8.0	2.0	ug/L	1		6020A	Total/NA

Client Sample ID: SCFmw-004-181001-GW — Lab Sample ID: 280-116270-13

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	31	J	300	70	18	ug/L	1		6010C	Total/NA
Calcium	170000		1000	140	35	ug/L	1		6010C	Total/NA
Iron	38	J	100	85	22	ug/L	1		6010C	Total/NA
Magnesium	67000		500	40	11	ug/L	1		6010C	Total/NA
Potassium	2800	J	3000	940	240	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SCFmw-004-181001-GW (Continued) Lab Sample ID: 280-116270-13

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sodium	13000		5000	350	120	ug/L	1		6010C	Total/NA
Barium	56		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Copper	7.6		2.0	1.8	0.56	ug/L	1		6020A	Total/NA
Lead	2.1	J	3.0	0.70	0.18	ug/L	1		6020A	Total/NA
Manganese	780		3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Zinc	42		20	8.0	2.0	ug/L	1		6020A	Total/NA

Client Sample ID: LL1mw-087-181001-GW Lab Sample ID: 280-116270-14

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	55	J	300	70	18	ug/L	1		6010C	Total/NA
Calcium	130000		1000	140	35	ug/L	1		6010C	Total/NA
Iron	140		100	85	22	ug/L	1		6010C	Total/NA
Magnesium	42000		500	40	11	ug/L	1		6010C	Total/NA
Potassium	920	J	3000	940	240	ug/L	1		6010C	Total/NA
Sodium	14000		5000	350	120	ug/L	1		6010C	Total/NA
Barium	24		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Chromium	0.50	J	10	1.8	0.50	ug/L	1		6020A	Total/NA
Cobalt	0.45	J	1.0	0.20	0.054	ug/L	1		6020A	Total/NA
Copper	0.72	J	2.0	1.8	0.56	ug/L	1		6020A	Total/NA
Manganese	140		3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Nickel	2.1	J	3.0	1.0	0.30	ug/L	1		6020A	Total/NA
Thallium	0.069	J	1.0	0.20	0.050	ug/L	1		6020A	Total/NA
Zinc	3.5	J	20	8.0	2.0	ug/L	1		6020A	Total/NA

Client Sample ID: LL4mw-200-181001-GW Lab Sample ID: 280-116270-15

No Detections.

This Detection Summary does not include radiochemical test results.

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:02	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/09/18 17:02	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/09/18 17:02	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/09/18 17:02	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/09/18 17:02	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/09/18 17:02	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/09/18 17:02	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/09/18 17:02	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/09/18 17:02	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/09/18 17:02	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/09/18 17:02	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/09/18 17:02	1
Acetone	6.4	U	10	6.4	1.9	ug/L		11/09/18 17:02	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:02	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:02	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/09/18 17:02	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:02	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/09/18 17:02	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/09/18 17:02	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/09/18 17:02	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/09/18 17:02	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:02	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/09/18 17:02	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:02	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/09/18 17:02	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:02	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:02	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:02	1
Methylene Chloride	0.80	U	5.0	0.80	0.32	ug/L		11/09/18 17:02	1
Styrene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:02	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/09/18 17:02	1
Toluene	**0.68**	**J**	1.0	0.40	0.17	ug/L		11/09/18 17:02	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/09/18 17:02	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:02	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/09/18 17:02	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/09/18 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/09/18 17:02*	*1*
4-Bromofluorobenzene (Surr)	*85*		*85 - 114*		*11/09/18 17:02*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/09/18 17:02*	*1*
Toluene-d8 (Surr)	*90*		*89 - 112*		*11/09/18 17:02*	*1*

Client Sample ID: FWGTB-181006 TB **Lab Sample ID: 280-116270-2**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U H	1.0	0.40	0.16	ug/L		11/12/18 16:37	1
1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21	ug/L		11/12/18 16:37	1
1,1,2-Trichloroethane	0.80	U H	1.0	0.80	0.27	ug/L		11/12/18 16:37	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: FWGTB-181006 TB **Lab Sample ID: 280-116270-2**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloroethane	0.80	U H	1.0	0.80	0.22	ug/L		11/12/18 16:37	1
1,1-Dichloroethene	0.80	U H	1.0	0.80	0.23	ug/L		11/12/18 16:37	1
1,2-Dibromoethane	0.40	U H	1.0	0.40	0.18	ug/L		11/12/18 16:37	1
1,2-Dichloroethane	0.40	U H	1.0	0.40	0.13	ug/L		11/12/18 16:37	1
1,2-Dichloroethene, Total	0.20	U H	1.0	0.20	0.24	ug/L		11/12/18 16:37	1
1,2-Dichloropropane	0.40	U H	1.0	0.40	0.18	ug/L		11/12/18 16:37	1
2-Butanone (MEK)	4.0	U H	6.0	4.0	2.0	ug/L		11/12/18 16:37	1
2-Hexanone	4.0	U H	5.0	4.0	1.7	ug/L		11/12/18 16:37	1
4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	3.2	0.98	ug/L		11/12/18 16:37	1
Acetone	6.4	U H	10	6.4	1.9	ug/L		11/12/18 16:37	1
Benzene	0.40	U H	1.0	0.40	0.16	ug/L		11/12/18 16:37	1
Bromobenzene	0.40	U H	1.0	0.40	0.17	ug/L		11/12/18 16:37	1
Bromochloromethane	0.20	U H	1.0	0.20	0.10	ug/L		11/12/18 16:37	1
Bromodichloromethane	0.40	U H	1.0	0.40	0.17	ug/L		11/12/18 16:37	1
Bromoform	0.40	U H	1.0	0.40	0.19	ug/L		11/12/18 16:37	1
Bromomethane	0.80	U H	2.0	0.80	0.21	ug/L		11/12/18 16:37	1
Carbon disulfide	1.6	U H	2.0	1.6	0.45	ug/L		11/12/18 16:37	1
Carbon tetrachloride	0.40	U H	2.0	0.40	0.19	ug/L		11/12/18 16:37	1
Chlorobenzene	0.40	U H	1.0	0.40	0.17	ug/L		11/12/18 16:37	1
Chloroethane	1.6	U H	2.0	1.6	0.41	ug/L		11/12/18 16:37	1
Chloroform	0.40	U H	1.0	0.40	0.16	ug/L		11/12/18 16:37	1
Chloromethane	0.80	U H	2.0	0.80	0.30	ug/L		11/12/18 16:37	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.16	ug/L		11/12/18 16:37	1
Dibromochloromethane	0.40	U H	1.0	0.40	0.17	ug/L		11/12/18 16:37	1
Ethylbenzene	0.40	U H	1.0	0.40	0.16	ug/L		11/12/18 16:37	1
Methylene Chloride	**0.33**	**J H**	5.0	0.80	0.32	ug/L		11/12/18 16:37	1
Styrene	0.40	U H	1.0	0.40	0.17	ug/L		11/12/18 16:37	1
Tetrachloroethene	0.40	U H	1.0	0.40	0.20	ug/L		11/12/18 16:37	1
Toluene	0.40	U H	1.0	0.40	0.17	ug/L		11/12/18 16:37	1
trans-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.19	ug/L		11/12/18 16:37	1
Trichloroethene	0.40	U H	1.0	0.40	0.16	ug/L		11/12/18 16:37	1
Vinyl chloride	0.20	U H	1.5	0.20	0.10	ug/L		11/12/18 16:37	1
Xylenes, Total	0.80	U H	1.0	0.80	0.19	ug/L		11/12/18 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*11/12/18 16:37*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/12/18 16:37*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/12/18 16:37*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/12/18 16:37*	*1*

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:39	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/09/18 17:39	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/09/18 17:39	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/09/18 17:39	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/09/18 17:39	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/09/18 17:39	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/09/18 17:39	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/09/18 17:39	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/09/18 17:39	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/09/18 17:39	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/09/18 17:39	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/09/18 17:39	1
Acetone	6.4	U M	10	6.4	1.9	ug/L		11/09/18 17:39	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:39	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:39	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/09/18 17:39	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:39	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/09/18 17:39	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/09/18 17:39	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/09/18 17:39	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/09/18 17:39	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:39	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/09/18 17:39	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:39	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/09/18 17:39	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:39	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:39	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:39	1
Methylene Chloride	0.80	U	5.0	0.80	0.32	ug/L		11/09/18 17:39	1
Styrene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 17:39	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/09/18 17:39	1
Toluene	**0.45**	**J**	1.0	0.40	0.17	ug/L		11/09/18 17:39	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/09/18 17:39	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 17:39	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/09/18 17:39	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/09/18 17:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*11/09/18 17:39*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/09/18 17:39*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/09/18 17:39*	*1*
Toluene-d8 (Surr)	*92*		*89 - 112*		*11/09/18 17:39*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.013	U	0.11	0.013	0.0062	ug/L		11/02/18 04:25	1
2-Methylnaphthalene	0.013	U	0.11	0.013	0.0063	ug/L		11/02/18 04:25	1
Acenaphthene	0.042	U Q	0.11	0.042	0.0044	ug/L		11/02/18 04:25	1
Acenaphthylene	0.042	U Q	0.11	0.042	0.0054	ug/L		11/02/18 04:25	1
Anthracene	0.042	U Q	0.11	0.042	0.0059	ug/L		11/02/18 04:25	1
Benzo[a]anthracene	0.013	U	0.11	0.013	0.0044	ug/L		11/02/18 04:25	1
Benzo[a]pyrene	0.013	U	0.11	0.013	0.0073	ug/L		11/02/18 04:25	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.013	U	0.11	0.013	0.0033	ug/L		11/02/18 04:25	1
Benzo[g,h,i]perylene	0.013	U	0.11	0.013	0.0065	ug/L		11/02/18 04:25	1
Benzo[k]fluoranthene	0.013	U	0.11	0.013	0.0066	ug/L		11/02/18 04:25	1
Chrysene	0.013	U	0.11	0.013	0.0035	ug/L		11/02/18 04:25	1
Dibenz(a,h)anthracene	0.013	U	0.11	0.013	0.0043	ug/L		11/02/18 04:25	1
Fluoranthene	0.013	U Q	0.11	0.013	0.0051	ug/L		11/02/18 04:25	1
Fluorene	0.042	U Q	0.11	0.042	0.0058	ug/L		11/02/18 04:25	1
Indeno[1,2,3-cd]pyrene	0.042	U	0.11	0.042	0.0047	ug/L		11/02/18 04:25	1
Naphthalene	0.013	U	0.11	0.013	0.0084	ug/L		11/02/18 04:25	1
Phenanthrene	0.021	U Q	0.11	0.021	0.0098	ug/L		11/02/18 04:25	1
Pyrene	0.021	U Q	0.11	0.021	0.0064	ug/L		11/02/18 04:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*	*Q*	*53 - 106*	*10/29/18 21:02*	*11/02/18 04:25*	*1*
Nitrobenzene-d5	*57*		*55 - 111*	*10/29/18 21:02*	*11/02/18 04:25*	*1*
Terphenyl-d14	*78*		*58 - 132*	*10/29/18 21:02*	*11/02/18 04:25*	*1*

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.014	U	0.12	0.014	0.0068	ug/L		11/02/18 04:54	1
2-Methylnaphthalene	0.014	U	0.12	0.014	0.0069	ug/L		11/02/18 04:54	1
Acenaphthene	0.046	U	0.12	0.046	0.0048	ug/L		11/02/18 04:54	1
Acenaphthylene	0.046	U	0.12	0.046	0.0059	ug/L		11/02/18 04:54	1
Anthracene	0.046	U	0.12	0.046	0.0064	ug/L		11/02/18 04:54	1
Benzo[a]anthracene	0.014	U	0.12	0.014	0.0048	ug/L		11/02/18 04:54	1
Benzo[a]pyrene	0.014	U M	0.12	0.014	0.0079	ug/L		11/02/18 04:54	1
Benzo[b]fluoranthene	0.014	U	0.12	0.014	0.0036	ug/L		11/02/18 04:54	1
Benzo[g,h,i]perylene	0.014	U	0.12	0.014	0.0071	ug/L		11/02/18 04:54	1
Benzo[k]fluoranthene	0.014	U	0.12	0.014	0.0073	ug/L		11/02/18 04:54	1
Chrysene	0.014	U	0.12	0.014	0.0038	ug/L		11/02/18 04:54	1
Dibenz(a,h)anthracene	0.014	U	0.12	0.014	0.0047	ug/L		11/02/18 04:54	1
Fluoranthene	0.014	U	0.12	0.014	0.0055	ug/L		11/02/18 04:54	1
Fluorene	0.046	U	0.12	0.046	0.0063	ug/L		11/02/18 04:54	1
Indeno[1,2,3-cd]pyrene	0.046	U	0.12	0.046	0.0052	ug/L		11/02/18 04:54	1
Naphthalene	0.014	U	0.12	0.014	0.0092	ug/L		11/02/18 04:54	1
Phenanthrene	0.023	U	0.12	0.023	0.011	ug/L		11/02/18 04:54	1
Pyrene	0.023	U	0.12	0.023	0.0070	ug/L		11/02/18 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*56*		*53 - 106*	*10/29/18 21:02*	*11/02/18 04:54*	*1*
Nitrobenzene-d5	*59*		*55 - 111*	*10/29/18 21:02*	*11/02/18 04:54*	*1*
Terphenyl-d14	*81*		*58 - 132*	*10/29/18 21:02*	*11/02/18 04:54*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.30	ug/L		11/13/18 17:00	1
1,2-Dichlorobenzene	0.54	U	11	0.54	0.25	ug/L		11/13/18 17:00	1
1,3-Dichlorobenzene	1.1	U	11	1.1	0.32	ug/L		11/13/18 17:00	1
1,4-Dichlorobenzene	1.1	U	11	1.1	0.34	ug/L		11/13/18 17:00	1
1,4-Dioxane	4.7	U	19	4.7	1.8	ug/L		11/13/18 17:00	1
2,4,5-Trichlorophenol	1.1	U	21	1.1	0.48	ug/L		11/13/18 17:00	1
2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31	ug/L		11/13/18 17:00	1
2,4-Dichlorophenol	2.1	U	11	2.1	0.68	ug/L		11/13/18 17:00	1
2,4-Dimethylphenol	2.1	U	11	2.1	0.62	ug/L		11/13/18 17:00	1
2,4-Dinitrophenol	32	U	86	32	11	ug/L		11/13/18 17:00	1
2,4-Dinitrotoluene	4.7	U	21	4.7	1.8	ug/L		11/13/18 17:00	1
2,6-Dinitrotoluene	4.7	U	21	4.7	2.0	ug/L		11/13/18 17:00	1
2-Chloronaphthalene	1.1	U	11	1.1	0.28	ug/L		11/13/18 17:00	1
2-Chlorophenol	4.7	U	11	4.7	2.1	ug/L		11/13/18 17:00	1
2-Methylphenol	2.1	U	11	2.1	1.0	ug/L		11/13/18 17:00	1
2-Nitroaniline	4.7	U	54	4.7	1.9	ug/L		11/13/18 17:00	1
2-Nitrophenol	1.1	U	21	1.1	0.42	ug/L		11/13/18 17:00	1
3 & 4 Methylphenol	0.54	U	21	0.54	0.27	ug/L		11/13/18 17:00	1
3,3'-Dichlorobenzidine	4.7	U	54	4.7	2.1	ug/L		11/13/18 17:00	1
3-Nitroaniline	4.7	U	54	4.7	2.1	ug/L		11/13/18 17:00	1
4,6-Dinitro-2-methylphenol	9.4	U	86	9.4	4.3	ug/L		11/13/18 17:00	1
4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.46	ug/L		11/13/18 17:00	1
4-Chloro-3-methylphenol	5.4	U	21	5.4	2.6	ug/L		11/13/18 17:00	1
4-Chloroaniline	4.7	U	27	4.7	2.3	ug/L		11/13/18 17:00	1
4-Chlorophenyl phenyl ether	4.7	U	11	4.7	1.8	ug/L		11/13/18 17:00	1
4-Nitroaniline	4.7	U	54	4.7	2.1	ug/L		11/13/18 17:00	1
4-Nitrophenol	4.3	U	54	4.3	1.3	ug/L		11/13/18 17:00	1
Benzoic acid	32	U	86	32	11	ug/L		11/13/18 17:00	1
Benzyl alcohol	0.54	U	27	0.54	0.25	ug/L		11/13/18 17:00	1
bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.30	ug/L		11/13/18 17:00	1
Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0	ug/L		11/13/18 17:00	1
Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.44	ug/L		11/13/18 17:00	1
Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.60	ug/L		11/13/18 17:00	1
Butyl benzyl phthalate	2.1	U	21	2.1	1.1	ug/L		11/13/18 17:00	1
Carbazole	1.1	U	11	1.1	0.46	ug/L		11/13/18 17:00	1
Dibenzofuran	1.1	U	11	1.1	0.31	ug/L		11/13/18 17:00	1
Diethyl phthalate	1.1	U	21	1.1	0.41	ug/L		11/13/18 17:00	1
Dimethyl phthalate	0.54	U	21	0.54	0.22	ug/L		11/13/18 17:00	1
Di-n-butyl phthalate	4.7	U	21	4.7	1.2	ug/L		11/13/18 17:00	1
Di-n-octyl phthalate	1.1	U	21	1.1	0.37	ug/L		11/13/18 17:00	1
Hexachlorobenzene	2.1	U	11	2.1	0.71	ug/L		11/13/18 17:00	1
Hexachlorobutadiene	11	U	32	11	3.5	ug/L		11/13/18 17:00	1
Hexachlorocyclopentadiene	32	U	54	32	11	ug/L		11/13/18 17:00	1
Hexachloroethane	4.7	U	11	4.7	2.2	ug/L		11/13/18 17:00	1
Isophorone	0.54	U	11	0.54	0.22	ug/L		11/13/18 17:00	1
Nitrobenzene	2.1	U	21	2.1	0.87	ug/L		11/13/18 17:00	1
N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37	ug/L		11/13/18 17:00	1
N-Nitrosodiphenylamine	1.1	U	11	1.1	0.47	ug/L		11/13/18 17:00	1
Pentachlorophenol	64	U	86	64	21	ug/L		11/13/18 17:00	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Phenol	4.7	U	11	4.7	2.1	ug/L		11/13/18 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*85*		*43 - 140*	*10/31/18 10:52*	*11/13/18 17:00*	*1*
2-Fluorobiphenyl	*82*		*44 - 119*	*10/31/18 10:52*	*11/13/18 17:00*	*1*
2-Fluorophenol (Surr)	*86*		*19 - 119*	*10/31/18 10:52*	*11/13/18 17:00*	*1*
Nitrobenzene-d5 (Surr)	*88*		*44 - 120*	*10/31/18 10:52*	*11/13/18 17:00*	*1*
Phenol-d5 (Surr)	*83*		*10 - 115*	*10/31/18 10:52*	*11/13/18 17:00*	*1*
Terphenyl-d14 (Surr)	*88*		*50 - 134*	*10/31/18 10:52*	*11/13/18 17:00*	*1*

Client Sample ID: FWGmw-016-181001-GW **Lab Sample ID: 280-116270-8**
Date Collected: 10/25/18 15:40 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	2.2	U	11	2.2	0.62	ug/L		11/13/18 17:29	1
Butyl benzyl phthalate	2.2	U	22	2.2	1.1	ug/L		11/13/18 17:29	1
Diethyl phthalate	1.1	U	22	1.1	0.42	ug/L		11/13/18 17:29	1
Dimethyl phthalate	0.55	U	22	0.55	0.23	ug/L		11/13/18 17:29	1
Di-n-butyl phthalate	4.9	U	22	4.9	1.3	ug/L		11/13/18 17:29	1
Di-n-octyl phthalate	1.1	U	22	1.1	0.39	ug/L		11/13/18 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*76*		*43 - 140*	*10/31/18 10:52*	*11/13/18 17:29*	*1*
2-Fluorobiphenyl	*77*		*44 - 119*	*10/31/18 10:52*	*11/13/18 17:29*	*1*
2-Fluorophenol (Surr)	*84*		*19 - 119*	*10/31/18 10:52*	*11/13/18 17:29*	*1*
Nitrobenzene-d5 (Surr)	*84*		*44 - 120*	*10/31/18 10:52*	*11/13/18 17:29*	*1*
Phenol-d5 (Surr)	*85*		*10 - 115*	*10/31/18 10:52*	*11/13/18 17:29*	*1*
Terphenyl-d14 (Surr)	*90*		*50 - 134*	*10/31/18 10:52*	*11/13/18 17:29*	*1*

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28	ug/L		11/13/18 17:58	1
1,2-Dichlorobenzene	0.50	U	10	0.50	0.23	ug/L		11/13/18 17:58	1
1,3-Dichlorobenzene	1.0	U	10	1.0	0.30	ug/L		11/13/18 17:58	1
1,4-Dichlorobenzene	1.0	U	10	1.0	0.32	ug/L		11/13/18 17:58	1
1,4-Dioxane	4.4	U	18	4.4	1.7	ug/L		11/13/18 17:58	1
2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45	ug/L		11/13/18 17:58	1
2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29	ug/L		11/13/18 17:58	1
2,4-Dichlorophenol	2.0	U	10	2.0	0.64	ug/L		11/13/18 17:58	1
2,4-Dimethylphenol	2.0	U	10	2.0	0.58	ug/L		11/13/18 17:58	1
2,4-Dinitrophenol	30	U	80	30	10	ug/L		11/13/18 17:58	1
2,4-Dinitrotoluene	4.4	U	20	4.4	1.7	ug/L		11/13/18 17:58	1
2,6-Dinitrotoluene	4.4	U	20	4.4	1.9	ug/L		11/13/18 17:58	1
2-Chloronaphthalene	1.0	U	10	1.0	0.26	ug/L		11/13/18 17:58	1
2-Chlorophenol	4.4	U	10	4.4	2.0	ug/L		11/13/18 17:58	1
2-Methylphenol	2.0	U	10	2.0	0.98	ug/L		11/13/18 17:58	1
2-Nitroaniline	4.4	U	50	4.4	1.7	ug/L		11/13/18 17:58	1
2-Nitrophenol	1.0	U	20	1.0	0.39	ug/L		11/13/18 17:58	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
3 & 4 Methylphenol	0.50	U	20	0.50	0.25	ug/L		11/13/18 17:58	1
3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0	ug/L		11/13/18 17:58	1
3-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		11/13/18 17:58	1
4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0	ug/L		11/13/18 17:58	1
4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43	ug/L		11/13/18 17:58	1
4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4	ug/L		11/13/18 17:58	1
4-Chloroaniline	4.4	U	25	4.4	2.1	ug/L		11/13/18 17:58	1
4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7	ug/L		11/13/18 17:58	1
4-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		11/13/18 17:58	1
4-Nitrophenol	4.0	U	50	4.0	1.2	ug/L		11/13/18 17:58	1
Benzoic acid	30	U	80	30	10	ug/L		11/13/18 17:58	1
Benzyl alcohol	0.50	U	25	0.50	0.23	ug/L		11/13/18 17:58	1
bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28	ug/L		11/13/18 17:58	1
Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97	ug/L		11/13/18 17:58	1
Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41	ug/L		11/13/18 17:58	1
Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56	ug/L		11/13/18 17:58	1
Butyl benzyl phthalate	2.0	U	20	2.0	1.0	ug/L		11/13/18 17:58	1
Carbazole	1.0	U	10	1.0	0.43	ug/L		11/13/18 17:58	1
Dibenzofuran	1.0	U	10	1.0	0.29	ug/L		11/13/18 17:58	1
Diethyl phthalate	1.0	U	20	1.0	0.38	ug/L		11/13/18 17:58	1
Dimethyl phthalate	0.50	U	20	0.50	0.21	ug/L		11/13/18 17:58	1
Di-n-butyl phthalate	4.4	U	20	4.4	1.2	ug/L		11/13/18 17:58	1
Di-n-octyl phthalate	1.0	U	20	1.0	0.35	ug/L		11/13/18 17:58	1
Hexachlorobenzene	2.0	U	10	2.0	0.66	ug/L		11/13/18 17:58	1
Hexachlorobutadiene	10	U	30	10	3.3	ug/L		11/13/18 17:58	1
Hexachlorocyclopentadiene	30	U	50	30	10	ug/L		11/13/18 17:58	1
Hexachloroethane	4.4	U	10	4.4	2.1	ug/L		11/13/18 17:58	1
Isophorone	0.50	U	10	0.50	0.21	ug/L		11/13/18 17:58	1
Nitrobenzene	2.0	U	20	2.0	0.81	ug/L		11/13/18 17:58	1
N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35	ug/L		11/13/18 17:58	1
N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44	ug/L		11/13/18 17:58	1
Pentachlorophenol	60	U	80	60	20	ug/L		11/13/18 17:58	1
Phenol	4.4	U	10	4.4	2.0	ug/L		11/13/18 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*79*		*43 - 140*	*10/31/18 10:52*	*11/13/18 17:58*	*1*
2-Fluorobiphenyl	*77*		*44 - 119*	*10/31/18 10:52*	*11/13/18 17:58*	*1*
2-Fluorophenol (Surr)	*80*		*19 - 119*	*10/31/18 10:52*	*11/13/18 17:58*	*1*
Nitrobenzene-d5 (Surr)	*82*		*44 - 120*	*10/31/18 10:52*	*11/13/18 17:58*	*1*
Phenol-d5 (Surr)	*82*		*10 - 115*	*10/31/18 10:52*	*11/13/18 17:58*	*1*
Terphenyl-d14 (Surr)	*97*		*50 - 134*	*10/31/18 10:52*	*11/13/18 17:58*	*1*

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56	ug/L		11/13/18 18:27	1
Butyl benzyl phthalate	2.0	U	20	2.0	1.0	ug/L		11/13/18 18:27	1
Diethyl phthalate	1.0	U	20	1.0	0.38	ug/L		11/13/18 18:27	1
Dimethyl phthalate	0.50	U	20	0.50	0.21	ug/L		11/13/18 18:27	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Di-n-butyl phthalate	4.4	U	20	4.4	1.2	ug/L		11/13/18 18:27	1
Di-n-octyl phthalate	1.0	U	20	1.0	0.35	ug/L		11/13/18 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*78*		*43 - 140*	*10/31/18 10:52*	*11/13/18 18:27*	*1*
2-Fluorobiphenyl	*78*		*44 - 119*	*10/31/18 10:52*	*11/13/18 18:27*	*1*
2-Fluorophenol (Surr)	*82*		*19 - 119*	*10/31/18 10:52*	*11/13/18 18:27*	*1*
Nitrobenzene-d5 (Surr)	*84*		*44 - 120*	*10/31/18 10:52*	*11/13/18 18:27*	*1*
Phenol-d5 (Surr)	*85*		*10 - 115*	*10/31/18 10:52*	*11/13/18 18:27*	*1*
Terphenyl-d14 (Surr)	*95*		*50 - 134*	*10/31/18 10:52*	*11/13/18 18:27*	*1*

Client Sample ID: SCFmw-004-181001-GW **Lab Sample ID: 280-116270-13**
Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56	ug/L		11/13/18 18:56	1
Butyl benzyl phthalate	2.0	U	20	2.0	1.0	ug/L		11/13/18 18:56	1
Diethyl phthalate	1.0	U	20	1.0	0.38	ug/L		11/13/18 18:56	1
Dimethyl phthalate	0.50	U	20	0.50	0.21	ug/L		11/13/18 18:56	1
Di-n-butyl phthalate	4.4	U	20	4.4	1.2	ug/L		11/13/18 18:56	1
Di-n-octyl phthalate	1.0	U	20	1.0	0.35	ug/L		11/13/18 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*85*		*43 - 140*	*10/31/18 10:52*	*11/13/18 18:56*	*1*
2-Fluorobiphenyl	*83*		*44 - 119*	*10/31/18 10:52*	*11/13/18 18:56*	*1*
2-Fluorophenol (Surr)	*86*		*19 - 119*	*10/31/18 10:52*	*11/13/18 18:56*	*1*
Nitrobenzene-d5 (Surr)	*85*		*44 - 120*	*10/31/18 10:52*	*11/13/18 18:56*	*1*
Phenol-d5 (Surr)	*88*		*10 - 115*	*10/31/18 10:52*	*11/13/18 18:56*	*1*
Terphenyl-d14 (Surr)	*94*		*50 - 134*	*10/31/18 10:52*	*11/13/18 18:56*	*1*

Client Sample ID: LL1mw-087-181001-GW **Lab Sample ID: 280-116270-14**
Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	2.2	U	11	2.2	0.62	ug/L		11/13/18 19:25	1
Butyl benzyl phthalate	2.2	U	22	2.2	1.1	ug/L		11/13/18 19:25	1
Diethyl phthalate	1.1	U	22	1.1	0.42	ug/L		11/13/18 19:25	1
Dimethyl phthalate	0.55	U	22	0.55	0.23	ug/L		11/13/18 19:25	1
Di-n-butyl phthalate	4.9	U	22	4.9	1.3	ug/L		11/13/18 19:25	1
Di-n-octyl phthalate	1.1	U	22	1.1	0.39	ug/L		11/13/18 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*43 - 140*	*10/31/18 10:52*	*11/13/18 19:25*	*1*
2-Fluorobiphenyl	*85*		*44 - 119*	*10/31/18 10:52*	*11/13/18 19:25*	*1*
2-Fluorophenol (Surr)	*89*		*19 - 119*	*10/31/18 10:52*	*11/13/18 19:25*	*1*
Nitrobenzene-d5 (Surr)	*90*		*44 - 120*	*10/31/18 10:52*	*11/13/18 19:25*	*1*
Phenol-d5 (Surr)	*89*		*10 - 115*	*10/31/18 10:52*	*11/13/18 19:25*	*1*
Terphenyl-d14 (Surr)	*97*		*50 - 134*	*10/31/18 10:52*	*11/13/18 19:25*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4,4'-DDD	0.020	U	0.050	0.020	0.0078	ug/L		11/14/18 23:24	1
4,4'-DDE	0.020	U	0.050	0.020	0.0076	ug/L		11/14/18 23:24	1
4,4'-DDT	0.050	U	0.050	0.050	0.015	ug/L		11/14/18 23:24	1
Aldrin	0.020	U	0.050	0.020	0.0060	ug/L		11/14/18 23:24	1
alpha-BHC	0.020	U	0.050	0.020	0.0054	ug/L		11/14/18 23:24	1
alpha-Chlordane	0.020	U	0.050	0.020	0.0054	ug/L		11/14/18 23:24	1
beta-BHC	0.020	U	0.050	0.020	0.0088	ug/L		11/14/18 23:24	1
delta-BHC	0.020	U	0.050	0.020	0.0059	ug/L		11/14/18 23:24	1
Dieldrin	0.020	U	0.050	0.020	0.0064	ug/L		11/14/18 23:24	1
Endosulfan I	0.020	U	0.050	0.020	0.0059	ug/L		11/14/18 23:24	1
Endosulfan II	0.020	U	0.050	0.020	0.0071	ug/L		11/14/18 23:24	1
Endosulfan sulfate	0.020	U	0.050	0.020	0.0058	ug/L		11/14/18 23:24	1
Endrin	0.020	U	0.050	0.020	0.0080	ug/L		11/14/18 23:24	1
Endrin aldehyde	0.020	U	0.050	0.020	0.0089	ug/L		11/14/18 23:24	1
Endrin ketone	0.020	U	0.050	0.020	0.0071	ug/L		11/14/18 23:24	1
gamma-BHC (Lindane)	0.020	U	0.050	0.020	0.0070	ug/L		11/14/18 23:24	1
gamma-Chlordane	0.020	U	0.050	0.020	0.0092	ug/L		11/14/18 23:24	1
Heptachlor	0.020	U	0.050	0.020	0.0078	ug/L		11/14/18 23:24	1
Heptachlor epoxide	0.020	U	0.050	0.020	0.0076	ug/L		11/14/18 23:24	1
Methoxychlor	0.050	U	0.050	0.050	0.013	ug/L		11/14/18 23:24	1
Toxaphene	0.81	U	2.0	0.81	0.37	ug/L		11/14/18 23:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*75*		*34 - 122*	*11/01/18 08:30*	*11/14/18 23:24*	*1*
Tetrachloro-m-xylene	*58*		*44 - 124*	*11/01/18 08:30*	*11/14/18 23:24*	*1*

Client Sample ID: SCFmw-004-181001-GW **Lab Sample ID: 280-116270-13**
Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4,4'-DDD	0.020	U	0.049	0.020	0.0076	ug/L		11/14/18 23:06	1
4,4'-DDE	0.020	U	0.049	0.020	0.0074	ug/L		11/14/18 23:06	1
4,4'-DDT	0.049	U	0.049	0.049	0.015	ug/L		11/14/18 23:06	1
Aldrin	0.020	U	0.049	0.020	0.0058	ug/L		11/14/18 23:06	1
alpha-BHC	0.020	U	0.049	0.020	0.0052	ug/L		11/14/18 23:06	1
alpha-Chlordane	0.020	U	0.049	0.020	0.0052	ug/L		11/14/18 23:06	1
beta-BHC	0.020	U	0.049	0.020	0.0086	ug/L		11/14/18 23:06	1
delta-BHC	0.020	U	0.049	0.020	0.0057	ug/L		11/14/18 23:06	1
Dieldrin	0.020	U	0.049	0.020	0.0062	ug/L		11/14/18 23:06	1
Endosulfan I	0.020	U	0.049	0.020	0.0057	ug/L		11/14/18 23:06	1
Endosulfan II	0.020	U	0.049	0.020	0.0069	ug/L		11/14/18 23:06	1
Endosulfan sulfate	0.020	U	0.049	0.020	0.0056	ug/L		11/14/18 23:06	1
Endrin	0.020	U	0.049	0.020	0.0078	ug/L		11/14/18 23:06	1
Endrin aldehyde	0.020	U	0.049	0.020	0.0087	ug/L		11/14/18 23:06	1
Endrin ketone	0.020	U	0.049	0.020	0.0069	ug/L		11/14/18 23:06	1
gamma-BHC (Lindane)	0.020	U	0.049	0.020	0.0068	ug/L		11/14/18 23:06	1
gamma-Chlordane	0.020	U	0.049	0.020	0.0090	ug/L		11/14/18 23:06	1
Heptachlor	0.020	U	0.049	0.020	0.0076	ug/L		11/14/18 23:06	1
Heptachlor epoxide	0.020	U	0.049	0.020	0.0074	ug/L		11/14/18 23:06	1
Methoxychlor	0.049	U	0.049	0.049	0.013	ug/L		11/14/18 23:06	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: SCFmw-004-181001-GW **Lab Sample ID: 280-116270-13**
Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Toxaphene	0.79	U	2.0	0.79	0.36	ug/L		11/14/18 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*78*		*34 - 122*	*11/01/18 08:30*	*11/14/18 23:06*	*1*
Tetrachloro-m-xylene	*58*		*44 - 124*	*11/01/18 08:30*	*11/14/18 23:06*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
PCB-1016	0.42	U M	1.0	0.42	0.13	ug/L		11/27/18 03:04	1
PCB-1221	0.26	U M	1.0	0.26	0.22	ug/L		11/27/18 03:04	1
PCB-1232	0.63	U M	1.0	0.63	0.17	ug/L		11/27/18 03:04	1
PCB-1242	0.31	U M	1.0	0.31	0.11	ug/L		11/27/18 03:04	1
PCB-1248	0.31	U Q M	1.0	0.31	0.096	ug/L		11/27/18 03:04	1
PCB-1254	0.26	U M	1.0	0.26	0.12	ug/L		11/27/18 03:04	1
PCB-1260	0.42	U M	1.0	0.42	0.17	ug/L		11/27/18 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*25 - 120*	*11/05/18 09:12*	*11/27/18 03:04*	*1*
DCB Decachlorobiphenyl	*91*	*Q*	*30 - 136*	*11/05/18 09:12*	*11/27/18 03:04*	*1*

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
PCB-1016	0.42	U M	1.0	0.42	0.13	ug/L		11/27/18 07:39	1
PCB-1221	0.26	U M	1.0	0.26	0.22	ug/L		11/27/18 07:39	1
PCB-1232	0.63	U M	1.0	0.63	0.17	ug/L		11/27/18 07:39	1
PCB-1242	0.31	U M	1.0	0.31	0.11	ug/L		11/27/18 07:39	1
PCB-1248	0.31	U Q M	1.0	0.31	0.096	ug/L		11/27/18 07:39	1
PCB-1254	0.26	U M	1.0	0.26	0.12	ug/L		11/27/18 07:39	1
PCB-1260	0.42	U M	1.0	0.42	0.17	ug/L		11/27/18 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*93*		*25 - 120*	*11/05/18 09:12*	*11/27/18 07:39*	*1*
DCB Decachlorobiphenyl	*91*	*Q*	*30 - 136*	*11/05/18 09:12*	*11/27/18 07:39*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.42	U	1.0	0.42	0.21	ug/L		11/06/18 17:22	1
1,3-Dinitrobenzene	0.21	U	0.42	0.21	0.093	ug/L		11/06/18 17:22	1
2,4,6-Trinitrotoluene	0.21	U	0.42	0.21	0.076	ug/L		11/06/18 17:22	1
2,4-Dinitrotoluene	0.21	U	0.42	0.21	0.088	ug/L		11/06/18 17:22	1
2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.067	ug/L		11/06/18 17:22	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.053	ug/L		11/06/18 17:22	1
2-Nitrotoluene	0.21	U Q	0.42	0.21	0.089	ug/L		11/07/18 19:28	1
3-Nitrotoluene	0.21	U	0.42	0.21	0.087	ug/L		11/06/18 17:22	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.13	0.060	ug/L		11/06/18 17:22	1
4-Nitrotoluene	0.42	U	1.0	0.42	0.21	ug/L		11/06/18 17:22	1
HMX	0.21	U M	0.42	0.21	0.092	ug/L		11/06/18 17:22	1
Nitrobenzene	0.21	U	0.42	0.21	0.095	ug/L		11/06/18 17:22	1
Nitroglycerin	2.1	U	3.1	2.1	0.96	ug/L		11/06/18 17:22	1
PETN	1.3	U	2.1	1.3	0.43	ug/L		11/06/18 17:22	1
RDX	0.13	U	0.21	0.13	0.055	ug/L		11/06/18 17:22	1
Tetryl	0.21	U	0.25	0.21	0.083	ug/L		11/06/18 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*95*		*83 - 119*	*11/01/18 12:42*	*11/06/18 17:22*	*1*
1,2-Dinitrobenzene	*82*	*Q*	*83 - 119*	*11/01/18 12:42*	*11/07/18 19:28*	*1*

Client Sample ID: FWGmw-016-181001-GW **Lab Sample ID: 280-116270-8**
Date Collected: 10/25/18 15:40 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.44	U	1.1	0.44	0.22	ug/L		11/02/18 05:27	1
1,3-Dinitrobenzene	0.22	U	0.44	0.22	0.098	ug/L		11/02/18 05:27	1
2,4,6-Trinitrotoluene	0.22	U	0.44	0.22	0.080	ug/L		11/02/18 05:27	1
2,4-Dinitrotoluene	0.22	U	0.44	0.22	0.093	ug/L		11/02/18 05:27	1
2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.072	ug/L		11/02/18 05:27	1
2-Amino-4,6-dinitrotoluene	0.13	U	0.22	0.13	0.056	ug/L		11/02/18 05:27	1
2-Nitrotoluene	0.22	U	0.44	0.22	0.095	ug/L		11/02/18 05:27	1
3-Nitrotoluene	0.22	U Q	0.44	0.22	0.093	ug/L		11/02/18 05:27	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.22	0.13	0.064	ug/L		11/02/18 05:27	1
4-Nitrotoluene	0.44	U	1.1	0.44	0.22	ug/L		11/02/18 05:27	1
HMX	0.22	U M	0.44	0.22	0.097	ug/L		11/02/18 05:27	1
Nitrobenzene	0.22	U	0.44	0.22	0.10	ug/L		11/02/18 05:27	1
Nitroglycerin	2.2	U	3.3	2.2	1.0	ug/L		11/02/18 05:27	1
PETN	1.3	U	2.2	1.3	0.46	ug/L		11/02/18 05:27	1
RDX	0.13	U	0.22	0.13	0.058	ug/L		11/02/18 05:27	1
Tetryl	0.22	U M	0.27	0.22	0.088	ug/L		11/02/18 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*102*		*83 - 119*	*10/30/18 13:27*	*11/02/18 05:27*	*1*

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.44	U	1.1	0.44	0.22	ug/L		11/06/18 17:45	1
1,3-Dinitrobenzene	0.22	U	0.44	0.22	0.098	ug/L		11/06/18 17:45	1
2,4,6-Trinitrotoluene	0.22	U	0.44	0.22	0.080	ug/L		11/06/18 17:45	1
2,4-Dinitrotoluene	0.22	U	0.44	0.22	0.093	ug/L		11/06/18 17:45	1
2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.071	ug/L		11/06/18 17:45	1
2-Amino-4,6-dinitrotoluene	0.13	U	0.22	0.13	0.056	ug/L		11/06/18 17:45	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Nitrotoluene	0.22	U M	0.44	0.22	0.095	ug/L		11/06/18 17:45	1
3-Nitrotoluene	0.22	U	0.44	0.22	0.092	ug/L		11/06/18 17:45	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.22	0.13	0.064	ug/L		11/06/18 17:45	1
4-Nitrotoluene	0.44	U	1.1	0.44	0.22	ug/L		11/06/18 17:45	1
HMX	0.22	U M	0.44	0.22	0.097	ug/L		11/06/18 17:45	1
Nitrobenzene	0.22	U	0.44	0.22	0.10	ug/L		11/06/18 17:45	1
Nitroglycerin	2.2	U	3.3	2.2	1.0	ug/L		11/06/18 17:45	1
PETN	1.3	U	2.2	1.3	0.46	ug/L		11/06/18 17:45	1
RDX	0.13	U	0.22	0.13	0.058	ug/L		11/06/18 17:45	1
Tetryl	0.22	U	0.27	0.22	0.088	ug/L		11/06/18 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*97*		*83 - 119*	*11/01/18 12:42*	*11/06/18 17:45*	*1*

Client Sample ID: LL3mw-237-181001-GW **Lab Sample ID: 280-116270-11**
Date Collected: 10/26/18 13:10 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.43	U	1.1	0.43	0.22	ug/L		11/02/18 05:50	1
1,3-Dinitrobenzene	0.22	U	0.43	0.22	0.096	ug/L		11/02/18 05:50	1
2,4,6-Trinitrotoluene	0.22	U	0.43	0.22	0.078	ug/L		11/02/18 05:50	1
2,4-Dinitrotoluene	0.22	U	0.43	0.22	0.090	ug/L		11/02/18 05:50	1
2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.070	ug/L		11/02/18 05:50	1
2-Amino-4,6-dinitrotoluene	**0.26**		0.22	0.13	0.055	ug/L		11/02/18 05:50	1
2-Nitrotoluene	0.22	U	0.43	0.22	0.092	ug/L		11/02/18 05:50	1
3-Nitrotoluene	0.22	U Q	0.43	0.22	0.090	ug/L		11/02/18 05:50	1
4-Amino-2,6-dinitrotoluene	**0.37**		0.22	0.13	0.062	ug/L		11/02/18 05:50	1
4-Nitrotoluene	0.43	U	1.1	0.43	0.22	ug/L		11/02/18 05:50	1
HMX	0.22	U M	0.43	0.22	0.094	ug/L		11/02/18 05:50	1
Nitrobenzene	0.22	U	0.43	0.22	0.098	ug/L		11/03/18 08:19	1
Nitroglycerin	2.2	U	3.2	2.2	0.99	ug/L		11/02/18 05:50	1
PETN	1.3	U	2.2	1.3	0.45	ug/L		11/02/18 05:50	1
RDX	0.13	U	0.22	0.13	0.056	ug/L		11/02/18 05:50	1
Tetryl	0.22	U M	0.26	0.22	0.086	ug/L		11/02/18 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*96*		*83 - 119*	*10/30/18 13:27*	*11/02/18 05:50*	*1*
1,2-Dinitrobenzene	*85*		*83 - 119*	*10/30/18 13:27*	*11/03/18 08:19*	*1*

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.42	U	1.0	0.42	0.21	ug/L		11/02/18 06:13	1
1,3-Dinitrobenzene	0.21	U	0.42	0.21	0.092	ug/L		11/02/18 06:13	1
2,4,6-Trinitrotoluene	0.21	U	0.42	0.21	0.075	ug/L		11/02/18 06:13	1
2,4-Dinitrotoluene	0.21	U	0.42	0.21	0.087	ug/L		11/02/18 06:13	1
2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.067	ug/L		11/02/18 06:13	1
2-Amino-4,6-dinitrotoluene	**0.38**		0.21	0.13	0.053	ug/L		11/02/18 06:13	1
2-Nitrotoluene	0.21	U	0.42	0.21	0.089	ug/L		11/02/18 06:13	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
3-Nitrotoluene	0.21	U Q	0.42	0.21	0.087	ug/L		11/02/18 06:13	1
4-Amino-2,6-dinitrotoluene	**0.33**		0.21	0.13	0.060	ug/L		11/02/18 06:13	1
4-Nitrotoluene	0.42	U	1.0	0.42	0.21	ug/L		11/02/18 06:13	1
HMX	0.21	U	0.42	0.21	0.091	ug/L		11/02/18 06:13	1
Nitrobenzene	0.21	U	0.42	0.21	0.095	ug/L		11/02/18 06:13	1
Nitroglycerin	2.1	U	3.1	2.1	0.96	ug/L		11/02/18 06:13	1
PETN	1.3	U	2.1	1.3	0.43	ug/L		11/02/18 06:13	1
RDX	**0.084**	**J M J1**	0.21	0.13	0.054	ug/L		11/02/18 06:13	1
RDX	**0.14**	**J J1**	0.21	0.13	0.054	ug/L		11/03/18 08:54	1
Tetryl	0.21	U M	0.25	0.21	0.083	ug/L		11/02/18 06:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*101*		*83 - 119*	*10/30/18 13:27*	*11/02/18 06:13*	*1*
1,2-Dinitrobenzene	*84*		*83 - 119*	*10/30/18 13:27*	*11/03/18 08:54*	*1*

Client Sample ID: SCFmw-004-181001-GW **Lab Sample ID: 280-116270-13**
Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.43	U	1.1	0.43	0.21	ug/L		11/02/18 06:36	1
1,3-Dinitrobenzene	0.21	U	0.43	0.21	0.095	ug/L		11/02/18 06:36	1
2,4,6-Trinitrotoluene	0.21	U	0.43	0.21	0.077	ug/L		11/02/18 06:36	1
2,4-Dinitrotoluene	0.21	U	0.43	0.21	0.089	ug/L		11/02/18 06:36	1
2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.069	ug/L		11/02/18 06:36	1
2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.054	ug/L		11/02/18 06:36	1
2-Nitrotoluene	0.21	U	0.43	0.21	0.091	ug/L		11/02/18 06:36	1
3-Nitrotoluene	0.21	U Q	0.43	0.21	0.089	ug/L		11/02/18 06:36	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.13	0.062	ug/L		11/02/18 06:36	1
4-Nitrotoluene	0.43	U	1.1	0.43	0.21	ug/L		11/02/18 06:36	1
HMX	0.21	U M	0.43	0.21	0.093	ug/L		11/02/18 06:36	1
Nitrobenzene	0.21	U	0.43	0.21	0.097	ug/L		11/02/18 06:36	1
Nitroglycerin	2.1	U	3.2	2.1	0.98	ug/L		11/02/18 06:36	1
PETN	1.3	U	2.1	1.3	0.44	ug/L		11/02/18 06:36	1
RDX	0.13	U	0.21	0.13	0.056	ug/L		11/02/18 06:36	1
Tetryl	0.21	U	0.26	0.21	0.085	ug/L		11/02/18 06:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*102*		*83 - 119*	*10/30/18 13:27*	*11/02/18 06:36*	*1*

Client Sample ID: LL1mw-087-181001-GW **Lab Sample ID: 280-116270-14**
Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.47	U	1.2	0.47	0.23	ug/L		11/02/18 06:59	1
1,3-Dinitrobenzene	0.23	U	0.47	0.23	0.10	ug/L		11/02/18 06:59	1
2,4,6-Trinitrotoluene	0.23	U	0.47	0.23	0.084	ug/L		11/02/18 06:59	1
2,4-Dinitrotoluene	0.23	U	0.47	0.23	0.098	ug/L		11/02/18 06:59	1
2,6-Dinitrotoluene	0.23	U	0.23	0.23	0.075	ug/L		11/02/18 06:59	1
2-Amino-4,6-dinitrotoluene	0.14	U	0.23	0.14	0.059	ug/L		11/02/18 06:59	1
2-Nitrotoluene	0.23	U	0.47	0.23	0.10	ug/L		11/02/18 06:59	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Client Sample ID: LL1mw-087-181001-GW **Lab Sample ID: 280-116270-14**
Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
3-Nitrotoluene	0.23	U Q	0.47	0.23	0.097	ug/L		11/02/18 06:59	1
4-Amino-2,6-dinitrotoluene	0.14	U	0.23	0.14	0.067	ug/L		11/02/18 06:59	1
4-Nitrotoluene	0.47	U	1.2	0.47	0.23	ug/L		11/02/18 06:59	1
HMX	0.23	U M	0.47	0.23	0.10	ug/L		11/02/18 06:59	1
Nitrobenzene	0.23	U	0.47	0.23	0.11	ug/L		11/02/18 06:59	1
Nitroglycerin	2.3	U	3.5	2.3	1.1	ug/L		11/02/18 06:59	1
PETN	1.4	U	2.3	1.4	0.49	ug/L		11/02/18 06:59	1
RDX	0.14	U	0.23	0.14	0.061	ug/L		11/02/18 06:59	1
Tetryl	0.23	U	0.28	0.23	0.093	ug/L		11/02/18 06:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*101*		*83 - 119*	*10/30/18 13:27*	*11/02/18 06:59*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		11/05/18 23:09	1
Calcium	**91000**		1000	140	35	ug/L		11/05/18 23:09	1
Iron	**540**		100	85	22	ug/L		11/05/18 23:09	1
Magnesium	**27000**		500	40	11	ug/L		11/05/18 23:09	1
Potassium	**2200**	**J**	3000	940	240	ug/L		11/05/18 23:09	1
Sodium	**16000**		5000	350	120	ug/L		11/06/18 19:44	1

Client Sample ID: FWGmw-016-181001-GW **Lab Sample ID: 280-116270-8**
Date Collected: 10/25/18 15:40 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		11/05/18 23:12	1
Calcium	**100000**		1000	140	35	ug/L		11/05/18 23:12	1
Iron	**680**		100	85	22	ug/L		11/05/18 23:12	1
Magnesium	**28000**		500	40	11	ug/L		11/05/18 23:12	1
Potassium	**2200**	**J**	3000	940	240	ug/L		11/05/18 23:12	1
Sodium	**11000**		5000	350	120	ug/L		11/06/18 19:48	1

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		11/05/18 23:16	1
Calcium	**100000**		1000	140	35	ug/L		11/05/18 23:16	1
Iron	**890**		100	85	22	ug/L		11/05/18 23:16	1
Magnesium	**34000**		500	40	11	ug/L		11/05/18 23:16	1
Potassium	**4400**		3000	940	240	ug/L		11/05/18 23:16	1
Sodium	**16000**		5000	350	120	ug/L		11/06/18 19:51	1

Method: 6010C - Metals (ICP)

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		11/05/18 23:19	1
Calcium	**23000**		1000	140	35	ug/L		11/05/18 23:19	1
Iron	85	U	100	85	22	ug/L		11/05/18 23:19	1
Magnesium	**7400**		500	40	11	ug/L		11/05/18 23:19	1
Potassium	**1300**	**J**	3000	940	240	ug/L		11/05/18 23:19	1
Sodium	**3200**	**J**	5000	350	120	ug/L		11/06/18 19:54	1

Client Sample ID: SCFmw-004-181001-GW **Lab Sample ID: 280-116270-13**
Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	**31**	**J**	300	70	18	ug/L		11/05/18 23:23	1
Calcium	**170000**		1000	140	35	ug/L		11/05/18 23:23	1
Iron	**38**	**J**	100	85	22	ug/L		11/05/18 23:23	1
Magnesium	**67000**		500	40	11	ug/L		11/05/18 23:23	1
Potassium	**2800**	**J**	3000	940	240	ug/L		11/05/18 23:23	1
Sodium	**13000**		5000	350	120	ug/L		11/06/18 19:58	1

Client Sample ID: LL1mw-087-181001-GW **Lab Sample ID: 280-116270-14**
Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	**55**	**J**	300	70	18	ug/L		11/05/18 23:26	1
Calcium	**130000**		1000	140	35	ug/L		11/05/18 23:26	1
Iron	**140**		100	85	22	ug/L		11/05/18 23:26	1
Magnesium	**42000**		500	40	11	ug/L		11/05/18 23:26	1
Potassium	**920**	**J**	3000	940	240	ug/L		11/05/18 23:26	1
Sodium	**14000**		5000	350	120	ug/L		11/06/18 20:01	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		11/12/18 16:35	1
Arsenic	**23**		5.0	1.0	0.33	ug/L		11/12/18 16:35	1
Barium	**70**		3.0	0.95	0.29	ug/L		11/12/18 16:35	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/12/18 16:35	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/12/18 16:35	1
Chromium	1.8	U	10	1.8	0.50	ug/L		11/12/18 16:35	1
Cobalt	**2.3**		1.0	0.20	0.054	ug/L		11/12/18 16:35	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		11/12/18 16:35	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		11/12/18 16:35	1
Manganese	**170**		3.5	0.95	0.31	ug/L		11/12/18 16:35	1
Nickel	**3.2**		3.0	1.0	0.30	ug/L		11/12/18 16:35	1
Selenium	2.0	U	5.0	2.0	0.70	ug/L		11/12/18 16:35	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/12/18 16:35	1
Thallium	0.20	U	1.0	0.20	0.050	ug/L		11/12/18 16:35	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/12/18 16:35	1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Zinc	8.0	U	20	8.0	2.0	ug/L		11/12/18 16:35	1

Client Sample ID: FWGmw-016-181001-GW **Lab Sample ID: 280-116270-8**
Date Collected: 10/25/18 15:40 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		11/12/18 16:39	1
Arsenic	**4.0**	**J**	5.0	1.0	0.33	ug/L		11/12/18 16:39	1
Barium	**49**		3.0	0.95	0.29	ug/L		11/12/18 16:39	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/12/18 16:39	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/12/18 16:39	1
Chromium	1.8	U	10	1.8	0.50	ug/L		11/12/18 16:39	1
Cobalt	0.20	U	1.0	0.20	0.054	ug/L		11/12/18 16:39	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		11/12/18 16:39	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		11/12/18 16:39	1
Manganese	**200**		3.5	0.95	0.31	ug/L		11/12/18 16:39	1
Nickel	**0.88**	**J**	3.0	1.0	0.30	ug/L		11/12/18 16:39	1
Selenium	2.0	U	5.0	2.0	0.70	ug/L		11/12/18 16:39	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/12/18 16:39	1
Thallium	0.20	U	1.0	0.20	0.050	ug/L		11/12/18 16:39	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/12/18 16:39	1
Zinc	8.0	U	20	8.0	2.0	ug/L		11/12/18 16:39	1

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		11/12/18 16:42	1
Arsenic	**27**		5.0	1.0	0.33	ug/L		11/12/18 16:42	1
Barium	**81**		3.0	0.95	0.29	ug/L		11/12/18 16:42	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/12/18 16:42	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/12/18 16:42	1
Chromium	1.8	U	10	1.8	0.50	ug/L		11/12/18 16:42	1
Cobalt	**3.8**		1.0	0.20	0.054	ug/L		11/12/18 16:42	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		11/12/18 16:42	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		11/12/18 16:42	1
Manganese	**72**		3.5	0.95	0.31	ug/L		11/12/18 16:42	1
Nickel	**2.3**	**J**	3.0	1.0	0.30	ug/L		11/12/18 16:42	1
Selenium	2.0	U	5.0	2.0	0.70	ug/L		11/12/18 16:42	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/12/18 16:42	1
Thallium	0.20	U	1.0	0.20	0.050	ug/L		11/12/18 16:42	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/12/18 16:42	1
Zinc	8.0	U	20	8.0	2.0	ug/L		11/12/18 16:42	1

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	**0.54**	**J**	6.0	1.0	0.40	ug/L		11/12/18 16:46	1
Arsenic	1.0	U	5.0	1.0	0.33	ug/L		11/12/18 16:46	1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Barium	**17**		3.0	0.95	0.29	ug/L		11/12/18 16:46	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/12/18 16:46	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/12/18 16:46	1
Chromium	1.8	U	10	1.8	0.50	ug/L		11/12/18 16:46	1
Cobalt	0.20	U	1.0	0.20	0.054	ug/L		11/12/18 16:46	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		11/12/18 16:46	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		11/12/18 16:46	1
Manganese	**0.50**	**J**	3.5	0.95	0.31	ug/L		11/12/18 16:46	1
Nickel	**3.6**		3.0	1.0	0.30	ug/L		11/12/18 16:46	1
Selenium	2.0	U	5.0	2.0	0.70	ug/L		11/12/18 16:46	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/12/18 16:46	1
Thallium	0.20	U	1.0	0.20	0.050	ug/L		11/12/18 16:46	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/12/18 16:46	1
Zinc	**3.0**	**J**	20	8.0	2.0	ug/L		11/12/18 16:46	1

Client Sample ID: SCFmw-004-181001-GW **Lab Sample ID: 280-116270-13**
Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		11/12/18 16:50	1
Arsenic	1.0	U	5.0	1.0	0.33	ug/L		11/12/18 16:50	1
Barium	**56**		3.0	0.95	0.29	ug/L		11/12/18 16:50	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/12/18 16:50	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/12/18 16:50	1
Chromium	1.8	U	10	1.8	0.50	ug/L		11/12/18 16:50	1
Cobalt	0.20	U	1.0	0.20	0.054	ug/L		11/12/18 16:50	1
Copper	**7.6**		2.0	1.8	0.56	ug/L		11/12/18 16:50	1
Lead	**2.1**	**J**	3.0	0.70	0.18	ug/L		11/12/18 16:50	1
Manganese	**780**		3.5	0.95	0.31	ug/L		11/12/18 16:50	1
Nickel	1.0	U	3.0	1.0	0.30	ug/L		11/12/18 16:50	1
Selenium	2.0	U	5.0	2.0	0.70	ug/L		11/12/18 16:50	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/12/18 16:50	1
Thallium	0.20	U	1.0	0.20	0.050	ug/L		11/12/18 16:50	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/12/18 16:50	1
Zinc	**42**		20	8.0	2.0	ug/L		11/12/18 16:50	1

Client Sample ID: LL1mw-087-181001-GW **Lab Sample ID: 280-116270-14**
Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		11/12/18 16:54	1
Arsenic	1.0	U	5.0	1.0	0.33	ug/L		11/12/18 16:54	1
Barium	**24**		3.0	0.95	0.29	ug/L		11/12/18 16:54	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/12/18 16:54	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/12/18 16:54	1
Chromium	**0.50**	**J**	10	1.8	0.50	ug/L		11/12/18 16:54	1
Cobalt	**0.45**	**J**	1.0	0.20	0.054	ug/L		11/12/18 16:54	1
Copper	**0.72**	**J**	2.0	1.8	0.56	ug/L		11/12/18 16:54	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		11/12/18 16:54	1
Manganese	**140**		3.5	0.95	0.31	ug/L		11/12/18 16:54	1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: LL1mw-087-181001-GW **Lab Sample ID: 280-116270-14**
Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nickel	**2.1**	**J**	3.0	1.0	0.30	ug/L		11/12/18 16:54	1
Selenium	2.0	U	5.0	2.0	0.70	ug/L		11/12/18 16:54	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/12/18 16:54	1
Thallium	**0.069**	**J**	1.0	0.20	0.050	ug/L		11/12/18 16:54	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/12/18 16:54	1
Zinc	**3.5**	**J**	20	8.0	2.0	ug/L		11/12/18 16:54	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		11/12/18 15:04	1

Client Sample ID: FWGmw-016-181001-GW **Lab Sample ID: 280-116270-8**
Date Collected: 10/25/18 15:40 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		11/12/18 15:07	1

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		11/12/18 15:09	1

Client Sample ID: LL3mw-244-181001-GW **Lab Sample ID: 280-116270-12**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		11/12/18 15:20	1

Client Sample ID: SCFmw-004-181001-GW **Lab Sample ID: 280-116270-13**
Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		11/12/18 15:22	1

Client Sample ID: LL1mw-087-181001-GW **Lab Sample ID: 280-116270-14**
Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		11/12/18 15:29	1

General Chemistry

Client Sample ID: FWGmw-018-181001-GW **Lab Sample ID: 280-116270-1**
Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/08/18 16:31	1

Client Sample ID: LL2mw-264-181001-GW **Lab Sample ID: 280-116270-4**
Date Collected: 10/26/18 14:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/08/18 16:43	1

Client Sample ID: CBPmw-008-181001-GW **Lab Sample ID: 280-116270-5**
Date Collected: 10/26/18 10:25 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/08/18 16:44	1

Client Sample ID: CBPmw-009-181001-GW **Lab Sample ID: 280-116270-6**
Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	**0.0022**	**J**	0.010	0.0050	0.0020	mg/L		11/08/18 16:46	1

Client Sample ID: LL1mw-089-181001-GW **Lab Sample ID: 280-116270-7**
Date Collected: 10/26/18 12:25 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/08/18 16:47	1

Client Sample ID: FWGmw-020-181001-GW **Lab Sample ID: 280-116270-9**
Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/08/18 16:49	1

Client Sample ID: LL3mw-234-181001-GW **Lab Sample ID: 280-116270-10**
Date Collected: 10/26/18 11:15 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	**0.0023**	**J**	0.010	0.0050	0.0020	mg/L		11/08/18 16:50	1

Client Sample ID: LL4mw-200-181001-GW **Lab Sample ID: 280-116270-15**
Date Collected: 10/26/18 14:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/08/18 16:52	1

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116270-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units	Method
1,1,1-Trichloroethane	1.0	0.16	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.27	ug/L	8260B
1,1-Dichloroethane	1.0	0.22	ug/L	8260B
1,1-Dichloroethene	1.0	0.23	ug/L	8260B
1,2-Dibromoethane	1.0	0.18	ug/L	8260B
1,2-Dichloroethane	1.0	0.13	ug/L	8260B
1,2-Dichloroethene, Total	1.0	0.24	ug/L	8260B
1,2-Dichloropropane	1.0	0.18	ug/L	8260B
2-Butanone (MEK)	6.0	2.0	ug/L	8260B
2-Hexanone	5.0	1.7	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L	8260B
Acetone	10	1.9	ug/L	8260B
Benzene	1.0	0.16	ug/L	8260B
Bromobenzene	1.0	0.17	ug/L	8260B
Bromochloromethane	1.0	0.10	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.19	ug/L	8260B
Bromomethane	2.0	0.21	ug/L	8260B
Carbon disulfide	2.0	0.45	ug/L	8260B
Carbon tetrachloride	2.0	0.19	ug/L	8260B
Chlorobenzene	1.0	0.17	ug/L	8260B
Chloroethane	2.0	0.41	ug/L	8260B
Chloroform	1.0	0.16	ug/L	8260B
Chloromethane	2.0	0.30	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Dibromochloromethane	1.0	0.17	ug/L	8260B
Ethylbenzene	1.0	0.16	ug/L	8260B
Methylene Chloride	5.0	0.32	ug/L	8260B
Styrene	1.0	0.17	ug/L	8260B
Tetrachloroethene	1.0	0.20	ug/L	8260B
Toluene	1.0	0.17	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.19	ug/L	8260B
Trichloroethene	1.0	0.16	ug/L	8260B
Vinyl chloride	1.5	0.10	ug/L	8260B
Xylenes, Total	1.0	0.19	ug/L	8260B

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Prep: 3510C

Analyte	LOQ	DL	Units	Method
1-Methylnaphthalene	0.10	0.0059	ug/L	8270D SIM
2-Methylnaphthalene	0.10	0.0060	ug/L	8270D SIM
Acenaphthene	0.10	0.0042	ug/L	8270D SIM
Acenaphthylene	0.10	0.0051	ug/L	8270D SIM
Anthracene	0.10	0.0056	ug/L	8270D SIM
Benzo[a]anthracene	0.10	0.0042	ug/L	8270D SIM
Benzo[a]pyrene	0.10	0.0069	ug/L	8270D SIM
Benzo[b]fluoranthene	0.10	0.0031	ug/L	8270D SIM
Benzo[g,h,i]perylene	0.10	0.0062	ug/L	8270D SIM
Benzo[k]fluoranthene	0.10	0.0063	ug/L	8270D SIM
Chrysene	0.10	0.0033	ug/L	8270D SIM

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Prep: 3510C

Analyte	LOQ	DL	Units	Method
Dibenz(a,h)anthracene	0.10	0.0041	ug/L	8270D SIM
Fluoranthene	0.10	0.0048	ug/L	8270D SIM
Fluorene	0.10	0.0055	ug/L	8270D SIM
Indeno[1,2,3-cd]pyrene	0.10	0.0045	ug/L	8270D SIM
Naphthalene	0.10	0.0080	ug/L	8270D SIM
Phenanthrene	0.10	0.0093	ug/L	8270D SIM
Pyrene	0.10	0.0061	ug/L	8270D SIM

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Prep: 3520C

Analyte	LOQ	DL	Units	Method
1,2,4-Trichlorobenzene	10	0.28	ug/L	8270D
1,2-Dichlorobenzene	10	0.23	ug/L	8270D
1,3-Dichlorobenzene	10	0.30	ug/L	8270D
1,4-Dichlorobenzene	10	0.32	ug/L	8270D
1,4-Dioxane	18	1.7	ug/L	8270D
2,4,5-Trichlorophenol	20	0.45	ug/L	8270D
2,4,6-Trichlorophenol	20	0.29	ug/L	8270D
2,4-Dichlorophenol	10	0.64	ug/L	8270D
2,4-Dimethylphenol	10	0.58	ug/L	8270D
2,4-Dinitrophenol	80	10	ug/L	8270D
2,4-Dinitrotoluene	20	1.7	ug/L	8270D
2,6-Dinitrotoluene	20	1.9	ug/L	8270D
2-Chloronaphthalene	10	0.26	ug/L	8270D
2-Chlorophenol	10	2.0	ug/L	8270D
2-Methylphenol	10	0.98	ug/L	8270D
2-Nitroaniline	50	1.7	ug/L	8270D
2-Nitrophenol	20	0.39	ug/L	8270D
3 & 4 Methylphenol	20	0.25	ug/L	8270D
3,3'-Dichlorobenzidine	50	2.0	ug/L	8270D
3-Nitroaniline	50	2.0	ug/L	8270D
4,6-Dinitro-2-methylphenol	80	4.0	ug/L	8270D
4-Bromophenyl phenyl ether	10	0.43	ug/L	8270D
4-Chloro-3-methylphenol	20	2.4	ug/L	8270D
4-Chloroaniline	25	2.1	ug/L	8270D
4-Chlorophenyl phenyl ether	10	1.7	ug/L	8270D
4-Nitroaniline	50	2.0	ug/L	8270D
4-Nitrophenol	50	1.2	ug/L	8270D
Benzoic acid	80	10	ug/L	8270D
Benzyl alcohol	25	0.23	ug/L	8270D
bis (2-chloroisopropyl) ether	10	0.28	ug/L	8270D
Bis(2-chloroethoxy)methane	10	0.97	ug/L	8270D
Bis(2-chloroethyl)ether	20	0.41	ug/L	8270D
Bis(2-ethylhexyl) phthalate	10	0.56	ug/L	8270D
Butyl benzyl phthalate	20	1.0	ug/L	8270D
Carbazole	10	0.43	ug/L	8270D
Dibenzofuran	10	0.29	ug/L	8270D
Diethyl phthalate	20	0.38	ug/L	8270D
Dimethyl phthalate	20	0.21	ug/L	8270D
Di-n-butyl phthalate	20	1.2	ug/L	8270D

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Prep: 3520C

Analyte	LOQ	DL	Units	Method
Di-n-octyl phthalate	20	0.35	ug/L	8270D
Hexachlorobenzene	10	0.66	ug/L	8270D
Hexachlorobutadiene	30	3.3	ug/L	8270D
Hexachlorocyclopentadiene	50	10	ug/L	8270D
Hexachloroethane	10	2.1	ug/L	8270D
Isophorone	10	0.21	ug/L	8270D
Nitrobenzene	20	0.81	ug/L	8270D
N-Nitrosodi-n-propylamine	20	0.35	ug/L	8270D
N-Nitrosodiphenylamine	10	0.44	ug/L	8270D
Pentachlorophenol	80	20	ug/L	8270D
Phenol	10	2.0	ug/L	8270D

Method: 8081B - Organochlorine Pesticides (GC)

Prep: 3510C

Analyte	LOQ	DL	Units	Method
4,4'-DDD	0.050	0.0077	ug/L	8081B
4,4'-DDE	0.050	0.0075	ug/L	8081B
4,4'-DDT	0.050	0.015	ug/L	8081B
Aldrin	0.050	0.0059	ug/L	8081B
alpha-BHC	0.050	0.0053	ug/L	8081B
alpha-Chlordane	0.050	0.0053	ug/L	8081B
beta-BHC	0.050	0.0087	ug/L	8081B
delta-BHC	0.050	0.0058	ug/L	8081B
Dieldrin	0.050	0.0063	ug/L	8081B
Endosulfan I	0.050	0.0058	ug/L	8081B
Endosulfan II	0.050	0.0070	ug/L	8081B
Endosulfan sulfate	0.050	0.0057	ug/L	8081B
Endrin	0.050	0.0079	ug/L	8081B
Endrin aldehyde	0.050	0.0088	ug/L	8081B
Endrin ketone	0.050	0.0070	ug/L	8081B
gamma-BHC (Lindane)	0.050	0.0069	ug/L	8081B
gamma-Chlordane	0.050	0.0091	ug/L	8081B
Heptachlor	0.050	0.0077	ug/L	8081B
Heptachlor epoxide	0.050	0.0075	ug/L	8081B
Methoxychlor	0.050	0.013	ug/L	8081B
Toxaphene	2.0	0.37	ug/L	8081B

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep: 3510C

Analyte	LOQ	DL	Units	Method
PCB-1016	1.0	0.12	ug/L	8082A
PCB-1221	1.0	0.21	ug/L	8082A
PCB-1232	1.0	0.17	ug/L	8082A
PCB-1242	1.0	0.10	ug/L	8082A
PCB-1248	1.0	0.092	ug/L	8082A
PCB-1254	1.0	0.11	ug/L	8082A
PCB-1260	1.0	0.16	ug/L	8082A

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116270-1

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Prep: 3535

Analyte	LOQ	DL	Units	Method
1,3,5-Trinitrobenzene	1.0	0.20	ug/L	8330B
1,3-Dinitrobenzene	0.40	0.089	ug/L	8330B
2,4,6-Trinitrotoluene	0.40	0.072	ug/L	8330B
2,4-Dinitrotoluene	0.40	0.084	ug/L	8330B
2,6-Dinitrotoluene	0.20	0.065	ug/L	8330B
2-Amino-4,6-dinitrotoluene	0.20	0.051	ug/L	8330B
2-Nitrotoluene	0.40	0.086	ug/L	8330B
3-Nitrotoluene	0.40	0.083	ug/L	8330B
4-Amino-2,6-dinitrotoluene	0.20	0.058	ug/L	8330B
4-Nitrotoluene	1.0	0.20	ug/L	8330B
HMX	0.40	0.088	ug/L	8330B
Nitrobenzene	0.40	0.091	ug/L	8330B
Nitroglycerin	3.0	0.92	ug/L	8330B
PETN	2.0	0.42	ug/L	8330B
RDX	0.20	0.052	ug/L	8330B
Tetryl	0.24	0.079	ug/L	8330B

Method: 6010C - Metals (ICP)

Prep: 3010A

Analyte	LOQ	DL	Units	Method
Aluminum	300	18	ug/L	6010C
Calcium	1000	35	ug/L	6010C
Iron	100	22	ug/L	6010C
Magnesium	500	11	ug/L	6010C
Potassium	3000	240	ug/L	6010C
Sodium	5000	120	ug/L	6010C

Method: 6020A - Metals (ICP/MS)

Prep: 3020A

Analyte	LOQ	DL	Units	Method
Antimony	6.0	0.40	ug/L	6020A
Arsenic	5.0	0.33	ug/L	6020A
Barium	3.0	0.29	ug/L	6020A
Beryllium	1.0	0.080	ug/L	6020A
Cadmium	1.0	0.27	ug/L	6020A
Chromium	10	0.50	ug/L	6020A
Cobalt	1.0	0.054	ug/L	6020A
Copper	2.0	0.56	ug/L	6020A
Lead	3.0	0.18	ug/L	6020A
Manganese	3.5	0.31	ug/L	6020A
Nickel	3.0	0.30	ug/L	6020A
Selenium	5.0	0.70	ug/L	6020A
Silver	5.0	0.033	ug/L	6020A
Thallium	1.0	0.050	ug/L	6020A
Vanadium	6.0	0.50	ug/L	6020A
Zinc	20	2.0	ug/L	6020A

Method: 7470A - Mercury (CVAA)

Prep: 7470A

Default Detection Limits

Client: Leidos, Inc. TestAmerica Job ID: 280-116270-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Method: 7470A - Mercury (CVAA)

Prep: 7470A

Analyte	LOQ	DL	Units	Method
Mercury	0.20	0.027	ug/L	7470A

General Chemistry

Prep: 9012B

Analyte	LOQ	DL	Units	Method
Cyanide, Total	0.010	0.0020	mg/L	9012B

Surrogate Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116270-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-116270-1	FWGmw-018-181001-GW	96	85	96	90
280-116270-2	FWGTB-181006 TB	97	93	99	97
280-116270-9	FWGmw-020-181001-GW	98	92	98	92
LCS 280-436980/5	Lab Control Sample	99	96	102	100
LCS 280-437213/7	Lab Control Sample	97	97	101	100
LCSD 280-436980/6	Lab Control Sample Dup	99	94	99	99
MB 280-436980/4	Method Blank	97	102	103	103
MB 280-437213/6	Method Blank	94	99	100	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(43-140)	(44-119)	(19-119)	(44-120)	(10-115)	(50-134)
280-116270-1	FWGmw-018-181001-GW	85	82	86	88	83	88
280-116270-8	FWGmw-016-181001-GW	76	77	84	84	85	90
280-116270-9	FWGmw-020-181001-GW	79	77	80	82	82	97
280-116270-12	LL3mw-244-181001-GW	78	78	82	84	85	95
280-116270-13	SCFmw-004-181001-GW	85	83	86	85	88	94
280-116270-14	LL1mw-087-181001-GW	84	85	89	90	89	97
LCS 280-435687/2-A	Lab Control Sample	95	89	89	92	90	86
MB 280-435687/1-A	Method Blank	84	82	87	87	90	95

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(53-106)	(55-111)	(58-132)
280-116270-1	FWGmw-018-181001-GW	51 Q	57	78
280-116270-9	FWGmw-020-181001-GW	56	59	81
LCS 280-435408/2-A	Lab Control Sample	66	78	87
MB 280-435408/1-A	Method Blank	57	56	92

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	DCBP1 (34-122)	TCX1 (44-124)								
280-116270-12	LL3mw-244-181001-GW	75	58								
280-116270-13	SCFmw-004-181001-GW	78	58								
LCS 280-435801/2-A	Lab Control Sample	70	48								
LCS 280-435801/3-A	Lab Control Sample	68	44								
MB 280-435801/1-A	Method Blank	71	58								

Surrogate Legend
DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	TCX2 (25-120)	DCBP2 (30-136)								
280-116270-1	FWGmw-018-181001-GW	71	91 Q								
280-116270-9	FWGmw-020-181001-GW	93	91 Q								
LCS 280-436278/2-A	Lab Control Sample	85	85								
MB 280-436278/1-A	Method Blank	80	87								

Surrogate Legend
TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	12DNB1 (83-119)									
280-116270-1	FWGmw-018-181001-GW	95									
280-116270-1	FWGmw-018-181001-GW	82 Q									
280-116270-8	FWGmw-016-181001-GW	102									
280-116270-9	FWGmw-020-181001-GW	97									
280-116270-11	LL3mw-237-181001-GW	96									
280-116270-11	LL3mw-237-181001-GW	85									
280-116270-12	LL3mw-244-181001-GW	101									
280-116270-12	LL3mw-244-181001-GW	84									
280-116270-13	SCFmw-004-181001-GW	102									
280-116270-14	LL1mw-087-181001-GW	101									
LCS 280-435507/2-A	Lab Control Sample	102									
LCS 280-435841/2-A	Lab Control Sample	100									
MB 280-435507/1-A	Method Blank	101									
MB 280-435841/1-A	Method Blank	109									

Surrogate Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116270-1

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-436980/4
Matrix: Water
Analysis Batch: 436980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 09:40	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/09/18 09:40	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/09/18 09:40	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/09/18 09:40	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/09/18 09:40	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/09/18 09:40	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/09/18 09:40	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/09/18 09:40	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/09/18 09:40	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/09/18 09:40	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/09/18 09:40	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/09/18 09:40	1
Acetone	6.4	U M	10	6.4	1.9	ug/L		11/09/18 09:40	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 09:40	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 09:40	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/09/18 09:40	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 09:40	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/09/18 09:40	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/09/18 09:40	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/09/18 09:40	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/09/18 09:40	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 09:40	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/09/18 09:40	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 09:40	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/09/18 09:40	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 09:40	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 09:40	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 09:40	1
Methylene Chloride	0.80	U	5.0	0.80	0.32	ug/L		11/09/18 09:40	1
Styrene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 09:40	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/09/18 09:40	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		11/09/18 09:40	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/09/18 09:40	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/09/18 09:40	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/09/18 09:40	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/09/18 09:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*11/09/18 09:40*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*11/09/18 09:40*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*11/09/18 09:40*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*11/09/18 09:40*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-436980/5
Matrix: Water
Analysis Batch: 436980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	4.59		ug/L		92	74 - 131
1,1,2,2-Tetrachloroethane	5.00	5.33		ug/L		107	71 - 121
1,1,2-Trichloroethane	5.00	5.36		ug/L		107	80 - 119
1,1-Dichloroethane	5.00	4.98		ug/L		100	77 - 125
1,1-Dichloroethene	5.00	4.73		ug/L		95	71 - 131
1,2-Dibromoethane	5.00	5.14		ug/L		103	77 - 121
1,2-Dichloroethane	5.00	4.59		ug/L		92	73 - 128
1,2-Dichloropropane	5.00	5.14		ug/L		103	78 - 122
2-Butanone (MEK)	20.0	17.2		ug/L		86	56 - 143
2-Hexanone	20.0	19.4		ug/L		97	57 - 139
4-Methyl-2-pentanone (MIBK)	20.0	21.0		ug/L		105	67 - 130
Acetone	20.0	19.5		ug/L		97	39 - 160
Benzene	5.00	4.88		ug/L		98	79 - 120
Bromobenzene	5.00	4.93		ug/L		99	80 - 120
Bromochloromethane	5.00	5.12		ug/L		102	78 - 123
Bromodichloromethane	5.00	4.69		ug/L		94	79 - 125
Bromoform	5.00	4.58		ug/L		92	66 - 130
Bromomethane	5.00	4.89		ug/L		98	53 - 141
Carbon disulfide	5.00	4.74		ug/L		95	64 - 133
Carbon tetrachloride	5.00	4.42		ug/L		88	72 - 136
Chlorobenzene	5.00	4.80		ug/L		96	82 - 118
Chloroethane	5.00	4.88		ug/L		98	60 - 138
Chloroform	5.00	4.81		ug/L		96	79 - 124
Chloromethane	5.00	4.19		ug/L		84	50 - 139
cis-1,3-Dichloropropene	5.00	5.17		ug/L		103	75 - 124
Dibromochloromethane	5.00	4.73		ug/L		95	74 - 126
Ethylbenzene	5.00	4.65		ug/L		93	79 - 121
Methylene Chloride	5.00	4.71	J	ug/L		94	74 - 124
Styrene	5.00	4.81		ug/L		96	78 - 123
Tetrachloroethene	5.00	4.63		ug/L		93	74 - 129
Toluene	5.00	4.94		ug/L		99	80 - 121
trans-1,3-Dichloropropene	5.00	4.65		ug/L		93	73 - 127
Trichloroethene	5.00	4.65		ug/L		93	79 - 123
Vinyl chloride	5.00	4.47		ug/L		89	58 - 137
Xylenes, Total	10.0	9.56		ug/L		96	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

Lab Sample ID: LCSD 280-436980/6
Matrix: Water
Analysis Batch: 436980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	5.00	4.69		ug/L		94	74 - 131	2	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-436980/6
Matrix: Water
Analysis Batch: 436980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2,2-Tetrachloroethane			5.00	5.54		ug/L		111	71 - 121	4	20
1,1,2-Trichloroethane			5.00	5.44		ug/L		109	80 - 119	1	20
1,1-Dichloroethane			5.00	5.01		ug/L		100	77 - 125	1	20
1,1-Dichloroethene			5.00	4.86		ug/L		97	71 - 131	3	20
1,2-Dibromoethane			5.00	5.47		ug/L		109	77 - 121	6	20
1,2-Dichloroethane			5.00	4.85		ug/L		97	73 - 128	6	20
1,2-Dichloropropane			5.00	5.46		ug/L		109	78 - 122	6	20
2-Butanone (MEK)			20.0	18.2		ug/L		91	56 - 143	6	20
2-Hexanone			20.0	21.0		ug/L		105	57 - 139	8	20
4-Methyl-2-pentanone (MIBK)			20.0	22.1		ug/L		110	67 - 130	5	20
Acetone			20.0	18.9		ug/L		95	39 - 160	3	20
Benzene			5.00	5.03		ug/L		101	79 - 120	3	20
Bromobenzene			5.00	5.07		ug/L		101	80 - 120	3	20
Bromochloromethane			5.00	5.30		ug/L		106	78 - 123	3	20
Bromodichloromethane			5.00	5.01		ug/L		100	79 - 125	7	20
Bromoform			5.00	4.56		ug/L		91	66 - 130	0	20
Bromomethane			5.00	4.98		ug/L		100	53 - 141	2	20
Carbon disulfide			5.00	4.84		ug/L		97	64 - 133	2	20
Carbon tetrachloride			5.00	4.54		ug/L		91	72 - 136	3	20
Chlorobenzene			5.00	5.06		ug/L		101	82 - 118	5	20
Chloroethane			5.00	4.98		ug/L		100	60 - 138	2	20
Chloroform			5.00	4.92		ug/L		98	79 - 124	2	20
Chloromethane			5.00	4.47		ug/L		89	50 - 139	6	20
cis-1,3-Dichloropropene			5.00	5.34		ug/L		107	75 - 124	3	20
Dibromochloromethane			5.00	5.00		ug/L		100	74 - 126	5	20
Ethylbenzene			5.00	4.98		ug/L		100	79 - 121	7	20
Methylene Chloride			5.00	4.92	J	ug/L		98	74 - 124	4	20
Styrene			5.00	5.19		ug/L		104	78 - 123	8	20
Tetrachloroethene			5.00	4.93		ug/L		99	74 - 129	6	20
Toluene			5.00	5.02		ug/L		100	80 - 121	2	20
trans-1,3-Dichloropropene			5.00	4.85		ug/L		97	73 - 127	4	20
Trichloroethene			5.00	4.83		ug/L		97	79 - 123	4	20
Vinyl chloride			5.00	4.73		ug/L		95	58 - 137	6	20
Xylenes, Total			10.0	10.3		ug/L		103	79 - 121	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*

Lab Sample ID: MB 280-437213/6
Matrix: Water
Analysis Batch: 437213

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/12/18 11:58	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/12/18 11:58	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-437213/6
Matrix: Water
Analysis Batch: 437213

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/12/18 11:58	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/12/18 11:58	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/12/18 11:58	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/12/18 11:58	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/12/18 11:58	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/12/18 11:58	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/12/18 11:58	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/12/18 11:58	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/12/18 11:58	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/12/18 11:58	1
Acetone	6.4	U	10	6.4	1.9	ug/L		11/12/18 11:58	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/12/18 11:58	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/12/18 11:58	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/12/18 11:58	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/12/18 11:58	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/12/18 11:58	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/12/18 11:58	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/12/18 11:58	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/12/18 11:58	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/12/18 11:58	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/12/18 11:58	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/12/18 11:58	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/12/18 11:58	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/12/18 11:58	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/12/18 11:58	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/12/18 11:58	1
Methylene Chloride	0.80	U M	5.0	0.80	0.32	ug/L		11/12/18 11:58	1
Styrene	0.40	U	1.0	0.40	0.17	ug/L		11/12/18 11:58	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/12/18 11:58	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		11/12/18 11:58	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/12/18 11:58	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/12/18 11:58	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/12/18 11:58	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/12/18 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*11/12/18 11:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/12/18 11:58*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/12/18 11:58*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/12/18 11:58*	*1*

Lab Sample ID: LCS 280-437213/7
Matrix: Water
Analysis Batch: 437213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	4.93		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	5.00	5.32		ug/L		106	71 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-437213/7
Matrix: Water
Analysis Batch: 437213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	5.00	5.47		ug/L		109	80 - 119
1,1-Dichloroethane	5.00	5.22		ug/L		104	77 - 125
1,1-Dichloroethene	5.00	5.17		ug/L		103	71 - 131
1,2-Dibromoethane	5.00	5.28		ug/L		106	77 - 121
1,2-Dichloroethane	5.00	4.95		ug/L		99	73 - 128
1,2-Dichloropropane	5.00	5.55		ug/L		111	78 - 122
2-Butanone (MEK)	20.0	17.3		ug/L		87	56 - 143
2-Hexanone	20.0	19.8		ug/L		99	57 - 139
4-Methyl-2-pentanone (MIBK)	20.0	21.8		ug/L		109	67 - 130
Acetone	20.0	19.1		ug/L		96	39 - 160
Benzene	5.00	5.25		ug/L		105	79 - 120
Bromobenzene	5.00	5.06		ug/L		101	80 - 120
Bromochloromethane	5.00	5.37		ug/L		107	78 - 123
Bromodichloromethane	5.00	5.12		ug/L		102	79 - 125
Bromoform	5.00	4.58		ug/L		92	66 - 130
Bromomethane	5.00	5.13		ug/L		103	53 - 141
Carbon disulfide	5.00	5.18		ug/L		104	64 - 133
Carbon tetrachloride	5.00	4.78		ug/L		96	72 - 136
Chlorobenzene	5.00	5.11		ug/L		102	82 - 118
Chloroethane	5.00	5.07		ug/L		101	60 - 138
Chloroform	5.00	5.07		ug/L		101	79 - 124
Chloromethane	5.00	4.84		ug/L		97	50 - 139
cis-1,3-Dichloropropene	5.00	5.41		ug/L		108	75 - 124
Dibromochloromethane	5.00	4.94		ug/L		99	74 - 126
Ethylbenzene	5.00	5.04		ug/L		101	79 - 121
Methylene Chloride	5.00	5.01		ug/L		100	74 - 124
Styrene	5.00	5.09		ug/L		102	78 - 123
Tetrachloroethene	5.00	4.95		ug/L		99	74 - 129
Toluene	5.00	5.30		ug/L		106	80 - 121
trans-1,3-Dichloropropene	5.00	4.79		ug/L		96	73 - 127
Trichloroethene	5.00	5.01		ug/L		100	79 - 123
Vinyl chloride	5.00	4.90		ug/L		98	58 - 137
Xylenes, Total	10.0	10.2		ug/L		102	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-435687/1-A
Matrix: Water
Analysis Batch: 437389

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435687

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28	ug/L		11/13/18 12:09	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-435687/1-A
Matrix: Water
Analysis Batch: 437389

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435687

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dichlorobenzene	0.50	U	10	0.50	0.23	ug/L		11/13/18 12:09	1
1,3-Dichlorobenzene	1.0	U	10	1.0	0.30	ug/L		11/13/18 12:09	1
1,4-Dichlorobenzene	1.0	U	10	1.0	0.32	ug/L		11/13/18 12:09	1
1,4-Dioxane	4.4	U	18	4.4	1.7	ug/L		11/13/18 12:09	1
2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45	ug/L		11/13/18 12:09	1
2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29	ug/L		11/13/18 12:09	1
2,4-Dichlorophenol	2.0	U	10	2.0	0.64	ug/L		11/13/18 12:09	1
2,4-Dimethylphenol	2.0	U	10	2.0	0.58	ug/L		11/13/18 12:09	1
2,4-Dinitrophenol	30	U	80	30	10	ug/L		11/13/18 12:09	1
2,4-Dinitrotoluene	4.4	U	20	4.4	1.7	ug/L		11/13/18 12:09	1
2,6-Dinitrotoluene	4.4	U	20	4.4	1.9	ug/L		11/13/18 12:09	1
2-Chloronaphthalene	1.0	U	10	1.0	0.26	ug/L		11/13/18 12:09	1
2-Chlorophenol	4.4	U	10	4.4	2.0	ug/L		11/13/18 12:09	1
2-Methylphenol	2.0	U	10	2.0	0.98	ug/L		11/13/18 12:09	1
2-Nitroaniline	4.4	U	50	4.4	1.7	ug/L		11/13/18 12:09	1
2-Nitrophenol	1.0	U	20	1.0	0.39	ug/L		11/13/18 12:09	1
3 & 4 Methylphenol	0.50	U	20	0.50	0.25	ug/L		11/13/18 12:09	1
3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0	ug/L		11/13/18 12:09	1
3-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		11/13/18 12:09	1
4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0	ug/L		11/13/18 12:09	1
4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43	ug/L		11/13/18 12:09	1
4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4	ug/L		11/13/18 12:09	1
4-Chloroaniline	4.4	U	25	4.4	2.1	ug/L		11/13/18 12:09	1
4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7	ug/L		11/13/18 12:09	1
4-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		11/13/18 12:09	1
4-Nitrophenol	4.0	U	50	4.0	1.2	ug/L		11/13/18 12:09	1
Benzoic acid	30	U	80	30	10	ug/L		11/13/18 12:09	1
Benzyl alcohol	0.50	U	25	0.50	0.23	ug/L		11/13/18 12:09	1
bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28	ug/L		11/13/18 12:09	1
Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97	ug/L		11/13/18 12:09	1
Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41	ug/L		11/13/18 12:09	1
Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56	ug/L		11/13/18 12:09	1
Butyl benzyl phthalate	2.0	U	20	2.0	1.0	ug/L		11/13/18 12:09	1
Carbazole	1.0	U	10	1.0	0.43	ug/L		11/13/18 12:09	1
Dibenzofuran	1.0	U	10	1.0	0.29	ug/L		11/13/18 12:09	1
Diethyl phthalate	1.0	U	20	1.0	0.38	ug/L		11/13/18 12:09	1
Dimethyl phthalate	0.50	U	20	0.50	0.21	ug/L		11/13/18 12:09	1
Di-n-butyl phthalate	4.4	U	20	4.4	1.2	ug/L		11/13/18 12:09	1
Di-n-octyl phthalate	1.0	U	20	1.0	0.35	ug/L		11/13/18 12:09	1
Hexachlorobenzene	2.0	U	10	2.0	0.66	ug/L		11/13/18 12:09	1
Hexachlorobutadiene	10	U	30	10	3.3	ug/L		11/13/18 12:09	1
Hexachlorocyclopentadiene	30	U	50	30	10	ug/L		11/13/18 12:09	1
Hexachloroethane	4.4	U	10	4.4	2.1	ug/L		11/13/18 12:09	1
Isophorone	0.50	U	10	0.50	0.21	ug/L		11/13/18 12:09	1
Nitrobenzene	2.0	U	20	2.0	0.81	ug/L		11/13/18 12:09	1
N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35	ug/L		11/13/18 12:09	1
N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44	ug/L		11/13/18 12:09	1
Pentachlorophenol	60	U	80	60	20	ug/L		11/13/18 12:09	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-435687/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 437389 **Prep Batch: 435687**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Phenol	4.4	U	10	4.4	2.0	ug/L		11/13/18 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*43 - 140*	*10/31/18 10:52*	*11/13/18 12:09*	*1*
2-Fluorobiphenyl	*82*		*44 - 119*	*10/31/18 10:52*	*11/13/18 12:09*	*1*
2-Fluorophenol (Surr)	*87*		*19 - 119*	*10/31/18 10:52*	*11/13/18 12:09*	*1*
Nitrobenzene-d5 (Surr)	*87*		*44 - 120*	*10/31/18 10:52*	*11/13/18 12:09*	*1*
Phenol-d5 (Surr)	*90*		*10 - 115*	*10/31/18 10:52*	*11/13/18 12:09*	*1*
Terphenyl-d14 (Surr)	*95*		*50 - 134*	*10/31/18 10:52*	*11/13/18 12:09*	*1*

Lab Sample ID: LCS 280-435687/2-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 437389 **Prep Batch: 435687**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	80.0	66.9		ug/L		84	29 - 116
1,2-Dichlorobenzene	80.0	68.3		ug/L		85	32 - 111
1,3-Dichlorobenzene	80.0	66.7		ug/L		83	28 - 110
1,4-Dichlorobenzene	80.0	67.3		ug/L		84	29 - 112
1,4-Dioxane	80.0	58.5		ug/L		73	47 - 120
2,4,5-Trichlorophenol	80.0	73.8		ug/L		92	53 - 123
2,4,6-Trichlorophenol	80.0	78.7		ug/L		98	50 - 125
2,4-Dichlorophenol	80.0	71.5		ug/L		89	47 - 121
2,4-Dimethylphenol	80.0	62.3		ug/L		78	31 - 124
2,4-Dinitrophenol	160	146		ug/L		91	23 - 143
2,4-Dinitrotoluene	80.0	76.7		ug/L		96	57 - 128
2,6-Dinitrotoluene	80.0	75.2		ug/L		94	57 - 124
2-Chloronaphthalene	80.0	70.2		ug/L		88	40 - 116
2-Chlorophenol	80.0	69.8		ug/L		87	38 - 117
2-Methylphenol	80.0	70.1		ug/L		88	30 - 117
2-Nitroaniline	80.0	74.3		ug/L		93	55 - 127
2-Nitrophenol	80.0	72.7		ug/L		91	47 - 123
3 & 4 Methylphenol	80.0	71.6		ug/L		90	29 - 110
3,3'-Dichlorobenzidine	160	139		ug/L		87	27 - 129
3-Nitroaniline	80.0	60.3		ug/L		75	41 - 128
4-Bromophenyl phenyl ether	80.0	71.9		ug/L		90	55 - 124
4-Chloro-3-methylphenol	80.0	71.2		ug/L		89	52 - 119
4-Chloroaniline	80.0	56.4		ug/L		70	33 - 117
4-Chlorophenyl phenyl ether	80.0	72.2		ug/L		90	53 - 121
4-Nitroaniline	80.0	72.4		ug/L		91	70 - 120
4-Nitrophenol	160	149		ug/L		93	59 - 129
Benzoic acid	80.0	56.1	J	ug/L		70	41 - 120
Benzyl alcohol	80.0	72.7		ug/L		91	31 - 112
bis (2-chloroisopropyl) ether	80.0	75.5		ug/L		94	37 - 130
Bis(2-chloroethoxy)methane	80.0	72.6		ug/L		91	48 - 120
Bis(2-chloroethyl)ether	80.0	77.2		ug/L		96	43 - 118
Bis(2-ethylhexyl) phthalate	80.0	70.7		ug/L		88	55 - 135
Butyl benzyl phthalate	80.0	74.1		ug/L		93	53 - 134

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-435687/2-A
Matrix: Water
Analysis Batch: 437389

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435687

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbazole	80.0	73.6		ug/L		92	60 - 122
Dibenzofuran	80.0	72.5		ug/L		91	53 - 118
Diethyl phthalate	80.0	72.8		ug/L		91	56 - 125
Dimethyl phthalate	80.0	74.1		ug/L		93	45 - 127
Di-n-butyl phthalate	80.0	74.2		ug/L		93	59 - 127
Di-n-octyl phthalate	80.0	67.6		ug/L		84	51 - 140
Hexachlorobenzene	80.0	73.8		ug/L		92	53 - 125
Hexachlorobutadiene	80.0	68.1		ug/L		85	22 - 124
Hexachloroethane	80.0	65.6		ug/L		82	21 - 115
Isophorone	80.0	70.5		ug/L		88	42 - 124
Nitrobenzene	80.0	72.2		ug/L		90	45 - 121
N-Nitrosodi-n-propylamine	80.0	69.4		ug/L		87	49 - 119
N-Nitrosodiphenylamine	80.0	74.9		ug/L		94	51 - 123
Pentachlorophenol	160	144		ug/L		90	35 - 138
Phenol	80.0	70.6		ug/L		88	61 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*95*		*43 - 140*
2-Fluorobiphenyl	*89*		*44 - 119*
2-Fluorophenol (Surr)	*89*		*19 - 119*
Nitrobenzene-d5 (Surr)	*92*		*44 - 120*
Phenol-d5 (Surr)	*90*		*10 - 115*
Terphenyl-d14 (Surr)	*86*		*50 - 134*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-435408/1-A
Matrix: Water
Analysis Batch: 435950

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435408

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.012	U	0.10	0.012	0.0059	ug/L		11/01/18 23:01	1
2-Methylnaphthalene	0.012	U	0.10	0.012	0.0060	ug/L		11/01/18 23:01	1
Acenaphthene	0.040	U	0.10	0.040	0.0042	ug/L		11/01/18 23:01	1
Acenaphthylene	0.040	U	0.10	0.040	0.0051	ug/L		11/01/18 23:01	1
Anthracene	0.040	U M	0.10	0.040	0.0056	ug/L		11/01/18 23:01	1
Benzo[a]anthracene	0.012	U	0.10	0.012	0.0042	ug/L		11/01/18 23:01	1
Benzo[a]pyrene	0.012	U M	0.10	0.012	0.0069	ug/L		11/01/18 23:01	1
Benzo[b]fluoranthene	0.012	U M	0.10	0.012	0.0031	ug/L		11/01/18 23:01	1
Benzo[g,h,i]perylene	0.012	U M	0.10	0.012	0.0062	ug/L		11/01/18 23:01	1
Benzo[k]fluoranthene	0.012	U M	0.10	0.012	0.0063	ug/L		11/01/18 23:01	1
Chrysene	0.012	U	0.10	0.012	0.0033	ug/L		11/01/18 23:01	1
Dibenz(a,h)anthracene	0.012	U	0.10	0.012	0.0041	ug/L		11/01/18 23:01	1
Fluoranthene	0.012	U	0.10	0.012	0.0048	ug/L		11/01/18 23:01	1
Fluorene	0.040	U	0.10	0.040	0.0055	ug/L		11/01/18 23:01	1
Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.040	0.0045	ug/L		11/01/18 23:01	1
Naphthalene	0.012	U	0.10	0.012	0.0080	ug/L		11/01/18 23:01	1
Phenanthrene	0.0181	J	0.10	0.020	0.0093	ug/L		11/01/18 23:01	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 280-435408/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435950 **Prep Batch: 435408**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Pyrene	0.020	U	0.10	0.020	0.0061	ug/L		11/01/18 23:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*53 - 106*	*10/29/18 21:02*	*11/01/18 23:01*	*1*
Nitrobenzene-d5	*56*		*55 - 111*	*10/29/18 21:02*	*11/01/18 23:01*	*1*
Terphenyl-d14	*92*		*58 - 132*	*10/29/18 21:02*	*11/01/18 23:01*	*1*

Lab Sample ID: LCS 280-435408/2-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 435950 **Prep Batch: 435408**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	0.900	0.625		ug/L		69	41 - 115
2-Methylnaphthalene	0.900	0.598		ug/L		66	39 - 114
Acenaphthene	0.900	0.685		ug/L		76	48 - 114
Acenaphthylene	0.900	0.648		ug/L		72	35 - 121
Anthracene	0.900	0.704		ug/L		78	53 - 119
Benzo[a]anthracene	0.900	0.848		ug/L		94	59 - 120
Benzo[a]pyrene	0.900	0.731		ug/L		81	53 - 120
Benzo[b]fluoranthene	0.900	0.757		ug/L		84	53 - 126
Benzo[g,h,i]perylene	0.900	0.632		ug/L		70	44 - 128
Benzo[k]fluoranthene	0.900	0.803		ug/L		89	54 - 125
Chrysene	0.900	0.785		ug/L		87	57 - 120
Dibenz(a,h)anthracene	0.900	0.626		ug/L		70	44 - 131
Fluoranthene	0.900	0.783		ug/L		87	58 - 120
Fluorene	0.900	0.694		ug/L		77	50 - 118
Indeno[1,2,3-cd]pyrene	0.900	0.637		ug/L		71	48 - 130
Naphthalene	0.900	0.595		ug/L		66	43 - 114
Phenanthrene	0.900	0.716		ug/L		80	53 - 115
Pyrene	0.900	0.784		ug/L		87	53 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*66*		*53 - 106*
Nitrobenzene-d5	*78*		*55 - 111*
Terphenyl-d14	*87*		*58 - 132*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 280-435801/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 437597 **Prep Batch: 435801**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4,4'-DDD	0.020	U	0.050	0.020	0.0077	ug/L		11/14/18 19:18	1
4,4'-DDE	0.020	U	0.050	0.020	0.0075	ug/L		11/14/18 19:18	1
4,4'-DDT	0.050	U	0.050	0.050	0.015	ug/L		11/14/18 19:18	1
Aldrin	0.020	U	0.050	0.020	0.0059	ug/L		11/14/18 19:18	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 280-435801/1-A
Matrix: Water
Analysis Batch: 437597

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435801

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
alpha-BHC	0.020	U	0.050	0.020	0.0053	ug/L		11/14/18 19:18	1
alpha-Chlordane	0.020	U	0.050	0.020	0.0053	ug/L		11/14/18 19:18	1
beta-BHC	0.020	U	0.050	0.020	0.0087	ug/L		11/14/18 19:18	1
delta-BHC	0.020	U	0.050	0.020	0.0058	ug/L		11/14/18 19:18	1
Dieldrin	0.020	U	0.050	0.020	0.0063	ug/L		11/14/18 19:18	1
Endosulfan I	0.020	U	0.050	0.020	0.0058	ug/L		11/14/18 19:18	1
Endosulfan II	0.020	U	0.050	0.020	0.0070	ug/L		11/14/18 19:18	1
Endosulfan sulfate	0.020	U	0.050	0.020	0.0057	ug/L		11/14/18 19:18	1
Endrin	0.020	U	0.050	0.020	0.0079	ug/L		11/14/18 19:18	1
Endrin aldehyde	0.020	U	0.050	0.020	0.0088	ug/L		11/14/18 19:18	1
Endrin ketone	0.020	U	0.050	0.020	0.0070	ug/L		11/14/18 19:18	1
gamma-BHC (Lindane)	0.020	U	0.050	0.020	0.0069	ug/L		11/14/18 19:18	1
gamma-Chlordane	0.020	U	0.050	0.020	0.0091	ug/L		11/14/18 19:18	1
Heptachlor	0.020	U	0.050	0.020	0.0077	ug/L		11/14/18 19:18	1
Heptachlor epoxide	0.020	U	0.050	0.020	0.0075	ug/L		11/14/18 19:18	1
Methoxychlor	0.050	U	0.050	0.050	0.013	ug/L		11/14/18 19:18	1
Toxaphene	0.80	U	2.0	0.80	0.37	ug/L		11/14/18 19:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*71*		*34 - 122*	*11/01/18 08:30*	*11/14/18 19:18*	*1*
Tetrachloro-m-xylene	*58*		*44 - 124*	*11/01/18 08:30*	*11/14/18 19:18*	*1*

Lab Sample ID: LCS 280-435801/2-A
Matrix: Water
Analysis Batch: 437597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.500	0.402		ug/L		80	56 - 143
4,4'-DDE	0.500	0.313		ug/L		63	57 - 135
4,4'-DDT	0.500	0.398		ug/L		80	51 - 143
Aldrin	0.500	0.292		ug/L		58	45 - 134
alpha-BHC	0.500	0.380		ug/L		76	54 - 138
alpha-Chlordane	0.500	0.394		ug/L		79	60 - 129
beta-BHC	0.500	0.362		ug/L		72	56 - 136
delta-BHC	0.500	0.403		ug/L		81	52 - 142
Dieldrin	0.500	0.429		ug/L		86	60 - 136
Endosulfan I	0.500	0.404		ug/L		81	62 - 126
Endosulfan II	0.500	0.406		ug/L		81	52 - 135
Endosulfan sulfate	0.500	0.455		ug/L		91	62 - 133
Endrin	0.500	0.415		ug/L		83	60 - 138
Endrin aldehyde	0.500	0.295		ug/L		59	51 - 132
Endrin ketone	0.500	0.414		ug/L		83	58 - 134
gamma-BHC (Lindane)	0.500	0.387		ug/L		77	59 - 134
gamma-Chlordane	0.500	0.380		ug/L		76	56 - 136
Heptachlor	0.500	0.317		ug/L		63	54 - 130
Heptachlor epoxide	0.500	0.380		ug/L		76	61 - 133
Methoxychlor	0.500	0.458		ug/L		92	54 - 145

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-435801/2-A
Matrix: Water
Analysis Batch: 437597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435801

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*70*		*34 - 122*
Tetrachloro-m-xylene	*48*		*44 - 124*

Lab Sample ID: LCS 280-435801/3-A
Matrix: Water
Analysis Batch: 437597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435801

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toxaphene			2.00	1.13	J	ug/L		57	33 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*68*		*34 - 122*
Tetrachloro-m-xylene	*44*		*44 - 124*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-436278/1-A
Matrix: Water
Analysis Batch: 438794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436278

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
PCB-1016	0.40	U M	1.0	0.40	0.12	ug/L		11/26/18 21:26	1
PCB-1221	0.25	U M	1.0	0.25	0.21	ug/L		11/26/18 21:26	1
PCB-1232	0.60	U M	1.0	0.60	0.17	ug/L		11/26/18 21:26	1
PCB-1242	0.30	U M	1.0	0.30	0.10	ug/L		11/26/18 21:26	1
PCB-1248	0.30	U M	1.0	0.30	0.092	ug/L		11/26/18 21:26	1
PCB-1254	0.25	U M	1.0	0.25	0.11	ug/L		11/26/18 21:26	1
PCB-1260	0.40	U M	1.0	0.40	0.16	ug/L		11/26/18 21:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*80*		*25 - 120*	*11/05/18 09:12*	*11/26/18 21:26*	*1*
DCB Decachlorobiphenyl	*87*		*30 - 136*	*11/05/18 09:12*	*11/26/18 21:26*	*1*

Lab Sample ID: LCS 280-436278/2-A
Matrix: Water
Analysis Batch: 438794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436278

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			2.00	1.98		ug/L		99	46 - 129		
PCB-1260			2.00	2.00		ug/L		100	45 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*85*		*25 - 120*
DCB Decachlorobiphenyl	*85*		*30 - 136*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-435507/1-A
Matrix: Water
Analysis Batch: 435887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435507

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20	ug/L		11/02/18 04:41	1
1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089	ug/L		11/02/18 04:41	1
2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072	ug/L		11/02/18 04:41	1
2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084	ug/L		11/02/18 04:41	1
2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065	ug/L		11/02/18 04:41	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051	ug/L		11/02/18 04:41	1
2-Nitrotoluene	0.20	U	0.40	0.20	0.086	ug/L		11/02/18 04:41	1
3-Nitrotoluene	0.20	U	0.40	0.20	0.083	ug/L		11/02/18 04:41	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058	ug/L		11/02/18 04:41	1
4-Nitrotoluene	0.40	U	1.0	0.40	0.20	ug/L		11/02/18 04:41	1
HMX	0.20	U	0.40	0.20	0.088	ug/L		11/02/18 04:41	1
Nitrobenzene	0.20	U	0.40	0.20	0.091	ug/L		11/02/18 04:41	1
Nitroglycerin	2.0	U	3.0	2.0	0.92	ug/L		11/02/18 04:41	1
PETN	1.2	U	2.0	1.2	0.42	ug/L		11/02/18 04:41	1
RDX	0.12	U	0.20	0.12	0.052	ug/L		11/02/18 04:41	1
Tetryl	0.20	U	0.24	0.20	0.079	ug/L		11/02/18 04:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*101*		*83 - 119*	*10/30/18 13:27*	*11/02/18 04:41*	*1*

Lab Sample ID: LCS 280-435507/2-A
Matrix: Water
Analysis Batch: 435887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435507

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			2.00	2.14		ug/L		107	73 - 125		
1,3-Dinitrobenzene			2.00	2.04		ug/L		102	78 - 120		
2,4,6-Trinitrotoluene			2.00	1.96		ug/L		98	71 - 123		
2,4-Dinitrotoluene			2.00	1.90		ug/L		95	78 - 120		
2,6-Dinitrotoluene			2.00	1.94		ug/L		97	77 - 127		
2-Amino-4,6-dinitrotoluene			2.00	1.88		ug/L		94	79 - 120		
2-Nitrotoluene			2.00	1.54		ug/L		77	70 - 127		
3-Nitrotoluene			2.00	1.43	Q	ug/L		71	73 - 125		
4-Amino-2,6-dinitrotoluene			2.00	1.72		ug/L		86	76 - 125		
4-Nitrotoluene			2.00	1.72		ug/L		86	71 - 127		
HMX			2.00	1.97		ug/L		99	65 - 135		
Nitrobenzene			2.00	1.78		ug/L		89	65 - 134		
Nitroglycerin			20.0	20.6		ug/L		103	74 - 127		
PETN			20.0	19.9		ug/L		99	73 - 127		
RDX			2.00	2.05		ug/L		102	68 - 130		
Tetryl			2.00	2.16		ug/L		108	64 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*102*		*83 - 119*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: MB 280-435841/1-A
Matrix: Water
Analysis Batch: 436503

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435841

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20	ug/L		11/06/18 16:36	1
1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089	ug/L		11/06/18 16:36	1
2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072	ug/L		11/06/18 16:36	1
2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084	ug/L		11/06/18 16:36	1
2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065	ug/L		11/06/18 16:36	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051	ug/L		11/06/18 16:36	1
2-Nitrotoluene	0.20	U M	0.40	0.20	0.086	ug/L		11/06/18 16:36	1
3-Nitrotoluene	0.20	U	0.40	0.20	0.083	ug/L		11/06/18 16:36	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058	ug/L		11/06/18 16:36	1
4-Nitrotoluene	0.40	U	1.0	0.40	0.20	ug/L		11/06/18 16:36	1
HMX	0.20	U	0.40	0.20	0.088	ug/L		11/06/18 16:36	1
Nitrobenzene	0.20	U	0.40	0.20	0.091	ug/L		11/06/18 16:36	1
Nitroglycerin	2.0	U	3.0	2.0	0.92	ug/L		11/06/18 16:36	1
PETN	1.2	U	2.0	1.2	0.42	ug/L		11/06/18 16:36	1
RDX	0.12	U	0.20	0.12	0.052	ug/L		11/06/18 16:36	1
Tetryl	0.20	U	0.24	0.20	0.079	ug/L		11/06/18 16:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*109*		*83 - 119*	*11/01/18 12:42*	*11/06/18 16:36*	*1*

Lab Sample ID: LCS 280-435841/2-A
Matrix: Water
Analysis Batch: 436503

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435841

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	2.00	2.12		ug/L		106	73 - 125
1,3-Dinitrobenzene	2.00	2.04		ug/L		102	78 - 120
2,4,6-Trinitrotoluene	2.00	1.97		ug/L		99	71 - 123
2,4-Dinitrotoluene	2.00	1.96		ug/L		98	78 - 120
2,6-Dinitrotoluene	2.00	1.93		ug/L		97	77 - 127
2-Amino-4,6-dinitrotoluene	2.00	1.93		ug/L		97	79 - 120
2-Nitrotoluene	2.00	1.95		ug/L		97	70 - 127
3-Nitrotoluene	2.00	1.69		ug/L		85	73 - 125
4-Amino-2,6-dinitrotoluene	2.00	1.77		ug/L		88	76 - 125
4-Nitrotoluene	2.00	2.22		ug/L		111	71 - 127
HMX	2.00	2.02		ug/L		101	65 - 135
Nitrobenzene	2.00	1.84		ug/L		92	65 - 134
Nitroglycerin	20.0	20.3		ug/L		102	74 - 127
PETN	20.0	19.6		ug/L		98	73 - 127
RDX	2.00	2.04		ug/L		102	68 - 130
Tetryl	2.00	2.15		ug/L		107	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*100*		*83 - 119*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-435537/1-A
Matrix: Water
Analysis Batch: 436427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435537

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		11/05/18 22:07	1
Calcium	140	U	1000	140	35	ug/L		11/05/18 22:07	1
Iron	85	U	100	85	22	ug/L		11/05/18 22:07	1
Magnesium	40	U	500	40	11	ug/L		11/05/18 22:07	1
Potassium	940	U	3000	940	240	ug/L		11/05/18 22:07	1

Lab Sample ID: MB 280-435537/1-A
Matrix: Water
Analysis Batch: 436608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 435537

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sodium	350	U	5000	350	120	ug/L		11/06/18 18:44	1

Lab Sample ID: LCS 280-435537/2-A
Matrix: Water
Analysis Batch: 436427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435537

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	2000	2070		ug/L		104	86 - 115
Calcium	50000	50800		ug/L		102	87 - 113
Iron	1000	1030		ug/L		103	87 - 115
Magnesium	50000	50400		ug/L		101	85 - 113
Potassium	50000	51900		ug/L		104	86 - 114

Lab Sample ID: LCS 280-435537/2-A
Matrix: Water
Analysis Batch: 436608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 435537

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50000	53000		ug/L		106	87 - 115

Lab Sample ID: LCSD 280-435537/3-A
Matrix: Water
Analysis Batch: 436427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 435537

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	2000	2100		ug/L		105	86 - 115	1	20
Calcium	50000	51400		ug/L		103	87 - 113	1	20
Iron	1000	1040		ug/L		104	87 - 115	0	20
Magnesium	50000	51100		ug/L		102	85 - 113	1	20
Potassium	50000	52400		ug/L		105	86 - 114	1	20

Lab Sample ID: LCSD 280-435537/3-A
Matrix: Water
Analysis Batch: 436608

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 435537

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	50000	53600		ug/L		107	87 - 115	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-437198/1-A
Matrix: Water
Analysis Batch: 437317

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437198

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		11/12/18 14:35	1

Lab Sample ID: LCS 280-437198/2-A
Matrix: Water
Analysis Batch: 437317

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437198

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.26		ug/L		105	82 - 119

Lab Sample ID: LCSD 280-437198/3-A
Matrix: Water
Analysis Batch: 437317

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 437198

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	5.13		ug/L		103	82 - 119	2	20

Lab Sample ID: 280-116270-9 MS
Matrix: Water
Analysis Batch: 437317

Client Sample ID: FWGmw-020-181001-GW
Prep Type: Total/NA
Prep Batch: 437198

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.080	U	5.00	5.19		ug/L		104	82 - 119

Lab Sample ID: 280-116270-9 MSD
Matrix: Water
Analysis Batch: 437317

Client Sample ID: FWGmw-020-181001-GW
Prep Type: Total/NA
Prep Batch: 437198

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.080	U	5.00	5.15		ug/L		103	82 - 119	1	20

Method: 9012B - Cyanide, Total and/or Amenable

Lab Sample ID: MB 280-436821/5-A
Matrix: Water
Analysis Batch: 436904

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436821

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/08/18 16:29	1

Lab Sample ID: HLCS 280-436821/1-A
Matrix: Water
Analysis Batch: 436904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436821

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.350	0.346		mg/L		99	90 - 110

Method: 9012B - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 280-436821/3-A
Matrix: Water
Analysis Batch: 436904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436821

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.106		mg/L		106	83 - 116

Lab Sample ID: LCSD 280-436821/4-A
Matrix: Water
Analysis Batch: 436904

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 436821

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.0970		mg/L		97	83 - 116	9	20

Lab Sample ID: LLCS 280-436821/2-A
Matrix: Water
Analysis Batch: 436904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436821

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.101		mg/L		101	44 - 167

Lab Sample ID: 280-116270-1 MS
Matrix: Water
Analysis Batch: 436904

Client Sample ID: FWGmw-018-181001-GW
Prep Type: Total/NA
Prep Batch: 436821

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0050	U	0.100	0.106		mg/L		106	83 - 116

Lab Sample ID: 280-116270-1 MSD
Matrix: Water
Analysis Batch: 436904

Client Sample ID: FWGmw-018-181001-GW
Prep Type: Total/NA
Prep Batch: 436821

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.0050	U	0.100	0.101		mg/L		101	83 - 116	5	20

QC Association Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116270-1

GC/MS VOA

Analysis Batch: 436980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	8260B	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	8260B	
MB 280-436980/4	Method Blank	Total/NA	Water	8260B	
LCS 280-436980/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-436980/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 437213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-2	FWGTB-181006 TB	Total/NA	Water	8260B	
MB 280-437213/6	Method Blank	Total/NA	Water	8260B	
LCS 280-437213/7	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 435408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	3510C	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	3510C	
MB 280-435408/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-435408/2-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 435687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	3520C	
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	3520C	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	3520C	
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	3520C	
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	3520C	
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	3520C	
MB 280-435687/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-435687/2-A	Lab Control Sample	Total/NA	Water	3520C	

Analysis Batch: 435950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	8270D SIM	435408
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	8270D SIM	435408
MB 280-435408/1-A	Method Blank	Total/NA	Water	8270D SIM	435408
LCS 280-435408/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	435408

Analysis Batch: 437389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	8270D	435687
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	8270D	435687
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	8270D	435687
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	8270D	435687
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	8270D	435687
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	8270D	435687
MB 280-435687/1-A	Method Blank	Total/NA	Water	8270D	435687
LCS 280-435687/2-A	Lab Control Sample	Total/NA	Water	8270D	435687

GC Semi VOA

Prep Batch: 435801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	3510C	
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	3510C	
MB 280-435801/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-435801/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-435801/3-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 436278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	3510C	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	3510C	
MB 280-436278/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-436278/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 437597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	8081B	435801
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	8081B	435801
MB 280-435801/1-A	Method Blank	Total/NA	Water	8081B	435801
LCS 280-435801/2-A	Lab Control Sample	Total/NA	Water	8081B	435801
LCS 280-435801/3-A	Lab Control Sample	Total/NA	Water	8081B	435801

Analysis Batch: 438794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	8082A	436278
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	8082A	436278
MB 280-436278/1-A	Method Blank	Total/NA	Water	8082A	436278
LCS 280-436278/2-A	Lab Control Sample	Total/NA	Water	8082A	436278

HPLC/IC

Prep Batch: 435507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	3535	
280-116270-11	LL3mw-237-181001-GW	Total/NA	Water	3535	
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	3535	
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	3535	
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	3535	
MB 280-435507/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-435507/2-A	Lab Control Sample	Total/NA	Water	3535	

Prep Batch: 435841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	3535	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	3535	
MB 280-435841/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-435841/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 435887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	8330B	435507

HPLC/IC (Continued)

Analysis Batch: 435887 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-11	LL3mw-237-181001-GW	Total/NA	Water	8330B	435507
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	8330B	435507
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	8330B	435507
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	8330B	435507
MB 280-435507/1-A	Method Blank	Total/NA	Water	8330B	435507
LCS 280-435507/2-A	Lab Control Sample	Total/NA	Water	8330B	435507

Analysis Batch: 436121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-11	LL3mw-237-181001-GW	Total/NA	Water	8330B	435507
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	8330B	435507

Analysis Batch: 436503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	8330B	435841
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	8330B	435841
MB 280-435841/1-A	Method Blank	Total/NA	Water	8330B	435841
LCS 280-435841/2-A	Lab Control Sample	Total/NA	Water	8330B	435841

Analysis Batch: 436697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	8330B	435841

Metals

Prep Batch: 435537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	3010A	
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	3010A	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	3010A	
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	3010A	
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	3010A	
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	3010A	
MB 280-435537/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-435537/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-435537/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Prep Batch: 435538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	3020A	
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	3020A	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	3020A	
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	3020A	
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	3020A	
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	3020A	

Analysis Batch: 436427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	6010C	435537
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	6010C	435537

Metals (Continued)

Analysis Batch: 436427 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	6010C	435537
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	6010C	435537
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	6010C	435537
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	6010C	435537
MB 280-435537/1-A	Method Blank	Total/NA	Water	6010C	435537
LCS 280-435537/2-A	Lab Control Sample	Total/NA	Water	6010C	435537
LCSD 280-435537/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	435537

Analysis Batch: 436608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	6010C	435537
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	6010C	435537
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	6010C	435537
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	6010C	435537
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	6010C	435537
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	6010C	435537
MB 280-435537/1-A	Method Blank	Total/NA	Water	6010C	435537
LCS 280-435537/2-A	Lab Control Sample	Total/NA	Water	6010C	435537
LCSD 280-435537/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	435537

Prep Batch: 437198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	7470A	
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	7470A	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	7470A	
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	7470A	
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	7470A	
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	7470A	
MB 280-437198/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-437198/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-437198/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
280-116270-9 MS	FWGmw-020-181001-GW	Total/NA	Water	7470A	
280-116270-9 MSD	FWGmw-020-181001-GW	Total/NA	Water	7470A	

Analysis Batch: 437317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	7470A	437198
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	7470A	437198
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	7470A	437198
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	7470A	437198
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	7470A	437198
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	7470A	437198
MB 280-437198/1-A	Method Blank	Total/NA	Water	7470A	437198
LCS 280-437198/2-A	Lab Control Sample	Total/NA	Water	7470A	437198
LCSD 280-437198/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	437198
280-116270-9 MS	FWGmw-020-181001-GW	Total/NA	Water	7470A	437198
280-116270-9 MSD	FWGmw-020-181001-GW	Total/NA	Water	7470A	437198

Analysis Batch: 437321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	6020A	435538

Metals (Continued)

Analysis Batch: 437321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-8	FWGmw-016-181001-GW	Total/NA	Water	6020A	435538
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	6020A	435538
280-116270-12	LL3mw-244-181001-GW	Total/NA	Water	6020A	435538
280-116270-13	SCFmw-004-181001-GW	Total/NA	Water	6020A	435538
280-116270-14	LL1mw-087-181001-GW	Total/NA	Water	6020A	435538

General Chemistry

Prep Batch: 436821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	9012B	
280-116270-4	LL2mw-264-181001-GW	Total/NA	Water	9012B	
280-116270-5	CBPmw-008-181001-GW	Total/NA	Water	9012B	
280-116270-6	CBPmw-009-181001-GW	Total/NA	Water	9012B	
280-116270-7	LL1mw-089-181001-GW	Total/NA	Water	9012B	
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	9012B	
280-116270-10	LL3mw-234-181001-GW	Total/NA	Water	9012B	
280-116270-15	LL4mw-200-181001-GW	Total/NA	Water	9012B	
MB 280-436821/5-A	Method Blank	Total/NA	Water	9012B	
HLCS 280-436821/1-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 280-436821/3-A	Lab Control Sample	Total/NA	Water	9012B	
LCSD 280-436821/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	
LLCS 280-436821/2-A	Lab Control Sample	Total/NA	Water	9012B	
280-116270-1 MS	FWGmw-018-181001-GW	Total/NA	Water	9012B	
280-116270-1 MSD	FWGmw-018-181001-GW	Total/NA	Water	9012B	

Analysis Batch: 436904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116270-1	FWGmw-018-181001-GW	Total/NA	Water	9012B	436821
280-116270-4	LL2mw-264-181001-GW	Total/NA	Water	9012B	436821
280-116270-5	CBPmw-008-181001-GW	Total/NA	Water	9012B	436821
280-116270-6	CBPmw-009-181001-GW	Total/NA	Water	9012B	436821
280-116270-7	LL1mw-089-181001-GW	Total/NA	Water	9012B	436821
280-116270-9	FWGmw-020-181001-GW	Total/NA	Water	9012B	436821
280-116270-10	LL3mw-234-181001-GW	Total/NA	Water	9012B	436821
280-116270-15	LL4mw-200-181001-GW	Total/NA	Water	9012B	436821
MB 280-436821/5-A	Method Blank	Total/NA	Water	9012B	436821
HLCS 280-436821/1-A	Lab Control Sample	Total/NA	Water	9012B	436821
LCS 280-436821/3-A	Lab Control Sample	Total/NA	Water	9012B	436821
LCSD 280-436821/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	436821
LLCS 280-436821/2-A	Lab Control Sample	Total/NA	Water	9012B	436821
280-116270-1 MS	FWGmw-018-181001-GW	Total/NA	Water	9012B	436821
280-116270-1 MSD	FWGmw-018-181001-GW	Total/NA	Water	9012B	436821

Client Sample ID: FWGmw-018-181001-GW — Lab Sample ID: 280-116270-1

Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436980	11/09/18 17:02	JLS	TAL DEN
Total/NA	Prep	3520C			934.5 mL	1 mL	435687	10/31/18 10:52	JZ	TAL DEN
Total/NA	Analysis	8270D		1			437389	11/13/18 17:00	DCK	TAL DEN
Total/NA	Prep	3510C			237.3 mL	1 mL	435408	10/29/18 21:02	AJE	TAL DEN
Total/NA	Analysis	8270D SIM		1			435950	11/02/18 04:25	MKW	TAL DEN
Total/NA	Prep	3510C			956.7 mL	10 mL	436278	11/05/18 09:12	KJS	TAL DEN
Total/NA	Analysis	8082A		1			438794	11/27/18 03:04	BJP	TAL DEN
Total/NA	Prep	3535			478.3 mL	5 mL	435841	11/01/18 12:42	CBB	TAL DEN
Total/NA	Analysis	8330B		1			436697	11/07/18 19:28	HKF	TAL DEN
Total/NA	Prep	3535			478.3 mL	5 mL	435841	11/01/18 12:42	CBB	TAL DEN
Total/NA	Analysis	8330B		1			436503	11/06/18 17:22	HKF	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436608	11/06/18 19:44	CML	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436427	11/05/18 23:09	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	435538	11/07/18 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437321	11/12/18 16:35	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437198	11/12/18 09:34	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			437317	11/12/18 15:04	THP	TAL DEN
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:31	RK	TAL DEN

Client Sample ID: FWGTB-181006 TB — Lab Sample ID: 280-116270-2

Date Collected: 10/26/18 09:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437213	11/12/18 16:37	JLS	TAL DEN

Client Sample ID: LL2mw-264-181001-GW — Lab Sample ID: 280-116270-4

Date Collected: 10/26/18 14:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:43	RK	TAL DEN

Client Sample ID: CBPmw-008-181001-GW — Lab Sample ID: 280-116270-5

Date Collected: 10/26/18 10:25 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN

Client Sample ID: CBPmw-008-181001-GW — Lab Sample ID: 280-116270-5

Date Collected: 10/26/18 10:25 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:44	RK	TAL DEN

Client Sample ID: CBPmw-009-181001-GW — Lab Sample ID: 280-116270-6

Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:46	RK	TAL DEN

Client Sample ID: LL1mw-089-181001-GW — Lab Sample ID: 280-116270-7

Date Collected: 10/26/18 12:25 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:47	RK	TAL DEN

Client Sample ID: FWGmw-016-181001-GW — Lab Sample ID: 280-116270-8

Date Collected: 10/25/18 15:40 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			901.6 mL	1 mL	435687	10/31/18 10:52	JZ	TAL DEN
Total/NA	Analysis	8270D		1			437389	11/13/18 17:29	DCK	TAL DEN
Total/NA	Prep	3535			450.7 mL	5 mL	435507	10/30/18 13:27	CBB	TAL DEN
Total/NA	Analysis	8330B		1			435887	11/02/18 05:27	HKF	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436608	11/06/18 19:48	CML	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436427	11/05/18 23:12	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	435538	11/07/18 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437321	11/12/18 16:39	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437198	11/12/18 09:34	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			437317	11/12/18 15:07	THP	TAL DEN

Client Sample ID: FWGmw-020-181001-GW — Lab Sample ID: 280-116270-9

Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	436980	11/09/18 17:39	JLS	TAL DEN
Total/NA	Prep	3520C			999.9 mL	1 mL	435687	10/31/18 10:52	JZ	TAL DEN

Client Sample ID: FWGmw-020-181001-GW — Lab Sample ID: 280-116270-9

Date Collected: 10/26/18 10:00 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D		1			437389	11/13/18 17:58	DCK	TAL DEN
Total/NA	Prep	3510C			217.2 mL	1 mL	435408	10/29/18 21:02	AJE	TAL DEN
Total/NA	Analysis	8270D SIM		1			435950	11/02/18 04:54	MKW	TAL DEN
Total/NA	Prep	3510C			957.7 mL	10 mL	436278	11/05/18 09:12	KJS	TAL DEN
Total/NA	Analysis	8082A		1			438794	11/27/18 07:39	BJP	TAL DEN
Total/NA	Prep	3535			452.1 mL	5 mL	435841	11/01/18 12:42	CBB	TAL DEN
Total/NA	Analysis	8330B		1			436503	11/06/18 17:45	HKF	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436608	11/06/18 19:51	CML	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436427	11/05/18 23:16	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	435538	11/07/18 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437321	11/12/18 16:42	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437198	11/12/18 09:34	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			437317	11/12/18 15:09	THP	TAL DEN
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:49	RK	TAL DEN

Client Sample ID: LL3mw-234-181001-GW — Lab Sample ID: 280-116270-10

Date Collected: 10/26/18 11:15 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:50	RK	TAL DEN

Client Sample ID: LL3mw-237-181001-GW — Lab Sample ID: 280-116270-11

Date Collected: 10/26/18 13:10 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			463.5 mL	5 mL	435507	10/30/18 13:27	CBB	TAL DEN
Total/NA	Analysis	8330B		1			436121	11/03/18 08:19	HKF	TAL DEN
Total/NA	Prep	3535			463.5 mL	5 mL	435507	10/30/18 13:27	CBB	TAL DEN
Total/NA	Analysis	8330B		1			435887	11/02/18 05:50	HKF	TAL DEN

Client Sample ID: LL3mw-244-181001-GW — Lab Sample ID: 280-116270-12

Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			997.8 mL	1 mL	435687	10/31/18 10:52	JZ	TAL DEN
Total/NA	Analysis	8270D		1			437389	11/13/18 18:27	DCK	TAL DEN

Client Sample ID: LL3mw-244-181001-GW — Lab Sample ID: 280-116270-12

Date Collected: 10/26/18 08:50 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			990.2 mL	10 mL	435801	11/01/18 08:30	JT	TAL DEN
Total/NA	Analysis	8081B		1			437597	11/14/18 23:24	TEB	TAL DEN
Total/NA	Prep	3535			480 mL	5 mL	435507	10/30/18 13:27	CBB	TAL DEN
Total/NA	Analysis	8330B		1			436121	11/03/18 08:54	HKF	TAL DEN
Total/NA	Prep	3535			480 mL	5 mL	435507	10/30/18 13:27	CBB	TAL DEN
Total/NA	Analysis	8330B		1			435887	11/02/18 06:13	HKF	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436608	11/06/18 19:54	CML	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436427	11/05/18 23:19	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	435538	11/07/18 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437321	11/12/18 16:46	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437198	11/12/18 09:34	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			437317	11/12/18 15:20	THP	TAL DEN

Client Sample ID: SCFmw-004-181001-GW — Lab Sample ID: 280-116270-13

Date Collected: 10/26/18 13:35 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1004 mL	1 mL	435687	10/31/18 10:52	JZ	TAL DEN
Total/NA	Analysis	8270D		1			437389	11/13/18 18:56	DCK	TAL DEN
Total/NA	Prep	3510C			1016.2 mL	10 mL	435801	11/01/18 08:30	JT	TAL DEN
Total/NA	Analysis	8081B		1			437597	11/14/18 23:06	TEB	TAL DEN
Total/NA	Prep	3535			469.1 mL	5 mL	435507	10/30/18 13:27	CBB	TAL DEN
Total/NA	Analysis	8330B		1			435887	11/02/18 06:36	HKF	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436608	11/06/18 19:58	CML	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436427	11/05/18 23:23	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	435538	11/07/18 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437321	11/12/18 16:50	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437198	11/12/18 09:34	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			437317	11/12/18 15:22	THP	TAL DEN

Client Sample ID: LL1mw-087-181001-GW — Lab Sample ID: 280-116270-14

Date Collected: 10/26/18 13:30 **Matrix: Water**
Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			906.3 mL	1 mL	435687	10/31/18 10:52	JZ	TAL DEN
Total/NA	Analysis	8270D		1			437389	11/13/18 19:25	DCK	TAL DEN
Total/NA	Prep	3535			428.5 mL	5 mL	435507	10/30/18 13:27	CBB	TAL DEN

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116270-1

Client Sample ID: LL1mw-087-181001-GW

Lab Sample ID: 280-116270-14

Date Collected: 10/26/18 13:30

Matrix: Water

Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8330B		1			435887	11/02/18 06:59	HKF	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436608	11/06/18 20:01	CML	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	435537	11/02/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436427	11/05/18 23:26	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	435538	11/07/18 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437321	11/12/18 16:54	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437198	11/12/18 09:34	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			437317	11/12/18 15:29	THP	TAL DEN

Client Sample ID: LL4mw-200-181001-GW

Lab Sample ID: 280-116270-15

Date Collected: 10/26/18 14:50

Matrix: Water

Date Received: 10/27/18 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			50 mL	50 mL	436821	11/08/18 09:55	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	436904	11/08/18 16:52	RK	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-116270-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3020A	Water	Thallium

Method Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-116270-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL DEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
8330B	Nitroaromatics and Nitramines (HPLC)	EPA	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
9012B	Cyanide, Total and/or Amenable	EPA	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3535	Solid-Phase Extraction (SPE)	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-116270-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-116270-1	FWGmw-018-181001-GW	Water	10/26/18 09:30	10/27/18 08:50
280-116270-2	FWGTB-181006 TB	Water	10/26/18 09:30	10/27/18 08:50
280-116270-4	LL2mw-264-181001-GW	Water	10/26/18 14:00	10/27/18 08:50
280-116270-5	CBPmw-008-181001-GW	Water	10/26/18 10:25	10/27/18 08:50
280-116270-6	CBPmw-009-181001-GW	Water	10/26/18 08:50	10/27/18 08:50
280-116270-7	LL1mw-089-181001-GW	Water	10/26/18 12:25	10/27/18 08:50
280-116270-8	FWGmw-016-181001-GW	Water	10/25/18 15:40	10/27/18 08:50
280-116270-9	FWGmw-020-181001-GW	Water	10/26/18 10:00	10/27/18 08:50
280-116270-10	LL3mw-234-181001-GW	Water	10/26/18 11:15	10/27/18 08:50
280-116270-11	LL3mw-237-181001-GW	Water	10/26/18 13:10	10/27/18 08:50
280-116270-12	LL3mw-244-181001-GW	Water	10/26/18 08:50	10/27/18 08:50
280-116270-13	SCFmw-004-181001-GW	Water	10/26/18 13:35	10/27/18 08:50
280-116270-14	LL1mw-087-181001-GW	Water	10/26/18 13:30	10/27/18 08:50
280-116270-15	LL4mw-200-181001-GW	Water	10/26/18 14:50	10/27/18 08:50

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 434433

Lab Sample ID: STD005 280-434433/10 IC Client Sample ID:

Date Analyzed: 10/22/18 22:40 Lab File ID: P1532.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	7.37	Assign Peak	seifertj	10/23/18 08:13
Isobutyl alcohol		Invalid Compound ID	seifertj	10/23/18 08:13
Methyl acetate		Invalid Compound ID	seifertj	10/23/18 08:29

Lab Sample ID: STD01 280-434433/11 IC Client Sample ID:

Date Analyzed: 10/22/18 22:59 Lab File ID: P1533.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)	6.64	Assign Peak	newcomer	10/26/18 10:26
sec-Butyl Alcohol	6.68	Baseline	seifertj	10/23/18 12:15
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:27

Lab Sample ID: STD02 280-434433/12 IC Client Sample ID:

Date Analyzed: 10/22/18 23:17 Lab File ID: P1534.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)	6.63	Split Peak	seifertj	10/23/18 08:24
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:25
1,4-Dioxane	8.10	Assign Peak	seifertj	10/23/18 08:25

Lab Sample ID: STD05 280-434433/13 IC Client Sample ID:

Date Analyzed: 10/22/18 23:36 Lab File ID: P1535.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.10	Wrong peak	seifertj	10/23/18 08:21
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:22

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 434433

Lab Sample ID: ICIS 280-434433/14 Client Sample ID:

Date Analyzed: 10/22/18 23:54 Lab File ID: P1536.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:16
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:21

Lab Sample ID: STD25 280-434433/15 IC Client Sample ID:

Date Analyzed: 10/23/18 00:13 Lab File ID: P1537.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.10	Wrong peak	seifertj	10/23/18 08:18

Lab Sample ID: STD60 280-434433/16 IC Client Sample ID:

Date Analyzed: 10/23/18 00:32 Lab File ID: P1538.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.09	Wrong peak	seifertj	10/23/18 08:20
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:21

Lab Sample ID: ICV 280-434433/17 Client Sample ID:

Date Analyzed: 10/23/18 01:12 Lab File ID: P1540.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.12	Wrong peak	seifertj	10/23/18 08:31
1,4-Dioxane	8.10	Split Peak	seifertj	10/23/18 08:31

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 436980

Lab Sample ID: CCV 280-436980/2 Client Sample ID:

Date Analyzed: 11/09/18 08:57 Lab File ID: P2437.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	6.67	Assign Peak	seifertj	11/12/18 13:00
2-Pentanone	7.90	Assign Peak	seifertj	11/12/18 13:00
1,4-Dioxane	8.10	Split Peak	seifertj	11/12/18 13:00
1-Chlorohexane	9.73	Assign Peak	seifertj	11/12/18 13:00

Lab Sample ID: CCV 280-436980/3 Client Sample ID:

Date Analyzed: 11/09/18 09:17 Lab File ID: P2438.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol	4.96	Split Peak	seifertj	11/12/18 13:01
Acetonitrile	5.60	Split Peak	seifertj	11/12/18 13:01

Lab Sample ID: MB 280-436980/4 Client Sample ID:

Date Analyzed: 11/09/18 09:40 Lab File ID: P2439.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	seifertj	11/12/18 13:02

Lab Sample ID: 280-116270-1 Client Sample ID: FWGmw-018-181001-GW

Date Analyzed: 11/09/18 17:02 Lab File ID: P2462.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
m-Xylene & p-Xylene		Invalid Compound ID	seifertj	11/12/18 13:13

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 436980

Lab Sample ID: 280-116270-9 Client Sample ID: FWGmw-020-181001-GW

Date Analyzed: 11/09/18 17:39 Lab File ID: P2464.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	seifertj	11/12/18 13:14

Lab Sample ID: CCVC 280-436980/39 Client Sample ID:

Date Analyzed: 11/09/18 19:12 Lab File ID: P2469.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.10	Split Peak	seifertj	11/14/18 15:42

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Analysis Batch Number: 437213

Lab Sample ID: CCV 280-437213/14 Client Sample ID:

Date Analyzed: 11/12/18 11:40 Lab File ID: P2545.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.10	Split Peak	seifertj	11/13/18 17:08

Lab Sample ID: MB 280-437213/6 Client Sample ID:

Date Analyzed: 11/12/18 11:58 Lab File ID: P2546.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride		Invalid Compound ID	seifertj	11/13/18 17:18

Lab Sample ID: CCVC 280-437213/38 Client Sample ID:

Date Analyzed: 11/12/18 20:29 Lab File ID: P2572.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.12	Wrong peak	seifertj	11/13/18 17:27
1,4-Dioxane	8.10	Split Peak	seifertj	11/15/18 14:56

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_K Analysis Batch Number: 437249

Lab Sample ID: STD004 280-437249/5 IC Client Sample ID:

Date Analyzed: 11/12/18 15:25 Lab File ID: K27518.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.30	Wrong peak	kiekeld	11/13/18 10:26

Lab Sample ID: STD010 280-437249/6 IC Client Sample ID:

Date Analyzed: 11/12/18 15:54 Lab File ID: K27519.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.32	Wrong peak	kiekeld	11/13/18 10:28

Lab Sample ID: STD020 280-437249/7 IC Client Sample ID:

Date Analyzed: 11/12/18 16:23 Lab File ID: K27520.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.33	Wrong peak	kiekeld	11/13/18 10:29

Lab Sample ID: STD050 280-437249/8 IC Client Sample ID:

Date Analyzed: 11/12/18 16:52 Lab File ID: K27521.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.36	Wrong peak	kiekeld	11/13/18 10:30

Lab Sample ID: ICV 280-437249/13 Client Sample ID:

Date Analyzed: 11/12/18 19:17 Lab File ID: K27526.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	5.98	Wrong peak	kiekeld	11/13/18 10:41

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 435404

Lab Sample ID: STD0001 280-435404/4 IC Client Sample ID:

Date Analyzed: 10/29/18 16:32 Lab File ID: F4399.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.26	Assign Peak	wickhamm	10/29/18 19:07
1-Methylnaphthalene	6.76	Assign Peak	wickhamm	10/29/18 19:08
2-Fluorobiphenyl	7.03	Assign Peak	wickhamm	10/29/18 19:07
Acenaphthene-d10	7.71	Baseline	wickhamm	10/29/18 19:07
Benzo[k]fluoranthene		Invalid Compound ID	wickhamm	10/29/18 19:09
Fluoranthene-d10	10.61	Assign Peak	wickhamm	10/29/18 19:09
Terphenyl-d14 (Surr)	11.20	Assign Peak	wickhamm	10/29/18 19:08
Indeno[1,2,3-cd]pyrene	20.52	Incomplete Integration	wickhamm	10/29/18 19:09

Lab Sample ID: STD0002 280-435404/5 IC Client Sample ID:

Date Analyzed: 10/29/18 17:02 Lab File ID: F4400.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.26	Baseline	wickhamm	10/29/18 19:10
2-Fluorobiphenyl	7.03	Baseline	wickhamm	10/29/18 19:10
Acenaphthene-d10	7.71	Baseline	wickhamm	10/29/18 19:09
Acenaphthene	7.75	Baseline	wickhamm	10/29/18 19:10
Terphenyl-d14 (Surr)	11.20	Baseline	wickhamm	10/29/18 19:10
Benzo[k]fluoranthene	16.34	Baseline	wickhamm	10/29/18 19:10
Indeno[1,2,3-cd]pyrene	20.51	Baseline	wickhamm	10/29/18 19:10

Lab Sample ID: STD0500 280-435404/6 IC Client Sample ID:

Date Analyzed: 10/29/18 17:32 Lab File ID: F4401.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.26	Peak assignment corrected	wickhamm	10/29/18 19:11

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 435404

Lab Sample ID: STD0100 280-435404/7 IC Client Sample ID:

Date Analyzed: 10/29/18 18:01 Lab File ID: F4402.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene-d10	7.71	Baseline	wickhamm	10/29/18 19:11
Acenaphthene	7.74	Baseline	wickhamm	10/29/18 19:12
Benzo[k]fluoranthene	16.33	Baseline	wickhamm	10/29/18 19:12

Lab Sample ID: STD0300 280-435404/8 IC Client Sample ID:

Date Analyzed: 10/29/18 18:31 Lab File ID: F4403.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene	7.74	Baseline	wickhamm	10/29/18 19:13
Benzo[k]fluoranthene	16.33	Baseline	wickhamm	10/29/18 19:13

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 435950

Lab Sample ID: CCV 280-435950/3 Client Sample ID:

Date Analyzed: 11/01/18 18:29 Lab File ID: F4474.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene-d10	7.72	Baseline	wickhamm	11/01/18 18:55

Lab Sample ID: MB 280-435408/1-A Client Sample ID:

Date Analyzed: 11/01/18 23:01 Lab File ID: F4483.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Anthracene		Invalid Compound ID	wickhamm	11/02/18 17:10
Benzo[a]pyrene		Invalid Compound ID	wickhamm	11/02/18 17:10
Benzo[b]fluoranthene		Invalid Compound ID	wickhamm	11/02/18 17:10
Benzo[g,h,i]perylene		Invalid Compound ID	wickhamm	11/02/18 17:10
Benzo[k]fluoranthene		Invalid Compound ID	wickhamm	11/02/18 17:10

Lab Sample ID: 280-116270-9 Client Sample ID: FWGmw-020-181001-GW

Date Analyzed: 11/02/18 04:54 Lab File ID: F4495.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzo[a]pyrene		Invalid Compound ID	wickhamm	11/02/18 17:18

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: STD6 280-433303/16 IC Client Sample ID:

Date Analyzed: 10/13/18 16:10 Lab File ID: 011F1901.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 5	8.09	Baseline Smoothing	mooret	10/14/18 21:36

Lab Sample ID: STD4 280-433303/18 IC Client Sample ID:

Date Analyzed: 10/13/18 16:45 Lab File ID: 013F2101.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.25	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:37

Lab Sample ID: STD4 280-433303/18 IC Client Sample ID:

Date Analyzed: 10/13/18 16:45 Lab File ID: 013F2101.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 2	7.15	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 3	7.29	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 5	8.10	Baseline Smoothing	mooret	10/14/18 21:37

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: STD3 280-433303/19 IC Client Sample ID:

Date Analyzed: 10/13/18 17:03 Lab File ID: 014F2201.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.24	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:33

Lab Sample ID: STD2 280-433303/20 IC Client Sample ID:

Date Analyzed: 10/13/18 17:20 Lab File ID: 015F2301.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.24	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:33

Lab Sample ID: STD2 280-433303/20 IC Client Sample ID:

Date Analyzed: 10/13/18 17:20 Lab File ID: 015F2301.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 5	8.10	Baseline Smoothing	mooret	10/14/18 21:33

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: STD1 280-433303/21 IC Client Sample ID:

Date Analyzed: 10/13/18 17:37 Lab File ID: 016F2401.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.25	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:34

Lab Sample ID: STD1 280-433303/21 IC Client Sample ID:

Date Analyzed: 10/13/18 17:37 Lab File ID: 016F2401.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 5	8.10	Baseline Smoothing	mooret	10/14/18 21:34

Lab Sample ID: STD2 280-433303/31 IC Client Sample ID:

Date Analyzed: 10/13/18 20:32 Lab File ID: 026F3401.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Heptachlor epoxide	5.93	Incomplete Integration	mooret	10/14/18 09:17

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: ICV 280-433303/34 Client Sample ID:

Date Analyzed: 10/13/18 21:24 Lab File ID: 029F3701.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene		Unspecified		
Toxaphene Peak 1	6.23	Unspecified	mooret	10/14/18 21:42
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 3	7.52	Unspecified	mooret	10/14/18 21:42
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:40

Lab Sample ID: ICV 280-433303/34 Client Sample ID:

Date Analyzed: 10/13/18 21:24 Lab File ID: 029F3701.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene		Unspecified		
Toxaphene Peak 1	5.77	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 4	7.78	Unspecified	mooret	10/14/18 21:43
Toxaphene Peak 5	8.09	Baseline Smoothing	mooret	10/14/18 21:40

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 437597

Lab Sample ID: CCV 280-437597/34 Client Sample ID:

Date Analyzed: 11/14/18 23:59 Lab File ID: 11140034.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.73	Baseline Smoothing	bacat	12/04/18 14:34
Toxaphene Peak 2	7.08	Baseline Smoothing	bacat	12/04/18 14:34
Toxaphene Peak 3	7.22	Baseline Smoothing	bacat	12/04/18 14:34
Toxaphene Peak 4	7.74	Baseline Smoothing	bacat	12/04/18 14:34
Toxaphene Peak 5	8.03	Baseline Smoothing	bacat	12/04/18 14:34

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL61248 280-438388/5 Client Sample ID:

Date Analyzed: 11/21/18 10:09 Lab File ID: 11211805.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4	5.51	Shouldering	patadiab	11/21/18 11:04

Lab Sample ID: STDL51248 280-438388/6 Client Sample ID:

Date Analyzed: 11/21/18 10:30 Lab File ID: 11211806.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4	5.51	Split Peak	mooret	11/21/18 15:16

Lab Sample ID: STDL52154 280-438388/13 Client Sample ID:

Date Analyzed: 11/21/18 12:58 Lab File ID: 11211813.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:10

Lab Sample ID: STDL42154 280-438388/14 Client Sample ID:

Date Analyzed: 11/21/18 13:19 Lab File ID: 11211814.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:11

Lab Sample ID: STDL32154 280-438388/15 Client Sample ID:

Date Analyzed: 11/21/18 13:41 Lab File ID: 11211815.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:11

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL12154 280-438388/17 Client Sample ID:

Date Analyzed: 11/21/18 14:23 Lab File ID: 11211817.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:12

Lab Sample ID: STDL51660 280-438388/20 Client Sample ID:

Date Analyzed: 11/21/18 15:27 Lab File ID: 11211820.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 2	3.67	Baseline Smoothing	patadiab	11/23/18 10:03
PCB-1016 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:03
PCB-1016 Peak 4	4.27	Baseline Smoothing	patadiab	11/23/18 10:03
PCB-1016 Peak 5	4.50	Baseline Smoothing	patadiab	11/23/18 10:03

Lab Sample ID: STDL73262 280-438388/25 Client Sample ID:

Date Analyzed: 11/21/18 17:13 Lab File ID: 11211825.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 5	4.73	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 1	6.25	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 2	7.16	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 3	7.49	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 4	7.93	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 5	8.32	Baseline Smoothing	patadiab	11/23/18 10:17

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL73262 280-438388/25 Client Sample ID:

Date Analyzed: 11/21/18 17:13 Lab File ID: 11211825.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 1	3.28	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 2	3.67	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 4	4.27	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 5	4.93	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1262 Peak 1	6.65	Baseline Smoothing	patadiab	11/23/18 10:18

Lab Sample ID: STDL63262 280-438388/26 Client Sample ID:

Date Analyzed: 11/21/18 17:34 Lab File ID: 11211826.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 5	4.73	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 1	6.25	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 2	7.16	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 3	7.49	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 4	7.93	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 5	8.32	Baseline Smoothing	patadiab	11/23/18 10:20

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL53262 280-438388/27 Client Sample ID:

Date Analyzed: 11/21/18 17:55 Lab File ID: 11211827.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1232 Peak 4	4.26	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1232 Peak 5	4.73	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 1	6.25	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 2	7.15	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 3	7.49	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 4	7.93	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 5	8.32	Baseline Smoothing	patadiab	11/23/18 10:21

Lab Sample ID: ICV 280-438388/40 Client Sample ID:

Date Analyzed: 11/21/18 22:30 Lab File ID: 11211840.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1	5.18	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 2	5.51	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 3	5.85	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 4	6.62	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 5	6.99	Baseline Smoothing	patadiab	11/23/18 10:39

Lab Sample ID: ICV 280-438388/41 Client Sample ID:

Date Analyzed: 11/21/18 22:51 Lab File ID: 11211841.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 2	3.67	Baseline Smoothing	patadiab	11/23/18 10:41
PCB-1016 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:41
PCB-1016 Peak 4	4.27	Baseline Smoothing	patadiab	11/23/18 10:41
PCB-1016 Peak 5	4.50	Baseline Smoothing	patadiab	11/23/18 10:41

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: ICV 280-438388/43 Client Sample ID:

Date Analyzed: 11/21/18 23:34 Lab File ID: 11211843.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 4	5.24	Peak not integrated	patadiab	11/23/18 11:08
PCB-1242 Peak 5	5.26	Peak not integrated	patadiab	11/23/18 11:08

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: MB 280-436278/1-A Client Sample ID:

Date Analyzed: 11/26/18 21:26 Lab File ID: 11261816.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:32

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: MB 280-436278/1-A Client Sample ID:

Date Analyzed: 11/26/18 21:26 Lab File ID: 11261816.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:32
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:32

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: MB 280-436278/1-A Client Sample ID:

Date Analyzed: 11/26/18 21:26 Lab File ID: 11261816.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: MB 280-436278/1-A Client Sample ID:

Date Analyzed: 11/26/18 21:26 Lab File ID: 11261816.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-1 Client Sample ID: FWGmw-018-181001-GW

Date Analyzed: 11/27/18 03:04 Lab File ID: 11261832.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:51

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-1 Client Sample ID: FWGmw-018-181001-GW

Date Analyzed: 11/27/18 03:04 Lab File ID: 11261832.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/28/18 12:51
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/28/18 12:51

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-1 Client Sample ID: FWGmw-018-181001-GW

Date Analyzed: 11/27/18 03:04 Lab File ID: 11261832.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		

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PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-1 Client Sample ID: FWGmw-018-181001-GW

Date Analyzed: 11/27/18 03:04 Lab File ID: 11261832.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		

Lab Sample ID: CCV 280-438794/38 Client Sample ID:

Date Analyzed: 11/27/18 05:11 Lab File ID: 11261838.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	3.27	Baseline Smoothing	patadiab	11/27/18 07:02
PCB-1016 Peak 2	3.63	Baseline Smoothing	patadiab	11/27/18 07:02
PCB-1016 Peak 3	4.12	Baseline Smoothing	patadiab	11/27/18 07:02
PCB-1016 Peak 4	4.26	Baseline Smoothing	patadiab	11/27/18 07:02
PCB-1016 Peak 5	4.73	Baseline Smoothing	patadiab	11/27/18 07:02

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-9 Client Sample ID: FWGmw-020-181001-GW

Date Analyzed: 11/27/18 07:39 Lab File ID: 11261845.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/28/18 13:10

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-9 Client Sample ID: FWGmw-020-181001-GW

Date Analyzed: 11/27/18 07:39 Lab File ID: 11261845.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/28/18 13:10
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/28/18 13:10

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-9 Client Sample ID: FWGmw-020-181001-GW

Date Analyzed: 11/27/18 07:39 Lab File ID: 11261845.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		

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PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438794

Lab Sample ID: 280-116270-9 Client Sample ID: FWGmw-020-181001-GW

Date Analyzed: 11/27/18 07:39 Lab File ID: 11261845.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 433312

Lab Sample ID: IC 280-433312/10 Client Sample ID:

Date Analyzed: 10/13/18 18:08 Lab File ID: 10130010.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:52

Lab Sample ID: IC 280-433312/11 Client Sample ID:

Date Analyzed: 10/13/18 18:43 Lab File ID: 10130011.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:51

Lab Sample ID: IC 280-433312/13 Client Sample ID:

Date Analyzed: 10/13/18 19:53 Lab File ID: 10130013.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:58
2,4,6-Trinitrotoluene	24.74	Baseline Smoothing	fiedlerh	10/14/18 13:58

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 433312

Lab Sample ID: IC 280-433312/14 Client Sample ID:

Date Analyzed: 10/13/18 20:28 Lab File ID: 10130014.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.14	Baseline Smoothing	fiedlerh	10/14/18 13:55
RDX	9.22	Baseline Smoothing	fiedlerh	10/14/18 13:56
Nitrobenzene	12.16	Baseline Smoothing	fiedlerh	10/14/18 13:56
1,2-Dinitrobenzene	13.16	Baseline Smoothing	fiedlerh	10/14/18 13:58
3,5-Dinitroaniline	15.12	Baseline Smoothing	fiedlerh	10/14/18 13:56
1,3-Dinitrobenzene	15.72	Baseline Smoothing	fiedlerh	10/14/18 13:53
2-Nitrotoluene	16.50	Baseline Smoothing	fiedlerh	10/14/18 13:57
4-Nitrotoluene	16.82	Baseline Smoothing	fiedlerh	10/14/18 13:57
4-Amino-2,6-dinitrotoluene	17.22	Baseline Smoothing	fiedlerh	10/14/18 13:57
3-Nitrotoluene	17.74	Baseline Smoothing	fiedlerh	10/14/18 13:56
2-Amino-4,6-dinitrotoluene	18.26	Baseline Smoothing	fiedlerh	10/14/18 13:56
2,6-Dinitrotoluene	19.84	Baseline Smoothing	fiedlerh	10/14/18 13:57
Tetryl	23.72	Baseline Smoothing	fiedlerh	10/14/18 13:57
2,4,6-Trinitrotoluene	24.75	Baseline Smoothing	fiedlerh	10/14/18 13:57
PETN	25.15	Baseline Smoothing	fiedlerh	10/14/18 13:57

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 436697

Lab Sample ID: 280-116270-1 Client Sample ID: FWGmw-018-181001-GW

Date Analyzed: 11/07/18 19:28 Lab File ID: 11070010.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	fiedlerh	11/08/18 09:55
4-Nitrotoluene		Invalid Compound ID	fiedlerh	11/08/18 09:55

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 435887

Lab Sample ID: 280-116270-8 Client Sample ID: FWGmw-016-181001-GW

Date Analyzed: 11/02/18 05:27 Lab File ID: 11010043.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX		Invalid Compound ID	fiedlerh	11/02/18 16:09
Tetryl		Invalid Compound ID	fiedlerh	11/02/18 16:09

Lab Sample ID: 280-116270-11 Client Sample ID: LL3mw-237-181001-GW

Date Analyzed: 11/02/18 05:50 Lab File ID: 11010044.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX		Invalid Compound ID	fiedlerh	11/02/18 16:09
Tetryl		Invalid Compound ID	fiedlerh	11/02/18 16:09

Lab Sample ID: 280-116270-12 Client Sample ID: LL3mw-244-181001-GW

Date Analyzed: 11/02/18 06:13 Lab File ID: 11010045.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
RDX	7.77	Baseline Smoothing	fiedlerh	11/02/18 16:10
Tetryl		Invalid Compound ID	fiedlerh	11/02/18 16:10

Lab Sample ID: 280-116270-13 Client Sample ID: SCFmw-004-181001-GW

Date Analyzed: 11/02/18 06:36 Lab File ID: 11010046.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX		Invalid Compound ID	fiedlerh	11/02/18 16:10

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 435887

Lab Sample ID: 280-116270-14 Client Sample ID: LL1mw-087-181001-GW

Date Analyzed: 11/02/18 06:59 Lab File ID: 11010047.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX		Invalid Compound ID	fiedlerh	11/02/18 16:10

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 436503

Lab Sample ID: MB 280-435841/1-A Client Sample ID:

Date Analyzed: 11/06/18 16:36 Lab File ID: 11060013.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene		Invalid Compound ID	fiedlerh	11/07/18 08:29

Lab Sample ID: 280-116270-1 Client Sample ID: FWGmw-018-181001-GW

Date Analyzed: 11/06/18 17:22 Lab File ID: 11060015.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX		Invalid Compound ID	fiedlerh	11/07/18 08:29

Lab Sample ID: 280-116270-9 Client Sample ID: FWGmw-020-181001-GW

Date Analyzed: 11/06/18 17:45 Lab File ID: 11060016.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene		Invalid Compound ID	fiedlerh	11/07/18 08:29
HMX		Invalid Compound ID	fiedlerh	11/07/18 08:29

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8081 LCS_00450	11/07/18	11/01/18	P&T Methanol, Lot MethanolP&T_00216	50 mL	8081HCBPrim_00001	0.5 mL	Hexachlorobenzene	0.5 ug/mL
					8081LCSPrim_00041	0.5 mL	4,4'-DDD	0.5 ug/mL
							4,4'-DDE	0.5 ug/mL
							4,4'-DDT	0.5 ug/mL
							Aldrin	0.5 ug/mL
							alpha-BHC	0.5 ug/mL
							alpha-Chlordane	0.5 ug/mL
							beta-BHC	0.5 ug/mL
							delta-BHC	0.5 ug/mL
							Dieldrin	0.5 ug/mL
							Endosulfan I	0.5 ug/mL
							Endosulfan II	0.5 ug/mL
							Endosulfan sulfate	0.5 ug/mL
							Endrin	0.5 ug/mL
							Endrin aldehyde	0.5 ug/mL
							Endrin ketone	0.5 ug/mL
							gamma-BHC (Lindane)	0.5 ug/mL
							gamma-Chlordane	0.5 ug/mL
							Heptachlor	0.5 ug/mL
							Heptachlor epoxide	0.5 ug/mL
							Methoxychlor	0.5 ug/mL
.8081HCBPrim_00001	06/14/19	06/14/18	Hexane, Lot Hexane Cycl 00050	10 mL	8081HCBStkSS_00036	0.5 mL	Hexachlorobenzene	50 ug/mL
..8081HCBStkSS_00036	06/14/19	Ultra Scientific, Lot CR-5129			(Purchased Reagent)		Hexachlorobenzene	1000 ug/mL
.8081LCSPrim_00041	01/30/19	07/30/18	Hexane, Lot Hexane_Cycl_00051	10 mL	8081ABResPS_00028	0.25 mL	4,4'-DDD	50 ug/mL
							4,4'-DDE	50 ug/mL
							4,4'-DDT	50 ug/mL
							Aldrin	50 ug/mL
							alpha-BHC	50 ug/mL
							alpha-Chlordane	50 ug/mL
							beta-BHC	50 ug/mL
							delta-BHC	50 ug/mL
							Dieldrin	50 ug/mL
							Endosulfan I	50 ug/mL
							Endosulfan II	50 ug/mL
							Endosulfan sulfate	50 ug/mL
							Endrin	50 ug/mL
							Endrin aldehyde	50 ug/mL
							Endrin ketone	50 ug/mL
							gamma-BHC (Lindane)	50 ug/mL
							gamma-Chlordane	50 ug/mL
							Heptachlor	50 ug/mL
							Heptachlor epoxide	50 ug/mL
							Methoxychlor	50 ug/mL
..8081ABResPS_00028	04/30/22	Restek, Lot A0108399			(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
8081/82 Surr_00105	03/25/19	09/25/18	ACETONE, Lot Acetone_00232	1000 mL	AR_SURR_RES_00084	1 mL	DCB Decachlorobiphenyl	0.2 ug/mL
							Tetrachloro-m-xylene	0.2 ug/mL
.AR_SURR_RES_00084	11/30/23		RESTEK, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081_EvalBPEM_00013	02/27/19	08/27/18	Hexane, Lot 173156	100 mL	8081EvalBStk2_00020	20 uL	4,4'-DDT	0.04 ug/mL
							Endrin	0.04 ug/mL
.8081EvalBStk2_00020	02/27/19		AccuStandard, Inc, Lot 217101288		(Purchased Reagent)		4,4'-DDT	200 ug/mL
							Endrin	200 ug/mL
8081_IS_00008	12/02/18	06/02/18	Hexane, Lot 189035	500 mL	BNB stock_00014	1 mL	1-Bromo-2-nitrobenzene	2 ug/mL
.BNB stock_00014	08/31/20		Restek, Lot A0127264		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
8081ABICVL3_00035	02/28/19	10/13/18	Hexane, Lot 190112	100 mL	8081ABICVStk_00034	2.5 mL	4,4'-DDD	25 ng/mL
							4,4'-DDE	25 ng/mL
							4,4'-DDT	25 ng/mL
							Aldrin	25 ng/mL
							alpha-BHC	25 ng/mL
							alpha-Chlordane	25 ng/mL
							beta-BHC	25 ng/mL
							delta-BHC	25 ng/mL
							Dieldrin	25 ng/mL
							Endosulfan I	25 ng/mL
							Endosulfan II	25 ng/mL
							Endosulfan sulfate	25 ng/mL
							Endrin	25 ng/mL
							Endrin aldehyde	25 ng/mL
							Endrin ketone	25 ng/mL
							gamma-BHC (Lindane)	25 ng/mL
							gamma-Chlordane	25 ng/mL
							Heptachlor	25 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Heptachlor epoxide	25 ng/mL
							Methoxychlor	25 ng/mL
							DCB Decachlorobiphenyl	25 ng/mL
							Tetrachloro-m-xylene	25 ng/mL
.8081ABICVStk_00034	02/28/19	10/13/18	Hexane, Lot 190112	50 mL	8081ABResSS_00012	0.025 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					AR_SURR_RES_00093	0.25 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResSS_00012	02/28/19		Restek, Lot A0108854		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..AR_SURR_RES_00093	04/13/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8081IcalL1_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	0.4 mL	4,4'-DDD	4 ng/mL
							4,4'-DDE	4 ng/mL
							4,4'-DDT	4 ng/mL
							Aldrin	4 ng/mL
							alpha-BHC	4 ng/mL
							alpha-Chlordane	4 ng/mL
							beta-BHC	4 ng/mL
							delta-BHC	4 ng/mL
							Dieldrin	4 ng/mL
							Endosulfan I	4 ng/mL
							Endosulfan II	4 ng/mL
							Endosulfan sulfate	4 ng/mL
							Endrin	4 ng/mL
							Endrin aldehyde	4 ng/mL
							Endrin ketone	4 ng/mL
							gamma-BHC (Lindane)	4 ng/mL
							gamma-Chlordane	4 ng/mL
							Heptachlor	4 ng/mL
							Heptachlor epoxide	4 ng/mL
							Methoxychlor	4 ng/mL
							Hexachlorobenzene	4 ng/mL
							DCB Decachlorobiphenyl	4 ng/mL
							Tetrachloro-m-xylene	4 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL2_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	1 mL	4,4'-DDD	10 ng/mL
							4,4'-DDE	10 ng/mL
							4,4'-DDT	10 ng/mL
							Aldrin	10 ng/mL
							alpha-BHC	10 ng/mL
							alpha-Chlordane	10 ng/mL
							beta-BHC	10 ng/mL
							delta-BHC	10 ng/mL
							Dieldrin	10 ng/mL
							Endosulfan I	10 ng/mL
							Endosulfan II	10 ng/mL
							Endosulfan sulfate	10 ng/mL
							Endrin	10 ng/mL
							Endrin aldehyde	10 ng/mL
							Endrin ketone	10 ng/mL
							gamma-BHC (Lindane)	10 ng/mL
							gamma-Chlordane	10 ng/mL
							Heptachlor	10 ng/mL
							Heptachlor epoxide	10 ng/mL
							Methoxychlor	10 ng/mL
							Hexachlorobenzene	10 ng/mL
							DCB Decachlorobiphenyl	10 ng/mL
							Tetrachloro-m-xylene	10 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL3_00028	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	2.5 mL	4,4'-DDD	25 ng/mL
							4,4'-DDE	25 ng/mL
							4,4'-DDT	25 ng/mL
							Aldrin	25 ng/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							alpha-BHC	25 ng/mL
							alpha-Chlordane	25 ng/mL
							beta-BHC	25 ng/mL
							delta-BHC	25 ng/mL
							Dieldrin	25 ng/mL
							Endosulfan I	25 ng/mL
							Endosulfan II	25 ng/mL
							Endosulfan sulfate	25 ng/mL
							Endrin	25 ng/mL
							Endrin aldehyde	25 ng/mL
							Endrin ketone	25 ng/mL
							gamma-BHC (Lindane)	25 ng/mL
							gamma-Chlordane	25 ng/mL
							Heptachlor	25 ng/mL
							Heptachlor epoxide	25 ng/mL
							Methoxychlor	25 ng/mL
							Hexachlorobenzene	25 ng/mL
							DCB Decachlorobiphenyl	25 ng/mL
							Tetrachloro-m-xylene	25 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL4_00031	12/20/18	06/20/18	Hexane, Lot 192742	500 mL	8081ABCalStk_00033	25 mL	4,4'-DDD	50 ng/mL
							4,4'-DDE	50 ng/mL
							4,4'-DDT	50 ng/mL
							Aldrin	50 ng/mL
							alpha-BHC	50 ng/mL
							alpha-Chlordane	50 ng/mL
							beta-BHC	50 ng/mL
							delta-BHC	50 ng/mL
							Dieldrin	50 ng/mL
							Endosulfan I	50 ng/mL
							Endosulfan II	50 ng/mL
							Endosulfan sulfate	50 ng/mL
							Endrin	50 ng/mL
							Endrin aldehyde	50 ng/mL
							Endrin ketone	50 ng/mL
							gamma-BHC (Lindane)	50 ng/mL
							gamma-Chlordane	50 ng/mL
							Heptachlor	50 ng/mL
							Heptachlor epoxide	50 ng/mL
							Methoxychlor	50 ng/mL
							Hexachlorobenzene	50 ng/mL
							DCB Decachlorobiphenyl	50 ng/mL
							Tetrachloro-m-xylene	50 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL5_00026	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	7.5 mL	4,4'-DDD	75 ng/mL
							4,4'-DDE	75 ng/mL
							4,4'-DDT	75 ng/mL
							Aldrin	75 ng/mL
							alpha-BHC	75 ng/mL
							alpha-Chlordane	75 ng/mL
							beta-BHC	75 ng/mL
							delta-BHC	75 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dieldrin	75 ng/mL
							Endosulfan I	75 ng/mL
							Endosulfan II	75 ng/mL
							Endosulfan sulfate	75 ng/mL
							Endrin	75 ng/mL
							Endrin aldehyde	75 ng/mL
							Endrin ketone	75 ng/mL
							gamma-BHC (Lindane)	75 ng/mL
							gamma-Chlordane	75 ng/mL
							Heptachlor	75 ng/mL
							Heptachlor epoxide	75 ng/mL
							Methoxychlor	75 ng/mL
							Hexachlorobenzene	75 ng/mL
							DCB Decachlorobiphenyl	75 ng/mL
							Tetrachloro-m-xylene	75 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL6_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	10 mL	4,4'-DDD	100 ng/mL
							4,4'-DDE	100 ng/mL
							4,4'-DDT	100 ng/mL
							Aldrin	100 ng/mL
							alpha-BHC	100 ng/mL
							alpha-Chlordane	100 ng/mL
							beta-BHC	100 ng/mL
							delta-BHC	100 ng/mL
							Dieldrin	100 ng/mL
							Endosulfan I	100 ng/mL
							Endosulfan II	100 ng/mL
							Endosulfan sulfate	100 ng/mL
							Endrin	100 ng/mL
							Endrin aldehyde	100 ng/mL
							Endrin ketone	100 ng/mL
							gamma-BHC (Lindane)	100 ng/mL
							gamma-Chlordane	100 ng/mL
							Heptachlor	100 ng/mL
							Heptachlor epoxide	100 ng/mL
							Methoxychlor	100 ng/mL
							Hexachlorobenzene	100 ng/mL
							DCB Decachlorobiphenyl	100 ng/mL
							Tetrachloro-m-xylene	100 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081Toxaphene_00031	11/13/18	05/16/18	ACETONE, Lot Acetone 000196	500 mL	8081 ToxStock_00018	1 mL	Toxaphene	2 ug/mL
.8081 ToxStock_00018	01/30/25		AccuStandard, Lot 215011420		(Purchased Reagent)		Toxaphene	1000 ug/mL
8081TOXCCVL4_00014	11/12/18	05/12/18	Hexane, Lot 189045	250 mL	8081ToxPS_00034	0.1 mL	Toxaphene Peak 1	2000 ng/mL
							Toxaphene Peak 2	2000 ng/mL
							Toxaphene Peak 3	2000 ng/mL
							Toxaphene Peak 4	2000 ng/mL
							Toxaphene Peak 5	2000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toxaphene Peak 5	5000 ug/mL
8081TOXCCVL4_00015	05/12/19	11/12/18	Hexane, Lot 189045	250 mL	8081ToxPS_00039	0.1 mL	Toxaphene	2000 ng/mL
.8081ToxPS_00039	05/12/19		Restek, Lot A0128388		(Purchased Reagent)		Toxaphene	5000 ug/mL
8081ToxICVL3_00013	03/19/19	09/19/18	Hexane, Lot 190112	100 mL	8081ToxSS_00020	0.1 mL	Toxaphene	1000 ng/mL
.8081ToxSS_00020	03/19/19		Accustandard, Inc., Lot 217071319		(Purchased Reagent)		Toxaphene	1000 ug/mL
8081ToxL1_00020	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.004 mL	Toxaphene Peak 1	200 ng/mL
							Toxaphene Peak 2	200 ng/mL
							Toxaphene Peak 3	200 ng/mL
							Toxaphene Peak 4	200 ng/mL
							Toxaphene Peak 5	200 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL2_00021	11/12/18	05/12/18	Hexane, Lot 175756	100 mL	8081ToxPS_00034	0.01 mL	Toxaphene Peak 1	500 ng/mL
							Toxaphene Peak 2	500 ng/mL
							Toxaphene Peak 3	500 ng/mL
							Toxaphene Peak 4	500 ng/mL
							Toxaphene Peak 5	500 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL3_00020	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.02 mL	Toxaphene Peak 1	1000 ng/mL
							Toxaphene Peak 2	1000 ng/mL
							Toxaphene Peak 3	1000 ng/mL
							Toxaphene Peak 4	1000 ng/mL
							Toxaphene Peak 5	1000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL5_00021	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.1 mL	Toxaphene Peak 1	5000 ng/mL
							Toxaphene Peak 2	5000 ng/mL
							Toxaphene Peak 3	5000 ng/mL
							Toxaphene Peak 4	5000 ng/mL
							Toxaphene Peak 5	5000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8081ToxL6_00023	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.2 mL	Toxaphene Peak 1	10000 ng/mL
							Toxaphene Peak 2	10000 ng/mL
							Toxaphene Peak 3	10000 ng/mL
							Toxaphene Peak 4	10000 ng/mL
							Toxaphene Peak 5	10000 ng/mL
.8081ToxPS_00034	03/31/21	Restek, Lot A0123422			(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8082 LCS_00049	12/11/18	07/11/18	ACETONE, Lot Acetone_00221	500 mL	8082LCSSTOCK_00034	1 mL	PCB-1016	2 ug/mL
							PCB-1260	2 ug/mL
.8082LCSSTOCK_00034	07/11/19	RESTEK, Lot A0116282			(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
8270_LCS_Main_00055	05/31/19	10/01/18	P&T Methanol, Lot MethanolP&T_00214	500 mL	571995_00044	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00049	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00050	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00051	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00052	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					571995_00053	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00055	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00056	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					MS-569731_00095	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00096	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00097	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00100	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					OP-572556_00003	5 mL	Hexachlorocyclopentadiene	160 ug/mL
					OP-572556_00006	5 mL	Hexachlorocyclopentadiene	160 ug/mL
.571995_00044	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00049	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00050	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00051	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00052	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00053	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00055	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00056	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-569731_00095	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00096	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00097	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00100	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.OP-572556_00003	10/01/19		Restek, Lot A0127376		(Purchased Reagent)		Hexachlorocyclopentadiene	4000 ug/mL
.OP-572556_00006	10/01/19		Restek, Lot A0127376		(Purchased Reagent)		Hexachlorocyclopentadiene	4000 ug/mL
8270_LCS_Supp_00308	11/01/18	10/25/18	P&T Methanol, Lot MethanolP&T_00216	50 mL	OP-569732_00001	1 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
					OP-569732_00002	1 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
					OP-CustBenz_00026	2 mL	3,3'-Dichlorobenzidine	160 ug/mL
							Benzidine	160 ug/mL
.OP-569732_00001	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.OP-569732_00002	10/05/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.OP-CustBenz_00026	07/31/22		Restek, Lot A0139914		(Purchased Reagent)		3,3'-Dichlorobenzidine	4000 ug/mL
							Benzidine	4000 ug/mL
8270BO-SIMLCS_00031	09/30/19	10/11/18	P&T Methanol, Lot MethanolP&T_00215	250 mL	571995_00043	225 uL	1,1'-Biphenyl	0.9 ug/mL
							1,2,4,5-Tetrachlorobenzene	0.9 ug/mL
							1,2,4-Trichlorobenzene	0.9 ug/mL
							1,2-Dichlorobenzene	0.9 ug/mL
							1,2-Diphenylhydrazine	0.909877 ug/mL
							1,3-Dichlorobenzene	0.9 ug/mL
							1,3-Dinitrobenzene	0.9 ug/mL
							1,4-Dichlorobenzene	0.9 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	0.9 ug/mL
							1-Methylnaphthalene	0.9 ug/mL
							2,3,4,6-Tetrachlorophenol	0.9 ug/mL
							2,4,5-Trichlorophenol	0.9 ug/mL
							2,4,6-Trichlorophenol	0.9 ug/mL
							2,4-Dichlorophenol	0.9 ug/mL
							2,4-Dimethylphenol	0.9 ug/mL
							2,4-Dinitrophenol	1.8 ug/mL
							2,4-Dinitrotoluene	0.9 ug/mL
							2,6-Dichlorophenol	0.9 ug/mL
							2,6-Dinitrotoluene	0.9 ug/mL
							2-Chloronaphthalene	0.9 ug/mL
							2-Chlorophenol	0.9 ug/mL
							2-Methylnaphthalene	0.9 ug/mL
							2-Methylphenol	0.9 ug/mL
							2-Nitroaniline	0.9 ug/mL
							2-Nitrophenol	0.9 ug/mL
							3 & 4 Methylphenol	0.9 ug/mL
							3-Methylphenol	0.9 ug/mL
							3-Nitroaniline	0.9 ug/mL
							4,6-Dinitro-2-methylphenol	1.8 ug/mL
							4-Bromophenyl phenyl ether	0.9 ug/mL
							4-Chloro-3-methylphenol	0.9 ug/mL
							4-Chloroaniline	0.9 ug/mL
							4-Chlorophenyl phenyl ether	0.9 ug/mL
							4-Methylphenol	0.9 ug/mL
							4-Nitroaniline	0.9 ug/mL
							4-Nitrophenol	1.8 ug/mL
							Acenaphthene	0.9 ug/mL
							Acenaphthylene	0.9 ug/mL
							Acetophenone	0.9 ug/mL
							Aniline	0.9 ug/mL
							Anthracene	0.9 ug/mL
							Azobenzene	0.9 ug/mL
							Benzo[a]anthracene	0.9 ug/mL
							Benzo[a]pyrene	0.9 ug/mL
							Benzo[b]fluoranthene	0.9 ug/mL
							Benzo[g,h,i]perylene	0.9 ug/mL
							Benzo[k]fluoranthene	0.9 ug/mL
							Benzyl alcohol	0.9 ug/mL
							bis (2-chloroisopropyl) ether	0.9 ug/mL
							Bis(2-chloroethoxy)methane	0.9 ug/mL
							Bis(2-chloroethyl)ether	0.9 ug/mL
							Bis(2-ethylhexyl) phthalate	0.9 ug/mL
							Butyl benzyl phthalate	0.9 ug/mL
							Carbazole	0.9 ug/mL
							Chrysene	0.9 ug/mL
							Di-n-butyl phthalate	0.9 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-octyl phthalate	0.9 ug/mL
							Dibenz(a,h)anthracene	0.9 ug/mL
							Dibenzofuran	0.9 ug/mL
							Diethyl phthalate	0.9 ug/mL
							Dimethyl phthalate	0.9 ug/mL
							Diphenylamine	0.765 ug/mL
							Fluoranthene	0.9 ug/mL
							Fluorene	0.9 ug/mL
							Hexachlorobenzene	0.9 ug/mL
							Hexachlorobutadiene	0.9 ug/mL
							Hexachlorocyclopentadiene	0.9 ug/mL
							Hexachloroethane	0.9 ug/mL
							Hexadecane	0.9 ug/mL
							Indeno[1,2,3-cd]pyrene	0.9 ug/mL
							Isophorone	0.9 ug/mL
							n-Decane	0.9 ug/mL
							N-Nitrosodi-n-propylamine	0.9 ug/mL
							N-Nitrosodimethylamine	0.9 ug/mL
							N-Nitrosodiphenylamine	0.9 ug/mL
							n-Octadecane	0.9 ug/mL
							Naphthalene	0.9 ug/mL
							Nitrobenzene	0.9 ug/mL
							Pentachlorophenol	1.8 ug/mL
							Phenanthrene	0.9 ug/mL
							Phenol	0.9 ug/mL
							Pyrene	0.9 ug/mL
							Pyridine	1.8 ug/mL
.571995_00043	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
8270Surrogate_00128	07/09/19	10/17/18	ACETONE, Lot Acetone_00232	1000 mL	8270SurStkHL_00282	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00283	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00289	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00290	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
.8270SurStkHL_00282	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00283	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00289	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00290	12/31/22		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
8330 LCS_00078	04/30/18	02/08/18	Acetonitrile, Lot ACN_00209	100 mL	8330 LCSMix2_00102	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00061	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00062	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00069	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00070	1 mL	PETN	100 ug/mL
					8330LCSMix1_00097	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
.8330 LCSMix2_00102	02/08/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00061	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00062	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00069	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00070	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00097	02/08/19		Restek, Lot A0122924		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
8330 LCS_00081	06/28/19	06/13/18	Acetonitrile, Lot ACN_00204	100 mL	8330 LCSMix2_00103	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00057	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00063	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00049	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00066	1 mL	PETN	100 ug/mL
					8330LCSMix1_00102	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
.8330 LCSMix2_00103	11/30/21		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00057	07/31/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00063	07/31/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.8330_PETN_Stk_00049	06/30/19		Restek, Lot A0120082		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00066	05/31/20		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00102	06/20/22		Restek, Lot A0128688		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
8330 LCS_00082	09/07/19	09/07/18	Acetonitrile, Lot ACN_00215	100 mL	8330 LCSMix2_00104	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00067	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00068	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00067	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00068	1 mL	PETN	100 ug/mL
					8330LCSMix1_00105	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
					PicricARestek_00080	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 LCSMix2_00104	09/07/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00067	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00068	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00067	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00068	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00105	09/07/19		Restek, Lot A0128688		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.PicricARestek_00080	09/07/19		Restek, Lot A0105913		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330 LCS_00083	03/07/19	09/07/18	Acetonitrile, Lot ACN_00215	100 mL	8330 LCSMix2_00104	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00067	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00068	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00067	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00068	1 mL	PETN	100 ug/mL
					8330LCSMix1_00105	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
					PicricARestek_00080	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 LCSMix2_00104	09/07/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00067	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00068	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00067	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00068	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00105	09/07/19		Restek, Lot A0128688		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.PicricARestek_00080	09/07/19		Restek, Lot A0105913		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330_ADDs_00017	03/01/19	07/23/18	Acetonitrile, Lot 184115	5 mL	3,5-DNA Stock_00029	0.1 mL	3,5-Dinitroaniline	20 ug/mL
.3,5-DNA Stock_00029	02/28/22		Restek, Lot A0129440		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
8330IntermStk_00055	07/14/18	05/02/18	Acetonitrile, Lot 184115	10 mL	8330ICALStock_00026	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10.01 ug/mL
							2,4,6-Trinitrotoluene	10.04 ug/mL
							2,4-Dinitrotoluene	10.02 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	10.03 ug/mL
							2-Amino-4,6-dinitrotoluene	10.03 ug/mL
							2-Nitrotoluene	10.03 ug/mL
							3-Nitrotoluene	10.04 ug/mL
							4-Amino-2,6-dinitrotoluene	10.03 ug/mL
							4-Nitrotoluene	10.04 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10.02 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene	10 ug/mL
					8330PAStkPS_00054	1 mL	2,4,6-Trinitrophenol	10 ug/mL
					NG__00002	1 mL	Nitroglycerin	100 ug/mL
					PETN_00002	1 mL	PETN	100 ug/mL
.8330ICALStock_00026	07/14/18	07/14/17	Acetonitrile, Lot ACN_00178	10 mL	8330 Stock_TS_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00161	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00009	04/30/20	Ultra Scientific, Lot CR-1002			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00161	08/15/24	AccuStandard, Lot 214081391			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00054	07/19/19	AccuStandard, Lot 216061376-01			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
.NG__00002	07/14/18	07/14/17	Acetonitrile, Lot 0000130057	5 mL	8330_NG_Stk_00049	1 mL	Nitroglycerin	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..8330_NG_Stk_00049	01/01/20		Restek, Lot A0124122		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.PETN_00002	07/14/18	07/14/17	Acetonitrile, Lot 0000130057	5 mL	8330_PETN_Stk_00052	1 mL	PETN	1000 mL
..8330_PETN_Stk_00052	01/01/20		Restek, Lot A0124124		(Purchased Reagent)		PETN	5000 ug/mL
8330IntermStk_00056	01/16/19	07/16/18	Acetonitrile, Lot 194301	5 mL	8330_NG_Stk_00051	200 uL	Nitroglycerin	200 ug/mL
					8330_PETN_Stk_00053	200 uL	PETN	200 ug/mL
					8330ICALStock_00028	1 mL	1,3,5-Trinitrobenzene	20 ug/mL
							1,3-Dinitrobenzene	20.02 ug/mL
							2,4,6-Trinitrotoluene	20.08 ug/mL
							2,4-Dinitrotoluene	20.04 ug/mL
							2,6-Dinitrotoluene	20.06 ug/mL
							2-Amino-4,6-dinitrotoluene	20.06 ug/mL
							2-Nitrotoluene	20.06 ug/mL
							3-Nitrotoluene	20.08 ug/mL
							4-Amino-2,6-dinitrotoluene	20.06 ug/mL
							4-Nitrotoluene	20.08 ug/mL
							HMX	20 ug/mL
							Nitrobenzene	20.04 ug/mL
							RDX	20 ug/mL
							Tetryl	20 ug/mL
							1,2-Dinitrobenzene	20 ug/mL
					8330PAStkPS_00056	1 mL	2,4,6-Trinitrophenol	20 ug/mL
.8330_NG_Stk_00051	01/01/20		Restek, Lot A0124122		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00053	01/01/20		Restek, Lot A0124124		(Purchased Reagent)		PETN	5000 ug/mL
.8330ICALStock_00028	07/16/19	07/16/18	Acetonitrile, Lot ACN_194301	10 mL	8330 Stock_TS_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00162	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00011	04/30/20		Ultra Scientific, Lot CR-1002		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00162	08/15/24	AccuStandard, Lot 214081391			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00056	04/12/20	AccuStandard, Lot 218031154			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
8330Surrogate_00098	03/01/19	03/01/18	Acetonitrile, Lot ACN_00210	500 mL	8330SurrStkSS_00123	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00124	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00125	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00126	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00127	1 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00123	03/01/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00124	03/01/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00125	03/01/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00126	03/01/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00127	03/01/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00100	03/07/19	09/07/18	Acetonitrile, Lot ACN_00215	500 mL	8330SurrStkSS_00130	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00131	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00132	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00133	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00141	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00130	09/07/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00131	09/07/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00132	09/07/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00133	09/07/19	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00141	09/07/19	Restek, Lot A0131413			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
AR_1248_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1248_RESss_00010	25 uL	PCB-1248	250 ng/mL
.AR_1248_RESss_00010	06/06/19	RESTEK, Lot A0124143			(Purchased Reagent)		PCB-1248	1000 ug/mL
AR_1248_L1_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	0.25 mL	PCB-1248 Peak 1	0.025 ug/mL
							PCB-1248 Peak 2	0.025 ug/mL
							PCB-1248 Peak 3	0.025 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 4	0.025 ug/mL
							PCB-1248 Peak 5	0.025 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L2_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	0.5 mL	PCB-1248 Peak 1	0.05 ug/mL
							PCB-1248 Peak 2	0.05 ug/mL
							PCB-1248 Peak 3	0.05 ug/mL
							PCB-1248 Peak 4	0.05 ug/mL
							PCB-1248 Peak 5	0.05 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	1 mL	PCB-1248 Peak 1	0.1 ug/mL
							PCB-1248 Peak 2	0.1 ug/mL
							PCB-1248 Peak 3	0.1 ug/mL
							PCB-1248 Peak 4	0.1 ug/mL
							PCB-1248 Peak 5	0.1 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
AR_1248_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	2.5 mL	PCB-1248 Peak 1	0.25 ug/mL
							PCB-1248 Peak 2	0.25 ug/mL
							PCB-1248 Peak 3	0.25 ug/mL
							PCB-1248 Peak 4	0.25 ug/mL
							PCB-1248 Peak 5	0.25 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	5 mL	PCB-1248 Peak 1	0.5 ug/mL
							PCB-1248 Peak 2	0.5 ug/mL
							PCB-1248 Peak 3	0.5 ug/mL
							PCB-1248 Peak 4	0.5 ug/mL
							PCB-1248 Peak 5	0.5 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L6_00019	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	7.5 mL	PCB-1248 Peak 1	0.75 ug/mL
							PCB-1248 Peak 2	0.75 ug/mL
							PCB-1248 Peak 3	0.75 ug/mL
							PCB-1248 Peak 4	0.75 ug/mL
							PCB-1248 Peak 5	0.75 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
.AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1660_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1660_RESss_00010	25 uL	PCB-1016	250 ng/mL
							PCB-1260	250 ng/mL
					AR_SURR_RES_00090	6.25 uL	DCB Decachlorobiphenyl	12.5 ng/mL
							Tetrachloro-m-xylene	12.5 ng/mL
.AR_1660_RESss_00010	06/06/19		RESTEK, Lot A0114674		(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
.AR_SURR_RES_00090	06/06/19		RESTEK, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L1_00031	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	0.25 mL	PCB-1016 Peak 1	0.025 ug/mL
							PCB-1016 Peak 2	0.025 ug/mL
							PCB-1016 Peak 3	0.025 ug/mL
							PCB-1016 Peak 4	0.025 ug/mL
							PCB-1016 Peak 5	0.025 ug/mL
							PCB-1260 Peak 1	0.025 ug/mL
							PCB-1260 Peak 2	0.025 ug/mL
							PCB-1260 Peak 3	0.025 ug/mL
							PCB-1260 Peak 4	0.025 ug/mL
							PCB-1260 Peak 5	0.025 ug/mL
							DCB Decachlorobiphenyl	0.00125 ug/mL
							Tetrachloro-m-xylene	0.00125 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L2_00030	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	0.5 mL	PCB-1016 Peak 1	0.05 ug/mL
							PCB-1016 Peak 2	0.05 ug/mL
							PCB-1016 Peak 3	0.05 ug/mL
							PCB-1016 Peak 4	0.05 ug/mL
							PCB-1016 Peak 5	0.05 ug/mL
							PCB-1260 Peak 1	0.05 ug/mL
							PCB-1260 Peak 2	0.05 ug/mL
							PCB-1260 Peak 3	0.05 ug/mL
							PCB-1260 Peak 4	0.05 ug/mL
							PCB-1260 Peak 5	0.05 ug/mL
							DCB Decachlorobiphenyl	0.0025 ug/mL
							Tetrachloro-m-xylene	0.0025 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L3_00031	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	1 mL	PCB-1016 Peak 1	0.1 ug/mL
							PCB-1016 Peak 2	0.1 ug/mL
							PCB-1016 Peak 3	0.1 ug/mL
							PCB-1016 Peak 4	0.1 ug/mL
							PCB-1016 Peak 5	0.1 ug/mL
							PCB-1260 Peak 1	0.1 ug/mL
							PCB-1260 Peak 2	0.1 ug/mL
							PCB-1260 Peak 3	0.1 ug/mL
							PCB-1260 Peak 4	0.1 ug/mL
							PCB-1260 Peak 5	0.1 ug/mL
							DCB Decachlorobiphenyl	0.005 ug/mL
							Tetrachloro-m-xylene	0.005 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19	RESTEK, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L4_00068	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	2.5 mL	PCB-1016 Peak 1	0.25 ug/mL
							PCB-1016 Peak 2	0.25 ug/mL
							PCB-1016 Peak 3	0.25 ug/mL
							PCB-1016 Peak 4	0.25 ug/mL
							PCB-1016 Peak 5	0.25 ug/mL
							PCB-1260 Peak 1	0.25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 2	0.25 ug/mL
							PCB-1260 Peak 3	0.25 ug/mL
							PCB-1260 Peak 4	0.25 ug/mL
							PCB-1260 Peak 5	0.25 ug/mL
							DCB Decachlorobiphenyl	0.0125 ug/mL
							Tetrachloro-m-xylene	0.0125 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L5_00066	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	25 mL	AR_1660_L7_00026	12.5 mL	PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL
							PCB-1016 Peak 4	0.5 ug/mL
							PCB-1016 Peak 5	0.5 ug/mL
							PCB-1260 Peak 1	0.5 ug/mL
							PCB-1260 Peak 2	0.5 ug/mL
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
							DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L5_00066	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	25 mL	AR_1660_L7_00026	12.5 mL	PCB-1016	0.5 ug/mL
							PCB-1260	0.5 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016	1 ug/mL
							PCB-1260	1 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
AR_1660_L6_00033	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	7.5 mL	PCB-1016 Peak 1	0.75 ug/mL
							PCB-1016 Peak 2	0.75 ug/mL
							PCB-1016 Peak 3	0.75 ug/mL
							PCB-1016 Peak 4	0.75 ug/mL
							PCB-1016 Peak 5	0.75 ug/mL
							PCB-1260 Peak 1	0.75 ug/mL
							PCB-1260 Peak 2	0.75 ug/mL
							PCB-1260 Peak 3	0.75 ug/mL
							PCB-1260 Peak 4	0.75 ug/mL
							PCB-1260 Peak 5	0.75 ug/mL
							DCB Decachlorobiphenyl	0.0375 ug/mL
							Tetrachloro-m-xylene	0.0375 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
.AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_2154_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1221_RESss_00010	25 uL	PCB-1221	250 ng/mL
					AR_1254_RESss_00010	25 uL	PCB-1254	250 ng/mL
.AR_1221_RESss_00010	06/06/19		RESTEK, Lot A0117382		(Purchased Reagent)		PCB-1221	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.AR_1254_RESss_00010	06/06/19		RESTEK, Lot A0105373		(Purchased Reagent)		PCB-1254	1000 ug/mL
AR_2154_L1_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	0.25 mL	PCB-1221 Peak 1	0.025 ug/mL
							PCB-1221 Peak 2	0.025 ug/mL
							PCB-1221 Peak 3	0.025 ug/mL
							PCB-1254 Peak 1	0.025 ug/mL
							PCB-1254 Peak 2	0.025 ug/mL
							PCB-1254 Peak 3	0.025 ug/mL
							PCB-1254 Peak 4	0.025 ug/mL
							PCB-1254 Peak 5	0.025 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L2_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	0.5 mL	PCB-1221 Peak 1	0.05 ug/mL
							PCB-1221 Peak 2	0.05 ug/mL
							PCB-1221 Peak 3	0.05 ug/mL
							PCB-1254 Peak 1	0.05 ug/mL
							PCB-1254 Peak 2	0.05 ug/mL
							PCB-1254 Peak 3	0.05 ug/mL
							PCB-1254 Peak 4	0.05 ug/mL
							PCB-1254 Peak 5	0.05 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	1 mL	PCB-1221 Peak 1	0.1 ug/mL
							PCB-1221 Peak 2	0.1 ug/mL
							PCB-1221 Peak 3	0.1 ug/mL
							PCB-1254 Peak 1	0.1 ug/mL
							PCB-1254 Peak 2	0.1 ug/mL
							PCB-1254 Peak 3	0.1 ug/mL
							PCB-1254 Peak 4	0.1 ug/mL
							PCB-1254 Peak 5	0.1 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	2.5 mL	PCB-1221 Peak 1	0.25 ug/mL
							PCB-1221 Peak 2	0.25 ug/mL
							PCB-1221 Peak 3	0.25 ug/mL
							PCB-1254 Peak 1	0.25 ug/mL
							PCB-1254 Peak 2	0.25 ug/mL
							PCB-1254 Peak 3	0.25 ug/mL
							PCB-1254 Peak 4	0.25 ug/mL
							PCB-1254 Peak 5	0.25 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L5_00022	04/22/19	10/23/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	5 mL	PCB-1221 Peak 1	0.5 ug/mL
							PCB-1221 Peak 2	0.5 ug/mL
							PCB-1221 Peak 3	0.5 ug/mL
							PCB-1254 Peak 1	0.5 ug/mL
							PCB-1254 Peak 2	0.5 ug/mL
							PCB-1254 Peak 3	0.5 ug/mL
							PCB-1254 Peak 4	0.5 ug/mL
							PCB-1254 Peak 5	0.5 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L5_00022	04/22/19	10/23/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	5 mL	PCB-1221	0.5 ug/mL
							PCB-1254	0.5 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221	1 ug/mL
							PCB-1254	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221	1000 ug/mL
							PCB-1254	1000 ug/mL
AR_2154_L6_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	7.5 mL	PCB-1221 Peak 1	0.75 ug/mL
							PCB-1221 Peak 2	0.75 ug/mL
							PCB-1221 Peak 3	0.75 ug/mL
							PCB-1254 Peak 1	0.75 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 2	0.75 ug/mL
							PCB-1254 Peak 3	0.75 ug/mL
							PCB-1254 Peak 4	0.75 ug/mL
							PCB-1254 Peak 5	0.75 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
.AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_3262_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1232_RESss_00010	25 uL	PCB-1232	250 ng/mL
.AR_1232_RESss_00010	06/06/19		RESTEK, Lot A095877		(Purchased Reagent)		PCB-1232	1000 ug/mL
AR_3262_L1_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	0.25 mL	PCB-1232 Peak 1	0.025 ug/mL
							PCB-1232 Peak 2	0.025 ug/mL
							PCB-1232 Peak 3	0.025 ug/mL
							PCB-1232 Peak 4	0.025 ug/mL
							PCB-1232 Peak 5	0.025 ug/mL
							PCB-1262 Peak 1	0.025 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 2	0.025 ug/mL
							PCB-1262 Peak 3	0.025 ug/mL
							PCB-1262 Peak 4	0.025 ug/mL
							PCB-1262 Peak 5	0.025 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L2_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	0.5 mL	PCB-1232 Peak 1	0.05 ug/mL
							PCB-1232 Peak 2	0.05 ug/mL
							PCB-1232 Peak 3	0.05 ug/mL
							PCB-1232 Peak 4	0.05 ug/mL
							PCB-1232 Peak 5	0.05 ug/mL
							PCB-1262 Peak 1	0.05 ug/mL
							PCB-1262 Peak 2	0.05 ug/mL
							PCB-1262 Peak 3	0.05 ug/mL
							PCB-1262 Peak 4	0.05 ug/mL
							PCB-1262 Peak 5	0.05 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	1 mL	PCB-1232 Peak 1	0.1 ug/mL
							PCB-1232 Peak 2	0.1 ug/mL
							PCB-1232 Peak 3	0.1 ug/mL
							PCB-1232 Peak 4	0.1 ug/mL
							PCB-1232 Peak 5	0.1 ug/mL
							PCB-1262 Peak 1	0.1 ug/mL
							PCB-1262 Peak 2	0.1 ug/mL
							PCB-1262 Peak 3	0.1 ug/mL
							PCB-1262 Peak 4	0.1 ug/mL
							PCB-1262 Peak 5	0.1 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	2.5 mL	PCB-1232 Peak 1	0.25 ug/mL
							PCB-1232 Peak 2	0.25 ug/mL
							PCB-1232 Peak 3	0.25 ug/mL
							PCB-1232 Peak 4	0.25 ug/mL
							PCB-1232 Peak 5	0.25 ug/mL
							PCB-1262 Peak 1	0.25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 2	0.25 ug/mL
							PCB-1262 Peak 3	0.25 ug/mL
							PCB-1262 Peak 4	0.25 ug/mL
							PCB-1262 Peak 5	0.25 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	5 mL	PCB-1232 Peak 1	0.5 ug/mL
							PCB-1232 Peak 2	0.5 ug/mL
							PCB-1232 Peak 3	0.5 ug/mL
							PCB-1232 Peak 4	0.5 ug/mL
							PCB-1232 Peak 5	0.5 ug/mL
							PCB-1262 Peak 1	0.5 ug/mL
							PCB-1262 Peak 2	0.5 ug/mL
							PCB-1262 Peak 3	0.5 ug/mL
							PCB-1262 Peak 4	0.5 ug/mL
							PCB-1262 Peak 5	0.5 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L6_00019	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	7.5 mL	PCB-1232 Peak 1	0.75 ug/mL
							PCB-1232 Peak 2	0.75 ug/mL
							PCB-1232 Peak 3	0.75 ug/mL
							PCB-1232 Peak 4	0.75 ug/mL
							PCB-1232 Peak 5	0.75 ug/mL
							PCB-1262 Peak 1	0.75 ug/mL
							PCB-1262 Peak 2	0.75 ug/mL
							PCB-1262 Peak 3	0.75 ug/mL
							PCB-1262 Peak 4	0.75 ug/mL
							PCB-1262 Peak 5	0.75 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
.AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_4268_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1242_RESss_00010	25 uL	PCB-1242	250 ng/mL
.AR_1242_RESss_00010	06/06/19		RESTEK, Lot A0105175		(Purchased Reagent)		PCB-1242	1000 ug/mL
AR_4268_L1_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	0.25 mL	PCB-1242 Peak 1	0.025 ug/mL
							PCB-1242 Peak 2	0.025 ug/mL
							PCB-1242 Peak 3	0.025 ug/mL
							PCB-1242 Peak 4	0.025 ug/mL
							PCB-1242 Peak 5	0.025 ug/mL
							PCB-1268 Peak 1	0.025 ug/mL
							PCB-1268 Peak 2	0.025 ug/mL
							PCB-1268 Peak 3	0.025 ug/mL
							PCB-1268 Peak 4	0.025 ug/mL
							PCB-1268 Peak 5	0.025 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L2_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	0.5 mL	PCB-1242 Peak 1	0.05 ug/mL
							PCB-1242 Peak 2	0.05 ug/mL
							PCB-1242 Peak 3	0.05 ug/mL
							PCB-1242 Peak 4	0.05 ug/mL
							PCB-1242 Peak 5	0.05 ug/mL
							PCB-1268 Peak 1	0.05 ug/mL
							PCB-1268 Peak 2	0.05 ug/mL
							PCB-1268 Peak 3	0.05 ug/mL
							PCB-1268 Peak 4	0.05 ug/mL
							PCB-1268 Peak 5	0.05 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19	RESTEK, Lot A0133093			(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L3_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	1 mL	PCB-1242 Peak 1	0.1 ug/mL
							PCB-1242 Peak 2	0.1 ug/mL
							PCB-1242 Peak 3	0.1 ug/mL
							PCB-1242 Peak 4	0.1 ug/mL
							PCB-1242 Peak 5	0.1 ug/mL
							PCB-1268 Peak 1	0.1 ug/mL
							PCB-1268 Peak 2	0.1 ug/mL
							PCB-1268 Peak 3	0.1 ug/mL
							PCB-1268 Peak 4	0.1 ug/mL
							PCB-1268 Peak 5	0.1 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L4_00023	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	2.5 mL	PCB-1242 Peak 1	0.25 ug/mL
							PCB-1242 Peak 2	0.25 ug/mL
							PCB-1242 Peak 3	0.25 ug/mL
							PCB-1242 Peak 4	0.25 ug/mL
							PCB-1242 Peak 5	0.25 ug/mL
							PCB-1268 Peak 1	0.25 ug/mL
							PCB-1268 Peak 2	0.25 ug/mL
							PCB-1268 Peak 3	0.25 ug/mL
							PCB-1268 Peak 4	0.25 ug/mL
							PCB-1268 Peak 5	0.25 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	5 mL	PCB-1242 Peak 1	0.5 ug/mL
							PCB-1242 Peak 2	0.5 ug/mL
							PCB-1242 Peak 3	0.5 ug/mL
							PCB-1242 Peak 4	0.5 ug/mL
							PCB-1242 Peak 5	0.5 ug/mL
							PCB-1268 Peak 1	0.5 ug/mL
							PCB-1268 Peak 2	0.5 ug/mL
							PCB-1268 Peak 3	0.5 ug/mL
							PCB-1268 Peak 4	0.5 ug/mL
							PCB-1268 Peak 5	0.5 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L6_00018	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	7.5 mL	PCB-1242 Peak 1	0.75 ug/mL
							PCB-1242 Peak 2	0.75 ug/mL
							PCB-1242 Peak 3	0.75 ug/mL
							PCB-1242 Peak 4	0.75 ug/mL
							PCB-1242 Peak 5	0.75 ug/mL
							PCB-1268 Peak 1	0.75 ug/mL
							PCB-1268 Peak 2	0.75 ug/mL
							PCB-1268 Peak 3	0.75 ug/mL
							PCB-1268 Peak 4	0.75 ug/mL
							PCB-1268 Peak 5	0.75 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
.AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
BNB IS_00012	01/26/19	07/26/18	Hexane, Lot 190112	100 mL	BNB 10000ppb_00008	10 mL	1-Bromo-2-nitrobenzene	1000 ng/mL
.BNB 10000ppb_00008	01/26/19	07/26/18	Hexane, Lot 190112	100 mL	BNB stock_00015	1 mL	1-Bromo-2-nitrobenzene	10000 ng/mL
..BNB stock_00015	07/26/19		Restek, Lot A0127264		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
CN 10ppm_00320	11/12/18	11/05/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.CN CAL Std_00062	11/30/18	Ricca, Lot 1805F17			(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN CAL 1 ppm_01454	11/09/18	11/08/18	1% NaOH, Lot N/A	100 mL	CN 10ppm_00320	10 mL	Cyanide, Total	1 mg/L
.CN 10ppm_00320	11/12/18	11/05/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Total	10 mg/L
..CN CAL Std_00062	11/30/18	Ricca, Lot 1805F17			(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Daily_01221	11/09/18	11/08/18	1% HNO3, Lot N/A	100 mL	CN ICV Int_00510	1 mL	Cyanide, Total	0.1 mg/L
.CN ICV Int_00510	11/12/18	11/05/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Total	10 mg/L
..CN ICV Std_00052	11/30/18	SPEX, Lot 13-66YPX			(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Int_00510	11/12/18	11/05/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN ICV Std_00052	11/30/18	SPEX, Lot 13-66YPX			(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
Hg Biwk ICV_00261	11/26/18	11/12/18	1% HNO3, Lot K23022	100 mL	Hg ICV Stock_00010	0.4 mL	Mercury	0.4 mg/L
.Hg ICV Stock_00010	03/05/19	Inorganic Ventures, Lot H2-HG02113R			(Purchased Reagent)		Mercury	100 mg/L
Hg Daily Spk_02288	11/13/18	11/12/18	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike_00134	1 mL	Mercury	0.1 mg/L
.Hg Mnth Spike_00134	12/10/18	11/12/18	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim_00012	1 mL	Mercury	10 mg/L
..Hg Ultra Prim_00012	03/09/19	Ultra Scientific, Lot T00602			(Purchased Reagent)		Mercury	1000 mg/L
ICP CCV_00350	05/04/19	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL1A_00812	250 mL	Aluminum	0.5 mg/L
							Calcium	5 mg/L
							Iron	2.5 mg/L
							Magnesium	20 mg/L
							Potassium	50 mg/L
							Sodium	5 mg/L
.ICP ICAL1A_00812	05/04/19	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	1000 mL	Icp cal std 3_00018	10 mL	Aluminum	1 mg/L
							Calcium	10 mg/L
							Iron	5 mg/L
							Magnesium	40 mg/L
							Potassium	100 mg/L
							Sodium	10 mg/L
..Icp cal std 3_00018	08/23/19	Inorganic Ventures, Lot M2-MEB663620			(Purchased Reagent)		Aluminum	100 mg/L
							Calcium	1000 mg/L
							Iron	500 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Magnesium	4000 mg/L
							Potassium	10000 mg/L
							Sodium	1000 mg/L
ICP CCV_52_00013	02/13/19	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	10000 Na_00067	1 mL	Sodium	25 mg/L
					ICP ICAL1A_00812	250 mL	Aluminum	0.5 mg/L
							Calcium	5 mg/L
							Iron	2.5 mg/L
							Magnesium	20 mg/L
							Potassium	50 mg/L
							Sodium	25 mg/L
.10000 Na_00067	09/05/19	Inorganic Ventures, Lot N2-NA668816			(Purchased Reagent)		Sodium	10000 mg/L
.ICP ICAL1A_00812	05/04/19	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	1000 mL	Icp cal std 3_00018	10 mL	Aluminum	1 mg/L
							Calcium	10 mg/L
							Iron	5 mg/L
							Magnesium	40 mg/L
							Potassium	100 mg/L
							Sodium	10 mg/L
..Icp cal std 3_00018	08/23/19	Inorganic Ventures, Lot M2-MEB663620			(Purchased Reagent)		Aluminum	100 mg/L
							Calcium	1000 mg/L
							Iron	500 mg/L
							Magnesium	4000 mg/L
							Potassium	10000 mg/L
							Sodium	1000 mg/L
ICP CCVH_00614	12/11/18	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL2A_00513	250 mL	Aluminum	50 mg/L
							Iron	50 mg/L
							Sodium	250 mg/L
.ICP ICAL2A_00513	12/11/18	11/02/18	5%HCl/5% HNO3, Lot see reagent log	1000 mL	10000 Al_00018	10 mL	Aluminum	100 mg/L
					10000 Fe_00021	10 mL	Iron	100 mg/L
					10000 Na_00067	50 mL	Sodium	500 mg/L
..10000 Al_00018	06/26/19	Inorganic Ventures, Lot K2-AL			(Purchased Reagent)		Aluminum	10000 mg/L
..10000 Fe_00021	08/08/19	Inorganic Ventures, Lot M2-FE659835			(Purchased Reagent)		Iron	10000 mg/L
..10000 Na_00067	09/05/19	Inorganic Ventures, Lot N2-NA668816			(Purchased Reagent)		Sodium	10000 mg/L
ICP ICSA_00173	12/14/18	10/19/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	Icp stk ICSA_00024	50 mL	Aluminum	500 mg/L
							Calcium	500 mg/L
							Iron	200 mg/L
							Magnesium	500 mg/L
.Icp stk ICSA_00024	07/30/19	Inorganic Ventures, Lot K2-MEB643109			(Purchased Reagent)		Aluminum	5000 mg/L
							Calcium	5000 mg/L
							Iron	2000 mg/L
							Magnesium	5000 mg/L
ICP ICSAB_00194	12/01/18	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	250 mL	10000 Si_00015	0.25 mL	Si	10 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					ANALYTES B_00014	2.5 mL	Barium	0.5 mg/L
							Beryllium	0.5 mg/L
							Cadmium	1 mg/L
							Chromium	0.5 mg/L
							Cobalt	0.5 mg/L
							Copper	0.5 mg/L
							Lead	1 mg/L
							Manganese	0.5 mg/L
							Nickel	1 mg/L
							Silver	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
					ICP ISAB 1B_00011	2.5 mL	Thallium	10 mg/L
					ICP ISAB STD1_00010	2.5 mL	Antimony	1 mg/L
							Arsenic	2 mg/L
							B	2 mg/L
							Li	1 mg/L
							Mo	1 mg/L
							P	2 mg/L
							Potassium	50 mg/L
							Selenium	5 mg/L
							Sodium	50 mg/L
							Sr	1 mg/L
					ICP ISAB STD2_00013	2.5 mL	Sn	10 mg/L
							Ti	1 mg/L
					Icp stk ICSA_00024	25 mL	Aluminum	500 mg/L
							Calcium	500 mg/L
							Iron	200 mg/L
							Magnesium	500 mg/L
.10000 Si_00015	09/24/19	Inorganic ventures, Lot M2-SI657321			(Purchased Reagent)		Si	10000 mg/L
.ANALYTES B_00014	04/01/19	SPEX, Lot 5-177MKBY			(Purchased Reagent)		Barium	50 mg/L
							Beryllium	50 mg/L
							Cadmium	100 mg/L
							Chromium	50 mg/L
							Cobalt	50 mg/L
							Copper	50 mg/L
							Lead	100 mg/L
							Manganese	50 mg/L
							Nickel	100 mg/L
							Silver	100 mg/L
							Vanadium	50 mg/L
							Zinc	100 mg/L
.ICP ISAB 1B_00011	12/01/18	High Purity, Lot 1734922			(Purchased Reagent)		Thallium	1000 mg/L
.ICP ISAB STD1_00010	12/01/18	High Purity, Lot 1734921			(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	200 mg/L
							B	200 mg/L
							Li	100 mg/L
							Mo	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							P	200 mg/L
							Potassium	5000 mg/L
							Selenium	500 mg/L
							Sodium	5000 mg/L
							Sr	100 mg/L
.ICP ISAB STD2_00013	01/03/19		High Purity, Lot 1721944		(Purchased Reagent)		Sn	1000 mg/L
							Ti	100 mg/L
.Icp stk ICSA_00024	07/30/19		Inorganic Ventures, Lot K2-MEB643109		(Purchased Reagent)		Aluminum	5000 mg/L
							Calcium	5000 mg/L
							Iron	2000 mg/L
							Magnesium	5000 mg/L
ICP ICV_00676	04/30/19	11/05/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVL A_00014	1 mL	Aluminum	0.25 ppm
							Calcium	2 ppm
							Iron	0.25 ppm
							Magnesium	10 ppm
							Potassium	20 ppm
							Sodium	2 ppm
.Icp ICVL A_00014	04/30/19		High Purity, Lot 1810602		(Purchased Reagent)		Aluminum	25 mg/L
							Calcium	200 mg/L
							Iron	25 mg/L
							Magnesium	1000 mg/L
							Potassium	2000 mg/L
							Sodium	200 mg/L
ICP ICV_00677	04/30/19	11/06/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVL A_00014	1 mL	Aluminum	0.25 ppm
							Calcium	2 ppm
							Iron	0.25 ppm
							Magnesium	10 ppm
							Potassium	20 ppm
							Sodium	2 ppm
.Icp ICVL A_00014	04/30/19		High Purity, Lot 1810602		(Purchased Reagent)		Aluminum	25 mg/L
							Calcium	200 mg/L
							Iron	25 mg/L
							Magnesium	1000 mg/L
							Potassium	2000 mg/L
							Sodium	200 mg/L
ICP ICVH_00791	04/30/19	11/06/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVH_00746	1 mL	Aluminum	40 mg/L
							Iron	80 mg/L
							Sodium	40 mg/L
.Icp ICVH_00746	09/30/19		High Purity, Lot 1824227		(Purchased Reagent)		Aluminum	4000 mg/L
							Iron	8000 mg/L
							Sodium	4000 mg/L
ICP ICVH_52_00049	04/07/19	11/05/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	10000 Na (HP)_00002	0.4 mL	Sodium	80 mg/L
					Icp ICVH_00746	1 mL	Aluminum	40 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iron	80 mg/L
							Sodium	80 mg/L
.10000 Na (HP)_00002	07/09/19		High Purity, Lot 1721911		(Purchased Reagent)		Sodium	10000 mg/L
.Icp ICVH_00746	09/30/19		High Purity, Lot 1824227		(Purchased Reagent)		Aluminum	4000 mg/L
							Iron	8000 mg/L
							Sodium	4000 mg/L
ICP LLCCV_02392	11/06/18	11/05/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-4_00008	1 mL	Aluminum	100 ppb
							Calcium	200 ppb
							Iron	100 ppb
							Magnesium	200 ppb
							Potassium	3000 ppb
							Sodium	1000 ppb
.ICP LLCCV-4_00008	09/26/19		Inorganic Ventures, Lot M2-MEb670719		(Purchased Reagent)		Aluminum	10 mg/L
							Calcium	20 mg/L
							Iron	10 mg/L
							Magnesium	20 mg/L
							Potassium	300 mg/L
							Sodium	100 mg/L
ICP LLCCV_02393	11/07/18	11/06/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-4_00008	1 mL	Aluminum	100 ppb
							Calcium	200 ppb
							Iron	100 ppb
							Magnesium	200 ppb
							Potassium	3000 ppb
							Sodium	1000 ppb
.ICP LLCCV-4_00008	09/26/19		Inorganic Ventures, Lot M2-MEb670719		(Purchased Reagent)		Aluminum	10 mg/L
							Calcium	20 mg/L
							Iron	10 mg/L
							Magnesium	20 mg/L
							Potassium	300 mg/L
							Sodium	100 mg/L
ICP SPK 2B_00082	11/01/19		Inorganic Ventures, Lot N2-MEB665203		(Purchased Reagent)		Antimony	50 mg/L
							B	100 mg/L
							Mo	100 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sn	200 mg/L
							Sulfur	200 mg/L
							Ti	100 mg/L
							Zr	50 mg/L
ICP SPK 3A_00154	10/18/19		Inorganic Ventures, Lot N2-MEB672708		(Purchased Reagent)		Aluminum	200 mg/L
							Arsenic	100 mg/L
							Barium	200 mg/L
							Beryllium	5 mg/L
							Bi	200 mg/L
							Cadmium	10 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Calcium	5000 mg/L
							Chromium	20 mg/L
							Cobalt	50 mg/L
							Copper	25 mg/L
							Iron	100 mg/L
							Lead	50 mg/L
							Li	100 mg/L
							Magnesium	5000 mg/L
							Manganese	50 mg/L
							Nickel	50 mg/L
							P	1000 mg/L
							Potassium	5000 mg/L
							Selenium	200 mg/L
							Silver	5 mg/L
							Sodium	5000 mg/L
							Sr	100 mg/L
							Th	100 mg/L
							Thallium	200 mg/L
							U	200 mg/L
							Vanadium	50 mg/L
							Zinc	50 mg/L
ms 77 RL_01798	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	ms 77 cal std_01906	0.5 mL	Arsenic	1 ppb
							Barium	1 ppb
							Beryllium	1 ppb
							Cadmium	1 ppb
							Chromium	1 ppb
							Cobalt	1 ppb
							Copper	1 ppb
							Lead	1 ppb
							Manganese	1 ppb
							Nickel	1 ppb
							Selenium	1 ppb
							Silver	1 ppb
							Thallium	1 ppb
							Antimony	1 ppb
.ms 77 cal std_01906	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L
..MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 alt RL_01074	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	1 ppm V_00017	0.25 mL	Vanadium	5 ppb
					1 ppm Zn_00015	0.5 mL	Zinc	10 ppb
.1 ppm V_00017	04/11/19	10/12/18	2%HNO3/0.5% HCl, Lot 185595/187518	50 mL	1000 V_00015	0.05 mL	Vanadium	1 mg/L
..1000 V_00015	08/31/19	Inorganoc Ventures, Lot K2-V651103			(Purchased Reagent)		Vanadium	1000 mg/L
.1 ppm Zn_00015	03/15/19	10/15/18	1% HNO3, Lot 192582	50 mL	1000 Zn_00020	0.05 mL	Zinc	1 mg/L
..1000 Zn_00020	08/24/19	Inorganic Ventures, Lot M2-ZN656655			(Purchased Reagent)		Zinc	1000 mg/L
ms 77 cal std_01906	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
.MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 ccv_01914	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	ms 77 cal std_01906	50 mL	Arsenic	0.05 mg/L
							Barium	0.05 mg/L
							Beryllium	0.05 mg/L
							Cadmium	0.05 mg/L
							Chromium	0.05 mg/L
							Cobalt	0.05 mg/L
							Copper	0.05 mg/L
							Lead	0.05 mg/L
							Manganese	0.05 mg/L
							Nickel	0.05 mg/L
							Selenium	0.05 mg/L
							Silver	0.05 mg/L
							Thallium	0.05 mg/L
							Vanadium	0.05 mg/L
							Zinc	0.05 mg/L
							Antimony	0.05 mg/L
.ms 77 cal std_01906	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
..MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 icsa_00386	11/14/18	11/07/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICSA STOCK_00030	5 mL	Mo	2 mg/L
.MS ICSA STOCK_00030	05/08/19	Inorganic Ventures, Lot m2-meb662772			(Purchased Reagent)		Mo	20 mg/L
ms 77 icsab_00385	11/14/18	11/07/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
							Mo	2.1 mg/L
					MS ICSA STOCK_00030	10 mL	Mo	2.1 mg/L
.MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
							Mo	20 mg/L
.MS ICSA STOCK_00030	05/08/19	Inorganic Ventures, Lot m2-meb662772			(Purchased Reagent)		Mo	20 mg/L
MS 77 ICV_01910	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICV StockA_00008	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Cobalt	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
							Zinc	40 ug/L
					MS ICV StockB_00008	0.1 mL	Antimony	40 ug/L
							Silver	40 ug/L
.MS ICV StockA_00008	11/30/18	HIGH PURITY, Lot 1731407			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS ICV StockB_00008	11/30/18	HIGH PURITY, Lot 1731408			(Purchased Reagent)		Antimony	20 mg/L
							Silver	20 mg/L
MS 77 LLCCV_01716	11/13/18	11/12/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS LLCCV 2A_00006	1 mL	Antimony	0.002 mg/L
					MS LLCCV1_00020	1 mL	Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Chromium	0.002 mg/L
							Cobalt	0.001 mg/L
							Copper	0.002 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Lead	0.001 mg/L
							Manganese	0.001 mg/L
							Nickel	0.002 mg/L
							Selenium	0.005 mg/L
							Silver	0.005 mg/L
							Thallium	0.001 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV 2A_00006	08/03/19	Inorganic Ventures, Lot m2-meb664006			(Purchased Reagent)		Antimony	0.2 mg/L
.MS LLCCV1_00020	08/03/19	Inorganic Ventures, Lot m2-meb664005			(Purchased Reagent)		Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.2 mg/L
							Cobalt	0.1 mg/L
							Copper	0.2 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.2 mg/L
							Selenium	0.5 mg/L
							Silver	0.5 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS-DFTPP_00047							Aramite, Total	
							Diallate	
							Isosafrole	
							Methyl Phenols,Total	
							Phthalic acid	
							Tentatively Identified Compound	
							Total Cresols	
							TPAH	
					MS-47548-U_00015	1 mL	4,4'-DDD	0.05 ug/mL
							4,4'-DDE	0.05 ug/mL
							4,4'-DDT	50 ug/mL
							Benzidine_T	50 ug/mL
							DFTPP	50 ug/mL
							Pentachlorophenol_T	50 ug/mL
.MS-47548-U_00015	03/31/19	Supelco, Lot XA19099V			(Purchased Reagent)		4,4'-DDD	1 ug/mL
							4,4'-DDE	1 ug/mL
							4,4'-DDT	1000 ug/mL
							Benzidine_T	1000 ug/mL
							DFTPP	1000 ug/mL
							Pentachlorophenol_T	1000 ug/mL
MS-FAMSSV_100_00020	04/04/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA004_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	10 uL	2,4,6-Tribromophenol (Surr)	4 ug/mL
							2-Fluorobiphenyl	4 ug/mL
							2-Fluorophenol (Surr)	4 ug/mL
							Nitrobenzene-d5	4 ug/mL
							Phenol-d5 (Surr)	4 ug/mL
							Terphenyl-d14	4 ug/mL
							Famphur	4 ug/mL
							Alachlor	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL
							Benzoic acid	8 ug/mL
							Atrazine	4 ug/mL
							Caprolactam	4 ug/mL
							1,1'-Biphenyl	4 ug/mL
							1,2,4,5-Tetrachlorobenzene	4 ug/mL
							1,2,4-Trichlorobenzene	4 ug/mL
							1,2-Dichlorobenzene	4 ug/mL
							1,2-Diphenylhydrazine	4.0439 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	4 ug/mL
							1,3-Dinitrobenzene	4 ug/mL
							1,4-Dichlorobenzene	4 ug/mL
							1,4-Dioxane	4 ug/mL
							1-Methylnaphthalene	4 ug/mL
							2,3,4,6-Tetrachlorophenol	4 ug/mL
							2,4,5-Trichlorophenol	4 ug/mL
							2,4,6-Trichlorophenol	4 ug/mL
							2,4-Dichlorophenol	4 ug/mL
							2,4-Dimethylphenol	4 ug/mL
							2,4-Dinitrophenol	8 ug/mL
							2,4-Dinitrotoluene	4 ug/mL
							2,6-Dichlorophenol	4 ug/mL
							2,6-Dinitrotoluene	4 ug/mL
							2-Chloronaphthalene	4 ug/mL
							2-Chlorophenol	4 ug/mL
							2-Methylnaphthalene	4 ug/mL
							2-Methylphenol	4 ug/mL
							2-Nitroaniline	4 ug/mL
							2-Nitrophenol	4 ug/mL
							3 & 4 Methylphenol	4 ug/mL
							3-Nitroaniline	4 ug/mL
							4,6-Dinitro-2-methylphenol	8 ug/mL
							4-Bromophenyl phenyl ether	4 ug/mL
							4-Chloro-3-methylphenol	4 ug/mL
							4-Chloroaniline	4 ug/mL
							4-Chlorophenyl phenyl ether	4 ug/mL
							4-Nitroaniline	4 ug/mL
							4-Nitrophenol	8 ug/mL
							Acenaphthene	4 ug/mL
							Acenaphthylene	4 ug/mL
							Acetophenone	4 ug/mL
							Aniline	4 ug/mL
							Anthracene	4 ug/mL
							Azobenzene	4 ug/mL
							Benzo[a]anthracene	4 ug/mL
							Benzo[a]pyrene	4 ug/mL
							Benzo[b]fluoranthene	4 ug/mL
							Benzo[g,h,i]perylene	4 ug/mL
							Benzo[k]fluoranthene	4 ug/mL
							Benzyl alcohol	4 ug/mL
							bis (2-chloroisopropyl) ether	4 ug/mL
							Bis(2-chloroethoxy)methane	4 ug/mL
							Bis(2-chloroethyl)ether	4 ug/mL
							Bis(2-ethylhexyl) phthalate	4 ug/mL
							Butyl benzyl phthalate	4 ug/mL
							Carbazole	4 ug/mL
							Chrysene	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	4 ug/mL
							Di-n-octyl phthalate	4 ug/mL
							Dibenz(a,h)anthracene	4 ug/mL
							Dibenzofuran	4 ug/mL
							Diethyl phthalate	4 ug/mL
							Dimethyl phthalate	4 ug/mL
							Diphenylamine	3.4 ug/mL
							Fluoranthene	4 ug/mL
							Fluorene	4 ug/mL
							Hexachlorobenzene	4 ug/mL
							Hexachlorobutadiene	4 ug/mL
							Hexachlorocyclopentadiene	4 ug/mL
							Hexachloroethane	4 ug/mL
							Indeno[1,2,3-cd]pyrene	4 ug/mL
							Isophorone	4 ug/mL
							N-Nitrosodi-n-propylamine	4 ug/mL
							N-Nitrosodimethylamine	4 ug/mL
							N-Nitrosodiphenylamine	4 ug/mL
							Naphthalene	4 ug/mL
							Nitrobenzene	4 ug/mL
							Pentachlorophenol	8 ug/mL
							Phenanthrene	4 ug/mL
							Phenol	4 ug/mL
							Pyrene	4 ug/mL
							Pyridine	8 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA010_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	25 uL	2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14	10 ug/mL
							Famphur	10 ug/mL
							Alachlor	10 ug/mL
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzoic acid	20 ug/mL
							Atrazine	10 ug/mL
							Caprolactam	10 ug/mL
							1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10.1097 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							bis (2-chloroisopropyl) ether	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Diphenylamine	8.5 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	10 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	20 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA020_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	50 uL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14	20 ug/mL
							Famphur	20 ug/mL
							Alachlor	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzoic acid	40 ug/mL
							Atrazine	20 ug/mL
							Caprolactam	20 ug/mL
							1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20.2195 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							bis (2-chloroisopropyl) ether	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA050_00040	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	125 uL	2,4,6-Tribromophenol (Surr)	50 ug/mL
							2-Fluorobiphenyl	50 ug/mL
							2-Fluorophenol (Surr)	50 ug/mL
							Nitrobenzene-d5	50 ug/mL
							Phenol-d5 (Surr)	50 ug/mL
							Terphenyl-d14	50 ug/mL
							Famphur	50 ug/mL
							Alachlor	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Benzoic acid	100 ug/mL
							Atrazine	50 ug/mL
							Caprolactam	50 ug/mL
							1,1'-Biphenyl	50 ug/mL
							1,2,4,5-Tetrachlorobenzene	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Diphenylhydrazine	50.5487 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	50 ug/mL
							1-Methylnaphthalene	50 ug/mL
							2,3,4,6-Tetrachlorophenol	50 ug/mL
							2,4,5-Trichlorophenol	50 ug/mL
							2,4,6-Trichlorophenol	50 ug/mL
							2,4-Dichlorophenol	50 ug/mL
							2,4-Dimethylphenol	50 ug/mL
							2,4-Dinitrophenol	100 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dichlorophenol	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Chloronaphthalene	50 ug/mL
							2-Chlorophenol	50 ug/mL
							2-Methylnaphthalene	50 ug/mL
							2-Methylphenol	50 ug/mL
							2-Nitroaniline	50 ug/mL
							2-Nitrophenol	50 ug/mL
							3 & 4 Methylphenol	50 ug/mL
							3-Nitroaniline	50 ug/mL
							4,6-Dinitro-2-methylphenol	100 ug/mL
							4-Bromophenyl phenyl ether	50 ug/mL
							4-Chloro-3-methylphenol	50 ug/mL
							4-Chloroaniline	50 ug/mL
							4-Chlorophenyl phenyl ether	50 ug/mL
							4-Nitroaniline	50 ug/mL
							4-Nitrophenol	100 ug/mL
							Acenaphthene	50 ug/mL
							Acenaphthylene	50 ug/mL
							Acetophenone	50 ug/mL
							Aniline	50 ug/mL
							Anthracene	50 ug/mL
							Azobenzene	50 ug/mL
							Benzo[a]anthracene	50 ug/mL
							Benzo[a]pyrene	50 ug/mL
							Benzo[b]fluoranthene	50 ug/mL
							Benzo[g,h,i]perylene	50 ug/mL
							Benzo[k]fluoranthene	50 ug/mL
							Benzyl alcohol	50 ug/mL
							bis (2-chloroisopropyl) ether	50 ug/mL
							Bis(2-chloroethoxy)methane	50 ug/mL
							Bis(2-chloroethyl)ether	50 ug/mL
							Bis(2-ethylhexyl) phthalate	50 ug/mL
							Butyl benzyl phthalate	50 ug/mL
							Carbazole	50 ug/mL
							Chrysene	50 ug/mL
							Di-n-butyl phthalate	50 ug/mL
							Di-n-octyl phthalate	50 ug/mL
							Dibenz(a,h)anthracene	50 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	50 ug/mL
							Diethyl phthalate	50 ug/mL
							Dimethyl phthalate	50 ug/mL
							Diphenylamine	42.5 ug/mL
							Fluoranthene	50 ug/mL
							Fluorene	50 ug/mL
							Hexachlorobenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexachlorocyclopentadiene	50 ug/mL
							Hexachloroethane	50 ug/mL
							Indeno[1,2,3-cd]pyrene	50 ug/mL
							Isophorone	50 ug/mL
							N-Nitrosodi-n-propylamine	50 ug/mL
							N-Nitrosodimethylamine	50 ug/mL
							N-Nitrosodiphenylamine	50 ug/mL
							Naphthalene	50 ug/mL
							Nitrobenzene	50 ug/mL
							Pentachlorophenol	100 ug/mL
							Phenanthrene	50 ug/mL
							Phenol	50 ug/mL
							Pyrene	50 ug/mL
							Pyridine	100 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA080_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14	80 ug/mL
							Famphur	80 ug/mL
							Alachlor	80 ug/mL
							3,3'-Dichlorobenzidine	80 ug/mL
							Benzoic acid	160 ug/mL
							Atrazine	80 ug/mL
							Caprolactam	80 ug/mL
							1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-569732 HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA120_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	300 uL	2,4,6-Tribromophenol (Surr)	120 ug/mL
							2-Fluorobiphenyl	120 ug/mL
							2-Fluorophenol (Surr)	120 ug/mL
							Nitrobenzene-d5	120 ug/mL
							Phenol-d5 (Surr)	120 ug/mL
							Terphenyl-d14	120 ug/mL
							Famphur	120 ug/mL
							Alachlor	120 ug/mL
							3,3'-Dichlorobenzidine	120 ug/mL
							Benzoic acid	240 ug/mL
							Atrazine	120 ug/mL
							Caprolactam	120 ug/mL
							1,1'-Biphenyl	120 ug/mL
							1,2,4,5-Tetrachlorobenzene	120 ug/mL
							1,2,4-Trichlorobenzene	120 ug/mL
							1,2-Dichlorobenzene	120 ug/mL
							1,2-Diphenylhydrazine	121.317 ug/mL
							1,3-Dichlorobenzene	120 ug/mL
							1,3-Dinitrobenzene	120 ug/mL
							1,4-Dichlorobenzene	120 ug/mL
							1,4-Dioxane	120 ug/mL
							1-Methylnaphthalene	120 ug/mL
							2,3,4,6-Tetrachlorophenol	120 ug/mL
							2,4,5-Trichlorophenol	120 ug/mL
							2,4,6-Trichlorophenol	120 ug/mL
							2,4-Dichlorophenol	120 ug/mL
							2,4-Dimethylphenol	120 ug/mL
							2,4-Dinitrophenol	240 ug/mL
							2,4-Dinitrotoluene	120 ug/mL
							2,6-Dichlorophenol	120 ug/mL
							2,6-Dinitrotoluene	120 ug/mL
							2-Chloronaphthalene	120 ug/mL
							2-Chlorophenol	120 ug/mL
							2-Methylnaphthalene	120 ug/mL
							2-Methylphenol	120 ug/mL
							2-Nitroaniline	120 ug/mL
							2-Nitrophenol	120 ug/mL
							3 & 4 Methylphenol	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitroaniline	120 ug/mL
							4,6-Dinitro-2-methylphenol	240 ug/mL
							4-Bromophenyl phenyl ether	120 ug/mL
							4-Chloro-3-methylphenol	120 ug/mL
							4-Chloroaniline	120 ug/mL
							4-Chlorophenyl phenyl ether	120 ug/mL
							4-Nitroaniline	120 ug/mL
							4-Nitrophenol	240 ug/mL
							Acenaphthene	120 ug/mL
							Acenaphthylene	120 ug/mL
							Acetophenone	120 ug/mL
							Aniline	120 ug/mL
							Anthracene	120 ug/mL
							Azobenzene	120 ug/mL
							Benzo[a]anthracene	120 ug/mL
							Benzo[a]pyrene	120 ug/mL
							Benzo[b]fluoranthene	120 ug/mL
							Benzo[g,h,i]perylene	120 ug/mL
							Benzo[k]fluoranthene	120 ug/mL
							Benzyl alcohol	120 ug/mL
							bis (2-chloroisopropyl) ether	120 ug/mL
							Bis(2-chloroethoxy)methane	120 ug/mL
							Bis(2-chloroethyl)ether	120 ug/mL
							Bis(2-ethylhexyl) phthalate	120 ug/mL
							Butyl benzyl phthalate	120 ug/mL
							Carbazole	120 ug/mL
							Chrysene	120 ug/mL
							Di-n-butyl phthalate	120 ug/mL
							Di-n-octyl phthalate	120 ug/mL
							Dibenz(a,h)anthracene	120 ug/mL
							Dibenzofuran	120 ug/mL
							Diethyl phthalate	120 ug/mL
							Dimethyl phthalate	120 ug/mL
							Diphenylamine	102 ug/mL
							Fluoranthene	120 ug/mL
							Fluorene	120 ug/mL
							Hexachlorobenzene	120 ug/mL
							Hexachlorobutadiene	120 ug/mL
							Hexachlorocyclopentadiene	120 ug/mL
							Hexachloroethane	120 ug/mL
							Indeno[1,2,3-cd]pyrene	120 ug/mL
							Isophorone	120 ug/mL
							N-Nitrosodi-n-propylamine	120 ug/mL
							N-Nitrosodimethylamine	120 ug/mL
							N-Nitrosodiphenylamine	120 ug/mL
							Naphthalene	120 ug/mL
							Nitrobenzene	120 ug/mL
							Pentachlorophenol	240 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	120 ug/mL
							Phenol	120 ug/mL
							Pyrene	120 ug/mL
							Pyridine	240 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA160_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	400 uL	2,4,6-Tribromophenol (Surr)	160 ug/mL
							2-Fluorobiphenyl	160 ug/mL
							2-Fluorophenol (Surr)	160 ug/mL
							Nitrobenzene-d5	160 ug/mL
							Phenol-d5 (Surr)	160 ug/mL
							Terphenyl-d14	160 ug/mL
							Famphur	160 ug/mL
							Alachlor	160 ug/mL
							3,3'-Dichlorobenzidine	160 ug/mL
							Benzoic acid	320 ug/mL
							Atrazine	160 ug/mL
							Caprolactam	160 ug/mL
							1,1'-Biphenyl	160 ug/mL
							1,2,4,5-Tetrachlorobenzene	160 ug/mL
							1,2,4-Trichlorobenzene	160 ug/mL
							1,2-Dichlorobenzene	160 ug/mL
							1,2-Diphenylhydrazine	161.756 ug/mL
							1,3-Dichlorobenzene	160 ug/mL
							1,3-Dinitrobenzene	160 ug/mL
							1,4-Dichlorobenzene	160 ug/mL
							1,4-Dioxane	160 ug/mL
							1-Methylnaphthalene	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6-Tetrachlorophenol	160 ug/mL
							2,4,5-Trichlorophenol	160 ug/mL
							2,4,6-Trichlorophenol	160 ug/mL
							2,4-Dichlorophenol	160 ug/mL
							2,4-Dimethylphenol	160 ug/mL
							2,4-Dinitrophenol	320 ug/mL
							2,4-Dinitrotoluene	160 ug/mL
							2,6-Dichlorophenol	160 ug/mL
							2,6-Dinitrotoluene	160 ug/mL
							2-Chloronaphthalene	160 ug/mL
							2-Chlorophenol	160 ug/mL
							2-Methylnaphthalene	160 ug/mL
							2-Methylphenol	160 ug/mL
							2-Nitroaniline	160 ug/mL
							2-Nitrophenol	160 ug/mL
							3 & 4 Methylphenol	160 ug/mL
							3-Nitroaniline	160 ug/mL
							4,6-Dinitro-2-methylphenol	320 ug/mL
							4-Bromophenyl phenyl ether	160 ug/mL
							4-Chloro-3-methylphenol	160 ug/mL
							4-Chloroaniline	160 ug/mL
							4-Chlorophenyl phenyl ether	160 ug/mL
							4-Nitroaniline	160 ug/mL
							4-Nitrophenol	320 ug/mL
							Acenaphthene	160 ug/mL
							Acenaphthylene	160 ug/mL
							Acetophenone	160 ug/mL
							Aniline	160 ug/mL
							Anthracene	160 ug/mL
							Azobenzene	160 ug/mL
							Benzo[a]anthracene	160 ug/mL
							Benzo[a]pyrene	160 ug/mL
							Benzo[b]fluoranthene	160 ug/mL
							Benzo[g,h,i]perylene	160 ug/mL
							Benzo[k]fluoranthene	160 ug/mL
							Benzyl alcohol	160 ug/mL
							bis (2-chloroisopropyl) ether	160 ug/mL
							Bis(2-chloroethoxy)methane	160 ug/mL
							Bis(2-chloroethyl)ether	160 ug/mL
							Bis(2-ethylhexyl) phthalate	160 ug/mL
							Butyl benzyl phthalate	160 ug/mL
							Carbazole	160 ug/mL
							Chrysene	160 ug/mL
							Di-n-butyl phthalate	160 ug/mL
							Di-n-octyl phthalate	160 ug/mL
							Dibenz(a,h)anthracene	160 ug/mL
							Dibenzofuran	160 ug/mL
							Diethyl phthalate	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dimethyl phthalate	160 ug/mL
							Diphenylamine	136 ug/mL
							Fluoranthene	160 ug/mL
							Fluorene	160 ug/mL
							Hexachlorobenzene	160 ug/mL
							Hexachlorobutadiene	160 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	160 ug/mL
							Indeno[1,2,3-cd]pyrene	160 ug/mL
							Isophorone	160 ug/mL
							N-Nitrosodi-n-propylamine	160 ug/mL
							N-Nitrosodimethylamine	160 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							Naphthalene	160 ug/mL
							Nitrobenzene	160 ug/mL
							Pentachlorophenol	320 ug/mL
							Phenanthrene	160 ug/mL
							Phenol	160 ug/mL
							Pyrene	160 ug/mL
							Pyridine	320 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA200_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	500 uL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
							Famphur	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Alachlor	200 ug/mL
							3,3'-Dichlorobenzidine	200 ug/mL
							Benzoic acid	400 ug/mL
							Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
							1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00173	11/30/18	10/01/18	Methylene Chloride, Lot 187286	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00173	11/30/18	10/01/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00047	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14	80 ug/mL
							3,3'-Dichlorobenzidine	80 ug/mL
							Benzoic acid	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Isophorone	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-HSLA_STK_00047	11/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-569730 HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-571995_00002	2 mL	1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Hexachlorobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenol	200 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-569730 HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenol	1000 ug/mL
MS-HSLB1B3SSV_00052	03/06/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	2000 ug/mL
MS-HSLB1B3SSV_00052	03/06/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLB1_STK_00012	250 uL	Benzoic acid	200 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Benzyl alcohol	100 ug/mL
							bis (2-chloroisopropyl) ether	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Isophorone	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenol	100 ug/mL
.MS-HSLB1_STK_00012	03/31/19	06/18/18	Methylene Chloride, Lot 187286	5 mL	MS-569731.SEC_00003	1 mL	Benzoic acid	400 ug/mL
					MS-571995.SEC_00002	1 mL	1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Isophorone	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenol	200 ug/mL
..MS-569731.SEC_00003	05/31/19		Restek, Lot A0132859		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-571995.SEC_00002	03/31/19		Restek, Lot A0131190		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenol	1000 ug/mL
MS-HSLB2SSV_00047	02/28/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLB2SSV_00047	02/28/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLB2_STK_00010	250 uL	3,3'-Dichlorobenzidine	100 ug/mL
.MS-HSLB2_STK_00010	02/28/19	06/18/18	Methylene Chloride, Lot 187286	10 mL	MS-569730SEC_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
..MS-569730SEC_00004	04/30/19		Restek, Lot A0131614		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
.MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM CCV_00080	01/30/19	10/30/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM CCV_00080	01/30/19	10/30/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIMSL_00027	30 uL	2-methylnaphthalene-d10	0.6 ug/mL
							Fluoranthene-d10	0.6 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							1-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
							2-Fluorobiphenyl	0.6 ug/mL
							Nitrobenzene-d5	0.6 ug/mL
							Terphenyl-d14	0.6 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19	O2SI, Lot 334026			(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM SSV2_00004	03/31/19	07/02/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM SSV2_00004	03/31/19	07/02/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM SSV_00130	30 uL	1-Methylnaphthalene	0.6 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
.MS-SIM SSV_00130	03/31/19	07/02/18	Methylene Chloride, Lot 187286	10 mL	MS-HSLB1_STK_00012	1 mL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
..MS-HSLB1_STK_00012	03/31/19	06/18/18	Methylene Chloride, Lot 187286	5 mL	MS-571995.SEC_00002	1 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-571995.SEC_00002	03/31/19	Restek, Lot A0131190			(Purchased Reagent)		1-Methylnaphthalene	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Chrysene	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
MS-SIMSL 0.01_00005	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	5 uL	2-methylnaphthalene-d10	0.01 ug/mL
							Fluoranthene-d10	0.01 ug/mL
							2-Methylnaphthalene	0.02 ug/mL
							1-Methylnaphthalene	0.01 ug/mL
							Acenaphthene	0.01 ug/mL
							Acenaphthylene	0.01 ug/mL
							Anthracene	0.01 ug/mL
							Benzo[a]anthracene	0.01 ug/mL
							Benzo[a]pyrene	0.01 ug/mL
							Benzo[b]fluoranthene	0.01 ug/mL
							Benzo[g,h,i]perylene	0.01 ug/mL
							Benzo[k]fluoranthene	0.01 ug/mL
							Chrysene	0.01 ug/mL
							Dibenz(a,h)anthracene	0.01 ug/mL
							Fluoranthene	0.01 ug/mL
							Fluorene	0.01 ug/mL
							Indeno[1,2,3-cd]pyrene	0.01 ug/mL
							Naphthalene	0.01 ug/mL
							Phenanthrene	0.01 ug/mL
							Pyrene	0.01 ug/mL
							2-Fluorobiphenyl	0.01 ug/mL
							Nitrobenzene-d5	0.01 ug/mL
							Terphenyl-d14	0.01 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.02_00079	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	10 uL	2-methylnaphthalene-d10	0.02 ug/mL
							Fluoranthene-d10	0.02 ug/mL
							2-Methylnaphthalene	0.04 ug/mL
							1-Methylnaphthalene	0.02 ug/mL
							Acenaphthene	0.02 ug/mL
							Acenaphthylene	0.02 ug/mL
							Anthracene	0.02 ug/mL
							Benzo[a]anthracene	0.02 ug/mL
							Benzo[a]pyrene	0.02 ug/mL
							Benzo[b]fluoranthene	0.02 ug/mL
							Benzo[g,h,i]perylene	0.02 ug/mL
							Benzo[k]fluoranthene	0.02 ug/mL
							Chrysene	0.02 ug/mL
							Dibenz(a,h)anthracene	0.02 ug/mL
							Fluoranthene	0.02 ug/mL
							Fluorene	0.02 ug/mL
							Indeno[1,2,3-cd]pyrene	0.02 ug/mL
							Naphthalene	0.02 ug/mL
							Phenanthrene	0.02 ug/mL
							Pyrene	0.02 ug/mL
							2-Fluorobiphenyl	0.02 ug/mL
							Nitrobenzene-d5	0.02 ug/mL
							Terphenyl-d14	0.02 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.05_00007	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	25 uL	2-methylnaphthalene-d10	0.05 ug/mL
							Fluoranthene-d10	0.05 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							1-Methylnaphthalene	0.05 ug/mL
							Acenaphthene	0.05 ug/mL
							Acenaphthylene	0.05 ug/mL
							Anthracene	0.05 ug/mL
							Benzo[a]anthracene	0.05 ug/mL
							Benzo[a]pyrene	0.05 ug/mL
							Benzo[b]fluoranthene	0.05 ug/mL
							Benzo[g,h,i]perylene	0.05 ug/mL
							Benzo[k]fluoranthene	0.05 ug/mL
							Chrysene	0.05 ug/mL
							Dibenz(a,h)anthracene	0.05 ug/mL
							Fluoranthene	0.05 ug/mL
							Fluorene	0.05 ug/mL
							Indeno[1,2,3-cd]pyrene	0.05 ug/mL
							Naphthalene	0.05 ug/mL
							Phenanthrene	0.05 ug/mL
							Pyrene	0.05 ug/mL
							2-Fluorobiphenyl	0.05 ug/mL
							Nitrobenzene-d5	0.05 ug/mL
							Terphenyl-d14	0.05 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS-SIMSL 0.1_00075	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	50 uL	2-methylnaphthalene-d10	0.1 ug/mL
							Fluoranthene-d10	0.1 ug/mL
							2-Methylnaphthalene	0.2 ug/mL
							1-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							2-Fluorobiphenyl	0.1 ug/mL
							Nitrobenzene-d5	0.1 ug/mL
							Terphenyl-d14	0.1 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.3_00074	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-SIMSL Int._00026	150 uL	2-methylnaphthalene-d10	0.3 ug/mL
							Fluoranthene-d10	0.3 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							1-Methylnaphthalene	0.3 ug/mL
							Acenaphthene	0.3 ug/mL
							Acenaphthylene	0.3 ug/mL
							Anthracene	0.3 ug/mL
							Benzo[a]anthracene	0.3 ug/mL
							Benzo[a]pyrene	0.3 ug/mL
							Benzo[b]fluoranthene	0.3 ug/mL
							Benzo[g,h,i]perylene	0.3 ug/mL
							Benzo[k]fluoranthene	0.3 ug/mL
							Chrysene	0.3 ug/mL
							Dibenz(a,h)anthracene	0.3 ug/mL
							Fluoranthene	0.3 ug/mL
							Fluorene	0.3 ug/mL
							Indeno[1,2,3-cd]pyrene	0.3 ug/mL
							Naphthalene	0.3 ug/mL
							Phenanthrene	0.3 ug/mL
							Pyrene	0.3 ug/mL
							2-Fluorobiphenyl	0.3 ug/mL
							Nitrobenzene-d5	0.3 ug/mL
							Terphenyl-d14	0.3 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.6_00144	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	30 uL	2-methylnaphthalene-d10	0.6 ug/mL
							Fluoranthene-d10	0.6 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							1-Methylnaphthalene	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
							2-Fluorobiphenyl	0.6 ug/mL
							Nitrobenzene-d5	0.6 ug/mL
							Terphenyl-d14	0.6 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 1.2_00075	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	60 uL	2-methylnaphthalene-d10	1.2 ug/mL
							Fluoranthene-d10	1.2 ug/mL
							2-Methylnaphthalene	2.4 ug/mL
							1-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2-Fluorobiphenyl	1.2 ug/mL
							Nitrobenzene-d5	1.2 ug/mL
							Terphenyl-d14	1.2 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 2.5_00074	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	125 uL	2-methylnaphthalene-d10	2.5 ug/mL
							Fluoranthene-d10	2.5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							1-Methylnaphthalene	2.5 ug/mL
							Acenaphthene	2.5 ug/mL
							Acenaphthylene	2.5 ug/mL
							Anthracene	2.5 ug/mL
							Benzo[a]anthracene	2.5 ug/mL
							Benzo[a]pyrene	2.5 ug/mL
							Benzo[b]fluoranthene	2.5 ug/mL
							Benzo[g,h,i]perylene	2.5 ug/mL
							Benzo[k]fluoranthene	2.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	2.5 ug/mL
							Dibenz(a,h)anthracene	2.5 ug/mL
							Fluoranthene	2.5 ug/mL
							Fluorene	2.5 ug/mL
							Indeno[1,2,3-cd]pyrene	2.5 ug/mL
							Naphthalene	2.5 ug/mL
							Phenanthrene	2.5 ug/mL
							Pyrene	2.5 ug/mL
							2-Fluorobiphenyl	2.5 ug/mL
							Nitrobenzene-d5	2.5 ug/mL
							Terphenyl-d14	2.5 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 5_00076	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	250 uL	2-methylnaphthalene-d10	5 ug/mL
							Fluoranthene-d10	5 ug/mL
							2-Methylnaphthalene	10 ug/mL
							1-Methylnaphthalene	5 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Anthracene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Chrysene	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Naphthalene	5 ug/mL
							Phenanthrene	5 ug/mL
							Pyrene	5 ug/mL
							2-Fluorobiphenyl	5 ug/mL
							Nitrobenzene-d5	5 ug/mL
							Terphenyl-d14	5 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19	O2SI, Lot 334026			(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19	Restek, Lot A0116027			(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21	Restek, Lot A0108907			(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MV-568718-D_00010	05/31/22		RESTEK, Lot A0127975		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00107	04/18/19	10/18/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-BFB_00026							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
MV-BFB_00027							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
MV-MegaMain B_00002	10/31/18	09/29/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722.sec_00005	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-571992.sec_00001	1000 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMain B_00003	11/30/18	11/01/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722.sec_00005	1000 uL	Bromomethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-571992.sec_00001	1000 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00002	10/31/18	10/04/18	P&T Methanol, Lot 181124	50 mL	MV-568720_00022	1266 uL	Acrolein	500.07 ug/mL
					MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569723_00004	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					MV-569724_00016	1000 uL	Vinyl acetate	100 ug/mL
					MV-569727_00007	4000 uL	Cyclohexanone	2000 ug/mL
					MV-571992_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					MV-CUS17739_00004	2500 uL	1-Chlorohexane	50 ug/mL
							2-Pentanone	200 ug/mL
							sec-Butyl Alcohol	1500 ug/mL
.MV-568720_00022	10/31/18		RESTEK, Lot A0137497		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00004	12/31/20		RESTEK, Lot A0133302		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724_00016	10/31/18		RESTEK, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00007	02/29/20		RESTEK, Lot A0124672		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00004	10/31/20	Ultra, Lot CS-4707			(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00002	10/31/18	10/04/18	P&T Methanol, Lot 181124	50 mL	MV-571992_00001	1000 uL	1,2-Dichloroethene, Total	100 ug/mL
							Xylenes, Total	100 ug/mL
.MV-571992_00001	12/31/18	RESTEK, Lot A0123711			(Purchased Reagent)		1,2-Dichloroethene, Total	5000 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00006	11/30/18	11/07/18	P&T Methanol, Lot 181124	50 mL	MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-571992_00001	1000 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
SIM_LVI_SURR_00006	02/11/19	10/01/18	ACETONE, Lot Acetone_00198	500 mL	8270SIMSurStk_00001	1 mL	2,4,6 - Tribromophenol	2 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							Fluoranthene-d10 (Surr)	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Phenol-d6	2 ug/mL
							Terphenyl-d14	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.8270SIMSurStk_00001	02/11/19		o2si, Lot 334025		(Purchased Reagent)		2,4,6 - Tribromophenol	1000 mg/L
							2,4,6-Tribromophenol (Surr)	1000 mg/L
							2-Fluorobiphenyl	1000 mg/L
							2-Fluorophenol (Surr)	1000 mg/L
							2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
							Fluoranthene-d10 (Surr)	1000 mg/L
							Nitrobenzene-d5	1000 mg/L
							Phenol-d5 (Surr)	1000 mg/L
							Phenol-d6	1000 mg/L
							Terphenyl-d14	1000 mg/L

Reagent

1000 v_00015

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CERTIFICATE OF ANALYSIS

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV1
Lot Number:	K2-V651103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Vanadium
Starting Material:	V2O5
Starting Material Lot#:	1782
Starting Material Purity:	99.9947%

4780772
ID: 1000 V_00015
Exp: 06/22/20 Prpd: SJS
1000 V IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 5 µg/mL

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**999 ± 5 µg/mL** ICP Assay NIST SRM 3165 Lot Number: 992706

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods | **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000199	M	Eu	<	0.000099	O	Na		0.007915	M	Se	<	0.006683	O	Zn	<	0.006624
M	Al		0.009352	O	Fe		0.033582	M	Nb		0.001127	O	Si		0.002638	M	Zr	<	0.001995
M	As	<	0.001596	M	Ga		0.000433	M	Nd	<	0.000399	M	Sm	<	0.000099				
M	Au	<	0.000300	M	Gd	<	0.000099	M	Ni	<	0.006982	M	Sn	<	0.001396				
M	B	<	0.016458	M	Ge	<	0.000399	M	Os	<	0.000100	O	Sr		0.000143				
M	Ba		0.000184	M	Hf	<	0.000099	O	P	<	0.055200	M	Ta	<	0.000099				
M	Be	<	0.000498	M	Hg	<	0.008001	M	Pb		0.000238	M	Tb	<	0.000099				
M	Bi	<	0.000399	M	Ho	<	0.000099	M	Pd	<	0.000099	M	Te	<	0.001197				
O	Ca		0.011993	M	In	<	0.000099	M	Pr	<	0.000099	M	Th	<	0.000199				
M	Cd	<	0.000099	M	Ir	<	0.000100	M	Pt	<	0.000199	M	Ti		0.001452				
M	Ce	<	0.000399	O	K	<	0.110400	M	Rb	<	0.000598	M	Tl	<	0.001396				
M	Co	<	0.000099	M	La	<	0.000199	M	Re	<	0.000099	M	Tm	<	0.000099				
O	Cr		0.016311	O	Li	<	0.003312	M	Rh	<	0.000399	M	U	<	0.000199				
M	Cs	<	0.000184	M	Lu	<	0.000099	M	Ru	<	0.000100	s	V	<					
M	Cu	<	0.002793	O	Mg	<	0.033120	n	S	<		M	W		0.000368				
M	Dy	<	0.000099	M	Mn		0.000650	M	Sb		0.009363	M	Y	<	0.000099				
M	Er	<	0.000099	M	Mo		0.011021	M	Sc	<	0.000498	M	Yb	<	0.000099				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

-While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 22, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 22, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

1000 Zn_00020

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6779 - 540.585.3030
fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 583.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN1
Lot Number:	M2-ZN656655
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Zinc
Starting Material:	Zn Shot
Starting Material Lot#:	1887
Starting Material Purity:	99.9994%

5062249
ID: 1000 Zn_00020
Exp: 03/31/21 Prpd: SJS
1000 Zn IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 3 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001528	M	Eu	<	0.000509	O	Na		0.000719	M	Se	<	0.050920	s	Zn	<	
O	Al	<	0.011300	O	Fe		0.000471	M	Nb	<	0.000509	O	Si	<	0.022600	O	Zr	<	0.001130
M	As	<	0.005092	M	Ga	<	0.005092	M	Nd	<	0.001018	M	Sm	<	0.000509				
M	Au	<	0.000509	M	Gd	<	0.002037	O	Ni	<	0.000904	M	Sn	<	0.000509				
O	B	<	0.001130	M	Ge	<	0.001018	n	Os	<		O	Sr		0.000009				
O	Ba	<	0.001130	M	Hf	<	0.000509	O	P	<	0.033900	M	Ta	<	0.000509				
O	Be	<	0.000113	O	Hg	<	0.002260	O	Pb		0.004240	M	Tb	<	0.000509				
M	Bi	<	0.010184	M	Ho	<	0.000509	M	Pd	<	0.000509	M	Te	<	0.005092				
O	Ca		0.000603	M	In	<	0.000509	M	Pr	<	0.000509	M	Th	<	0.000509				
O	Cd		0.000290	M	Ir	<	0.000509	M	Pt	<	0.000509	O	Ti	<	0.000565				
M	Ce	<	0.000509	O	K		0.000322	M	Rb	<	0.000509	M	Tl		0.000313				
M	Co	<	0.000509	M	La	<	0.000509	M	Re	<	0.000509	O	Tm	<	0.000379				
O	Cr	<	0.002260	O	Li	<	0.000565	M	Rh	<	0.000509	M	U	<	0.000509				
M	Cs	<	0.001528	M	Lu	<	0.000509	O	Ru	<	0.006780	O	V	<	0.001130				
O	Cu		0.000149	O	Mg		0.000023	O	S	<	0.011300	M	W	<	0.000509				
M	Dy	<	0.000509	O	Mn	<	0.000226	M	Sb	<	0.000509	O	Y		0.000082				
M	Er	<	0.000509	M	Mo	<	0.001528	O	Sc	<	0.000565	M	Yb	<	0.000509				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 31, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 31, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Revision1: Added 30mL statements 091917JAK

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. **1**-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

10000 Al_00018

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 08, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 08, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

300 Technology Drive
Christiansburg, VA 24073 - USA
Inorganic Ventures

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	K2-AL653003
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Al Shot
Starting Material Lot#:	1834
Starting Material Purity:	99.9965%

4785865
ID: 10000 Al_00018
Exp: 11/08/20 Prpd: CML
10000 Al IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 33 µg/mL

Certified Density: 1.083 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **10008 ± 39 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10039 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u^2_{char\ a}) / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u^2_{char\ b}) / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000521	M	Eu	<	0.000521	O	Na		0.039566	M	Se	<	0.003648	M	Zn	0.030987
s	Al	<		O	Fe		0.031494	M	Nb	<	0.000521	O	Si		0.185691	O	Zr	0.000399
M	As	<	0.012509	M	Ga		0.002264	M	Nd		0.004290	M	Sm	<	0.002085			
M	Au	<	0.000518	M	Gd	<	0.004170	O	Ni	<	0.012890	M	Sn	<	0.005212			
O	B		0.008253	M	Ge	<	0.002606	M	Os	<	0.000518	O	Sr		0.000202			
O	Ba	<	0.000659	M	Hf	<	0.000521	n	P	<		M	Ta	<	0.000521			
O	Be	<	0.000258	M	Hg	<	0.001555	M	Pb		0.001549	M	Tb	<	0.000521			
M	Bi	<	0.005212	M	Ho	<	0.000521	M	Pd	<	0.000521	M	Te	<	0.014072			
O	Ca		0.013185	M	In	<	0.002085	M	Pr		0.000953	M	Th	<	0.007297			
M	Cd	<	0.004170	M	Ir	<	0.000518	M	Pt	<	0.000521	O	Ti		0.001589			
M	Ce		0.011680	O	K		0.026175	M	Rb	<	0.000521	M	Tl		0.003099			
M	Co	<	0.000521	O	La		0.007115	M	Re	<	0.000521	M	Tm	<	0.000521			
O	Cr		0.001038	O	Li	<	0.000103	M	Rh	<	0.000521	M	U	<	0.005212			
M	Cs	<	0.000521	M	Lu	<	0.000521	M	Ru	<	0.000518	M	V		0.001549			
O	Cu		0.030608	O	Mg		0.016615	i	S	<		M	W	<	0.000521			
M	Dy	<	0.003127	O	Mn		0.000589	M	Sb	<	0.018763	O	Y	<	0.002578			
M	Er		0.000834	M	Mo	<	0.002085	O	Sc		0.000548	M	Yb	<	0.000521			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, HF and H2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

10000 Fe_00021

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 12, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 12, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

300 Technology Drive
Christiansburg, VA 24073 - USA
Tel: 800.669.6799 - 540.585.3030
Fax: 540.585.3012
inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGFE10
Lot Number:	M2-FE659835
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Iron
Starting Material:	Iron Metal
Starting Material Lot#:	2031 & 2146
Starting Material Purity:	99.9919%

4954179
ID: 10000 Fe_00021
Exp: 07/12/21 Prpd: SJS
10000 Fe IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	9993 ± 25 µg/mL
Density:	1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10014 ± 52 µg/mL** ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2	**9988 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000607	M	Eu	<	0.000607	O	Na		0.009866	M	Se	<	0.032805	O	Zn	0.119626
M	Al		0.009492	s	Fe	<		M	Nb	<	0.000607	O	Si		0.035517	M	Zr	< 0.002430
M	As		0.060562	M	Ga	<	0.048601	M	Nd	<	0.000607	M	Sm	<	0.000607			
M	Au	<	0.008508	M	Gd	<	0.000607	O	Ni		0.182522	M	Sn	<	0.012150			
M	B	<	0.015187	M	Ge		0.060202	M	Os	<	0.001215	O	Sr	<	0.000997			
O	Ba	<	0.002494	M	Hf	<	0.000607	i	P	<	0.000001	M	Ta	<	0.000607			
M	Be	<	0.000607	M	Hg	<	0.001215	M	Pb		0.001321	M	Tb	<	0.000607			
M	Bi	<	0.000607	M	Ho	<	0.000607	M	Pd	<	0.000607	M	Te	<	0.001822			
O	Ca		0.022445	M	In	<	0.000607	M	Pr	<	0.000607	M	Th	<	0.001215			
M	Cd	<	0.000607	M	Ir	<	0.006685	M	Pt	<	0.000607	M	Ti	<	0.009720			
M	Ce	<	0.000607	O	K		0.003453	M	Rb	<	0.000607	M	Tl	<	0.000607			
O	Co		0.254052	M	La	<	0.000607	M	Re	<	0.000607	M	Tm	<	0.000607			
O	Cr		0.034284	O	Li	<	0.000124	M	Rh	<	0.000607	M	U	<	0.002430			
M	Cs	<	0.000607	M	Lu	<	0.000607	M	Ru	<	0.000607	M	V	<	0.003645			
O	Cu		0.019732	O	Mg		0.001973	O	S		0.032064	M	W	<	0.003645			
M	Dy	<	0.000607	O	Mn		0.073995	M	Sb		0.043139	M	Y	<	0.000607			
M	Er	<	0.000607	M	Mo		0.012016	M	Sc	<	0.001822	M	Yb	<	0.000607			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 55.85 +3 6 Fe(H2O)63+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF and H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Fe Containing Samples (Preparation and Solution) - Metal (Soluble in HCl); Oxides (If the oxide has been at a high temperature then Na2CO3 fusion in Pt0 followed by HCl dissolution otherwise dissolve in dilute HCl); Ores (See Oxides above using only the fusion approach).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 56 amu	970 ppt	N/A	40Ar15N1H, 40Ar16O, 36Ar17O1H , 38Ar18O, 37Cl18O1H, 40Ca16O
ICP-OES 238.204 nm	0.005/0.001 µg/mL	1	Ru, Co
ICP-OES 239.562 nm	0.005/0.001 µg/mL	1	Co, W, Cr
ICP-OES 259.940 nm	0.006/0.001 µg/mL	1	Hf, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

10000 Na (HP)_00002

HIGH-PURITY STANDARDS
www.highpuritystandards.com
P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

5206983
ID: 10000 Na (HP)_00002
Exp:07/09/19 Prpd: Opn:07/10/18
10000 Na HP

Sodium

Product Number:	**10M52-2**
Lot Number:	**1721911**
Matrix:	1% (v/v) HCl

Certified Value:

Element	(µg/mL)	SRM ID	SRM Lot#
Sodium	10,000 ± 30	3152a	120715

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Density: 1.018 g/mL ± 0.002 g/mL @ 20.0° C ± 0.3 °C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot via ICP-OES/ICP-MS analysis. The values are reported in µg/L.

Ag	<	0.1	Cu	<	0.5	Li	<	0.1	Rb	<	0.1	Th	<	0.1
Al	<	5	Dy	<	0.1	Lu	<	0.1	Re	<	0.1	Ti	<	0.1
As	<	0.3	Er	<	0.1	Mg		3	Rh	<	0.1	Tl	<	0.1
Au	<	0.1	Eu	<	0.1	Mn	<	0.3	Ru	<	0.1	Tm	<	0.1
B	<	5	Fe		60	Mo	<	0.1	Sb	<	0.1	U	<	0.3
Ba	<	0.1	Ga	<	0.1	Na		M	Sc	<	0.1	V	<	0.3
Be	<	0.1	Gd	<	0.1	Nb	<	0.1	Se	<	0.5	W	<	0.1
Bi	<	0.1	Ge	<	0.1	Nd	<	0.1	Si	<	10	Y	<	0.1
Ca		40	Hf	<	0.1	Ni	<	0.1	Sm	<	0.1	Yb	<	0.1
Cd	<	0.1	Ho	<	0.1	Os	<	0.1	Sn	<	3	Zn	<	0.1
Ce	<	0.1	In	<	0.1	Pb	<	0.3	Sr	<	0.1	Zr	<	0.1
Co	<	0.3	Ir	<	0.1	Pd	<	0.1	Ta	<	0.1			
Cr	<	0.3	K	<	50	Pr	<	0.1	Tb	<	0.1			
Cs	<	0.1	La	<	0.1	Pt	<	0.1	Te	<	0.1			

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for **eighteen** months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates

Shipped Date: July 2018

Certificate Issue Date: October 9, 2017

Moven Mutuvari

Moven Mutuvari, Ph. D, Laboratory Manager

Preparation Information:

This standard is prepared using **99.999%** pure **Sodium Chloride** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.
b. **Volumetric Device**
   The calibration of volumetric vessels is checked annually using the ASTM method E542.
c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.
d. **Calibration Standards:**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

Reagent

10000 Na_00067

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 06, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	N2-NA668816
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	1870
Starting Material Purity:	99.9997%

5225623
ID: 10000 Na_00067
Exp: 06/06/22 Prpd: SJS
10000 Na IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9997 ± 18 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **10000 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9966 ± 58 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 120715

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods — Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$.

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002004	M	Eu	<	0.001002	s	Na	<		M	Se	<	0.028065	M	Zn	<	0.001002
O	Al	<	0.007396	M	Fe	<	0.008018	M	Nb	<	0.001002	O	Si	<	0.024654	M	Zr	<	0.001002
M	As	<	0.002004	M	Ga	<	0.001002	M	Nd	<	0.001002	M	Sm	<	0.001002				
M	Au	<	0.001002	M	Gd	<	0.001002	M	Ni	<	0.003007	M	Sn	<	0.003007				
O	B	<	0.024654	M	Ge	<	0.002004	M	Os	<	0.018045	M	Sr		0.001145				
M	Ba		0.000127	M	Hf	<	0.001002	O	P	<	0.043145	M	Ta	<	0.001002				
O	Be	<	0.000739	M	Hg	<	0.003007	M	Pb	<	0.001002	M	Tb	<	0.001002				
M	Bi	<	0.001002	M	Ho	<	0.001002	M	Pd	<	0.001002	M	Te	<	0.006014				
O	Ca		0.059185	M	In	<	0.001002	M	Pr	<	0.001002	M	Th	<	0.001002				
M	Cd	<	0.001002	M	Ir	<	0.001002	M	Pt	<	0.001002	M	Ti	<	0.002004				
M	Ce	<	0.001002	O	K		0.018935	M	Rb	<	0.001002	M	Tl	<	0.001002				
O	Co	<	0.004314	M	La	<	0.001002	M	Re	<	0.001002	M	Tm	<	0.001002				
M	Cr	<	0.004009	O	Li	<	0.000246	M	Rh	<	0.001002	M	U	<	0.001002				
M	Cs	<	0.001002	M	Lu	<	0.001002	M	Ru	<	0.001002	M	V	<	0.008018				
M	Cu	<	0.005011	M	Mg		0.004580	O	S	<	0.036982	M	W	<	0.002004				
M	Dy	<	0.001002	M	Mn	<	0.002004	M	Sb	<	0.001002	M	Y	<	0.001002				
M	Er	<	0.001002	M	Mo	<	0.001002	M	Sc	<	0.001002	M	Yb	<	0.001002				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

Reagent

10000 Si_00015

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI10
Lot Number:	M2-SI657321
Matrix:	1% (v/v) HNO3 1.4% (v/v) HF
Value / Analyte(s):	10 000 µg/mL ea: Silicon
Starting Material:	Fumed Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9908%

4938600
ID: 10000 Si_00015
Exp: 04/25/21 Prpd: SJS
10000 SI IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10023 ± 48 µg/mL

Density: 1.045 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3150 Lot Number: 130912

Assay Method #2 **9989 ± 57 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001488	M	Eu	<	0.000248	O	Na		0.016935	M	Se	<	0.002977	O	Zn	<	0.012935
O	Al		0.112342	M	Fe		0.026932	O	Nb	<	0.005610	s	Si	<		O	Zr	<	0.001122
M	As	<	0.003953	M	Ga	<	0.000248	M	Nd	<	0.000248	M	Sm	<	0.000248				
M	Au	<	0.029405	M	Gd	<	0.000248	M	Ni	<	0.003225	M	Sn	<	0.000744				
O	B		0.143798	M	Ge	<	0.001240	M	Os	<	0.000247	O	Sr		0.001081				
O	Ba		0.002655	M	Hf		0.001987	i	P	<	0.000001	M	Ta		0.015006				
O	Be	<	0.000336	M	Hg	<	0.001482	M	Pb	<	0.000744	M	Tb	<	0.000248				
M	Bi		0.007751	M	Ho	<	0.000248	M	Pd	<	0.000248	M	Te	<	0.000744				
O	Ca		0.211203	M	In	<	0.000496	M	Pr	<	0.000248	M	Th	<	0.007940				
M	Cd	<	0.000248	M	Ir	<	0.000247	M	Pt	<	0.000248	O	Ti		0.004305				
M	Ce	<	0.000992	O	K		0.027489	M	Rb	<	0.068983	M	Tl	<	0.007940				
M	Co	<	0.000248	M	La	<	0.000248	M	Re	<	0.000248	M	Tm	<	0.000248				
O	Cr	<	0.004488	O	Li		0.000096	M	Rh	<	0.000248	M	U	<	0.000248				
M	Cs	<	0.006451	M	Lu	<	0.000248	M	Ru	<	0.000247	M	V	<	0.005459				
O	Cu	<	0.001945	O	Mg		0.013364	O	S		1.364159	M	W	<	0.005459				
M	Dy	<	0.000248	M	Mn	<	0.002481	M	Sb	<	0.003970	M	Y	<	0.000248				
M	Er	<	0.000248	M	Mo	<	0.002233	O	Sc	<	0.000235	M	Yb	<	0.000248				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 25, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 25, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Revision1: Added 30mL statements 092217JAK

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

3,5-DNA Stock_00029

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110 Benner Circle
Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

ilac-MRA

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31661 **Lot No.:** A0129440

Description : 3,5-Dinitroaniline Standard

3, 5-Dinitroaniline Std 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

X2

500 & 50 / 57

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	3,5-Dinitroaniline	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 618-87-1 (Lot 10311HS)		+/- 30.3937	µg/mL	Unstressed
	Purity 99%		+/- 30.3937	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

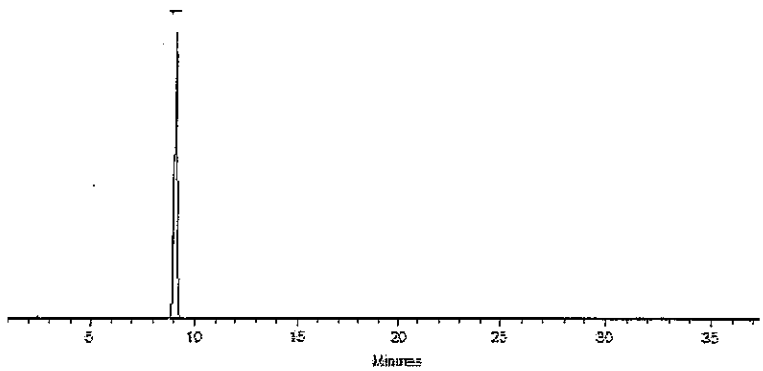
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 26-Jul-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Jul-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

571995_00043

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Catalog No. : 571995 **Lot No.:** A0136052

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBH5677) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 161108JLM) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,011.2 µg/mL	+/- 11.6933 µg/mL +/- 24.0420 µg/mL +/- 38.2625 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,005.1 µg/mL	+/- 5.8439 µg/mL +/- 12.0154 µg/mL +/- 19.1224 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,002.6 µg/mL	+/- 5.8292 µg/mL +/- 11.9851 µg/mL +/- 19.0742 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 11.9708 µg/mL +/- 19.0513 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBH3926V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8180 µg/mL +/- 11.9620 µg/mL +/- 19.0374 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,001.0	µg/mL	+/-	5.8199	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9660	µg/mL	Unstressed
	Purity 99%				+/-	19.0437	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,004.4	µg/mL	+/-	5.8397	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0067	µg/mL	Unstressed
	Purity 99%				+/-	19.1084	µg/mL	Stressed
11	Benzyl alcohol		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot 68996CMV)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,006.7	µg/mL	+/-	5.8528	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 5510800)			+/-	12.0336	µg/mL	Unstressed
	Purity 98%				+/-	19.1513	µg/mL	Stressed
15	Acetophenone		1,005.5	µg/mL	+/-	5.8459	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG7113)			+/-	12.0194	µg/mL	Unstressed
	Purity 99%				+/-	19.1287	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		501.0	µg/mL	+/-	2.9196	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9923	µg/mL	Unstressed
	Purity 99%				+/-	9.5334	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.7	µg/mL	+/-	2.9235	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0002	µg/mL	Unstressed
	Purity 99%				+/-	9.5461	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot NOPCF)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
19	Hexachloroethane		1,003.4	µg/mL	+/-	5.8339	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9947	µg/mL	Unstressed
	Purity 99%				+/-	19.0894	µg/mL	Stressed
20	Nitrobenzene		1,002.3	µg/mL	+/-	5.8273	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	11.9812	µg/mL	Unstressed
	Purity 99%				+/-	19.0678	µg/mL	Stressed
21	Isophorone		1,003.3	µg/mL	+/-	5.8334	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9938	µg/mL	Unstressed
	Purity 98%				+/-	19.0879	µg/mL	Stressed
22	2-Nitrophenol		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0457	µg/mL	Unstressed
	Purity 99%				+/-	19.1706	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.9	µg/mL	+/-	5.8191	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9644	µg/mL	Unstressed
	Purity 99%				+/-	19.0412	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 4621000)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
25	2,4-Dichlorophenol		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.0	µg/mL	+/-	5.8432	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0138	µg/mL	Unstressed
	Purity 99%				+/-	19.1198	µg/mL	Stressed
27	Naphthalene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
29	4-Chloroaniline		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.5	µg/mL	+/-	5.8284	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9835	µg/mL	Unstressed
	Purity 99%				+/-	19.0716	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	12.0459	µg/mL	Unstressed
	Purity 96%				+/-	19.1708	µg/mL	Stressed
33	1-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,004.3	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0051	µg/mL	Unstressed
	Purity 99%				+/-	19.1059	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012017H)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,003.5	µg/mL	+/-	5.8342	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	11.9955	µg/mL	Unstressed
	Purity 99%				+/-	19.0907	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.4	µg/mL	+/-	5.8513	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0306	µg/mL	Unstressed
	Purity 99%				+/-	19.1465	µg/mL	Stressed
38	2-Chloronaphthalene		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
39	Biphenyl		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed

40	2-Nitroaniline		1,004.5	µg/mL	+/-	5.8401	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	12.0075	µg/mL	Unstressed
	Purity 99%				+/-	19.1097	µg/mL	Stressed
41	Acenaphthylene		1,006.0	µg/mL	+/-	5.8491	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/-	12.0260	µg/mL	Unstressed
	Purity 97%				+/-	19.1392	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
43	Dimethylphthalate		1,003.7	µg/mL	+/-	5.8358	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9987	µg/mL	Unstressed
	Purity 99%				+/-	19.0957	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
45	3-Nitroaniline		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
46	Acenaphthene		1,005.9	µg/mL	+/-	5.8482	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/-	12.0242	µg/mL	Unstressed
	Purity 99%				+/-	19.1363	µg/mL	Stressed
47	2,4-Dinitrophenol		2,008.3	µg/mL	+/-	11.6766	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	24.0077	µg/mL	Unstressed
	Purity 99%				+/-	38.2080	µg/mL	Stressed
48	Dibenzofuran		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
49	4-Nitrophenol		2,009.3	µg/mL	+/-	11.6824	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	24.0197	µg/mL	Unstressed
	Purity 99%				+/-	38.2270	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,003.9	µg/mL	+/-	5.8366	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0003	µg/mL	Unstressed
	Purity 99%				+/-	19.0983	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.9	µg/mL	+/-	5.8253	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B180305L)			+/-	11.9772	µg/mL	Unstressed
	Purity 99%				+/-	19.0615	µg/mL	Stressed
52	Fluorene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG2582V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
54	Diethylphthalate		1,003.3	µg/mL	+/-	5.8335	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9939	µg/mL	Unstressed
	Purity 99%				+/-	19.0881	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed

56	4-Nitroaniline		1,003.1	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9907	µg/mL	Unstressed
	Purity 98%				+/-	19.0830	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,003.7	µg/mL	+/-	11.6495	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC25844V)			+/-	23.9520	µg/mL	Unstressed
	Purity 99%				+/-	38.1192	µg/mL	Stressed
58	Diphenylamine		852.3	µg/mL	+/-	4.9555	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1888	µg/mL	Unstressed
	Purity 99%				+/-	16.2154	µg/mL	Stressed
59	Azobenzene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,022.3	µg/mL	+/-	5.9439	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.2210	µg/mL	Unstressed
	Purity 99%				+/-	19.4496	µg/mL	Stressed
61	Hexachlorobenzene		1,002.5	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7013600)			+/-	11.9843	µg/mL	Unstressed
	Purity 99%				+/-	19.0729	µg/mL	Stressed
62	Pentachlorophenol		2,002.1	µg/mL	+/-	11.6406	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9336	µg/mL	Unstressed
	Purity 99%				+/-	38.0900	µg/mL	Stressed
63	n-Octadecane (C18)		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot OGCDK)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
64	Phenanthrene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
65	Anthracene		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9573	µg/mL	Unstressed
	Purity 99%				+/-	19.0298	µg/mL	Stressed
66	Carbazole		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 6489700)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.7	µg/mL	+/-	5.8470	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0218	µg/mL	Unstressed
	Purity 99%				+/-	19.1325	µg/mL	Stressed
68	Fluoranthene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0204	µg/mL	Unstressed
	Purity 98%				+/-	19.1302	µg/mL	Stressed
69	Pyrene		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9571	µg/mL	Unstressed
	Purity 98%				+/-	19.0295	µg/mL	Stressed
71	Benz(a)anthracene		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012012)			+/-	11.9915	µg/mL	Unstressed
	Purity 98%				+/-	19.0842	µg/mL	Stressed

72	Chrysene		1,004.6	µg/mL	+/-	5.8408	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0091	µg/mL	Unstressed
	Purity 99%				+/-	19.1122	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.7	µg/mL	+/-	5.8296	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	11.9859	µg/mL	Unstressed
	Purity 99%				+/-	19.0754	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.9	µg/mL	+/-	5.8602	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 6016000)			+/-	12.0489	µg/mL	Unstressed
	Purity 99%				+/-	19.1756	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.6	µg/mL	+/-	5.8350	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9971	µg/mL	Unstressed
	Purity 99%				+/-	19.0932	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012017K)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
77	Benzo(a)pyrene		1,002.1	µg/mL	+/-	5.8261	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9788	µg/mL	Unstressed
	Purity 99%				+/-	19.0640	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,004.0	µg/mL	+/-	5.8373	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0019	µg/mL	Unstressed
	Purity 99%				+/-	19.1008	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.9	µg/mL	+/-	5.8195	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9652	µg/mL	Unstressed
	Purity 99%				+/-	19.0425	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

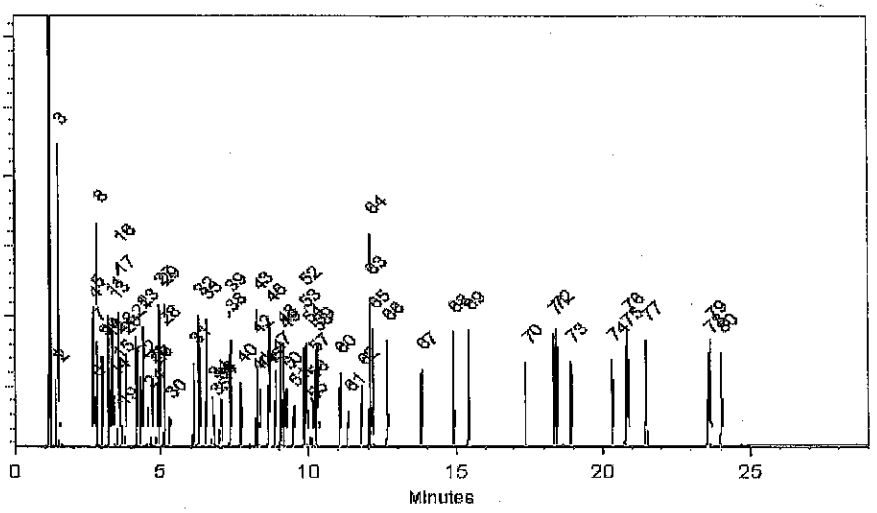
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician **Date Mixed:** 12-Mar-2018 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

571995_00044

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0136052

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBH5677) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 161108JLM) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,011.2 µg/mL	+/- 11.6933 µg/mL +/- 24.0420 µg/mL +/- 38.2625 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,005.1 µg/mL	+/- 5.8439 µg/mL +/- 12.0154 µg/mL +/- 19.1224 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,002.6 µg/mL	+/- 5.8292 µg/mL +/- 11.9851 µg/mL +/- 19.0742 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 11.9708 µg/mL +/- 19.0513 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBH3926V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8180 µg/mL +/- 11.9620 µg/mL +/- 19.0374 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,001.0	µg/mL	+/-	5.8199	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)			+/-	11.9660	µg/mL	Unstressed
	Purity 99%				+/-	19.0437	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,004.4	µg/mL	+/-	5.8397	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0067	µg/mL	Unstressed
	Purity 99%				+/-	19.1084	µg/mL	Stressed
11	Benzyl alcohol		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot 68996CMV)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,006.7	µg/mL	+/-	5.8528	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 5510800)			+/-	12.0336	µg/mL	Unstressed
	Purity 98%				+/-	19.1513	µg/mL	Stressed
15	Acetophenone		1,005.5	µg/mL	+/-	5.8459	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG7113)			+/-	12.0194	µg/mL	Unstressed
	Purity 99%				+/-	19.1287	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		501.0	µg/mL	+/-	2.9196	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	5.9923	µg/mL	Unstressed
	Purity 99%				+/-	9.5334	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.7	µg/mL	+/-	2.9235	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0002	µg/mL	Unstressed
	Purity 99%				+/-	9.5461	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot NOPCF)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
19	Hexachloroethane		1,003.4	µg/mL	+/-	5.8339	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9947	µg/mL	Unstressed
	Purity 99%				+/-	19.0894	µg/mL	Stressed
20	Nitrobenzene		1,002.3	µg/mL	+/-	5.8273	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	11.9812	µg/mL	Unstressed
	Purity 99%				+/-	19.0678	µg/mL	Stressed
21	Isophorone		1,003.3	µg/mL	+/-	5.8334	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	11.9938	µg/mL	Unstressed
	Purity 98%				+/-	19.0879	µg/mL	Stressed
22	2-Nitrophenol		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0457	µg/mL	Unstressed
	Purity 99%				+/-	19.1706	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.9	µg/mL	+/-	5.8191	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	11.9644	µg/mL	Unstressed
	Purity 99%				+/-	19.0412	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 4621000)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
25	2,4-Dichlorophenol		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.0	µg/mL	+/-	5.8432	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0138	µg/mL	Unstressed
	Purity 99%				+/-	19.1198	µg/mL	Stressed
27	Naphthalene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
29	4-Chloroaniline		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.5	µg/mL	+/-	5.8284	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9835	µg/mL	Unstressed
	Purity 99%				+/-	19.0716	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	12.0459	µg/mL	Unstressed
	Purity 96%				+/-	19.1708	µg/mL	Stressed
33	1-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,004.3	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0051	µg/mL	Unstressed
	Purity 99%				+/-	19.1059	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012017H)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,003.5	µg/mL	+/-	5.8342	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	11.9955	µg/mL	Unstressed
	Purity 99%				+/-	19.0907	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.4	µg/mL	+/-	5.8513	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0306	µg/mL	Unstressed
	Purity 99%				+/-	19.1465	µg/mL	Stressed
38	2-Chloronaphthalene		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
39	Biphenyl		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed

40	2-Nitroaniline		1,004.5	µg/mL	+/-	5.8401	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	12.0075	µg/mL	Unstressed
	Purity 99%				+/-	19.1097	µg/mL	Stressed
41	Acenaphthylene		1,006.0	µg/mL	+/-	5.8491	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/-	12.0260	µg/mL	Unstressed
	Purity 97%				+/-	19.1392	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
43	Dimethylphthalate		1,003.7	µg/mL	+/-	5.8358	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9987	µg/mL	Unstressed
	Purity 99%				+/-	19.0957	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
45	3-Nitroaniline		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
46	Acenaphthene		1,005.9	µg/mL	+/-	5.8482	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/-	12.0242	µg/mL	Unstressed
	Purity 99%				+/-	19.1363	µg/mL	Stressed
47	2,4-Dinitrophenol		2,008.3	µg/mL	+/-	11.6766	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	24.0077	µg/mL	Unstressed
	Purity 99%				+/-	38.2080	µg/mL	Stressed
48	Dibenzofuran		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
49	4-Nitrophenol		2,009.3	µg/mL	+/-	11.6824	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	24.0197	µg/mL	Unstressed
	Purity 99%				+/-	38.2270	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,003.9	µg/mL	+/-	5.8366	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0003	µg/mL	Unstressed
	Purity 99%				+/-	19.0983	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.9	µg/mL	+/-	5.8253	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B180305L)			+/-	11.9772	µg/mL	Unstressed
	Purity 99%				+/-	19.0615	µg/mL	Stressed
52	Fluorene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG2582V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
54	Diethylphthalate		1,003.3	µg/mL	+/-	5.8335	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9939	µg/mL	Unstressed
	Purity 99%				+/-	19.0881	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed

56	4-Nitroaniline		1,003.1	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9907	µg/mL	Unstressed
	Purity 98%				+/-	19.0830	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,003.7	µg/mL	+/-	11.6495	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC25844V)			+/-	23.9520	µg/mL	Unstressed
	Purity 99%				+/-	38.1192	µg/mL	Stressed
58	Diphenylamine		852.3	µg/mL	+/-	4.9555	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1888	µg/mL	Unstressed
	Purity 99%				+/-	16.2154	µg/mL	Stressed
59	Azobenzene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,022.3	µg/mL	+/-	5.9439	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.2210	µg/mL	Unstressed
	Purity 99%				+/-	19.4496	µg/mL	Stressed
61	Hexachlorobenzene		1,002.5	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7013600)			+/-	11.9843	µg/mL	Unstressed
	Purity 99%				+/-	19.0729	µg/mL	Stressed
62	Pentachlorophenol		2,002.1	µg/mL	+/-	11.6406	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9336	µg/mL	Unstressed
	Purity 99%				+/-	38.0900	µg/mL	Stressed
63	n-Octadecane (C18)		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot OGCDK)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
64	Phenanthrene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
65	Anthracene		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9573	µg/mL	Unstressed
	Purity 99%				+/-	19.0298	µg/mL	Stressed
66	Carbazole		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 6489700)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.7	µg/mL	+/-	5.8470	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0218	µg/mL	Unstressed
	Purity 99%				+/-	19.1325	µg/mL	Stressed
68	Fluoranthene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0204	µg/mL	Unstressed
	Purity 98%				+/-	19.1302	µg/mL	Stressed
69	Pyrene		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9571	µg/mL	Unstressed
	Purity 98%				+/-	19.0295	µg/mL	Stressed
71	Benz(a)anthracene		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012012)			+/-	11.9915	µg/mL	Unstressed
	Purity 98%				+/-	19.0842	µg/mL	Stressed

72	Chrysene		1,004.6	µg/mL	+/-	5.8408	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0091	µg/mL	Unstressed
	Purity 99%				+/-	19.1122	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.7	µg/mL	+/-	5.8296	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	11.9859	µg/mL	Unstressed
	Purity 99%				+/-	19.0754	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.9	µg/mL	+/-	5.8602	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 6016000)			+/-	12.0489	µg/mL	Unstressed
	Purity 99%				+/-	19.1756	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.6	µg/mL	+/-	5.8350	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9971	µg/mL	Unstressed
	Purity 99%				+/-	19.0932	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012017K)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
77	Benzo(a)pyrene		1,002.1	µg/mL	+/-	5.8261	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9788	µg/mL	Unstressed
	Purity 99%				+/-	19.0640	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,004.0	µg/mL	+/-	5.8373	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0019	µg/mL	Unstressed
	Purity 99%				+/-	19.1008	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.9	µg/mL	+/-	5.8195	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9652	µg/mL	Unstressed
	Purity 99%				+/-	19.0425	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

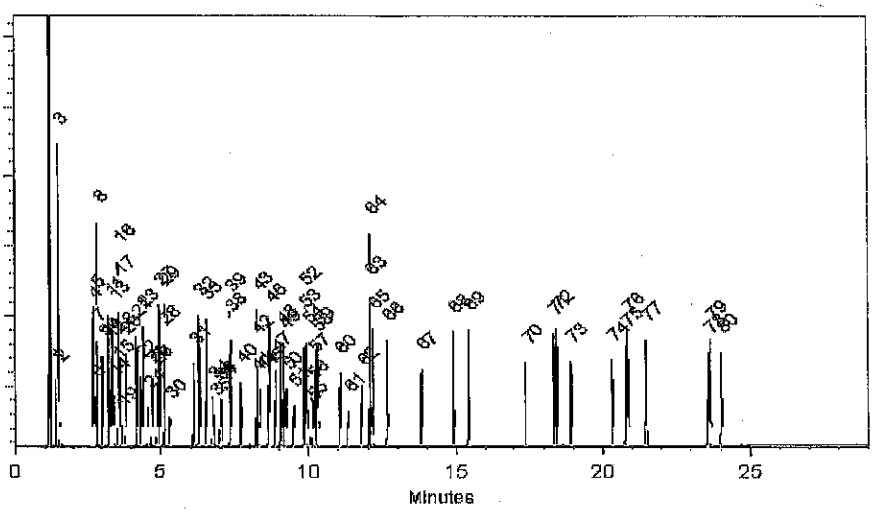
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician **Date Mixed:** 12-Mar-2018 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

571995_00049

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane		1,006.6 µg/mL	+/- 5.8525 µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)		+/- 12.0330 µg/mL	Unstressed
	Purity 99%			+/- 19.1503 µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1 µg/mL	+/- 5.8437 µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)		+/- 12.0150 µg/mL	Unstressed
	Purity 99%			+/- 19.1217 µg/mL	Stressed
3	Pyridine		2,012.7 µg/mL	+/- 11.7020 µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)		+/- 24.0599 µg/mL	Unstressed
	Purity 99%			+/- 38.2910 µg/mL	Stressed
4	Phenol		1,008.6 µg/mL	+/- 5.8641 µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)		+/- 12.0569 µg/mL	Unstressed
	Purity 99%			+/- 19.1883 µg/mL	Stressed
5	Aniline		1,006.2 µg/mL	+/- 5.8501 µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)		+/- 12.0282 µg/mL	Unstressed
	Purity 99%			+/- 19.1427 µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5 µg/mL	+/- 5.8693 µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)		+/- 12.0676 µg/mL	Unstressed
	Purity 99%			+/- 19.2054 µg/mL	Stressed
7	n-Decane (C10)		1,010.0 µg/mL	+/- 5.8722 µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)		+/- 12.0736 µg/mL	Unstressed
	Purity 99%			+/- 19.2150 µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

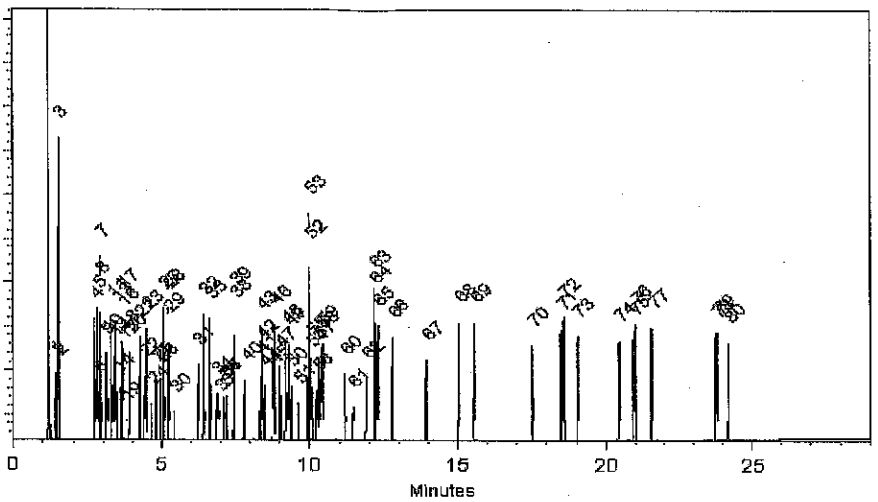
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00050

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 180322JLM) **Purity** 99%	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBJ8526) **Purity** 99%	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

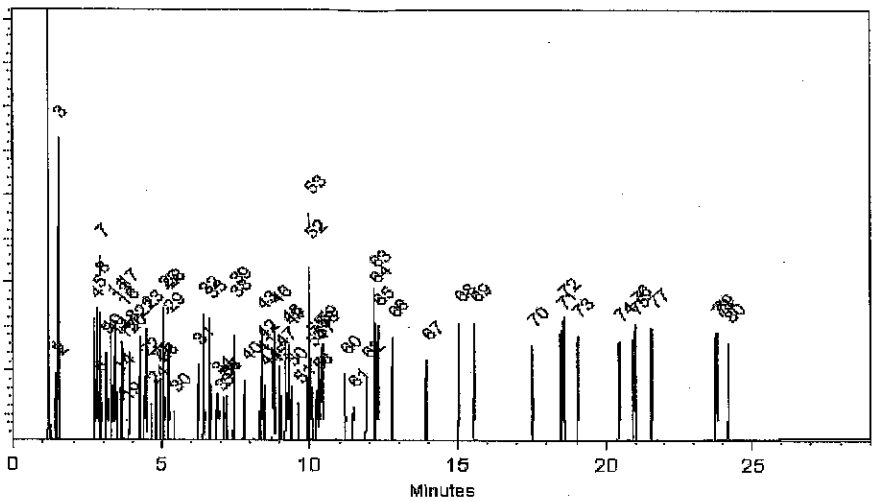
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00051

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

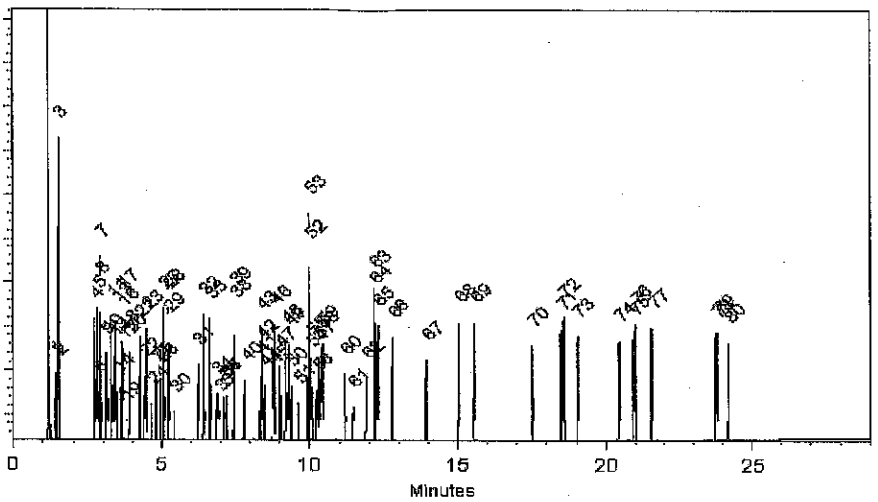
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00052

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBJ5124)	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 **Purity** 99%	(Lot 180322JLM)	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 **Purity** 99%	(Lot SHBC7174V)	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 **Purity** 99%	(Lot SHBF9719V)	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 **Purity** 99%	(Lot K22Z462)	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 **Purity** 99%	(Lot SHBD4430V)	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 **Purity** 99%	(Lot SHBJ8526)	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

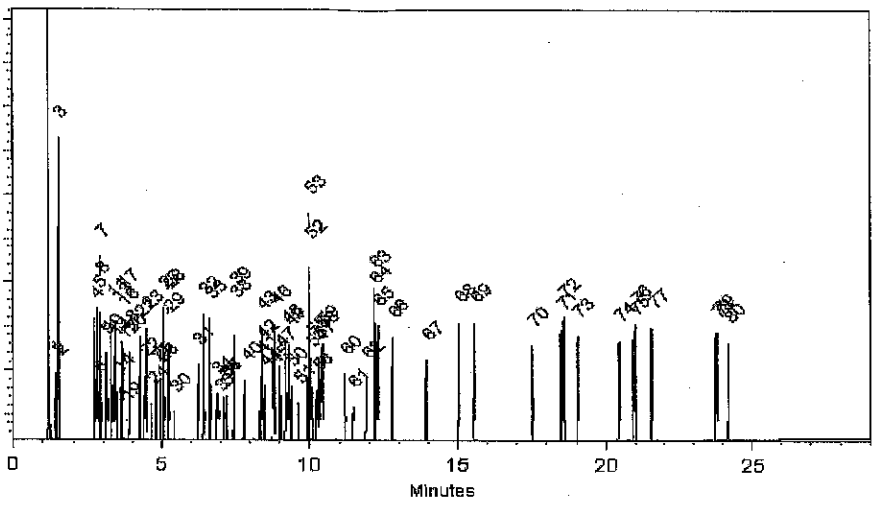
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00053

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 180322JLM) **Purity** 99%	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBJ8526) **Purity** 99%	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

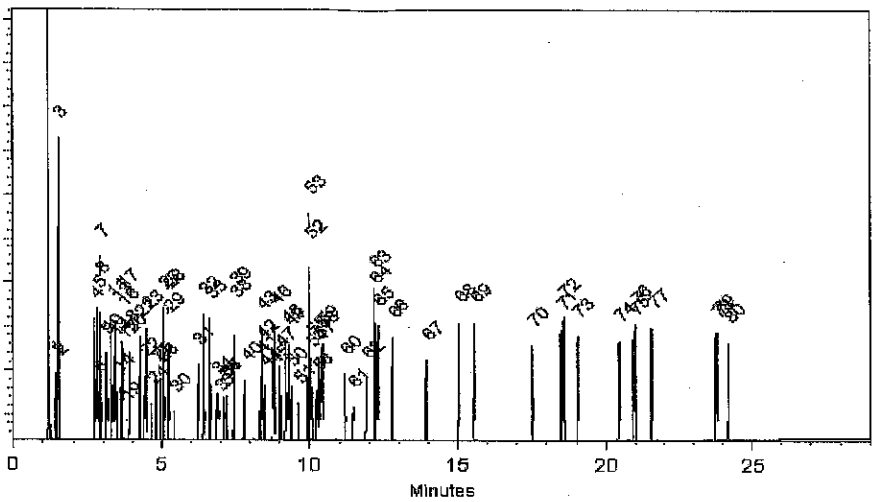
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00055

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 180322JLM) **Purity** 99%	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBJ8526) **Purity** 99%	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

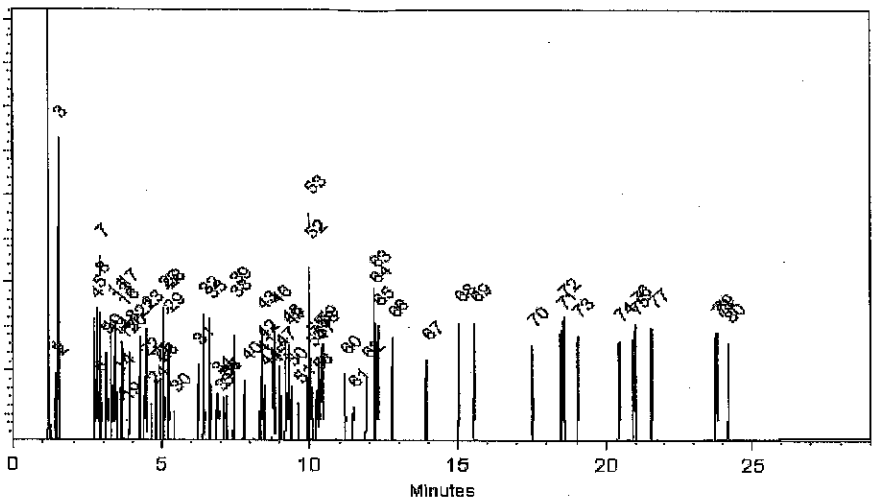
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00056

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

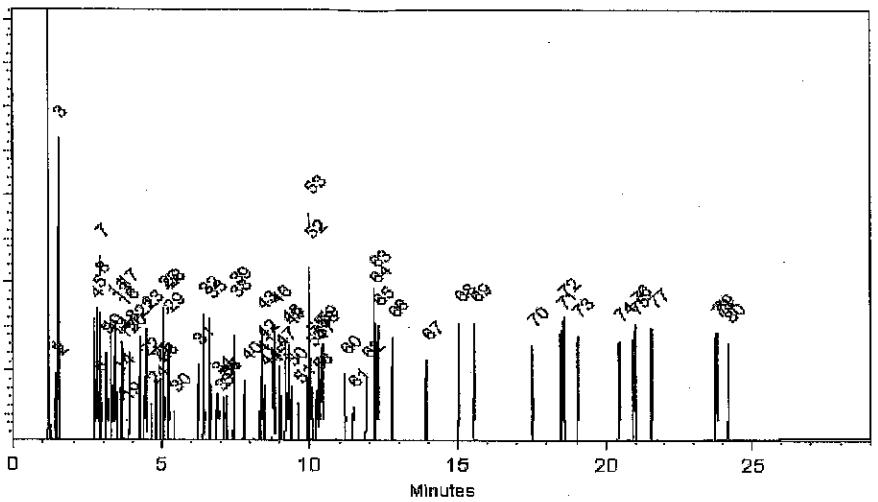
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed
Solvent:	Methylene chloride							
	CAS # 75-09-2							
	Purity 99%							

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

8081 ToxStock_00018

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-093S-H-10X
Description: Toxaphene Standard
Lot: 215011420
Solvent: Hexane
Hazards: **HIGHLY FLAMMABLE** - *Refer to SDS for safety info*

Danger 2

Date Certified: Jan 30, 2015
Expiration: Jan 30, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Toxaphene	8001-35-2	Tech Mix	1001	1001

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 5/16

Reagent

8081/82 Surr_00105

Report Date: 01-Oct-2018 09:58:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Denver

Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P3\20180928-74499.b\09281804.D				
Lims ID:	8082 Surr 105				
Client ID:					
Sample Type:	Client				
Inject. Date:	28-Sep-2018 11:22:28	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	8082 Surr 105				
Misc. Info.:	280-0074499-004				
Operator ID:	JAX/MED	Instrument ID:	SGC_P3		
Method:	\\ChromNA\Denver\ChromData\SGC_P3\20180928-74499.b\PCB_P3.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	01-Oct-2018 09:58:25	Calib Date:	20-Sep-2018 22:52:41		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P3\20180920-74190.b\09201835.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0302				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	20.3	101.59
$ 15 DCB Decachlorobiphenyl	20.0	15.6	78.08

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	16.1	80.29
$ 15 DCB Decachlorobiphenyl	20.0	17.4	86.89

Reagent

8081ABResPS_00026

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #2222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415 **Lot No.:** A0129369

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2021 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	alpha-BHC		2,012.0	µg/mL	+/- 11.8075	µg/mL	Gravimetric
	CAS # 319-84-6	(Lot 0911942)			+/- 91.6450	µg/mL	Unstressed
	Purity 99%				+/- 132.3230	µg/mL	Stressed
2	gamma-BHC (Lindane)		2,010.5	µg/mL	+/- 11.7987	µg/mL	Gravimetric
	CAS # 58-89-9	(Lot 6357300)			+/- 91.5767	µg/mL	Unstressed
	Purity 99%				+/- 132.2244	µg/mL	Stressed
3	beta-BHC		2,011.9	µg/mL	+/- 11.8072	µg/mL	Gravimetric
	CAS # 319-85-7	(Lot SZBD116XV)			+/- 91.6423	µg/mL	Unstressed
	Purity 98%				+/- 132.3191	µg/mL	Stressed
4	delta-BHC		2,017.0	µg/mL	+/- 11.8369	µg/mL	Gravimetric
	CAS # 319-86-8	(Lot ER02101401)			+/- 91.8728	µg/mL	Unstressed
	Purity 99%				+/- 132.6518	µg/mL	Stressed
5	Heptachlor		2,011.5	µg/mL	+/- 11.8046	µg/mL	Gravimetric
	CAS # 76-44-8	(Lot NT056422)			+/- 91.6223	µg/mL	Unstressed
	Purity 99%				+/- 132.2901	µg/mL	Stressed
6	Aldrin		2,009.0	µg/mL	+/- 11.7899	µg/mL	Gravimetric
	CAS # 309-00-2	(Lot 5923100)			+/- 91.5084	µg/mL	Unstressed
	Purity 98%				+/- 132.1257	µg/mL	Stressed
7	Heptachlor epoxide (isomer B)		2,007.0	µg/mL	+/- 11.7782	µg/mL	Gravimetric
	CAS # 1024-57-3	(Lot ER121511-01)			+/- 91.4173	µg/mL	Unstressed
	Purity 99%				+/- 131.9942	µg/mL	Stressed

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

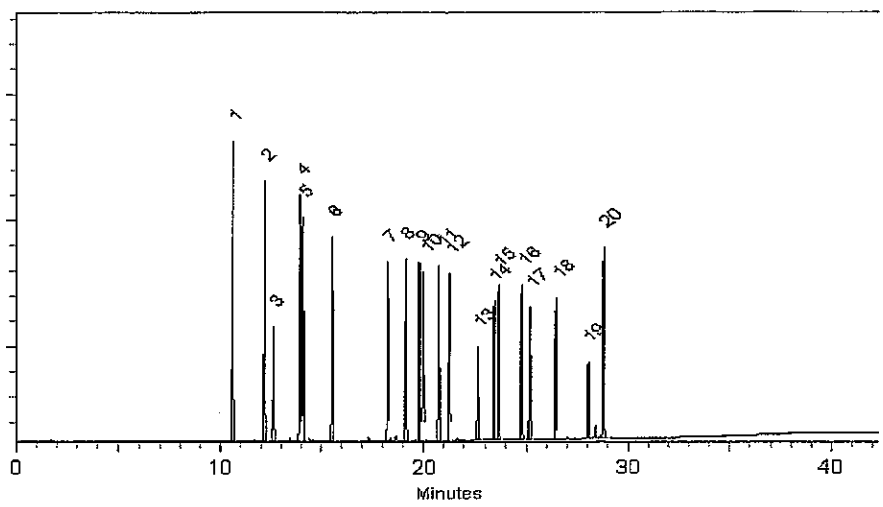
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 24-Jul-2017 **Balance:** B442140311

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 25-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

8	trans-Chlordane		2,007.0	µg/mL	+/-	11.7782	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot ER061906-04)			+/-	91.4173	µg/mL	Unstressed
	Purity 99%				+/-	131.9942	µg/mL	Stressed
9	cis-Chlordane		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot ER062410-01)			+/-	91.3717	µg/mL	Unstressed
	Purity 99%				+/-	131.9284	µg/mL	Stressed
10	Endosulfan I		2,013.0	µg/mL	+/-	11.8134	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot ER012105-02)			+/-	91.6906	µg/mL	Unstressed
	Purity 99%				+/-	132.3888	µg/mL	Stressed
11	4,4'-DDE		2,008.5	µg/mL	+/-	11.7870	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot GHYQG)			+/-	91.4856	µg/mL	Unstressed
	Purity 99%				+/-	132.0928	µg/mL	Stressed
12	Dieldrin		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot ER030105-03)			+/-	91.3717	µg/mL	Unstressed
	Purity 99%				+/-	131.9284	µg/mL	Stressed
13	Endrin		2,019.3	µg/mL	+/-	11.8503	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 6429800)			+/-	91.9771	µg/mL	Unstressed
	Purity 98%				+/-	132.8025	µg/mL	Stressed
14	4,4'-DDD		2,014.9	µg/mL	+/-	11.8244	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot ER061207-01)			+/-	91.7762	µg/mL	Unstressed
	Purity 98%				+/-	132.5124	µg/mL	Stressed
15	Endosulfan II		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot ER102407-02)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed
16	Endrin aldehyde		2,008.5	µg/mL	+/-	11.7870	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot ER082306-01)			+/-	91.4856	µg/mL	Unstressed
	Purity 99%				+/-	132.0928	µg/mL	Stressed
17	4,4'-DDT		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot S37912V)			+/-	91.5084	µg/mL	Unstressed
	Purity 99%				+/-	132.1257	µg/mL	Stressed
18	Endosulfan sulfate		2,009.3	µg/mL	+/-	11.7916	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot SZBC213XV)			+/-	91.5211	µg/mL	Unstressed
	Purity 96%				+/-	132.1441	µg/mL	Stressed
19	Methoxychlor		2,015.4	µg/mL	+/-	11.8273	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 6429900)			+/-	91.7985	µg/mL	Unstressed
	Purity 98%				+/-	132.5446	µg/mL	Stressed
20	Endrin ketone		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 160405JLM)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ABResPS_00028

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415 **Lot No.:** A0133751

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC **CAS #** 319-84-6 (Lot 0911942) **Purity** 99%	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 91.8956 µg/mL +/- 132.6847 µg/mL	Gravimetric Unstressed Stressed
2	gamma-BHC (Lindane) **CAS #** 58-89-9 (Lot 6815700) **Purity** 99%	2,010.5 µg/mL	+/- 11.7987 µg/mL +/- 91.5767 µg/mL +/- 132.2244 µg/mL	Gravimetric Unstressed Stressed
3	beta-BHC **CAS #** 319-85-7 (Lot BCBS8692V) **Purity** 98%	2,014.9 µg/mL	+/- 11.8244 µg/mL +/- 91.7762 µg/mL +/- 132.5124 µg/mL	Gravimetric Unstressed Stressed
4	delta-BHC **CAS #** 319-86-8 (Lot ER02101401) **Purity** 99%	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 91.5539 µg/mL +/- 132.1915 µg/mL	Gravimetric Unstressed Stressed
5	Heptachlor **CAS #** 76-44-8 (Lot NT057754) **Purity** 99%	2,016.5 µg/mL	+/- 11.8340 µg/mL +/- 91.8500 µg/mL +/- 132.6190 µg/mL	Gravimetric Unstressed Stressed
6	Aldrin **CAS #** 309-00-2 (Lot 6869200) **Purity** 97%	2,010.8 µg/mL	+/- 11.8006 µg/mL +/- 91.5908 µg/mL +/- 132.2447 µg/mL	Gravimetric Unstressed Stressed
7	Heptachlor epoxide (isomer B) **CAS #** 1024-57-3 (Lot ER121511-01) **Purity** 99%	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 91.8956 µg/mL +/- 132.6847 µg/mL	Gravimetric Unstressed Stressed

8	trans-Chlordane **CAS #** 5103-74-2 **Purity** 99%	(Lot ER061906-04)	2,012.5	µg/mL	+/- 11.8105 +/- 91.6678 +/- 132.3559	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	cis-Chlordane **CAS #** 5103-71-9 **Purity** 99%	(Lot ER062410-01)	2,014.0	µg/mL	+/- 11.8193 +/- 91.7361 +/- 132.4545	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Endosulfan I **CAS #** 959-98-8 **Purity** 99%	(Lot ER012105-02)	2,010.0	µg/mL	+/- 11.7958 +/- 91.5539 +/- 132.1915	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4,4'-DDE **CAS #** 72-55-9 **Purity** 99%	(Lot ER011106-01)	2,011.0	µg/mL	+/- 11.8017 +/- 91.5995 +/- 132.2572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Dieldrin **CAS #** 60-57-1 **Purity** 99%	(Lot 5416800)	2,011.0	µg/mL	+/- 11.8017 +/- 91.5995 +/- 132.2572	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	Endrin **CAS #** 72-20-8 **Purity** 98%	(Lot 6898800)	2,016.4	µg/mL	+/- 11.8331 +/- 91.8432 +/- 132.6091	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	4,4'-DDD **CAS #** 72-54-8 **Purity** 99%	(Lot HAN02-KNCK)	2,010.5	µg/mL	+/- 11.7987 +/- 91.5767 +/- 132.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Endosulfan II **CAS #** 33213-65-9 **Purity** 99%	(Lot 6815600)	2,009.5	µg/mL	+/- 11.7929 +/- 91.5312 +/- 132.1586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Endrin aldehyde **CAS #** 7421-93-4 **Purity** 99%	(Lot ER082306-01)	2,007.5	µg/mL	+/- 11.7811 +/- 91.4401 +/- 132.0271	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4,4'-DDT **CAS #** 50-29-3 **Purity** 99%	(Lot S37912V)	2,012.5	µg/mL	+/- 11.8105 +/- 91.6678 +/- 132.3559	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Endosulfan sulfate **CAS #** 1031-07-8 **Purity** 99%	(Lot BCBR9875V)	2,020.0	µg/mL	+/- 11.8545 +/- 92.0094 +/- 132.8491	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Methoxychlor **CAS #** 72-43-5 **Purity** 99%	(Lot 6736800)	2,018.5	µg/mL	+/- 11.8457 +/- 91.9411 +/- 132.7505	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Endrin ketone **CAS #** 53494-70-5 **Purity** 99%	(Lot 160405JLM)	2,015.5	µg/mL	+/- 11.8281 +/- 91.8045 +/- 132.5532	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

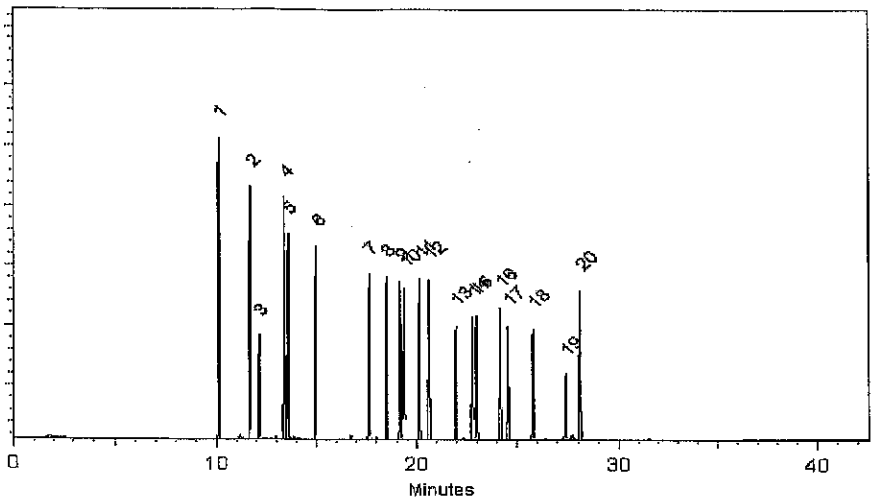
Carrier Gas:
hellum-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 27-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Jan-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

8081ABResSS_00012

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415.sec **Lot No.:** A0108854

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC **CAS #** 319-84-6.SEC (Lot 1623900) **Purity** 99%	2,009.5 µg/mL	+/- 11.7929 µg/mL +/- 78.6071 µg/mL +/- 124.7419 µg/mL	Gravimetric Unstressed Stressed
2	gamma-BHC (Lindane) **CAS #** 58-89-9.SEC (Lot LC00563V) **Purity** 99%	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 78.6267 µg/mL +/- 124.7729 µg/mL	Gravimetric Unstressed Stressed
3	beta-BHC **CAS #** 319-85-7.SEC (Lot 1808700) **Purity** 98%	2,003.1 µg/mL	+/- 11.7554 µg/mL +/- 78.3575 µg/mL +/- 124.3458 µg/mL	Gravimetric Unstressed Stressed
4	delta-BHC **CAS #** 319-86-8.SEC (Lot 1912200) **Purity** 99%	2,003.5 µg/mL	+/- 11.7577 µg/mL +/- 78.3724 µg/mL +/- 124.3694 µg/mL	Gravimetric Unstressed Stressed
5	Heptachlor **CAS #** 76-44-8.SEC (Lot 1745400) **Purity** 99%	2,000.5 µg/mL	+/- 11.7401 µg/mL +/- 78.2551 µg/mL +/- 124.1832 µg/mL	Gravimetric Unstressed Stressed
6	Aldrin **CAS #** 309-00-2.SEC (Lot ER062311-01) **Purity** 98%	2,004.1 µg/mL	+/- 11.7612 µg/mL +/- 78.3959 µg/mL +/- 124.4067 µg/mL	Gravimetric Unstressed Stressed

8	trans-Chlordane		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 5103-74-2.SEC	(Lot LC06193V)			+/-	78.4702	µg/mL	Unstressed
	Purity 99%				+/-	124.5246	µg/mL	Stressed
9	cis-Chlordane		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 5103-71-9.SEC	(Lot 24407)			+/-	78.5876	µg/mL	Unstressed
	Purity 99%				+/-	124.7108	µg/mL	Stressed
10	Endosulfan I		2,002.1	µg/mL	+/-	11.7497	µg/mL	Gravimetric
	CAS # 959-98-8.SEC	(Lot 1710200)			+/-	78.3192	µg/mL	Unstressed
	Purity 98%				+/-	124.2850	µg/mL	Stressed
11	4,4'-DDE		2,001.5	µg/mL	+/-	11.7459	µg/mL	Gravimetric
	CAS # 72-55-9.SEC	(Lot 1833500)			+/-	78.2942	µg/mL	Unstressed
	Purity 99%				+/-	124.2453	µg/mL	Stressed
12	Dieldrin		1,995.3	µg/mL	+/-	11.7094	µg/mL	Gravimetric
	CAS # 60-57-1.SEC	(Lot 1274700)			+/-	78.0509	µg/mL	Unstressed
	Purity 98%				+/-	123.8591	µg/mL	Stressed
13	Endrin		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 72-20-8 *	(Lot LC06045V)			+/-	78.2355	µg/mL	Unstressed
	Purity 99%				+/-	124.1521	µg/mL	Stressed
14	4,4'-DDD		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 72-54-8.SEC	(Lot 1141700)			+/-	78.5876	µg/mL	Unstressed
	Purity 98%				+/-	124.7108	µg/mL	Stressed
15	Endosulfan II		2,010.0	µg/mL	+/-	11.7958	µg/mL	Gravimetric
	CAS # 33213-65-9.SEC	(Lot 3437500)			+/-	78.6267	µg/mL	Unstressed
	Purity 99%				+/-	124.7729	µg/mL	Stressed
16	Endrin aldehyde		2,016.4	µg/mL	+/-	11.8331	µg/mL	Gravimetric
	CAS # 7421-93-4.SEC	(Lot 21752)			+/-	78.8751	µg/mL	Unstressed
	Purity 98%				+/-	125.1671	µg/mL	Stressed
17	4,4'-DDT		2,016.5	µg/mL	+/-	11.8340	µg/mL	Gravimetric
	CAS # 50-29-3.SEC	(Lot 3478000)			+/-	78.8809	µg/mL	Unstressed
	Purity 99%				+/-	125.1764	µg/mL	Stressed
18	Endosulfan sulfate		2,007.5	µg/mL	+/-	11.7813	µg/mL	Gravimetric
	CAS # 1031-07-8.SEC	(Lot 1888900)			+/-	78.5301	µg/mL	Unstressed
	Purity 98%				+/-	124.6196	µg/mL	Stressed
19	Methoxychlor		2,007.0	µg/mL	+/-	11.7782	µg/mL	Gravimetric
	CAS # 72-43-5.SEC	(Lot LC09014V)			+/-	78.5093	µg/mL	Unstressed
	Purity 99%				+/-	124.5867	µg/mL	Stressed
20	Endrin ketone		2,007.5	µg/mL	+/-	11.7813	µg/mL	Gravimetric
	CAS # 53494-70-5.SEC	(Lot 091307RD)			+/-	78.5301	µg/mL	Unstressed
	Purity 98%				+/-	124.6196	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

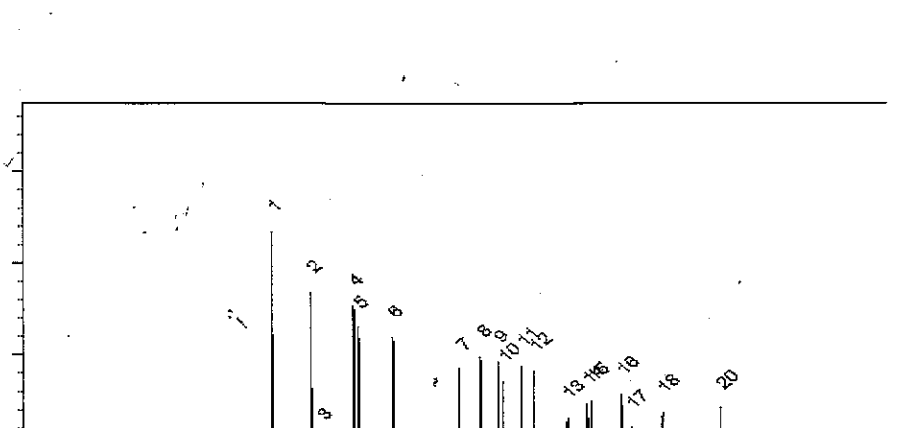
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 04-Feb-2015 **Balance:** B345965662

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 12-Feb-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

This certificated has been updated on 31January2017 for the following reasons and supersedes any pre-existing certificate: Elution order corrected to have Endosulfan 1 as peak 10 (was listed as peak 11), 4,4'-DDE as peak 11 (was listed as peak 10), 4,4'-DDT as peak 17 (was listed as 16), Endrin aldehyde as peak 16 (was listed as 17).

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081EvalBStk2_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8081-DS
Description: 4,4'-DDT & Endrin
Lot: 217101288
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Oct 30, 2017
Expiration: Nov 30, 2018
Sample Size: 1 mL
Components: 2
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
4,4'-DDT	50-29-3	98.2	200.6	197.0
Endrin	72-20-8	98.1	200.8	197.0

Received 03.28.18 KDK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8081HCBStkPS_00021

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: APP-9-112
Description: Hexachlorobenzene
Lot: 216101286
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Oct 26, 2016
Expiration: Oct 26, 2026
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Hexachlorobenzene	118-74-1	99.2	100.4	99.6

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

CERTIFICATION REPORT

1. **Quality Documentation:** This certificate is designed in accordance with ISO Guide 31 (Reference Materials - Contents of Certificates and Labels) and ISO Guide 35 (Reference Materials – General and Statistical Principles for Certification).

2. **Quality Standards:**

   ISO Guide 34 - General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   AR-1463

   ISO/IEC 17025 - General Requirements for the Competence of Testing and Calibration Laboratories ANAB Certificate Number AT-1339

   AT-1339

   ISO 9001 - Quality Management System - Requirements Eagle Registrations Certificate Number 3774

3. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11. If dilution is required, use only Class A glassware and diluent compatible with all certified analytes in this preparation. All solutions should be thoroughly mixed prior to use.

4. **Raw Materials:** Reference standards are prepared from the highest quality starting materials with defined purities. All analytes and solvents are obtained from pre-qualified vendors and then analyzed or evaluated prior to use.

5. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

6. **Homogeneity Assessment:** Homogeneity of the finished product is assessed by analyzing sample batches or by other methods consistent with the intended use of the product and by procedures that comply with the appropriate Quality System requirements, and ISO Guide 35.

7. **Stability Assessment:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label. To ensure a uniform solution, mix the contents of the sealed container thoroughly prior to use. Care should be taken not to contaminate the contents of the original container.

8. **Analytical Quality Control:** Products are tested by validated analytical methods specified in the manufacturer's quality system.

9. **Uncertainty Statistics and Confidence Limits:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_m = \sqrt{(u(P))^2 + (u(m))^2 + (u(V))^2}$. The expanded uncertainty, U_{CRM} assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level. The U_{CRM} for organic products is ±5%, the U_{CRM} for inorganic products is ±2%.

10. **Warranties:** The manufacturer warrants that its products shall conform to the description of such products as provided in its catalog or on the specific product label. This warranty is exclusive, and the manufacturer makes no other warranty, express or implied, including any implied warranty of merchantability or fitness for any particular purpose.

11. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. Due to the hazardous nature, only trained personnel should handle this product. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

8081HCBStkSS_00036

Certificate of Analysis

Hexachlorobenzene Solution

Product Number: EPA-1125 **Page:** 1 of 1

Lot Number: CR-5129 **Lot Issue Date:** 08-Nov-2017 **Expiration Date:** 31-Dec-2021

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
hexachlorobenzene	000118-74-1	RM03125	1003 ± 5 µg/mL

Matrix: acetone

Storage: Store at Room Temperature (15° to 30°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET ▪ NORTH KINGSTOWN, RHODE ISLAND 02852 ▪ WWW.ULTRASCI.COM

Reagent

8081ToxPS_00034

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32071 **Lot No.:** A0123422

Description : Toxaphene Standard

Toxaphene Standard 5,000 µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Toxaphene	5,018.0 µg/mL	+/- 29.4484	µg/mL	Gravimetric
	CAS # 8001-35-2 (Lot NT054507)		+/- 159.0403	µg/mL	Unstressed
	Purity ---%		+/- 207.7596	µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

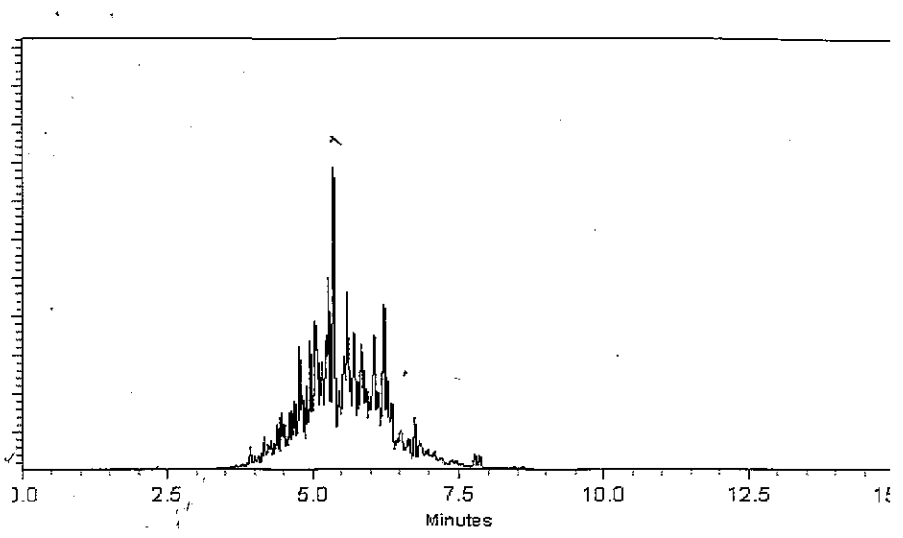
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 12-Dec-2016 **Balance:** B442140311

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 13-Dec-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\,stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\,stability} + U^2_{shipping\,stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ToxPS_00039

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32071 **Lot No.:** A0128388

Description : Toxaphene Standard

Toxaphene Standard 5,000 µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2021 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Toxaphene	5,034.0 µg/mL	+/- 29.5423 µg/mL	Gravimetric
	CAS # 8001-35-2 (Lot NT057448)		+/- 159.5474 µg/mL	Unstressed
	Purity ----%		+/- 208.4220 µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

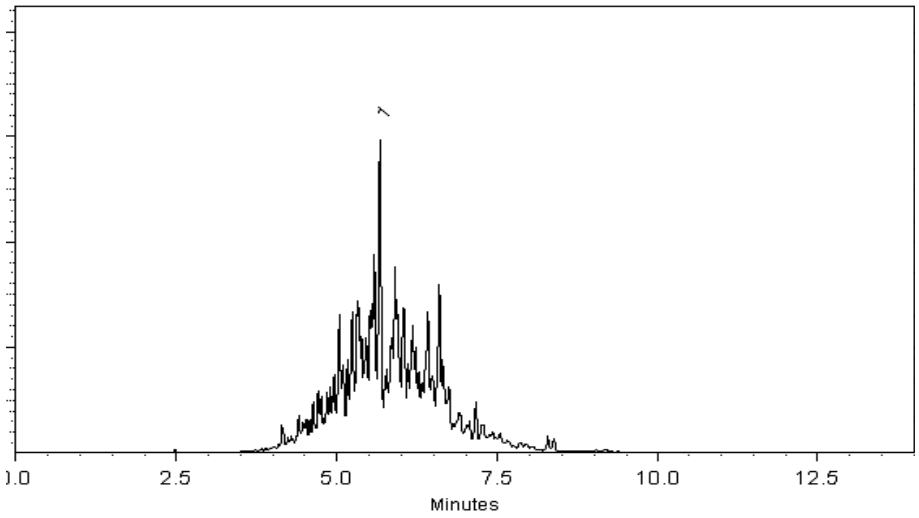
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician

Date Mixed: 12-Jun-2017 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 03-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ToxSS_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-093S-H-10X
Description: Toxaphene
Lot: 217071319
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 20, 2017
Expiration: Jul 20, 2027
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Toxaphene	8001-35-2	Tech Mix	1002	1002

Received
03·28·18
KDK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Reagent

8082 LCS_00049

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8082 LCS _ 00049

Reagent ID: 8082 LCS_00049

		Expiration Date:	08/05/2018
Description:	2 ug/mL	Lab [illegible]:	TestAmerica Denver
No. of Bottles:	2	Prep [illegible]:	Sriphuthorn, Kittiyada
Storage Location:	North Prep	Solvent:	ACETONE
Reagent Volume:	500.000 mL	Solvent Lot:	Acetone_00221
Creation Date:	07/11/2018		
Open Date:			
Container(s):	5210229, 5210230		
Comment:	Take 1mL 8082LCSStock and dilute to 500mL in Ac[illegible]ne. 6 Month expiration date. Divide into 2 bottles.		

PASS 13-July 2018

Reagent Analyte Information

Analyte	%R	%D	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
PCB-1016	95	5.0	8082LCSSTOCK_[illegible]	04/[illegible]/2022	[illegible]	[illegible]	2.00000	ug/mL
PCB-1260	92	8.3	8082LCSSTOCK_00034	04/30/2022	1000.[illegible]	ug/mL	2.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8082LCSSTOCK_00034	Aroclor 1016/1260 1000UG/ML	ASTD	04/30/22	RESTEK	A011[illegible]2	3[illegible]39	1.00000	mL

Preliminary Report

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D
Lims ID: 8082 LCS_00049
Client ID:
Sample Type: Client
Inject. Date: 13-Jul-2018 09:32:10 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 10.0000
Sample Info: 8082 LCS_00049
Misc. Info.: 280-0071939-004
Operator ID: JAX Instrument ID: SGC_P3

Method: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\PCB_P3.m
Limit Group: GCSV - 8082 - IS
Last Update: 13-Jul-2018 12:44:25 Calib Date: 20-May-2018 23:47:28
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P3\20180520-70135.b\05201835.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.832	1.834	-0.002	3364580530	1000.0	
2	1.755	1.754	0.001	914663468	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						U
1		2.750			ND	
2		2.781				
3 PCB-1221						U
1		2.967			ND	
1		3.110				
1		3.147				
2		3.097				
2		3.227				
2		3.280				
7 PCB-1232						U
1		3.145			ND	
1		3.492				
1		3.959				
1		4.099				
1		4.549				
2		3.279				
2		3.669				
2		4.126				
2		4.269				
2		4.796				

Preliminary Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
1 PCB-1016						
1	3.485	3.487	-0.002	203488343	184.8	
1	3.952	3.954	-0.002	484409114	193.2	
1	4.092	4.090	0.002	193370944	179.9	
1	4.302	4.304	-0.002	219686919	206.3	
1	4.538	4.537	0.001	208592567	186.9	
		Average of Peak Amounts =			190.2	
2	3.665	3.664	0.001	56306865	180.9	
2	4.122	4.121	0.001	130662122	182.6	
2	4.262	4.264	-0.002	49916935	174.4	
2	4.495	4.494	0.001	34467906	218.9	
2	4.785	4.787	-0.002	41291800	177.2	
		Average of Peak Amounts =			186.8	
					RPD = 1.79	
10 PCB-1242						U
1		3.492			ND	
1		3.962				
1		4.548				
1		5.038				
1		5.062				
2		3.669				
2		4.125				
2		4.269				
2		4.795				
2		4.932				
4 PCB-1248						U
1		3.952			ND	
1		4.308				
1		4.545				
1		5.295				
1		5.778				
2		4.125				
2		4.502				
2		4.792				
2		4.932				
2		6.105				

Preliminary Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.300			ND	
1		5.630				
1		5.783				
1		6.383				
1		6.750				
2		5.537				
2		5.960				
2		6.107				
2		6.657				
2		7.127				
12 PCB-1260						
1	6.005	6.007	-0.002	298207506	186.3	
1	6.732	6.730	0.002	587506377	189.6	
1	7.222	7.220	0.002	275021459	181.4	
1	7.652	7.654	-0.002	611908583	179.7	
1	8.035	8.037	-0.002	347624059	183.1	
		Average of Peak Amounts =			184.0	
2	6.645	6.647	-0.002	100659872	185.2	
2	7.115	7.114	0.001	156955927	189.0	
2	7.642	7.641	0.001	69492806	181.1	
2	8.009	8.011	-0.002	162573903	176.9	
2	8.512	8.514	-0.002	120717439	180.0	
		Average of Peak Amounts =			182.4	
					RPD = 0.87	
5 PCB-1262						U
1		6.385			ND	
1		6.909				
1		7.235				
1		7.669				
1		8.052				
2		6.656				
2		7.259				
2		7.652				
2		8.022				
2		8.526				

Reagent

8082LCSSTOCK_00034

RESTEK®
110 Benner Circle
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CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0116282

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016 **CAS #** 12674-11-2 **Purity** ----%	(Lot W-125-01)	1,009.0 µg/mL	+/- 5.8800 µg/mL +/- 31.9716 µg/mL +/- 41.7696 µg/mL		Gravimetric Unstressed Stressed
2	Aroclor 1260 **CAS #** 11096-82-5 **Purity** ----%	(Lot W-129-06)	1,004.6 µg/mL	+/- 5.8543 µg/mL +/- 31.8322 µg/mL +/- 41.5875 µg/mL		Gravimetric Unstressed Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

34-35

Reagent

8270_LCS_Main_00055

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Reagent ID: 8270_LCS_Main_00055

Description:	USE IN CONJUCTION WITH 8270_LCS_S	Expiration Date:	05/31/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Matsumoto, Jordan T
Reagent Volume:	500.000 mL	Solvent:	P&T Methanol
Creation Date:	10/01/2018	Solvent Lot:	MethanolP&T_00214
Open Date:			
Container(s):	5335109, 5335110, 5335111, 5335112, 5335262, 5335263		
Comment:	Make full volume.Place all stocks in a sonication bath for 5 minutes before use. Dilute to 500mL in P&T MeOH 40mL of MS-570666 or 571995 "8270 List 1 Std 1 MegaMix" 20mL of MS-569731 "Benzoic Acid" 10mL of "OP-572556" HCP 1 year expiration Exchange /MeCl2 verification All Standards in fridge.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,1'-Biphenyl	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2,4,5-Tetrachlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2,4-Trichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2-Diphenylhydrazine	571995_00044	09/30/2019	1010.97500	ug/mL	80.87796	ug/mL
1,3-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,3-Dinitrobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,4-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,4-Dioxane	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1-Methylnaphthalene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,2'-oxybis[1-chloropropane]	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,3,4,6-Tetrachlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4,5-Trichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4,6-Trichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4-Dichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4-Dimethylphenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D
Lims ID: 8270_LCS_Main_00055 Inj. Date: 03-Oct-2018 16:53:30
Worklist ID: 280-0074684-028 Instrument: SMS_D
Method: SMSD_8270C

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3520C
16 1,4-Dioxane	80.0	61.0	76.3	40-110
17 N-Nitrosodimethylamine	80.0	61.8	77.2	48-121
18 Pyridine	160.0	117.7	73.6	34-112
28 Phenol	80.0	65.8	82.2	50-127
30 Aniline	80.0	64.3	80.4	34-106
32 Bis(2-chloroethyl)ether	80.0	62.8	78.5	53-132
35 n-Decane	80.0	60.1	75.2	14-120
36 2-Chlorophenol	80.0	64.3	80.4	54-124
37 1,3-Dichlorobenzene	80.0	62.6	78.2	31-124
38 1,4-Dichlorobenzene	80.0	61.9	77.4	34-123
39 Benzyl alcohol	80.0	66.1	82.6	54-124
40 1,2-Dichlorobenzene	80.0	62.2	77.8	36-123
41 2-Methylphenol	80.0	66.0	82.4	55-123
43 2,2'-oxybis[1-chloropro	80.0	63.4	79.2	44-132
44 Indene	80.0	66.2	82.7	49-111
45 3-Methylphenol	80.0	66.3	82.9	51-124
46 3 & 4 Methylphenol	80.0	66.3	82.9	51-124
47 4-Methylphenol	80.0	66.3	82.9	51-124
48 N-Nitrosodi-n-propylami	80.0	65.8	82.2	57-117
50 Acetophenone	80.0	66.3	82.9	46-127
53 Hexachloroethane	80.0	60.5	75.6	27-123
54 Nitrobenzene	80.0	64.6	80.8	59-117
57 Isophorone	80.0	70.7	88.4	58-111
59 2-Nitrophenol	80.0	67.6	84.5	61-121
60 2,4-Dimethylphenol	80.0	67.1	83.9	33-117
63 Bis(2-chloroethoxy)meth	80.0	67.2	84.0	62-114
64 Benzoic acid	80.0	69.1	86.4	41-111
68 2,4-Dichlorophenol	80.0	68.9	86.1	62-119
70 1,2,4-Trichlorobenzene	80.0	65.4	81.7	44-117
72 Naphthalene	80.0	65.9	82.4	50-119
73 4-Chloroaniline	80.0	67.4	84.3	30-99
74 2,6-Dichlorophenol	80.0	69.0	86.3	63-118
76 Hexachlorobutadiene	80.0	66.6	83.2	36-118
83 4-Chloro-3-methylphenol	80.0	69.7	87.2	65-121
87 2-Methylnaphthalene	80.0	68.9	86.1	53-119
89 1-Methylnaphthalene	80.0	68.8	86.0	54-116
90 Hexachlorocyclopentadie	160.0	148.3	92.7	10-106
91 1,2,4,5-Tetrachlorobenz	80.0	68.6	85.8	57-117
94 2,4,6-Trichlorophenol	80.0	72.8	91.1	60-137
96 2,4,5-Trichlorophenol	80.0	70.4	88.0	60-129
100 1,1'-Biphenyl	80.0	67.7	84.6	52-130

Preliminary Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3520C
102 2-Chloronaphthalene	80.0	67.4	84.2	51-128
105 2-Nitroaniline	80.0	69.2	86.4	57-133
111 Dimethyl phthalate	80.0	71.3	89.1	59-131
112 1,3-Dinitrobenzene	80.0	72.7	90.8	65-135
113 2,6-Dinitrotoluene	80.0	72.1	90.2	65-135
115 Acenaphthylene	80.0	72.5	90.6	55-123
117 3-Nitroaniline	80.0	68.1	85.1	27-111
119 Acenaphthene	80.0	69.0	86.2	54-129
120 2,4-Dinitrophenol	160.0	127.4	79.6	56-121
121 4-Nitrophenol	160.0	135.0	84.4	50-140
124 2,4-Dinitrotoluene	80.0	72.1	90.1	65-135
125 Dibenzofuran	80.0	70.4	88.1	56-128
129 2,3,4,6-Tetrachlorophen	80.0	71.8	89.8	64-128
131 Hexadecane	80.0	68.1	85.2	47-129
132 Diethyl phthalate	80.0	72.2	90.2	60-133
134 4-Chlorophenyl phenyl e	80.0	70.7	88.3	56-130
135 Fluorene	80.0	71.1	88.9	51-133
138 4-Nitroaniline	80.0	69.9	87.4	54-128
139 4,6-Dinitro-2-methylphe	160.0	147.8	92.4	63-122
140 Diphenylamine	68.0	60.1	88.4	60-124
141 N-Nitrosodiphenylamine	80.0	69.1	86.4	63-116
142 1,2-Diphenylhydrazine	80.9	72.1	89.2	55-128
143 Azobenzene	80.0	71.4	89.2	55-128
152 4-Bromophenyl phenyl et	80.0	69.4	86.8	65-115
153 Hexachlorobenzene	80.0	71.2	89.0	65-114
156 n-Octadecane	80.0	68.5	85.6	
157 Pentachlorophenol	160.0	127.2	79.5	56-115
163 Phenanthrene	80.0	68.7	85.9	63-119
164 Anthracene	80.0	69.5	86.9	65-116
165 Carbazole	80.0	68.7	85.9	68-116
169 Di-n-butyl phthalate	80.0	70.5	88.1	65-118
176 Fluoranthene	80.0	70.7	88.3	65-118
180 Pyrene	80.0	68.7	85.8	59-124
187 Butyl benzyl phthalate	80.0	66.1	82.6	64-121
192 Benzo[a]anthracene	80.0	63.9	79.9	63-120
193 Bis(2-ethylhexyl) phtha	80.0	68.0	85.0	61-123
194 Chrysene	80.0	69.0	86.3	65-122
197 Di-n-octyl phthalate	80.0	66.7	83.4	56-119
198 Benzo[b]fluoranthene	80.0	68.7	85.9	64-122
200 Benzo[k]fluoranthene	80.0	71.3	89.1	69-125
202 Benzo[a]pyrene	80.0	68.7	85.9	62-114
208 Indeno[1,2,3-cd]pyrene	80.0	67.7	84.6	53-116
209 Dibenz(a,h)anthracene	80.0	68.7	85.8	60-120
210 Benzo[g,h,i]perylene	80.0	68.4	85.5	60-122

Preliminary Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D

Samples for Limit Group: 1, Lims Prep Method: 3520C
280-114613-C-3-A

Reagent

8270BO-SIMLCS_00031

Report Date: 17-Oct-2018 14:44:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_F\20181012-75020.b\F4024.D

Lims ID: 8270boSimlcs_00031 Inj. Date: 13-Oct-2018 03:44:30

Worklist ID: 280-0075020-025 Instrument: SMS_F

Method: SMSF_8270SIMX

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3546
8 1,4-Dioxane	900.0	*ND	0.0	
9 N-Nitrosodimethylamine	900.0	849.8	94.4	
10 Naphthalene	900.0	856.8	95.2	38-111
11 2-Methylnaphthalene	900.0	860.2	95.6	39-114
12 1-Methylnaphthalene	900.0	869.4	96.6	43-111
13 Dimethyl phthalate	900.0	*ND	0.0	
14 Acenaphthylene	900.0	768.8	85.4	39-116
15 Acenaphthene	900.0	806.4	89.6	44-111
16 Dibenzofuran	900.0	831.6	92.4	
17 Diethyl phthalate	900.0	*ND	0.0	
18 Fluorene	900.0	790.5	87.8	47-114
19 N-Nitrosodiphenylamine	900.0	772.8	85.9	
20 Phenanthrene	900.0	773.2	85.9	49-113
21 Anthracene	900.0	772.0	85.8	50-114
22 Di-n-butyl phthalate	900.0	756.7	84.1	
23 Fluoranthene	900.0	747.6	83.1	55-119
24 Pyrene	900.0	760.5	84.5	55-117
25 Butyl benzyl phthalate	900.0	760.1	84.5	
26 Benzo[a]anthracene	900.0	753.0	83.7	54-122
27 Chrysene	900.0	771.0	85.7	57-118
28 Bis(2-ethylhexyl) phtha	900.0	*ND	0.0	
29 Di-n-octyl phthalate	900.0	*ND	0.0	
30 Benzo[b]fluoranthene	900.0	798.5	88.7	53-128
31 Benzo[k]fluoranthene	900.0	804.9	89.4	56-123
32 Benzo[a]pyrene	900.0	789.2	87.7	50-125
33 Indeno[1,2,3-cd]pyrene	900.0	818.0	90.9	49-130
34 Dibenz(a,h)anthracene	900.0	812.6	90.3	50-129
35 Benzo[g,h,i]perylene	900.0	814.3	90.5	49-127

Samples for Limit Group: 1, Lims Prep Method: 3546

280-114910-A-16-P 280-114910-A-21-E 280-114910-A-22-E

280-114910-A-23-E 280-114859-A-2-A 280-114859-B-3-A

280-114859-B-4-A

Reagent

8270SIMSurStk_00001

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Date Received: _____

Certificate of Analysis

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
112220-01 -5PAK	334025	≤ -10 °C	Methylene Chloride	11-Feb-2019	Custom Surrogate Mix, 8-2220, 1000 mg/L, 5 x 1 ml

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
fluoranthene-d_{10}	93951-69-0	98.9	1458.12.2P	1002 +/- 4.54	mg/l
2-fluorobiphenyl	321-60-8	99.7	8.7.1P	1015 +/- 10.59	mg/l
2-fluorophenol	367-12-4	99.9	10.9.2P	1000 +/- 14.42	mg/L
2-methylnaphthalene-d_{10}	7297-45-2	98	1457.18.1P	1007 +/- 50.54	mg/l
nitrobenzene-d_5	4165-60-0	99.9	7.120.1P	1014 +/- 10.58	mg/l
phenol-d5	4165-62-2	99.6	11.12.3.2P	1004 +/- 10.48	mg/L
p-terphenyl-d_{14}	1718-51-0	100	9.12.8.1P	1008 +/- 10.52	mg/l
2,4,6-tribromophenol	118-79-6	99.8	12.1.5P	1001 +/- 14.43	mg/L

Certified By: Jarrett Howard

Jarrett Howard

Manufacture Date 22-Jan-2018

Follow all storage requirements, keep tightly closed when not in use, and use good laboratory practices when handling.
This Reference Material was manufactured, produced, and/or certified under a quality management system that is accredited to ISO 17034 and ISO/IEC 17025.

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.
The stated uncertainty is the expanded uncertainty with a coverage factor of two to give a 95% confidence level.

Reagent

8270Surrogate_00128

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8270Surrogate_00128

Reagent ID: 8270Surrogate_00128

Description:	8270 Surrogate 100ug/ml	Expiration Date:	07/09/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	McAleese, Maura A
Reagent Volume:	1000.000 mL	Solvent:	ACETONE
Creation Date:	10/17/2018	Solvent Lot:	Acetone_00232
Open Date:			
Container(s):	5367833, 5367834, 5367835, 5367836		
Comment:	Sonicate 8270SurrStkHL 5 mins before use. Take 20mL of 8270SurstkHL and dilute to 1000mL in acetone. One year expiration date. Split into 4x250mL bottles. Requires solvent exchange to MeCl2 prior to submission for verification.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,4,6 - Tribromophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00289	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL

Preliminary Report

TestAmerica Denver

Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_G6\20181023-75392.b\G6_35963.D
Lims ID: 8270Surrogate_00128
Client ID:
Sample Type: Client
Inject. Date: 23-Oct-2018 16:04:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 8270Surrogate_00128
Operator ID: HOEFLERA Instrument ID: SMS_G6

Method: \\ChromNA\Denver\ChromData\SMS_G6\20181023-75392.b\SMSG6_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 23-Oct-2018 16:59:20 Calib Date: 27-Sep-2018 16:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_G6\20180927-74477.b\G6_35533.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	98.7	98.69
$ 8 Phenol-d5	100.0	96.3	96.28
$ 9 Nitrobenzene-d5	100.0	92.0	92.00
$ 11 2-Fluorobiphenyl	100.0	87.8	87.81
$ 12 2,4,6-Tribromophenol	100.0	81.9	81.91
$ 13 Terphenyl-d14	100.0	92.3	92.34

Reagent

8270SurStkHL_00282

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBD7945V)	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot X-479)	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-25462)	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot Z20C043)	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-27278)	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

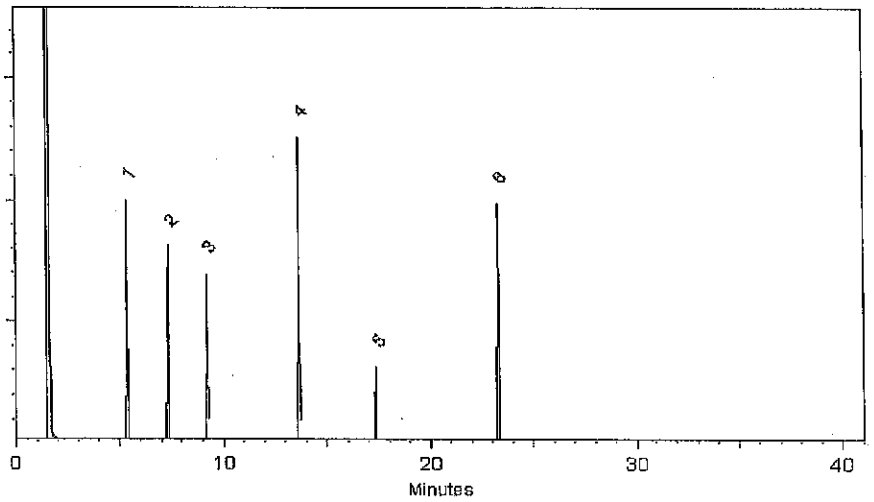
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00283

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBD7945V) **Purity** 99%	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot X-479) **Purity** 99%	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-25462) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot Z20C043) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot 29699MJV) **Purity** 99%	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 (Lot PR-27278) **Purity** 99%	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

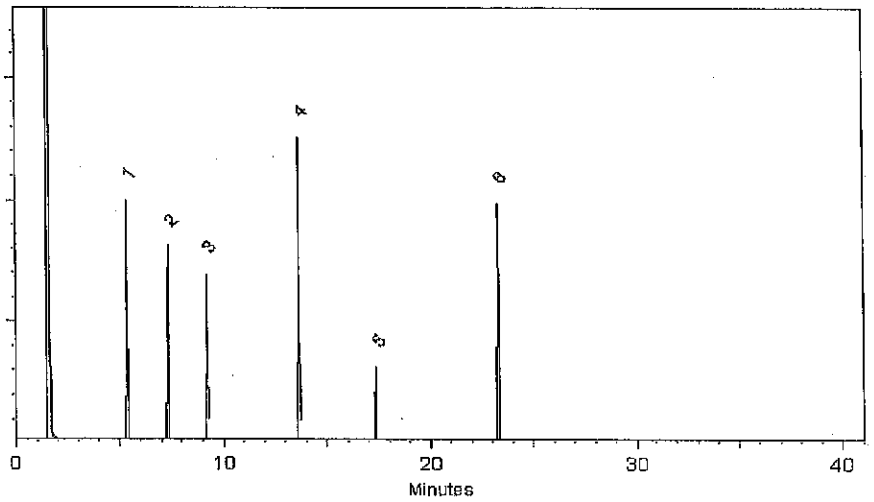
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
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$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00289

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBD7945V) **Purity** 99%	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot X-479) **Purity** 99%	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-25462) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot Z20C043) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot 29699MJV) **Purity** 99%	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 (Lot PR-27278) **Purity** 99%	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

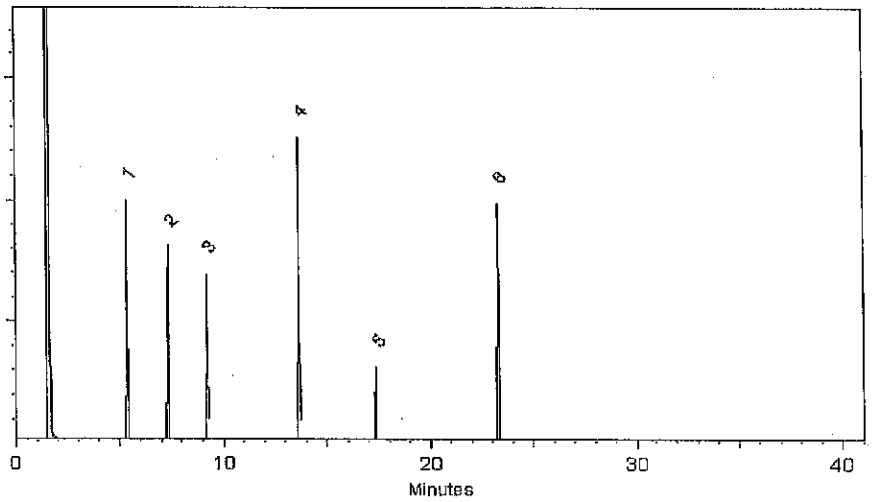
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00290

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBD7945V) **Purity** 99%	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot X-479) **Purity** 99%	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-25462) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot Z20C043) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot 29699MJV) **Purity** 99%	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 (Lot PR-27278) **Purity** 99%	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

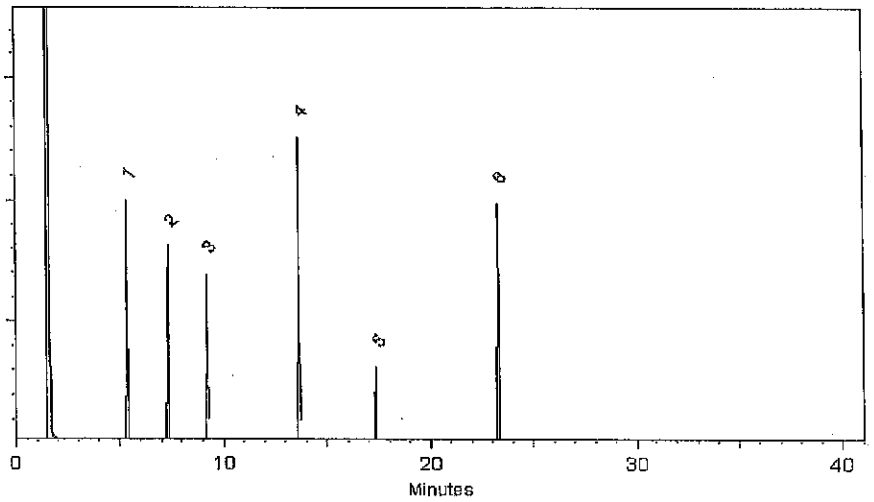
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 LCS_00078

*Standard is in the Explosives Room fridge *

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Reagent ID: 8330 LCS_00078

		Expiration Date:	04/30/2018
Description:	10+100 ug/mL KEEP IN FREEZER	Laboratory:	TestAmerica Denver
No. of Bottles:	2	Prepared By:	Cokley, Cheyana D
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	100.000 mL	Solvent Lot:	ACN_00209
Creation Date:	02/08/2018		
Open Date:			
Container(s):	4957477, 4957478		
Comment:	MNX has been added back 10.22.17; new expiration is 1 year after its creation date		

OK HKF 2/15/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,6-Dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2-Amino-4,6-dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
4-Amino-2,6-dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
m-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
o-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
p-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Tetryl	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00061	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00062	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00069	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00070	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
1,3,5-Trinitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
1,3-Dinitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrotoluene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2,4-Dinitrotoluene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
HMX	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Nitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
RDX	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
MNX	8330MNX_00002	04/30/2018	1000.00000	ug/mL	10.00000	ug/mL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00078

Reagent ID: 8330 LCS_00078

		Expiration Date:	04/30/2018
Description:	10+100 ug/mL KEEP IN FREEZER	Laboratory:	TestAmerica Denver
No. of Bottles:	2	Prepared By:	Cokley, Cheyana D
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	100.000 mL	Solvent Lot:	ACN_00209
Creation Date:	02/08/2018		
Open Date:			
Container(s):	4957477, 4957478		
Comment:	MNX has been added back 10.22.17; new expiration is 1 year after its creation date		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,4,6-Trinitrophenol	PicricARestek_00056	06/30/2018	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330 LCSMix2_00102	31451 1000ug/mL 8330 Calibration Mix#2	ASTD	02/08/19	Restek	A0122699	31451	1.00000	mL
8330_NG_Stk_00061	Cat#568871 5,000ug/mL	ASTD	02/08/19	Restek	A0128695	568871	1.00000	mL
8330_NG_Stk_00062	Cat#568871 5,000ug/mL	ASTD	02/08/19	Restek	A0128695	568871	1.00000	mL
8330_PETN_Stk_00069	Cat#568872 5,000ug/mL	ASTD	02/08/19	Restek	A0127970	568872	1.00000	mL
8330_PETN_Stk_00070	Cat#568872 5,000ug/mL	ASTD	02/08/19	Restek	A0127970	568872	1.00000	mL
8330LCSMix1_00097	Cat#31450, 1000ug/mL Restek	ASTD	02/08/19	Restek	A0122924	31450	1.00000	mL
8330MNX_00002	8330 MNX	ASTD	04/30/18	Ultra Scientific	CR-1036	CUS-23986	1.00000	mL
PicricARestek_00056	Cat# 31499	ASTD	06/30/18	Restek	A096192	31499	1.00000	mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180214-67233.b\001-1801.D

Lims ID: lcs0078 Inj. Date: 14-Feb-2018 18:29:33

Worklist ID: 280-0067233-022 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535
2 HMX	0.2000	0.1621	81.0	76-120
4 MNX	0.2000	*ND	0.0	* 60-136
5 RDX	0.2000	0.1745	87.2	80-120
6 2,4,6-Trinitrophenol	0.2000	0.1657	82.9	80-120
8 1,3,5-Trinitrobenzene	0.2000	0.1754	87.7	73-120
9 1,3-Dinitrobenzene	0.2000	0.1825	91.3	75-120
11 Nitrobenzene	0.2000	0.1956	97.8	64-120
12 Tetryl	0.2000	0.1897	94.9	10-120
13 Nitroglycerin	2.00	1.83	91.3	77-120
14 2,4,6-Trinitrotoluene	0.2000	0.1636	81.8	73-120
15 4-Amino-2,6-dinitrotolu	0.2000	0.1816	90.8	63-123
16 2-Amino-4,6-dinitrotolu	0.2000	0.1734	86.7	56-120
17 2,6-Dinitrotoluene	0.2000	0.1825	91.2	69-120
18 2,4-Dinitrotoluene	0.2000	0.1829	91.4	71-120
19 o-Nitrotoluene	0.2000	0.1976	98.8	52-120
20 p-Nitrotoluene	0.2000	0.1986	99.3	56-120
21 m-Nitrotoluene	0.2000	0.1924	96.2	61-124
22 PETN	2.00	1.80	90.2	77-123

Samples for Limit Group: 1, Lims Prep Method: 3535

600-160894-C-1-A 550-97259-C-14-A 550-97315-A-6-A

550-97324-A-12-A

Reagent

8330 LCS_00081

Report Date: 15-Jun-2018 07:35:24 Chrom Revision: 2.2 11-May-2018 08:54:46

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180614-71018.b\06140009.D

Lims ID: 8330 LCS%O00081 Inj. Date: 14-Jun-2018 18:11:46

Worklist ID: 280-0071018-009 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc
1 2,6-diamino-4-nitrotolu	0	*ND	0.0	
2 HMX	0.2000	0.1930	96.5	66-115
3 2,4-diamino-6-nitrotolu	0	*ND	0.0	
4 MNX	0	*ND	0.0	50-150
5 RDX	0.2000	0.1983	99.1	69-122
6 2,4,6-Trinitrophenol	0	0.1765	0.0	* 63-135
$ 7 1,2-Dinitrobenzene	0	*ND	0.0	78-119
8 1,3,5-Trinitrobenzene	0.2000	0.2075	103.7	62-127
9 1,3-Dinitrobenzene	0.2000	0.1986	99.3	59-131
11 Nitrobenzene	0.2000	0.1962	98.1	46-144
10 3,5-Dinitroaniline	0	*ND	0.0	86-118
12 Tetryl	0.2000	0.2027	101.3	56-131
13 Nitroglycerin	2.00	2.03	101.3	70-125
14 2,4,6-Trinitrotoluene	0.2000	0.1803	90.1	46-139
15 4-Amino-2,6-dinitrotolu	0.2000	0.1881	94.1	43-120
16 2-Amino-4,6-dinitrotolu	0.2000	0.1906	95.3	46-124
17 2,6-Dinitrotoluene	0.2000	0.1825	91.2	51-130
18 2,4-Dinitrotoluene	0.2000	0.1910	95.5	53-127
19 o-Nitrotoluene	0.2000	0.1874	93.7	37-138
20 p-Nitrotoluene	0.2000	0.1955	97.7	41-137
21 m-Nitrotoluene	0.2000	0.1858	92.9	31-140
22 PETN	2.00	1.91	95.4	67-127

OK (LH) 6/15/18

Samples for Limit Group: 1, Lims Prep Method: 8330B_Sonc_10g

280-110156-A-1-A 280-110156-A-2-A 280-110156-A-3-A

280-110156-A-5-A 280-110156-A-4-A

Reagent

8330 LCS_00082

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00082

OK HKF 9/12/18

Reagent ID: 8330 LCS_00082

Description:	10+100 ug/mL KEEP IN FREEZER	Expiration Date:	06/28/2019
No. of Bottles:	2	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Carroll, Randall P
Reagent Volume:	100.000 mL	Solvent:	Acetonitrile
Creation Date:	09/07/2018	Solvent Lot:	ACN_00204
Open Date:			
Container(s):	5297539, 5297540		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,6-Dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
2-Amino-4,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
4-Amino-2,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
m-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
o-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
p-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Tetryl	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00057	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00063	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00049	06/30/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00066	05/31/2020	5000.00000	ug/mL	100.00000	ug/mL
1,3,5-Trinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
1,3-Dinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4-Dinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
HMX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
Nitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
RDX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrophenol	PicricARestek_00078	09/30/2020	1000.00000	ug/mL	10.00000	ug/mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110010.D

Lims ID: 8330 LCS%O00082 Inj. Date: 11-Sep-2018 20:36:26

Worklist ID: 280-0073899-010 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535
1 2,6-diamino-4-nitrotolu	0	*ND	0.0	80-150	
25 TNX	0	*ND	0.0	50-150	
2 HMX	0.4000	0.3899	97.5	66-115	65-135
3 2,4-diamino-6-nitrotolu	0	*ND	0.0	70-150	
24 DNX	0	*ND	0.0	50-150	
4 MNX	0	*ND	0.0	68-123	50-150
5 RDX	0.4000	0.3916	97.9	69-122	68-130
6 2,4,6-Trinitrophenol	0.4000	0.3998	100.0	63-135	80-120
$ 7 1,2-Dinitrobenzene	0	*ND	0.0	63-127	83-119
8 1,3,5-Trinitrobenzene	0.4000	0.4096	102.4	62-127	73-125
9 1,3-Dinitrobenzene	0.4000	0.4033	100.8	59-131	78-120
11 Nitrobenzene	0.4000	0.4045	101.1	46-144	65-134
10 3,5-Dinitroaniline	0	*ND	0.0	55-119	71-117
12 Tetryl	0.4000	0.4274	106.9	56-131	64-128
13 Nitroglycerin	4.00	3.97	99.4	70-125	74-127
14 2,4,6-Trinitrotoluene	0.4000	0.3842	96.1	46-139	71-123
15 4-Amino-2,6-dinitrotolu	0.4000	0.3737	93.4	43-120	76-125
16 2-Amino-4,6-dinitrotolu	0.4000	0.3998	100.0	46-124	79-120
17 2,6-Dinitrotoluene	0.4000	0.3828	95.7	51-130	77-127
18 2,4-Dinitrotoluene	0.4000	0.3881	97.0	53-127	78-120
19 o-Nitrotoluene	0.4000	0.3903	97.6	37-138	70-127
20 p-Nitrotoluene	0.4000	0.4065	101.6	41-137	71-127
21 m-Nitrotoluene	0.4000	0.3886	97.1	31-140	73-125
22 PETN	4.00	3.95	98.7	67-127	73-127

Samples for Limit Group: 1, Lims Prep Method: 3535

680-157496-D-1-B	680-157496-D-2-B	680-157496-D-3-B
680-157496-D-4-B	680-157496-D-5-B	680-157496-D-6-B
680-157496-D-7-B	680-157496-D-8-B	680-157496-D-9-B
490-158536-D-1-B	490-158590-A-1-B	490-158590-A-2-B
600-171866-C-1-B	280-113921-A-1-B	

Samples for Limit Group: 2, Lims Prep Method: 3535

160-30545-A-1-B	160-30545-A-6-B	160-30545-A-7-B

Reagent

8330 LCS_00083

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00082

OK HKF 9/12/18

Reagent ID: 8330 LCS_00082

Description:	10+100 ug/mL KEEP IN FREEZER	Expiration Date:	06/28/2019
No. of Bottles:	2	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Carroll, Randall P
Reagent Volume:	100.000 mL	Solvent:	Acetonitrile
Creation Date:	09/07/2018	Solvent Lot:	ACN_00204
Open Date:			
Container(s):	5297539, 5297540		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,6-Dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
2-Amino-4,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
4-Amino-2,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
m-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
o-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
p-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Tetryl	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00057	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00063	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00049	06/30/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00066	05/31/2020	5000.00000	ug/mL	100.00000	ug/mL
1,3,5-Trinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
1,3-Dinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4-Dinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
HMX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
Nitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
RDX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrophenol	PicricARestek_00078	09/30/2020	1000.00000	ug/mL	10.00000	ug/mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110010.D

Lims ID: 8330 LCS%O00082 Inj. Date: 11-Sep-2018 20:36:26

Worklist ID: 280-0073899-010 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535
1 2,6-diamino-4-nitrotolu	0	*ND	0.0	80-150	
25 TNX	0	*ND	0.0	50-150	
2 HMX	0.4000	0.3899	97.5	66-115	65-135
3 2,4-diamino-6-nitrotolu	0	*ND	0.0	70-150	
24 DNX	0	*ND	0.0	50-150	
4 MNX	0	*ND	0.0	68-123	50-150
5 RDX	0.4000	0.3916	97.9	69-122	68-130
6 2,4,6-Trinitrophenol	0.4000	0.3998	100.0	63-135	80-120
$ 7 1,2-Dinitrobenzene	0	*ND	0.0	63-127	83-119
8 1,3,5-Trinitrobenzene	0.4000	0.4096	102.4	62-127	73-125
9 1,3-Dinitrobenzene	0.4000	0.4033	100.8	59-131	78-120
11 Nitrobenzene	0.4000	0.4045	101.1	46-144	65-134
10 3,5-Dinitroaniline	0	*ND	0.0	55-119	71-117
12 Tetryl	0.4000	0.4274	106.9	56-131	64-128
13 Nitroglycerin	4.00	3.97	99.4	70-125	74-127
14 2,4,6-Trinitrotoluene	0.4000	0.3842	96.1	46-139	71-123
15 4-Amino-2,6-dinitrotolu	0.4000	0.3737	93.4	43-120	76-125
16 2-Amino-4,6-dinitrotolu	0.4000	0.3998	100.0	46-124	79-120
17 2,6-Dinitrotoluene	0.4000	0.3828	95.7	51-130	77-127
18 2,4-Dinitrotoluene	0.4000	0.3881	97.0	53-127	78-120
19 o-Nitrotoluene	0.4000	0.3903	97.6	37-138	70-127
20 p-Nitrotoluene	0.4000	0.4065	101.6	41-137	71-127
21 m-Nitrotoluene	0.4000	0.3886	97.1	31-140	73-125
22 PETN	4.00	3.95	98.7	67-127	73-127

Samples for Limit Group: 1, Lims Prep Method: 3535

680-157496-D-1-B	680-157496-D-2-B	680-157496-D-3-B
680-157496-D-4-B	680-157496-D-5-B	680-157496-D-6-B
680-157496-D-7-B	680-157496-D-8-B	680-157496-D-9-B
490-158536-D-1-B	490-158590-A-1-B	490-158590-A-2-B
600-171866-C-1-B	280-113921-A-1-B	

Samples for Limit Group: 2, Lims Prep Method: 3535

160-30545-A-1-B	160-30545-A-6-B	160-30545-A-7-B

Reagent

8330 LCSMix2_00102

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl		1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 479-45-8	(Lot 091120JLM)		+/- 54.7830	µg/mL	Unstressed
	Purity 99%			+/- 63.8824	µg/mL	Stressed
2	4-Amino-2,6-dinitrotoluene		1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)		+/- 54.8926	µg/mL	Unstressed
	Purity 99%			+/- 64.0101	µg/mL	Stressed
3	2-Amino-4,6-dinitrotoluene		1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot 29550-55)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%			+/- 63.9463	µg/mL	Stressed
4	2,6-Dinitrotoluene		1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%			+/- 63.9463	µg/mL	Stressed
5	2-Nitrotoluene		1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot GA01)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%			+/- 63.9463	µg/mL	Stressed
6	4-Nitrotoluene		1,001.0 µg/mL	+/- 5.9459	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot FAU01)		+/- 54.8400	µg/mL	Unstressed
	Purity 97%			+/- 63.9488	µg/mL	Stressed
7	3-Nitrotoluene		1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%			+/- 63.9463	µg/mL	Stressed

Reagent

8330 LCSMix2_00103

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Tetryl **CAS #** 479-45-8 (Lot 091120JLM) **Purity** 99%	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL	Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 (Lot ER070908-01) **Purity** 99%	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL	Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 (Lot 29550-55) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 (Lot 1437483V) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 (Lot GA01) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 (Lot FAU01) **Purity** 97%	1,001.0 µg/mL	+/- 5.9459 µg/mL +/- 54.8400 µg/mL +/- 63.9488 µg/mL	Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 (Lot 07329LG) **Purity** 99%	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

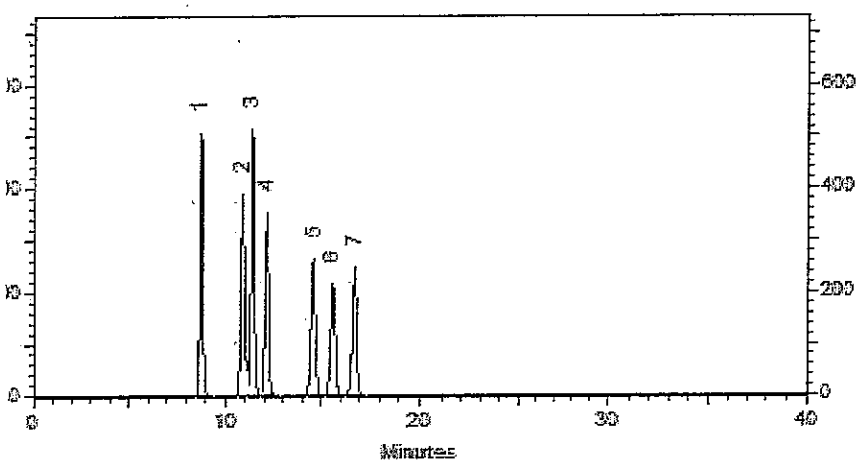
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis
Cathleen Soltis - Mix Technician

Date Mixed: 06-Nov-2016 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Nov-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

8330 LCSMix2_00104

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl **CAS #** 479-45-8 **Purity** 99%	(Lot 091120JLM)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL		Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99%	(Lot 29550-55)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot GA01)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 97%	(Lot FAU01)	1,001.0 µg/mL	+/- 5.9459 µg/mL +/- 54.8400 µg/mL +/- 63.9488 µg/mL		Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99%	(Lot 07329LG)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

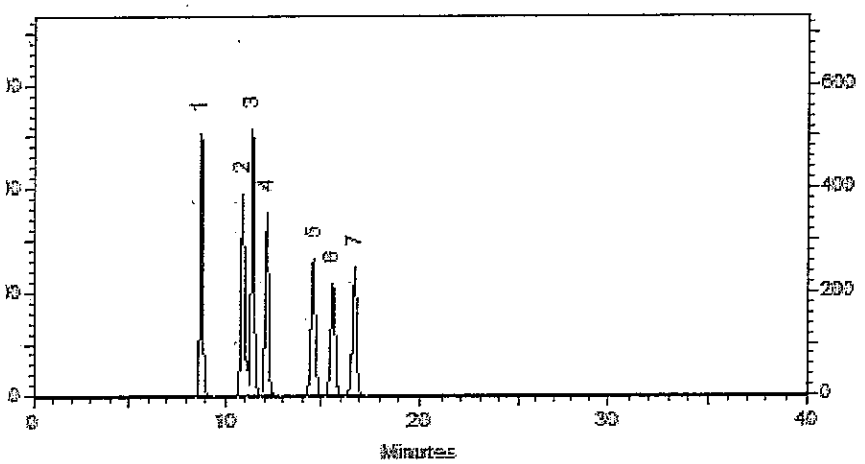
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 06-Nov-2016 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Nov-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

8330 Stock_TS_00009

Certificate of Analysis

Combined Stock Solution

Product Number: NAIM-833E **Page:** 1 of 1

Lot Number: CR-1002 **Lot Issue Date:** 10-Mar-2017 **Expiration Date:** 30-Apr-2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
HMX	002691-41-0	RM06237	1000 ± 5 µg/mL
RDX	000121-82-4	RM10915	1000 ± 5 µg/mL
1,3,5-trinitrobenzene	000099-35-4	RM06608	1000 ± 5 µg/mL
m-dinitrobenzene	000099-65-0	RM04448	1001 ± 5 µg/mL
nitrobenzene	000098-95-3	RM11472	1002 ± 5 µg/mL
2,4,6-trinitrotoluene (TNT)	000118-96-7	RM11972	1004 ± 5 µg/mL
2,4-dinitrotoluene	000121-14-2	RM01209	1002 ± 5 µg/mL
tetryl	000479-45-8	RM12295	1000 ± 5 µg/mL
2,6-dinitrotoluene	000606-20-2	RM10763	1003 ± 5 µg/mL
2-nitrotoluene	000088-72-2	NT01996	1003 ± 5 µg/mL
3-nitrotoluene	000099-08-1	NT02212	1004 ± 5 µg/mL
4-nitrotoluene	000099-99-0	NT02096	1004 ± 5 µg/mL
2-amino-4,6-dinitrotoluene	035572-78-2	RM04229	1003 ± 5 µg/mL
4-amino-2,6-dinitrotoluene	019406-51-0	RM04226	1003 ± 5 µg/mL

Matrix: acetonitrile

Storage: Store at Room Temperature (15° to 30°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.

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8330_NG_Stk_00057

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00061

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00062

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00063

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00067

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00068

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00049

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Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

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ilac-MRA

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Certificate of Composition

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0120082

Description : Custom PETN Standard

Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	PETN		5,044.0	µg/mL	+/- 46.9065	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)			+/- 278.6726	µg/mL	Unstressed
	Purity 99%				+/- 324.2377	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

7-6-16
YJC

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00066

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Certificate #3222.01

Certificate of Composition

ilac-MRA

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00067

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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00068

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Certificate of Composition

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00069

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00070

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330LCSMix1_00097

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31450 **Lot No.:** A0122924

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

5

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	HMX **CAS #** 2691-41-0 **Purity** 98%	(Lot 111005JLM)	999.6 µg/mL	+/- 5.9373 +/- 54.7611 +/- 63.8568	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 **Purity** 99%	(Lot 080220JLM)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 **Purity** 99%	(Lot UNVVB)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBB1436V)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot 2554100)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

8330LCSMix1_00102

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31450 **Lot No.:** A0128688

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	HMX		1,002.5	µg/mL	+/- 5.9548	µg/mL	Gravimetric
	CAS # 2691-41-0	(Lot 111005JLM)			+/- 54.9222	µg/mL	Unstressed
	Purity 98%				+/- 64.0446	µg/mL	Stressed
2	RDX		1,008.0	µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 121-82-4	(Lot 080220JLM)			+/- 55.2213	µg/mL	Unstressed
	Purity 99%				+/- 64.3934	µg/mL	Stressed
3	1,3,5-Trinitrobenzene		1,004.9	µg/mL	+/- 5.9689	µg/mL	Gravimetric
	CAS # 99-35-4	(Lot DJ5QO)			+/- 55.0525	µg/mL	Unstressed
	Purity 97%				+/- 64.1967	µg/mL	Stressed
4	1,3-Dinitrobenzene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed
5	Nitrobenzene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed
6	2,4,6-Trinitrotoluene		1,004.0	µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot 2554100)			+/- 55.0021	µg/mL	Unstressed
	Purity 99%				+/- 64.1379	µg/mL	Stressed
7	2,4-Dinitrotoluene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed

Reagent

8330LCSMix1_00105

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31450 **Lot No.:** A0128688

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	HMX		1,002.5	µg/mL	+/- 5.9548	µg/mL	Gravimetric
	CAS # 2691-41-0	(Lot 111005JLM)			+/- 54.9222	µg/mL	Unstressed
	Purity 98%				+/- 64.0446	µg/mL	Stressed
2	RDX		1,008.0	µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 121-82-4	(Lot 080220JLM)			+/- 55.2213	µg/mL	Unstressed
	Purity 99%				+/- 64.3934	µg/mL	Stressed
3	1,3,5-Trinitrobenzene		1,004.9	µg/mL	+/- 5.9689	µg/mL	Gravimetric
	CAS # 99-35-4	(Lot DJ5QO)			+/- 55.0525	µg/mL	Unstressed
	Purity 97%				+/- 64.1967	µg/mL	Stressed
4	1,3-Dinitrobenzene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed
5	Nitrobenzene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed
6	2,4,6-Trinitrotoluene		1,004.0	µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot 2554100)			+/- 55.0021	µg/mL	Unstressed
	Purity 99%				+/- 64.1379	µg/mL	Stressed
7	2,4-Dinitrotoluene		1,007.0	µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 55.1665	µg/mL	Unstressed
	Purity 99%				+/- 64.3295	µg/mL	Stressed

Reagent

8330PAStkPS_00054

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 216061376-01
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 19, 2017
Expiration: Jul 19, 2019
Sample Size: 1 mL
Components: 1

Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

Superseded

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

Reagent

8330PAStkPS_00056

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 218031154
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 12, 2018
Expiration: Apr 12, 2020
Sample Size: 1 mL
Components: 1

Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Gulde 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

CUSTOMER COPY

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8330Surrogate_00098

In Explosives (Prep) Fridge ☺ Thx

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00098

Reagent ID: 8330Surrogate_00098

Description:	10ug/mL 1,2-Dinitrobenzene	Expiration Date:	03/01/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Cokley, Cheyana D
Reagent Volume:	500.000 mL	Solvent:	Acetonitrile
Creation Date:	03/01/2018	Solvent Lot:	ACN_00210
Open Date:			
Container(s):	4983902, 4983903, 4983904, 4983905		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 100 mL in ACN. Mulitply recipe as needed.		

HKF 0IC 3/7/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_0013	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0014	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0015	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0016	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0017	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

Preliminary Report

TestAmerica Denver
ICV, ICal Verification Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 06-Mar-2018 13:40:54 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0067760-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Mar-2018 14:58:37 Calib Date: 06-Mar-2018 13:17:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK013

Start Cal Date: 06-Mar-2018 10:37:17
End Cal Date: 06-Mar-2018 13:17:57

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits	
2 HMX	0.4000	0.3593	-10.2	20.0	89.8		
4 MNX	0.4000	4.09	*923.6	20.0	1023.6		
5 RDX	0.4000	0.3939	-1.5	20.0	98.5		
6 2,4,6-Trinitrophen	0.4000	0.3960	-1.0	20.0	99.0		
$ 7 1,2-Dinitrobenzene	0.4000	0.3986	-0.4	20.0	99.6	———	8330 Surr_0097 used
8 1,3,5-Trinitrobenz	0.4000	0.4025	0.6	20.0	100.6		
9 1,3-Dinitrobenzene	0.4000	0.4001	0.0	20.0	100.0		
11 Nitrobenzene	0.4000	0.3982	-0.5	20.0	99.5		
12 Tetryl	0.4000	0.3934	-1.7	20.0	98.3		
14 2,4,6-Trinitrotolu	0.4000	0.3669	-8.3	20.0	91.7		
15 4-Amino-2,6-dinitr	0.4000	0.3788	-5.3	20.0	94.7		
16 2-Amino-4,6-dinitr	0.4000	0.3896	-2.6	20.0	97.4		
17 2,6-Dinitrotoluene	0.4000	0.3828	-4.3	20.0	95.7		
18 2,4-Dinitrotoluene	0.4000	0.3932	-1.7	20.0	98.3		
19 o-Nitrotoluene	0.4000	0.3947	-1.3	20.0	98.7		
20 p-Nitrotoluene	0.4000	0.4066	1.6	20.0	101.6		
21 m-Nitrotoluene	0.4000	0.3880	-3.0	20.0	97.0		

Reagent

8330Surrogate_00100

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00100

Reagent ID: 8330Surrogate_00100

		Expiration Date:	03/01/2019
Description:	10ug/mL 1,2-Dinitrobenzene	Laboratory:	TestAmerica Denver
No. of Bottles:	4	Prepared By:	Carroll, Randall P
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	500.000 mL	Solvent Lot:	ACN_00210
Creation Date:	09/07/2018		
Open Date:			
Container(s):	5297535, 5297536, 5297537, 5297538		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 10(mL in ACN. Mulitply recipe as needed.		

OK HKF 9/12/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_00123	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00124	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00125	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00126	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00127	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

In EXP freezer

in O prep

Report Date: 12-Sep-2018 10:03:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110009.D				
Lims ID:	8330S+U+R+R+O+G+A+T+E%O00100				
Client ID:					
Sample Type:	Client				
Inject. Date:	11-Sep-2018 20:13:27	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	8330S+U+R+R+O+G+				
Misc. Info.:	280-0073899-009				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	12-Sep-2018 10:03:24	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	XAWRK011				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.4000	0.4053	101.33

Reagent

8330SurrStkSS_00123

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00124

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00125

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00126

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00127

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00130

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00131

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00132

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00133

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00141

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0131413

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1,2-Dinitrobenzene	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.1943	µg/mL	Unstressed
	Purity 99%		+/- 57.5086	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStock_00161

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*

Danger 2

Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

Reagent

8330SurrStock_00162

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USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*

Danger 2

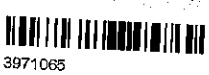
Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS



3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

Page 1 of 1 - Rev. 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

Reagent

ANALYTES B_00014

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: INT-B1 **Lot No.** 5-177MKBY

Description: Analytes B

Matrix: 5% HNO_3

This **ASSURANCE®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for analytical instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3151*	Be	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3105a*
Cd	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3108*	Co	50 µg/mL	49.4 µg/mL	±0.3 µg/mL	3113*
Ni	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3136*	Cr	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3112a*
Pb	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3128*	Cu	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3114*
Zn	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3168a*	Mn	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3132*
Ba	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3104a*	V	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3165*

* - indicates NIST SRM

† - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# 9-164YP, 12-03YP

5078581
ID: ANALYTES B_00014
Exp: 04/01/18 Prpd: SJS
ICP ANALYTES B SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified (measured) value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: APR · 2018 Certifying Officer: Kathleen Cullen

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principals for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where $k = 2$ is the coverage factor at the 95% confidence level
- u_c is obtained by combining the individual element standard uncertainty components u_i, and $u_c = \sqrt{\sum u_i^2}$

Certification Traveler Report:

All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, LLC of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, LLC be liable for any loss of profits or any incidental, special, or consequential damages.

Reagent

AR_1221_RESss_00010

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32007.sec **Lot No.:** A0117382

Description : Aroclor® 1221 Standard

Aroclor® 1221 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,000.0 µg/mL	+/- 10.0737	µg/mL	Gravimetric
	CAS # 11104-28-2.SEC (Lot W-126-07)		+/- 32.7345	µg/mL	Unstressed
	Purity ----%		+/- 42.2047	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1232_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32008.sec **Lot No.:** A095877

Description : Aroclor® 1232 Standard

Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2019 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1232	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11141-16-5.SEC (Lot 130604JLM)		+/- 20.8959	µg/mL	Unstressed
	Purity ----%		+/- 34.3792	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1242_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32009.SEC **Lot No.:** A0105175

Description : Aroclor® 1242 Standard

Aroclor® 1242 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2020 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1242	1,000.0 µg/mL	+/- 10.0737 µg/mL		Gravimetric
	CAS # 53469-21-9.SEC (Lot NTO1020)		+/- 32.1814 µg/mL		Unstressed
	Purity ----%		+/- 42.2011 µg/mL		Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1248_RES_00012

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010 **Lot No.:** A0130978

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,001.6 µg/mL	+/- 5.8779	µg/mL	Gravimetric
	CAS # 12672-29-6 (Lot W-108-07)		+/- 31.7447	µg/mL	Unstressed
	Purity ----%		+/- 41.4691	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1248_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010.SEC **Lot No.:** A0124143

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 12672-29-6.SEC (Lot 106-248)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1254_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32011.SEC **Lot No.:** A0105373

Description : Aroclor® 1254 Standard

Aroclor® 1254 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2020 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Aroclor 1254	1,004.0 µg/mL	+/- 10.1140 µg/mL	Gravimetric
	CAS # 11097-69-1.SEC (Lot RM00922)		+/- 32.3101 µg/mL	Unstressed
	Purity ----%		+/- 42.3699 µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1660_RES_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0134815

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016	1,001.3 µg/mL	+/- 5.8348	µg/mL	Gravimetric
	CAS # 12674-11-2 (Lot 164887)		+/- 31.7260	µg/mL	Unstressed
	Purity ----%		+/- 41.4488	µg/mL	Stressed
2	Aroclor 1260	1,000.0 µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 11096-82-5 (Lot 155463)		+/- 31.6864	µg/mL	Unstressed
	Purity ----%		+/- 41.3971	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1660_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039.SEC **Lot No.:** A0114674

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2022 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016		1,000.7 µg/mL	+/- 5.9437	µg/mL	Gravimetric
	CAS # 12674-11-2.SEC	(Lot 129)		+/- 31.7284	µg/mL	Unstressed
	Purity ----%			+/- 41.4406	µg/mL	Stressed
2	Aroclor 1260		1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11096-82-5.SEC	(Lot NTO1023)		+/- 31.7072	µg/mL	Unstressed
	Purity ----%			+/- 41.4130	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_2154_RES_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569745 **Lot No.:** A0131802

Description : PCB-1221/1254 Standard

PCB-1221/1254 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 11104-28-2 (Lot 2781200)		+/- 31.8975	µg/mL	Unstressed
	Purity ----%		+/- 41.6615	µg/mL	Stressed
2	Aroclor 1254	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 11097-69-1 (Lot 124-191-B)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%		+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_3262_RES_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569746 **Lot No.:** A0132023

Description : PCB-1232/1262 Standard

PCB-1232/1262 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** >1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1232	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 11141-16-5 (Lot W-107-05)		+/- 31.8340	µg/mL	Unstressed
	Purity ----%		+/- 41.5787	µg/mL	Stressed
2	Aroclor 1262	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 37324-23-5 (Lot 3067100)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%		+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_4268_RES_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569747 **Lot No.:** A0133093

Description : PCB-1242/1268 Standard

PCB-1242/1268 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Aroclor 1242	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 53469-21-9 (Lot 01141-A)		+/- 31.9609 µg/mL	Unstressed
	Purity ----%		+/- 41.7443 µg/mL	Stressed
2	Aroclor 1268	1,000.0 µg/mL	+/- 5.9397 µg/mL	Gravimetric
	CAS # 11100-14-4 (Lot 2743900)		+/- 31.7072 µg/mL	Unstressed
	Purity ----%		+/- 41.4130 µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_SURR_RES_00073

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0121594

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene **CAS #** 877-09-8 (Lot 0052481) **Purity** 98%	200.0 µg/mL	+/- 1.1656 +/- 6.3378 +/- 8.2802	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Decachlorobiphenyl (BZ# 209) **CAS #** 2051-24-3 (Lot ER071509-01) **Purity** 99%	201.2 µg/mL	+/- 1.1725 +/- 6.3753 +/- 8.3291	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Reagent

AR_SURR_RES_00084

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene		201.2 µg/mL	+/- 1.1725	µg/mL	Gravimetric
	CAS # 877-09-8	(Lot 0052481)		+/- 6.3751	µg/mL	Unstressed
	Purity 98%			+/- 8.3288	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)		201.5 µg/mL	+/- 1.1742	µg/mL	Gravimetric
	CAS # 2051-24-3	(Lot ER071509-01)		+/- 6.3848	µg/mL	Unstressed
	Purity 99%			+/- 8.3415	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

1-19-18

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	201.2 µg/mL	+/- 1.1725 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3751 µg/mL	Unstressed
	Purity 98%		+/- 8.3288 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	201.5 µg/mL	+/- 1.1742 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3848 µg/mL	Unstressed
	Purity 99%		+/- 8.3415 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

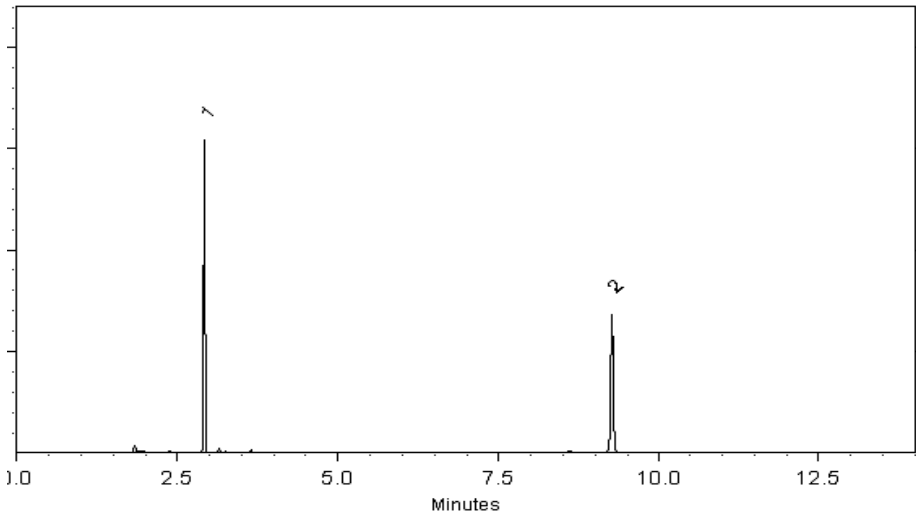
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 31-Aug-2017 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Sep-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0136320

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2024 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	200.3 µg/mL	+/- 1.1673 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3472 µg/mL	Unstressed
	Purity 98%		+/- 8.2923 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	200.2 µg/mL	+/- 1.1667 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3436 µg/mL	Unstressed
	Purity 99%		+/- 8.2877 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

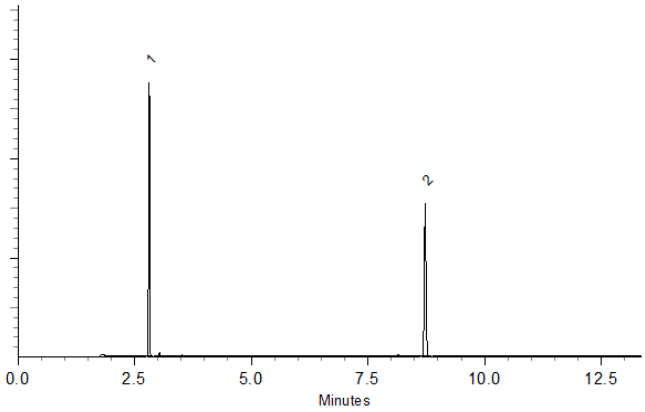
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dustin J Lidgett
Dustin Lidgett - Mix Technician

Date Mixed: 20-Mar-2018 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0127264

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.3065	µg/mL	Unstressed
	Purity 99%		+/- 57.6234	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

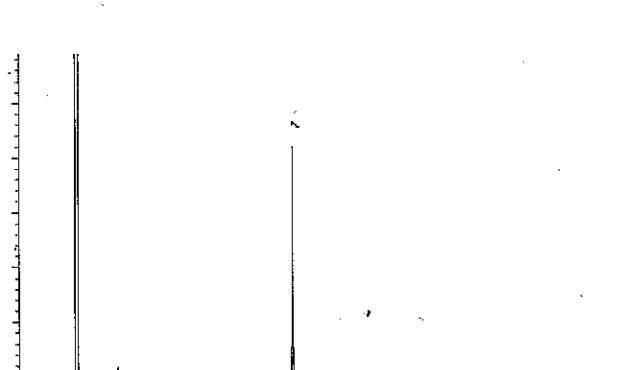
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0127264

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.3065	µg/mL	Unstressed
	Purity 99%		+/- 57.6234	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

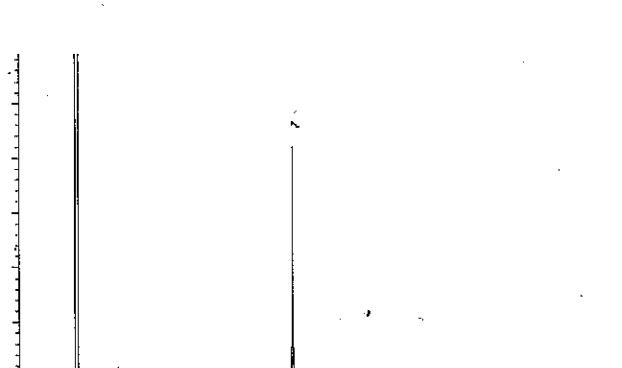
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

CN ICV Std_00052

Standard Verification Form

Standard Information			
Vendor Standard Name	5 ANION STANDARD 1000 ug/mL SIMPLE CYANIDE		
Vendor	SPEX		
Lot number	13-66YPX		
Initial Verification	☑ RK/11/11/18	Re-Verification	☑

TALS "Reagent" Information	
TALS Standard ID	CN ICV std-00052
COA Reviewed against what is in TALS	☑

Verification Information and Data			
Verified by	RK	Instrument ID	Alp-1
Verification Date	11/05/18	Method Reference	Total Cyanide
ID of Standard Used for Verification	CN ICV std-00052	Batch # / Chrom Work List #	
Attach to this form: formulary report , COA and data used for verification Attach to standard in TALS: this form and all supporting documentation including the original CoA			
See Acceptance Criteria Below:			
Approved for Use	☑	Not Approved for Use	☐
New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.			
New Expiration Date:	11/30/18		

1st Level Review RK Date: 11/05/18

2nd Level Review _____ Date: _____

QA Review (Re-verification only)		Date:

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: RSCN9-2X **Lot No.** 13-66YPX

Description: 1000 µg/mL Simple Cyanide

Matrix: 2% KOH

This Cyanide Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for titrimetric method. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±50 µg/mL

The CRM is prepared gravimetrically using high purity Potassium Cyanide, Lot# K48260367702. See side 2 for details of certification.

Certified By:

Titration with $AgNO_3$ using Rhodanine as indicator. $AgNO_3$ standardized against NaCl NIST SRM #919b.

Uncertified Properties:

Trace Impurities in the Solution (derived from starting material):

Ion	µg/mL	Ion	µg/mL
Cl^-	<0.5	SCN^-	<0.3
$PO4^{-3}$	<0.1	$SO4^{-2}$	<0.3
S^{-2}	<0.01		

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to ±5% of certified concentration for a period of three months from the date of certification. This includes uncertainty components associated with measurements, homogeneity by the most precise method, and short-term and long-term stability. For these solutions, we use high purity reagents, 18 megohm double deionized water, and triple rinsed bottles. All glassware used is Class A. This guarantee is valid only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUL - - 2018

Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Reagent

DOD_ADD_SURR_00002

o2si
smart solutions®

Quality System Audited & Registered
by NSF-ISR to ISO 9001:2008

2030 Savage Road
Charleston, South Carolina 29407
Phone: 866.272.0932
Fax: 866.509.5146
www.o2si.com

ACCREDITED

ISO 17025 Accredited Chemical Testing Lab
Cert. No. 3031.01

Date Received: _____

Certificate of Analysis

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
116210-03	334026	≤ -10 °C	Methylene Chloride	22-Jan-2020	2-Methylnaphthalene-d10 and Fluoranthene-d10 Solution, 1,000 mg/L, 1 mL

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
fluoranthene-d_{10}	93951-69-0	98	1458.12.1P	994.7 +/- 11.26	mg/L
2-methylnaphthalene-d_{10}	7297-45-2	98	1457.18.1P	994.7 +/- 50.01	mg/L

Certified By: Jarrett Howard

Jarrett Howard

Manufacture Date 22-Jan-2018

Follow all storage requirements, keep tightly closed when not in use, and use good laboratory practices when handling.
This Reference Material was manufactured, produced, and/or certified under a quality management system that is accredited to ISO 17034 and ISO/IEC 17025.

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.
The stated uncertainty is the expanded uncertainty with a coverage factor of two to give a 95% confidence level.

Reagent

Hg ICV Stock_00010

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS
Christiansburg, VA 24073 - USA
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fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-100PPM
Lot Number:	M2-HG659091
Matrix:	10% (v/v) HCl
Value / Analyte(s):	100 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	05214TX, R307HGA1, 1780
Starting Material Purity:	99.9994%

4964959
ID: Hg ICV Stock_00010
Exp: 06/19/21 Prpd: CDH
Hg ICV Stock Inorganic Ve

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 100.10 ± 0.43 µg/mL

Density: 1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.000171	M	Eu	< 0.000203	O	Na	0.000076	M	Se	< 0.013813	O	Zn	0.000012			
O	Al	0.000016	O	Fe	0.000014	M	Nb	< 0.000203	O	Si	0.000044	M	Zr	< 0.001218			
M	As	< 0.002844	M	Ga	< 0.000203	M	Nd	< 0.000203	M	Sm	< 0.000203						
O	Au	< 0.003219	M	Gd	< 0.000203	O	Ni	< 0.001812	M	Sn	< 0.000203						
O	B	< 0.002478	M	Ge	< 0.000609	M	Os	< 0.000201	O	Sr	< 0.000152						
M	Ba	< 0.000203	M	Hf	< 0.000203	O	P	< 0.010730	M	Ta	< 0.000203						
O	Be	< 0.000321	s	Hg	<	M	Pb	< 0.000203	M	Tb	< 0.000203						
M	Bi	< 0.013001	M	Ho	< 0.000203	M	Pd	< 0.000403	M	Te	< 0.001422						
O	Ca	0.000177	M	In	< 0.004062	M	Pr	< 0.000203	M	Th	< 0.000203						
M	Cd	0.000007	M	Ir	< 0.000201	M	Pt	< 0.000203	O	Ti	< 0.000530						
M	Ce	< 0.000203	M	K	0.000043	M	Rb	< 0.001218	O	Tl	< 0.002787						
M	Co	< 0.000406	M	La	< 0.000203	M	Re	< 0.001015	M	Tm	< 0.000203						
O	Cr	0.000016	O	Li	< 0.000180	M	Rh	< 0.000203	M	U	< 0.000812						
M	Cs	< 0.000203	M	Lu	< 0.000203	M	Ru	< 0.000201	M	V	< 0.000406						
M	Cu	< 0.000406	O	Mg	0.000037	O	S	< 0.023508	M	W	< 0.000609						
M	Dy	< 0.000203	M	Mn	< 0.000203	O	Sb	< 0.009657	M	Y	< 0.000203						
M	Er	< 0.000203	O	Mo	< 0.002152	M	Sc	< 0.000406	M	Yb	< 0.000203						

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-100PPM
Lot Number:	M2-HG659091
Matrix:	10% (v/v) HCl
Value / Analyte(s):	100 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	05214TX, R307HGA1, 1780
Starting Material Purity:	99.9994%

4964959
ID: Hg ICV Stock_00010
Exp: 06/19/21 Prpd: CDH
Hg ICV Stock Inorganic Ve

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 100.10 ± 0.43 µg/mL

Density: 1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

Hg Ultra Prim_00012

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

TRIPLE ISO CERTIFICATION — ISO 17025 • ISO GUIDE 34 • ISO 9001

ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Product Name: Mercury ICP Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	StartingMaterial	Lot Number	Purity (%)	Calculated Value	Traceability & Method
mercury	*mercuric nitrate	RM11214	99.999%	1002 ± 2 µg/mL	NIST SRM 3133; ICP-OES

*light sensitive

Solvent: 2% nitric acid in low TOC water (< 50 ppb)

Non-Certified Values:

Density: 1.0101 g/mL @ 20.00 ± 0.05°C

Trace Metallic Impurities in Solution Standard in µg/mL

*	Al	<0.005 ND	*	Ga	<0.005 ND	n	Nb		n	S				
*	Sb	<0.005 ND	n	Ge		n	Os		n	Ta				
*	As	<0.005 ND	n	Au		*	Pd	<0.005 ND	n	Te				
*	Ba	<0.005 ND	n	Hf		*	P	<0.005 ND	n	Tb				
*	Be	<0.005 ND	n	Ho		*	Pt	<0.005 ND	n	Tl				
*	Bi	<0.005 ND	*	In	<0.005 ND	*	K	<0.005 ND	*	Th	<0.005 ND			
*	B	<0.005 ND	n	Ir		n	Pr		n	Tm				
*	Cd	<0.005 ND	*	Fe	<0.005 ND	n	Re		*	Sn	<0.005 ND			
*	Cs	<0.005 ND	*	La	<0.005 ND	n	Rh		*	Ti	<0.005 ND			
*	Ca	<0.005 ND	*	Pb	<0.005 ND	n	Rb		n	W				
n	Ce		*	Li	<0.005 ND	n	Ru		n	U				
*	Cr	<0.005 ND	n	Lu		n	Sm		*	V	<0.005 ND			
*	Co	<0.005 ND	*	Mg	<0.005 ND	n	Sc		n	Yb				
*	Cu	<0.005 ND	*	Mn	<0.005 ND	*	Se	<0.005 ND	n	Y				
n	Dy		s	Hg		*	Si	<0.005 ND	*	Zn	<0.005 ND			
*	Er	<0.005 ND	*	Mo	<0.005 ND	*	Ag	<0.005 ND	n	Zr				
*	Eu	<0.005 ND	n	Nd		*	Na	<0.005 ND						
*	Gd	<0.005 ND	*	Ni	<0.005 ND	*	Sr	<0.005 ND						

* - element checked; i - spectral interference; n – element not checked; D – element detected; ND – element not detected; s - standard element

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001 Registered Quality System – TUV USA

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ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001 Registered Quality System – TUV USA

250 SMITH STREET • NORTH KINGSTOWN, RHODE ISLAND 02852 • WWW.ULTRASCI.COM

Reagent

Icp cal std 3_00018

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

[illegible]
Christiansburg, VA 24073 - USA
[illegible]
[illegible]
[illegible]

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLDEN-STD-3B
Lot Number:	M2-MEB663620
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium,
	4 000 µg/mL ea: Magnesium,
	1 000 µg/mL ea: Calcium, Sodium,
	500 µg/mL ea: Iron,
	200 µg/mL ea: Lithium, Phosphorus,
	100 µg/mL ea: Strontium, Vanadium, Zinc, Manganese, Cadmium, Cobalt, Chromium, Copper, Silver, Aluminum, Boron, Barium, Beryllium, Nickel

4888666
ID: icp cal std 3_00016
Exp: 12/05/20 Prpd: SJS
ICP CAL STD 3B IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.5 µg/mL	Barium, Ba	100.0 ± 0.5 µg/mL
Beryllium, Be	100.0 ± 0.7 µg/mL	Boron, B	100.0 ± 0.6 µg/mL
Cadmium, Cd	100.0 ± 0.5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Chromium, Cr	100.0 ± 0.6 µg/mL	Cobalt, Co	100.0 ± 0.5 µg/mL
Copper, Cu	100.0 ± 0.4 µg/mL	Iron, Fe	500.0 ± 2.0 µg/mL
Lithium, Li	200.0 ± 0.7 µg/mL	Magnesium, Mg	4 000 ± 16 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL
Phosphorus, P	200.0 ± 0.9 µg/mL	Potassium, K	10 000.0 ± 40.0 µg/mL
Silver, Ag	100.0 ± 0.4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	100.0 ± 0.4 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 °C)

Assay Information:

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 05, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

Icp ICVH_00746

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Fax: (843) 767-7906

5300282
ID: Icp ICVH_00746
Exp: 09/30/19 Prpd: SJS
ICP ICVH HP

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICVH
Part Number:	**SM-606-125**
Lot Number:	**1824227**
Matrix:	5% HNO_3
Purity:	99.96% - 99.9995%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	4000 ± 24	3101a	140903	Th	300 ± 3	*	
Fe	8000 ± 48	3126a	140812	U	500 ± 3	3164	080521
Na	4000 ± 24	3152a	120715				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **September 2018**
Certificate Issue Date: August 31, 2018

Moven Mututuvari
Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

Icp ICVL A_00014

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P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

Product Description:

Name:	Intrepid ICVL
Part Number:	**SM-606-062 Solution A**
Lot Number:	**1810602**
Matrix:	5% HNO_3
Purity:	99.5% - 99.9999%

5078624
ID: Icp ICVL A_00014
Exp: 04/17/18 Prpd: SJS
ICP ICVL SOLUTION A H

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Al	25.0 ± 0.1	3101a	140903	Li	25.0 ± 0.2	3129a	100714
As	25.0 ± 0.3	3103a	100818	Mg	1000 ± 5	3131a	140110
Ba	25.0 ± 0.2	3104a	140909	Mn	25.0 ± 0.3	3132	050429
Be	25.0 ± 0.3	3105a	090514	Ni	25.0 ± 0.1	3136	120619
B	25.0 ± 0.1	3107	110830	K	2000 ± 10	3141a	140813
Cd	25.0 ± 0.1	3108	130116	Se	50.0 ± 0.5	3149	100901
Ca	200 ± 1	3109a	130213	Na	200 ± 1	3152a	120715
Cr	25.0 ± 0.1	3112a	030730	Sr	25.0 ± 0.1	*	
Co	25.0 ± 0.1	3113	000630	Tl	50.0 ± 0.3	*	
Cu	25.0 ± 0.1	3114	121207	V	25.0 ± 0.2	3165	160906
Fe	25.0 ± 0.1	3126a	140812	Zn	25.0 ± 0.1	3168a	120629
Pb	25.0 ± 0.2	3128	101026				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **April 2018**

Certificate Issue Date: April 17, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP ISAB 1B_00011

HIGH-PURITY STANDARDS
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P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #1
Part Number:	**SM-606-037** Solution B
Lot Number:	**1734922**
Matrix:	2% HNO_3
Purity:	99.99%

4902379
ID: ICP ISAB 1B_00011
Exp: 12/01/18 Prpd: SJS
ICP ICSAB STD 1 SOL B H

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#
Tl	1000 ± 6	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:	**December 2017**
Expiration Date:	**December 2018**
Certificate Issue Date:	December 15, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

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Reagent

ICP ISAB STD1_00010

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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

Product Description:

Name:	ICS-AB STD#1
Part Number:	**SM-606-037**
	Solution A
Lot Number:	**1734921**
Matrix:	20% HCl
Purity:	99.999% - 99.9999%

4902371
ID: ICP ISAB STD1_00010
Exp: 12/01/18 Prpd: SJS
ICAP ICSAB STD 1 SOL A

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ide 34:2009 (RMP) Accreditation
ertificate Number AR-1436

ilac-MRA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Sb	100.0 ± 0.6	3102a	140911	P	200.0 ± 1.2	3139a	060717
As	200 ± 2	3103a	100818	K	5000 ± 25	3141a	140813
B	200.0 ± 1.2	3107	110830	Se	500 ± 5	3149	100901
Li	100.0 ± 0.6	3129a	100714	Na	5000 ± 25	3152a	120715
Mo	100.0 ± 0.6	3134	130418	Sr	100.0 ± 0.5	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:	**December 2017**
Expiration Date:	**December 2018**
Certificate Issue Date:	December 15, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP ISAB STD2_00013

Sample Name: ICP ISAB STD2_00011 Acquired: 7/3/2018 7:25:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%) 20x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**-.00690**	**-.00583**	**-.00005**	**.00046**	**-.00003**	**.00889**	**.04235**	**.00044**
Stddev	.00020	.00053	.00126	.00130	.00003	.00012	.00399	.00007	.00003
%RSD	321.04	7.6209	21.545	2405.4	6.1016	392.14	44.929	.16754	6.0746
#1	.00008	-.00727	-.00494	.00086	.00048	.00005	.01172	.04230	.00042
#2	-.00021	-.00653	-.00672	-.00097	.00044	-.00011	.00607	.04240	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00034**	**.00216**	**.01862**	**-.04392**	**-.00198**	**.00334**	**.00042**	**.00066**
Stddev	.00037	.00042	.00041	.00103	.03980	.00234	.00617	.00010	.00004
%RSD	85.544	124.10	19.108	5.5287	90.616	117.88	184.52	23.313	6.6074
#1	.00017	.00064	.00187	.01935	-.01578	-.00363	.00770	.00049	.00063
#2	.00070	.00004	.00245	.01789	-.07206	-.00033	-.00102	.00035	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02159**	**.00057**	**-.00434**	F **-.00317**	**-.04238**	**-.00080**	**-.00166**	**.00671**	**.01436**
Stddev	.00014	.00044	.00114	.00110	.00159	.00456	.00058	.02387	.05109
%RSD	.64346	76.481	26.343	34.690	3.7552	568.46	34.810	355.63	355.63
#1	-.02149	.00026	-.00514	-.00239	-.04125	-.00403	-.00207	.02359	.05049
#2	-.02169	.00088	-.00353	-.00395	-.04351	.00242	-.00126	-.01017	-.02176
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit				.00900					
Low Limit				-.00300					

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **49.229**	**.00004**	**-.00191**	F **4.9283**	**-.00214**	**.00870**	**-.00054**	**.00342**	**-.00298**
Stddev	.046	.00006	.00139	.0140	.00067	.04390	.00027	.00029	.00057
%RSD	.09407	174.51	73.200	.28319	31.237	504.79	50.451	8.6155	19.050
#1	49.197	-.00001	-.00289	4.9382	-.00166	.03974	-.00074	.00321	-.00258
#2	49.262	.00008	-.00092	4.9185	-.00261	-.02235	-.00035	.00362	-.00338
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000			.01000					
Low Limit	-.10000			-.01000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2971.1**	**55500.**	**4143.0**
Stddev	4.3	184.	14.9
%RSD	.14605	.33103	.36040
#1	2968.0	55630.	4132.5
#2	2974.2	55370.	4153.6

Sample Name: ICP ISAB STD2_00011 Acquired: 7/2/2018 19:23:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**-.01595**	**-.02613**	**.00451**	**.00011**	**-.00048**	**.21371**	**.01037**	**.00138**
Stddev	.00113	.00143	.00031	.00000	.00001	.00002	.00145	.00962	.00042
%RSD	186.17	8.9974	1.1694	.04020	11.626	3.3907	.67814	92.772	30.675
#1	-.00141	-.01493	-.02592	.00451	.00011	-.00046	.21269	.00357	.00108
#2	.00019	-.01696	-.02635	.00451	.00010	-.00049	.21474	.01717	.00168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00296**	**.00228**	**.05492**	**.01936**	**.08715**	F **-.02178**	**.00687**	**.00106**	**.00035**
Stddev	.00111	.00004	.00101	.00051	.00382	.00388	.00211	.00012	.00007
%RSD	37.565	1.6037	1.8430	2.6171	4.3864	17.824	30.758	11.120	19.271
#1	-.00217	.00225	.05564	.01900	.08986	-.01904	.00538	.00098	.00040
#2	-.00375	.00230	.05421	.01972	.08445	-.02453	.00836	.00114	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						25.000			
Low Limit						-.02000			

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02917**	**-.00052**	**-.01876**	**.00406**	**-.10075**	**.07719**	**.00456**	**.02709**	**.05798**
Stddev	.00696	.00044	.00243	.00121	.00935	.00444	.00209	.00419	.00897
%RSD	23.859	83.080	12.962	29.867	9.2760	5.7520	45.870	15.478	15.478
#1	.03409	-.00022	-.01704	.00320	-.09414	.08033	.00308	.02413	.05163
#2	.02425	-.00083	-.02048	.00491	-.10735	.07405	.00604	.03006	.06433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **619.55**	**.00010**	**.00732**	F **96.343**	**-.01120**	**-.10281**	**-.01118**	**.00211**	**-.00184**
Stddev	4.12	.00010	.00115	.638	.00088	.02135	.00080	.00006	.00099
%RSD	.66567	101.87	15.727	.66246	7.8719	20.768	7.1813	2.6625	53.824
#1	622.47	.00017	.00651	96.794	-.01182	-.08772	-.01175	.00207	-.00114
#2	616.64	.00003	.00814	95.892	-.01057	-.11791	-.01061	.00215	-.00254
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	50.000			10.000					
Low Limit	-.20000			-.02000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2883.4**	**51409.**	**4166.8**
Stddev	1.2	118.	2.3
%RSD	.04117	.22890	.05610
#1	2882.6	51326.	4168.5
#2	2884.3	51492.	4165.2

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #2
Part Number:	**SM-606-038**
Lot Number:	**1721944**
Matrix:	20% HCl
Purity:	99.98% - 99.999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#		Element	(mg/L)	SRM ID	SRM Lot#
Sn	1000 ± 10	3161a	140917		Ti	100 ± 1	3162a	130925

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **August 2017**
Expiration Date: **August 2018**
Certificate Issue Date: August 8, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP LLCCV-4_00008

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 14, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 14, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	991212
Bi	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	Calculated		See Sec. 4.2
S	Potentiometric	84L	84L
S	ICP Assay	3154	892205
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICP-LLCCV-4
Lot Number:	N2-MEB670719
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	300 mg/L ea: Potassium, 100 mg/L ea: Sodium, 20 mg/L ea: Magnesium, Calcium, 10 mg/L ea: Bismuth, Aluminum, Iron, Sulfur, 6 mg/L ea: Uranium, 4 mg/L ea: Nickel, 2 mg/L ea: Selenium, Zinc, Lithium, 1.5 mg/L ea: Copper, Arsenic, Thorium, Thallium, 1 mg/L ea: Vanadium, Strontium, Barium, Silver, Cobalt, Chromium, Manganese, 0.9 mg/L ea: Lead, 0.5 mg/L ea: Cadmium, 0.1 mg/L ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	10.00 ± 0.05 mg/L	Arsenic, As	1.500 ± 0.011 mg/L
Barium, Ba	1.000 ± 0.006 mg/L	Beryllium, Be	0.1000 ± 0.0006 mg/L
Bismuth, Bi	10.00 ± 0.07 mg/L	Cadmium, Cd	0.5000 ± 0.0037 mg/L
Calcium, Ca	20.00 ± 0.08 mg/L	Chromium, Cr	1.000 ± 0.007 mg/L
Cobalt, Co	1.000 ± 0.006 mg/L	Copper, Cu	1.500 ± 0.007 mg/L
Iron, Fe	10.00 ± 0.05 mg/L	Lead, Pb	0.900 ± 0.004 mg/L
Lithium, Li	2.001 ± 0.012 mg/L	Magnesium, Mg	19.99 ± 0.12 mg/L
Manganese, Mn	1.000 ± 0.005 mg/L	Nickel, Ni	4.000 ± 0.024 mg/L
Potassium, K	300.1 ± 1.1 mg/L	Selenium, Se	2.000 ± 0.015 mg/L
Silver, Ag	1.000 ± 0.008 mg/L	Sodium, Na	100.0 ± 0.4 mg/L
Strontium, Sr	1.000 ± 0.006 mg/L	Sulfur, S	10.00 ± 0.05 mg/L
Thallium, Tl	1.500 ± 0.012 mg/L	Thorium, Th	1.500 ± 0.009 mg/L
Uranium, U	6.000 ± 0.031 mg/L	Vanadium, V	1.000 ± 0.006 mg/L
Zinc, Zn	2.000 ± 0.012 mg/L		

Density: 1.013 g/mL (measured at 20 ± 4 °C)

Assay Information:

Reagent

Icp stk ICSA_00024

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 01, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

11.4 Revision Status

- Revision 1 - Wednesday, Apr 26, 2017. Added TMI data

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Technical Support Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

2809 Christiansen Drive
Christiansburg, VA 24073 - USA
Toll-Free: 800.669.2698
Local: 540.953.2698
Email: sales@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

5108867
ID: icp stk ICSA_00024
Exp: 07/01/20 Prpd: SJS
ICP stock ICSA solution

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-ICS-A
Lot Number:	K2-MEB643109
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Aluminum, Calcium, Magnesium, 2 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**5 000 ± 22 µg/mL**	**Calcium, Ca**	**5 000 ± 20 µg/mL**
Iron, Fe	**2 000 ± 8 µg/mL**	**Magnesium, Mg**	**5 000 ± 20 µg/mL**

Certified Density: 1.085 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	O	Na		0.027559	M	Se	<	0.002091	M	Zn		0.008219
s	Al	<		s	Fe	<		M	Nb	<	0.000100	O	Si		0.217000	M	Zr	<	0.001002
M	As	<	0.005613	M	Ga	<	0.000100	M	Nd	<	0.000601	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000100	M	Ni	<	0.005613	M	Sn	<	0.000200				
M	B	<	0.008420	M	Ge	<	0.000400	M	Os	<	0.000099	M	Sr		0.043302				
M	Ba	<	0.001603	M	Hf	<	0.000100	O	P	<	0.108500	M	Ta	<	0.000100				
O	Be	<	0.000217	M	Hg	<	0.000597	M	Pb		0.003408	M	Tb	<	0.000100				
M	Bi	<	0.000400	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.003107				
s	Ca	<		M	In	<	0.000400	M	Pr	<	0.000200	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.000099	M	Pt	<	0.000100	M	Ti	<	0.000801				
M	Ce	<	0.002004	O	K		0.011718	M	Rb	<	0.000100	M	Tl	<	0.000100				
M	Co	<	0.003207	M	La	<	0.000801	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.024658	O	Li		0.005425	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000601	M	Lu	<	0.000100	M	Ru	<	0.000099	M	V	<	0.000400				
M	Cu	<	0.004610	s	Mg	<		O	S		0.422173	M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn		0.002606	M	Sb	<	0.000200	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000400	M	Sc	<	0.001403	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

Reagent

MS CALSTD-1_00125

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-1
Lot Number:	M2-MEB660182
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

Silver, Arsenic, Barium,
Beryllium, Cadmium, Cobalt,
Chromium, Copper, Manganese,
Nickel, Lead, Selenium,
Thorium, Thallium, Uranium,
Vanadium, Zinc

4902218
ID: MS CALSTD-1_00125
Exp: 07/21/20 Prpd: LMT
ICP-MS Cal Std 1 IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

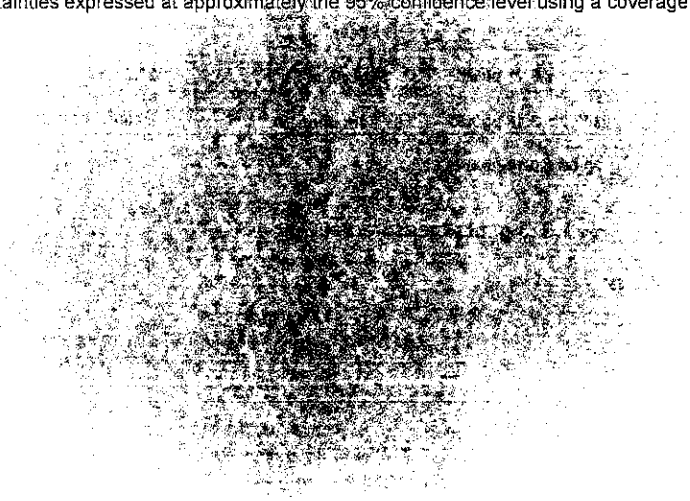
ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	20.00 ± 0.18 µg/mL	Barium, Ba	20.02 ± 0.09 µg/mL
Beryllium, Be	20.01 ± 0.09 µg/mL	Cadmium, Cd	20.01 ± 0.09 µg/mL
Chromium, Cr	20.00 ± 0.13 µg/mL	Cobalt, Co	20.00 ± 0.11 µg/mL
Copper, Cu	20.00 ± 0.10 µg/mL	Lead, Pb	20.00 ± 0.11 µg/mL
Manganese, Mn	20.00 ± 0.10 µg/mL	Nickel, Ni	20.00 ± 0.10 µg/mL
Selenium, Se	20.00 ± 0.13 µg/mL	Silver, Ag	20.01 ± 0.09 µg/mL
Thallium, Tl	20.01 ± 0.11 µg/mL	Thorium, Th	20.01 ± 0.10 µg/mL
Uranium, U	20.00 ± 0.10 µg/mL	Vanadium, V	20.00 ± 0.10 µg/mL
Zinc, Zn	20.00 ± 0.10 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.37 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 21, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 21, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TACS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS CALSTD-2_00094

INORGANIC VENTURES
[illegible]
Christiansburg, VA 24073 USA
[illegible]
tel: 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-2
Lot Number:	M2-MEB664004
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	20 µg/mL ea: Molybdenum, Antimony, Tin

5106413
ID: MS CALSTD-2_00094
Exp: 12/14/20 Prpd: LMT
ICP-MS Cal Std 2 IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**20.00 ± 0.14 µg/mL**	**Molybdenum, Mo**	**20.00 ± 0.12 µg/mL**
Tin, Sn	**20.00 ± 0.15 µg/mL**		

Density: 1.027 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	140917

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

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CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 14, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TAGS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael 2 Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS ICSA STOCK_00030

[illegible]
[illegible] · [illegible] · USA
[illegible]

tel: 800.669.4779 · 540.555.3060
fax: 540.555.3072
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	M2-MEB662772
Matrix:	1% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chloride, 2 000 µg/mL ea: Carbon, 1 000 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur, 20 µg/mL ea: Titanium, Molybdenum

5103134
ID: MS ICSA STOCK_00030
Exp: 11/01/21 Prpd: LMT
ICP-MS ICS-0A STOCK SOLUT

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 001 ± 3 µg/mL	Calcium, Ca	1 001 ± 4 µg/mL
Carbon, C	2 002 ± 4 µg/mL	Chloride, Cl	10 010.0 ± 60.0 µg/mL
Iron, Fe	1 001 ± 4 µg/mL	Magnesium, Mg	1 001 ± 4 µg/mL
Molybdenum, Mo	20.02 ± 0.10 µg/mL	Phosphorus, P	1 001 ± 4 µg/mL
Potassium, K	1 001 ± 4 µg/mL	Sodium, Na	1 001 ± 4 µg/mL
Sulfur, S	1 001 ± 4 µg/mL	Titanium, Ti	20.03 ± 0.12 µg/mL

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cl	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric		traceable to 84L
S	Acidimetric	84L	84L
S	ICP Assay	3154	892205
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	s	Na	<		M	Se	<	0.003000	M	Zn	0.004001
s	Al	<		s	Fe	<		M	Nb	<	0.000100	n	Si	<		M	Zr	< 0.000800
M	As	<	0.030009	M	Ga	<	0.000100	M	Nd	<	0.000100	M	Sm	<	0.000100			
M	Au	<	0.000100	M	Gd	<	0.000100	M	Ni	<	0.006402	M	Sn	<	0.000600			
M	B	<	0.005901	M	Ge	<	0.003000	M	Os	<	0.001000	M	Sr		0.006802			
M	Ba		0.000800	M	Hf	<	0.000100	s	P	<		M	Ta	<	0.000200			
M	Be	<	0.000100	M	Hg	<	0.000100	M	Pb		0.001300	M	Tb	<	0.000100			
M	Bi	<	0.000100	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.006402			
s	Ca	<		M	In	<	0.008802	M	Pr	<	0.000100	M	Th	<	0.000100			
O	Cd	<	0.003102	M	Ir	<	0.000100	M	Pt	<	0.000100	s	Ti	<				
M	Ce	<	0.000400	s	K	<		M	Rb		0.015304	M	Tl	<	0.000100			
O	Co	<	0.007238	M	La	<	0.000100	M	Re	<	0.000400	M	Tm	<	0.000100			
M	Cr		0.002200	O	Li		0.001137	M	Rh	<	0.000100	M	U	<	0.000100			
M	Cs	<	0.000100	M	Lu	<	0.000100	M	Ru	<	0.000100	M	V	<	0.003401			
M	Cu		0.004701	s	Mg	<		s	S	<		M	W		0.001800			
M	Dy	<	0.000100	O	Mn	<	0.010340	M	Sb	<	0.002400	M	Y	<	0.000100			
M	Er	<	0.000100	s	Mo	<		M	Sc	<	0.000800	M	Yb	<	0.000100			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 01, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

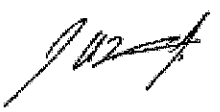
- Sealed TCT Bag Open Date: See TAGS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager



Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

MS ICV StockA_00008

HIGH-PURITY STANDARDS
www.high-purity-standards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

4851656
ID: MS ICV StockA_00007
Exp:11/30/18 Prpd:LMT Opn:11/20/17
ICP-MS ICV STOCK A HP

Product Description:

Name: MS ICV Stock
Part Number: **SM-606-134**
Solution A
Lot Number: **1731407**
Matrix: 2% HNO_3
Purity: 99.97% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	2000 ± 12	3101a	140903	Pb	20.0 ± 0.2	3128	101026
As	20.0 ± 0.2	3103a	100818	Mn	20.0 ± 0.3	3132	050429
Ba	20.00 ± 0.12	3104a	140909	Ni	20.00 ± 0.12	3136	120619
Be	20.0 ± 0.2	3105a	090514	Se	20.0 ± 0.2	3149	100901
Cd	20.00 ± 0.12	3108	130116	Tl	20.00 ± 0.12	*	
Cr	20.00 ± 0.12	3112a	030730	Th	20.0 ± 0.2	*	
Co	20.00 ± 0.12	3113	000630	U	20.00 ± 0.12	3164	080521
Cu	20.00 ± 0.12	3114	121207	V	20.0 ± 0.2	*	
Fe	2000 ± 12	3126a	140812	Zn	20.00 ± 0.12	3168a	120629

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **November 2017**
Expiration Date: **November 2018**
Certificate Issue Date: November 10, 2017

Moven Mutuvari
Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MS ICV StockB_00008

HIGH-PURITY STANDARDS
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P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

4851657
ID: MS ICV StockB_00008
Exp:11/30/18 Prpd:LMT Opn:11/20/17
ICP-MS ICV STOCK B HP

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	MS ICV Stock
Part Number:	**SM-606-134**
	Solution B
Lot Number:	**1731408**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.95% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	20.0 ± 0.2	3102a	140911	Sn	20.0 ± 0.2	3161a	140917
Mo	20.0 ± 0.2	3134	130418	W	20.0 ± 0.3	3163	140606
Ag	20.00 ± 0.12	3151	160729				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **November 2017**
Expiration Date: **November 2018**
Certificate Issue Date: November 10, 2017

Moven Mutuvari
Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MS LLCCV 2A_00006

INORGANIC VENTURES
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Inorganic Ventures
Tel: 800.669.6779 - 540.585.3030
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info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-LLCCV-2A
Lot Number:	M2-MEB664006
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 µg/mL ea: Tin, 0.5 µg/mL ea: Tungsten, 0.2 µg/mL ea: Molybdenum, Antimony

5232242
ID: MS LLCCV 2A_00006
Exp: 12/14/20 Prpd: LMT
LOW LEVEL CCV 2A IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	0.2000 ± 0.0015 µg/mL	Molybdenum, Mo	0.2000 ± 0.0012 µg/mL
Tin, Sn	1.000 ± 0.006 µg/mL	Tungsten, W	0.5000 ± 0.0046 µg/mL

Density: 1.009 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	061229 Sb
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
W	ICP Assay	3163	080331
W	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 14, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TMS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS LLCCV1_00020

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

540.961.0049 - 540.961.0603
fax: 540.585.3012
techservices@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

5232240
ID: MS LLCCV1_00020
Exp: 12/15/20 Prpd: LMT
LOW LEVEL CCV1 IV

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-LLCCV-1
Lot Number:	M2-MEB664005
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea: Potassium,
	5 µg/mL ea: Magnesium, Iron, Calcium, Sodium,
	3 µg/mL ea: Aluminum,
	1 µg/mL ea: Zinc,
	0.5 µg/mL ea: Vanadium, Arsenic, Silver, Selenium,
	0.2 µg/mL ea: Thorium, Chromium, Copper, Nickel,
	0.1 µg/mL ea: Lead, Cadmium, Cobalt, Barium, Beryllium, Thallium, Uranium, Manganese

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	3.000 ± 0.015 µg/mL	Arsenic, As	0.5000 ± 0.0037 µg/mL
Barium, Ba	0.1000 ± 0.0006 µg/mL	Beryllium, Be	0.1000 ± 0.0007 µg/mL
Cadmium, Cd	0.1000 ± 0.0007 µg/mL	Calcium, Ca	4.999 ± 0.019 µg/mL
Chromium, Cr	0.1999 ± 0.0012 µg/mL	Cobalt, Co	0.1000 ± 0.0007 µg/mL
Copper, Cu	0.2000 ± 0.0012 µg/mL	Iron, Fe	5.000 ± 0.025 µg/mL
Lead, Pb	0.1000 ± 0.0007 µg/mL	Magnesium, Mg	4.999 ± 0.030 µg/mL
Manganese, Mn	0.1000 ± 0.0007 µg/mL	Nickel, Ni	0.2000 ± 0.0015 µg/mL
Potassium, K	10.00 ± 0.05 µg/mL	Selenium, Se	0.5000 ± 0.0037 µg/mL
Silver, Ag	0.5001 ± 0.0040 µg/mL	Sodium, Na	4.999 ± 0.025 µg/mL
Thallium, Tl	0.1000 ± 0.0008 µg/mL	Thorium, Th	0.2000 ± 0.0012 µg/mL
Uranium, U	0.1000 ± 0.0009 µg/mL	Vanadium, V	0.4999 ± 0.0028 µg/mL
Zinc, Zn	1.000 ± 0.006 µg/mL		

Density: 1.022 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Tl	ICP Assay	3158	993012
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.21 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 15, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 15, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TAC's

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS-31010_00011

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31010 **Lot No.:** A0116027

Description : SV Calibration Mix #4

SV Calibration Mix #4 2000 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Hexachloroethane		2,002.0	µg/mL	+/- 11.8913	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/- 60.6057	µg/mL	Unstressed
	Purity 99%				+/- 60.6057	µg/mL	Stressed
2	Nitrobenzene		2,014.0	µg/mL	+/- 11.9625	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot 65096APV)			+/- 60.9690	µg/mL	Unstressed
	Purity 99%				+/- 60.9690	µg/mL	Stressed
3	Isophorone		2,002.0	µg/mL	+/- 11.8913	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/- 60.6057	µg/mL	Unstressed
	Purity 99%				+/- 60.6057	µg/mL	Stressed
4	1,2,4-Trichlorobenzene		2,014.0	µg/mL	+/- 11.9625	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot 26896BM)			+/- 60.9690	µg/mL	Unstressed
	Purity 99%				+/- 60.9690	µg/mL	Stressed
5	Hexachlorobutadiene		2,007.0	µg/mL	+/- 11.9212	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/- 60.7583	µg/mL	Unstressed
	Purity 98%				+/- 60.7583	µg/mL	Stressed
6	2-Methylnaphthalene		2,000.0	µg/mL	+/- 11.8794	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)			+/- 60.5452	µg/mL	Unstressed
	Purity 99%				+/- 60.5452	µg/mL	Stressed
7	Hexachlorocyclopentadiene		2,007.9	µg/mL	+/- 11.9263	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 150909)			+/- 60.7843	µg/mL	Unstressed
	Purity 97%				+/- 60.7843	µg/mL	Stressed

8	2,6-Dinitrotoluene		2,010.0	µg/mL	+/-	11.9388	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	60.8479	µg/mL	Unstressed
	Purity 99%				+/-	60.8479	µg/mL	Stressed
9	Dibenzofuran		2,002.0	µg/mL	+/-	11.8913	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	60.6057	µg/mL	Unstressed
	Purity 99%				+/-	60.6057	µg/mL	Stressed
10	2,4-Dinitrotoluene		2,000.0	µg/mL	+/-	11.8794	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	60.5452	µg/mL	Unstressed
	Purity 99%				+/-	60.5452	µg/mL	Stressed
11	Diethylphthalate		2,016.0	µg/mL	+/-	11.9744	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	61.0295	µg/mL	Unstressed
	Purity 99%				+/-	61.0295	µg/mL	Stressed
12	Hexachlorobenzene		2,018.0	µg/mL	+/-	11.9863	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LB98981V)			+/-	61.0901	µg/mL	Unstressed
	Purity 99%				+/-	61.0901	µg/mL	Stressed
13	Carbazole		1,999.2	µg/mL	+/-	11.8746	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 3715800)			+/-	60.5210	µg/mL	Unstressed
	Purity 98%				+/-	60.5210	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

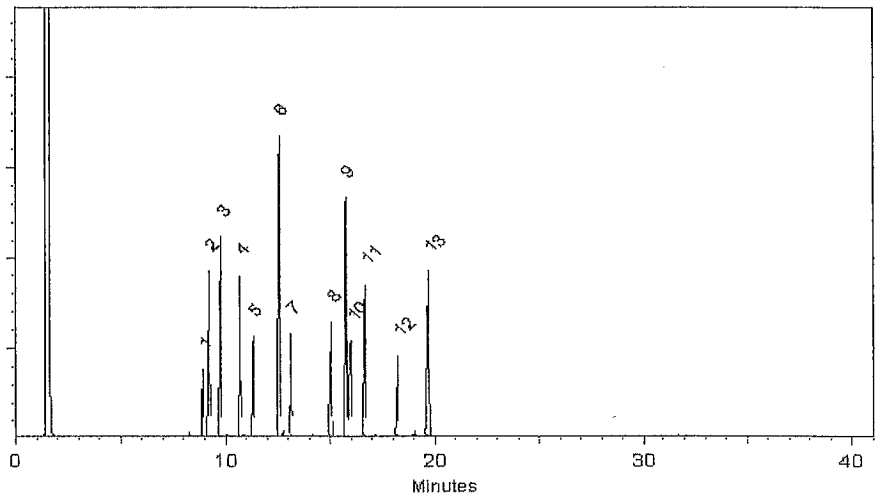
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 17-Dec-2015 **Balance:** B345965662

Jennifer L. Pollino - QC Analyst

Date Passed: 21-Dec-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-47548-U_00015

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Description: EPA 8270 GC/MS Tuning Solution II, 1x1ml, 1000µg/ml in methylene chloride

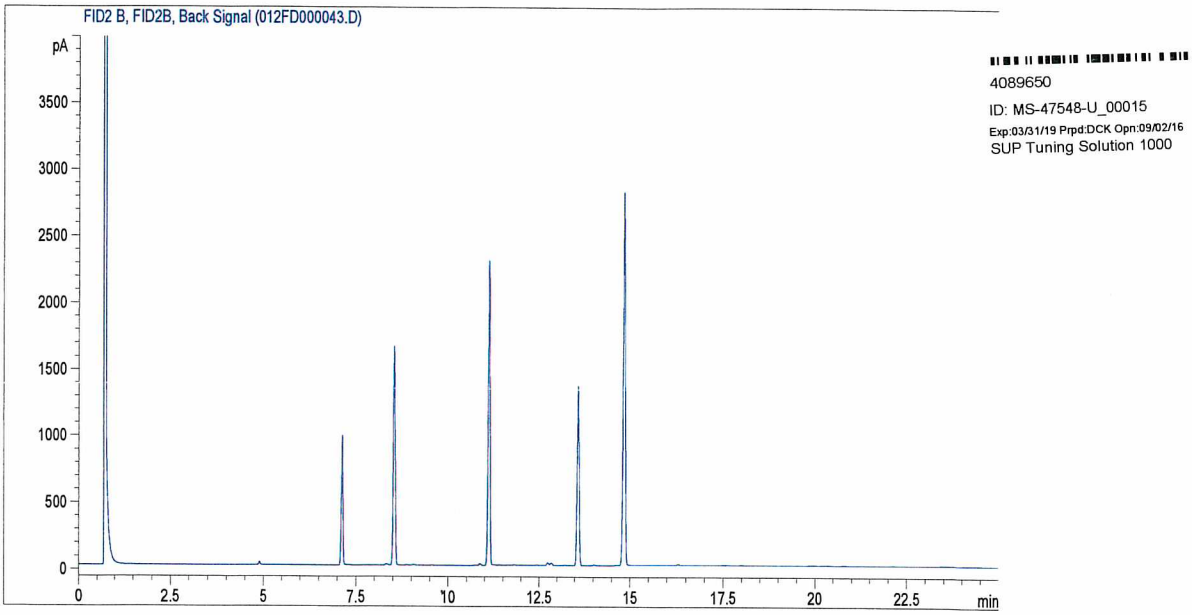
Part Number: 47548-U

Lot Number: XA19099V

Expiration Date: March 2019

Storage: Refrigerate

Analytical Method Parameters:
Column: Equity-5; 30 m x 0.53 mm, 1.5 µm df
150 °C to 280 °C (8.75 min) at 8 °C/min
Detector: FID; 310 °C
Injection Volume: 1µL



Elution	Analyte	Lot Number	CAS Number	Chromatographic Purity %	Certified Gravimetric Conc. µg/mL	Expanded Uncertainty µg/mL	Analytical Conc. µg/mL
1.	Pentachlorophenol	LC17897	87-86-5	97.5	1000.0	±38	945.6
2.	Decafluorotriphenylphosphine	LC14010	5074-71-5	98.6	986.0	±44	961.5
3.	Benzidine	LB83682	92-87-5	99.9	999.0	±38	1009.6
4.	4,4'-DDT	LA83013	50-29-3	98.0	980.8	±36	961.0
	Internal Standard	N/A	N/A	N/A	N/A	N/A	N/A

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Produced in double accredited laboratory fulfulling ISO/IEC 17025 and ISO Guide 34

Reagent

MS-567684_00019

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4101728
ID: MS-567684_00019
Exp: 07/31/20 Prpd: DCK
RES 8270 Internal Std Mix

Catalog No. : 567684 **Lot No.:** A0112833

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	2,014.8 µg/mL	+/- 11.7142 µg/mL +/- 89.5186 µg/mL +/- 98.3528 µg/mL		Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	(Lot M-1452)	2,015.8 µg/mL	+/- 11.7202 µg/mL +/- 89.5645 µg/mL +/- 98.4032 µg/mL		Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 97%	(Lot PR-21070)	2,002.0 µg/mL	+/- 11.6397 µg/mL +/- 88.9491 µg/mL +/- 97.7271 µg/mL		Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	(Lot PR-23065)	2,007.1 µg/mL	+/- 11.6693 µg/mL +/- 89.1750 µg/mL +/- 97.9753 µg/mL		Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99%	(Lot PR-25081)	2,013.2 µg/mL	+/- 11.7047 µg/mL +/- 89.4460 µg/mL +/- 98.2730 µg/mL		Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	(Lot PR-24113)	2,005.4 µg/mL	+/- 11.6598 µg/mL +/- 89.1024 µg/mL +/- 97.8955 µg/mL		Gravimetric Unstressed Stressed

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MS-567684_00020

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5035055
ID: MS-567684_00020
Exp: 08/31/22 Prpd: OCK
RES 8270 Internal Std Mix

Catalog No. : 567684 **Lot No.:** A0129635

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : August 31, 2022 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	2,014.1 µg/mL	+/- 11.7102 µg/mL +/- 90.7163 µg/mL +/- 100.6609 µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 (Lot M-1452) **Purity** 99%	2,004.1 µg/mL	+/- 11.6520 µg/mL +/- 90.2659 µg/mL +/- 100.1611 µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 (Lot PR-25444) **Purity** 99%	2,011.1 µg/mL	+/- 11.6927 µg/mL +/- 90.5811 µg/mL +/- 100.5110 µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 (Lot PR-27621) **Purity** 99%	2,014.5 µg/mL	+/- 11.7125 µg/mL +/- 90.7343 µg/mL +/- 100.6809 µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 (Lot PR-27952) **Purity** 99%	2,013.6 µg/mL	+/- 11.7072 µg/mL +/- 90.6938 µg/mL +/- 100.6359 µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 (Lot PR-27342) **Purity** 99%	2,012.2 µg/mL	+/- 11.6991 µg/mL +/- 90.6307 µg/mL +/- 100.5659 µg/mL	Gravimetric Unstressed Stressed

Reagent

MS-567685_00004

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Catalog No. : 567685 **Lot No.:** A0130500

4941881
ID: MS-567685_00004
Exp: 09/30/22 Prpd: DCK
8270 Surrogates 5000ug/mL

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,009.8 µg/mL	+/- 29.1274 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 146.2028 µg/mL		Unstressed
	Purity 99%			+/- 177.4114 µg/mL		Stressed
2	Phenol-d5		5,013.6 µg/mL	+/- 29.1495 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.3137 µg/mL		Unstressed
	Purity 99%			+/- 177.5460 µg/mL		Stressed
3	Nitrobenzene-d5		5,000.0 µg/mL	+/- 29.0704 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 145.9168 µg/mL		Unstressed
	Purity 99%			+/- 177.0644 µg/mL		Stressed
4	2-Fluorobiphenyl		5,001.2 µg/mL	+/- 29.0774 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot B19Z016)		+/- 145.9518 µg/mL		Unstressed
	Purity 99%			+/- 177.1069 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,002.6 µg/mL	+/- 29.0855 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 145.9926 µg/mL		Unstressed
	Purity 99%			+/- 177.1564 µg/mL		Stressed
6	p-Terphenyl-d14		5,004.0 µg/mL	+/- 29.0937 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.0335 µg/mL		Unstressed
	Purity 99%			+/- 177.2060 µg/mL		Stressed

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MS-568023_00043

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5199826
ID: MS-568023_00043
Exp: 06/30/20 Prpd: DCK
RES HSLA Famphur 2000ug/m

Catalog No. : 568023 **Lot No.:** A0139090

Description : 8270 Famphur Standard

8270 Famphur Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Famphur	2,014.9 µg/mL	+/- 18.7373	µg/mL	Gravimetric
	CAS # 52-85-7 (Lot 6789600)		+/- 87.6407	µg/mL	Unstressed
	Purity 98%		+/- 87.6775	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Brandon Reish - Mix Technician

Date Mixed: 21-Jun-2018 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

MS-568033_00026

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Catalog No. : 568033 **Lot No.:** A0133057

4941894
ID: MS-568033_00026
Exp: 06/30/19 Prpd: DCK
RES HSLA CUSTOM MIX 4000u

Description : Denver 8270 Standard

Denver 8270 Standard 4,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use. This product is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,3-Dichloroaniline	4,000.0 µg/mL	+/- 37.1978 µg/mL	Gravimetric
	CAS # 608-27-5 (Lot FBV01)		+/- 55.9394 µg/mL	Unstressed
	Purity 99%		+/- 81.4485 µg/mL	Stressed
2	3,5-Dimethylphenol	4,016.0 µg/mL	+/- 37.3466 µg/mL	Gravimetric
	CAS # 108-68-9 (Lot 02801LZ)		+/- 56.1632 µg/mL	Unstressed
	Purity 99%		+/- 81.7743 µg/mL	Stressed
3	Alachlor	4,008.0 µg/mL	+/- 37.2722 µg/mL	Gravimetric
	CAS # 15972-60-8 (Lot 6104400)		+/- 56.0513 µg/mL	Unstressed
	Purity 99%		+/- 81.6114 µg/mL	Stressed
4	alpha-Methylstyrene	4,016.0 µg/mL	+/- 37.3466 µg/mL	Gravimetric
	CAS # 98-83-9 (Lot MKBS2502V)		+/- 56.1632 µg/mL	Unstressed
	Purity 99%		+/- 81.7743 µg/mL	Stressed
5	Benzo(e)pyrene	4,004.0 µg/mL	+/- 37.2350 µg/mL	Gravimetric
	CAS # 192-97-2 (Lot NT058329)		+/- 55.9953 µg/mL	Unstressed
	Purity 99%		+/- 81.5299 µg/mL	Stressed

Reagent

MS-569730 HSL_00007

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Catalog No. : 569730 **Lot No.:** A0127472

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2018 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

4941882
ID: MS-569730 AFC_00006
Exp: 11/30/18 Prpd: DCK
HSLA Amine Mix (2015) 200

4941892
ID: MS-569730 HSL_00007
Exp: 11/30/18 Prpd: DCK
HSLA Amine Mix (2015) 200

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine	2,003.5 µg/mL	+/- 11.6483 µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 170428KJA)		+/- 23.9496 µg/mL	Unstressed
	Purity 99%		+/- 38.1154 µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,002.1 µg/mL	+/- 11.6402 µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 170123KJA)		+/- 23.9328 µg/mL	Unstressed
	Purity 99%		+/- 38.0887 µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569730 HSL_00008

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5306168
ID: MS-569730 AFC_00007
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

5306172
ID: MS-569730 HSL_00008
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

Catalog No. : 569730 **Lot No.:** A0137351

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzidine		2,000.3 µg/mL	+/- 11.6301	µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 171228KJA)		+/- 23.9121	µg/mL	Unstressed
	Purity 99%			+/- 38.0558	µg/mL	Stressed
2	3,3'-Dichlorobenzidine		2,005.7 µg/mL	+/- 11.6611	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 180328JNA)		+/- 23.9759	µg/mL	Unstressed
	Purity 99%			+/- 38.1572	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569730SEC_00004

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Catalog No. : 569730.SEC **Lot No.:** A0131614

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

5163418
ID: MS-569730SEC_00004
Exp: 04/30/19 Prpd: DCK
RES HSLB Amine Mix 2000ug

5163449
ID: MS-569730SECa_00004
Exp: 04/30/19 Prpd: DCK
RES Benzidine 2000ug/mL

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine **CAS #** 92-87-5.SEC (Lot 2715900) **Purity** 99%	2,004.0 µg/mL	+/- 11.7606 µg/mL +/- 24.0092 µg/mL +/- 38.1590 µg/mL	Gravimetric Unstressed Stressed
2	3,3'-Dichlorobenzidine **CAS #** 91-94-1.SEC (Lot 5340500) **Purity** 99%	2,014.0 µg/mL	+/- 11.8193 µg/mL +/- 24.1290 µg/mL +/- 38.3494 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731.SEC_00003

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5163391
ID: MS-569731.SEC_00003
Exp: 05/31/19 Prpd: DCK
8270 List 1 #10 2,000ug/m

Catalog No. : 569731.SEC **Lot No.:** A0132859

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,017.0 µg/mL	+/- 11.7541 µg/mL	Gravimetric
	CAS # 95-13-6.SEC (Lot IG5TI)		+/- 113.0940 µg/mL	Unstressed
	Purity 99%		+/- 115.7401 µg/mL	Stressed
2	Benzoic acid	2,008.5 µg/mL	+/- 11.7046 µg/mL	Gravimetric
	CAS # 65-85-0.SEC (Lot QD3UO)		+/- 112.6174 µg/mL	Unstressed
	Purity 99%		+/- 115.2524 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731_00079

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4944222
ID: MS-569731_00079
Exp: 03/31/19 Prpd: DCK
HSLA Benzoic Acid (2015)

Catalog No. : 569731 **Lot No.:** A0130477

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	1,996.3 µg/mL	+/- 11.6064 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 111.9283 µg/mL	Unstressed
	Purity 98%		+/- 114.5473 µg/mL	Stressed
2	Benzoic acid	2,000.8 µg/mL	+/- 11.6328 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 112.1829 µg/mL	Unstressed
	Purity 99%		+/- 114.8078 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731_00095

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Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569731_00096

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569731_00097

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569731_00100

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569732 HSL_00006

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

5335192
ID: MS-569732 HSL_00006
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

5335191
ID: MS-569732 BZH_00008
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Benzaldehyde **CAS #** 100-52-7 **Purity** 99%	(Lot SHBG8690V)	2,001.1	µg/mL	+/- 11.6345 +/- 64.1460 +/- 74.5673	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 **Purity** 99%	(Lot I16X016)	2,002.0	µg/mL	+/- 11.6398 +/- 64.1754 +/- 74.6014	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 **Purity** 99%	(Lot 77P7D)	2,002.6	µg/mL	+/- 11.6432 +/- 64.1941 +/- 74.6232	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-571995.SEC_00002

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

4994417
ID: MS-571995.SEC_00002
Exp:03/31/19 Prpd:DCK Opn:03/09/18
RES HSLB Mega Mix (2017)

Catalog No. : 571995.SEC **Lot No.:** A0131190

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane CAS # 123-91-1.SEC (Lot MUFZH) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine CAS # 62-75-9.SEC (Lot 61H72) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine CAS # 110-86-1.SEC (Lot QN8DK) Purity 99%	2,000.0 µg/mL	+/- 11.6282 µg/mL +/- 23.9081 µg/mL +/- 38.0494 µg/mL	Gravimetric Unstressed Stressed
4	Phenol CAS # 108-95-2.SEC (Lot EDPYN) Purity 99%	1,000.6 µg/mL	+/- 5.8310 µg/mL +/- 11.9678 µg/mL +/- 19.0402 µg/mL	Gravimetric Unstressed Stressed
5	Aniline CAS # 62-53-3.SEC (Lot ZCD3N) Purity 99%	1,000.4 µg/mL	+/- 5.8299 µg/mL +/- 11.9654 µg/mL +/- 19.0364 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether CAS # 111-44-4.SEC (Lot FA010143) Purity 99%	1,000.6 µg/mL	+/- 5.8310 µg/mL +/- 11.9678 µg/mL +/- 19.0402 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) CAS # 124-18-5.SEC (Lot UCVNN) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol CAS # 95-57-8.SEC Purity 99%	(Lot GJ01)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol CAS # 100-51-6.SEC Purity 99%	(Lot QZBUO)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot R6QDM)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) CAS # 95-48-7.SEC Purity 99%	(Lot NC7HL)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) CAS # 108-60-1.SEC Purity 99%	(Lot 2-KMW-57-8)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone CAS # 98-86-2.SEC Purity 99%	(Lot NSGTI)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) CAS # 108-39-4.SEC Purity 99%	(Lot 6LHTM)	500.0	µg/mL	+/- 2.9138 +/- 5.9803 +/- 9.5144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) CAS # 106-44-5.SEC Purity 99%	(Lot 65S2E)	501.0	µg/mL	+/- 2.9196 +/- 5.9923 +/- 9.5334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine CAS # 621-64-7.SEC Purity 99%	(Lot 4423200)	1,001.4	µg/mL	+/- 5.8357 +/- 11.9773 +/- 19.0555	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane CAS # 67-72-1.SEC Purity 99%	(Lot 10173016)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3.SEC Purity 99%	(Lot FLYIG)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1.SEC Purity 99%	(Lot XHGJI)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5.SEC Purity 99%	(Lot GXJ7J)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9.SEC Purity 99%	(Lot MKBL3650V)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 111-91-1 *	(Lot 5670100)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
25	2,4-Dichlorophenol		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 120-83-2.SEC	(Lot FHM01)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot OGO01)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
27	Naphthalene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
28	2,6-Dichlorophenol		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 87-65-0.SEC	(Lot SIDBB)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
29	4-Chloroaniline		1,000.2	µg/mL	+/-	5.8287	µg/mL	Gravimetric
	CAS # 106-47-8.SEC	(Lot 10171860)			+/-	11.9630	µg/mL	Unstressed
	Purity 99%				+/-	19.0326	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.5	µg/mL	+/-	5.8302	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 1068200)			+/-	11.9661	µg/mL	Unstressed
	Purity 97%				+/-	19.0375	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 59-50-7.SEC	(Lot FDO02)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
32	2-Methylnaphthalene		1,000.8	µg/mL	+/-	5.8320	µg/mL	Gravimetric
	CAS # 91-57-6.SEC	(Lot 76023-1)			+/-	11.9699	µg/mL	Unstressed
	Purity 98%				+/-	19.0436	µg/mL	Stressed
33	1-Methylnaphthalene		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 90-12-0.SEC	(Lot UATSA)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 95-94-3.SEC	(Lot AF02)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 77-47-4.SEC	(Lot 5608400)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,000.6	µg/mL	+/-	5.8309	µg/mL	Gravimetric
	CAS # 88-06-2.SEC	(Lot UUMYM)			+/-	11.9675	µg/mL	Unstressed
	Purity 98%				+/-	19.0399	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 95-95-4.SEC	(Lot MKBQ9937V)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 91-58-7.SEC	(Lot LC07783V)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
39	Biphenyl		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 92-52-4.SEC	(Lot 33OQE)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed

40	2-Nitroaniline CAS # 88-74-4.SEC Purity 99%	(Lot T6E7B)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8.SEC Purity 96%	(Lot 0012014)	999.9	µg/mL	+/- 5.8271 +/- 11.9598 +/- 19.0276	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0.SEC Purity 99%	(Lot 3XXLB)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3.SEC Purity 99%	(Lot 483WC)	1,002.0	µg/mL	+/- 5.8392 +/- 11.9845 +/- 19.0669	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2.SEC Purity 99%	(Lot GE01)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline CAS # 99-09-2.SEC Purity 99%	(Lot FGN03)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene CAS # 83-32-9.SEC Purity 99%	(Lot BWZJE)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol CAS # 51-28-5.SEC Purity 99%	(Lot YTR6B)	2,000.0	µg/mL	+/- 11.6282 +/- 23.9081 +/- 38.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran CAS # 132-64-9.SEC Purity 99%	(Lot 27ZGC)	1,000.8	µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol CAS # 100-02-7.SEC Purity 99%	(Lot 2J5LB)	2,000.0	µg/mL	+/- 11.6282 +/- 23.9081 +/- 38.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene CAS # 121-14-2.SEC Purity 99%	(Lot SHRSA)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2.SEC Purity 99%	(Lot LC19623V)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7.SEC Purity 99%	(Lot 5027400)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) CAS # 544-76-3.SEC Purity 99%	(Lot A0328141)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate CAS # 84-66-2.SEC Purity 99%	(Lot UMBJC)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether CAS # 7005-72-3.SEC Purity 99%	(Lot P31G)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 100-01-6.SEC	(Lot 5ITRC)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 6333400)			+/-	23.9081	µg/mL	Unstressed
	Purity 99%				+/-	38.0494	µg/mL	Stressed
58	Diphenylamine		850.0	µg/mL	+/-	4.9534	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/-	10.1665	µg/mL	Unstressed
	Purity 99%				+/-	16.1745	µg/mL	Stressed
59	Azobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
61	Hexachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot G120431)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
62	Pentachlorophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 5784900)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
63	n-Octadecane (C18)		1,001.0	µg/mL	+/-	5.8333	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/-	11.9726	µg/mL	Unstressed
	Purity 99%				+/-	19.0478	µg/mL	Stressed
64	Phenanthrene		1,002.0	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 4708400)			+/-	11.9839	µg/mL	Unstressed
	Purity 98%				+/-	19.0660	µg/mL	Stressed
65	Anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
67	Di-n-butylphthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
68	Fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
69	Pyrene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/-	11.9605	µg/mL	Unstressed
	Purity 98%				+/-	19.0287	µg/mL	Stressed
71	Benz(a)anthracene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed

72	chrysene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 218-01-9.SEC	(Lot NICZC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 117-81-7.SEC	(Lot MT8AG)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
74	Di-n-octyl phthalate		1,000.8	µg/mL	+/-	5.8322	µg/mL	Gravimetric
	CAS # 117-84-0.SEC	(Lot O8DLD)			+/-	11.9702	µg/mL	Unstressed
	Purity 99%				+/-	19.0440	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 205-99-2.SEC	(Lot 022011)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.6	µg/mL	+/-	5.8310	µg/mL	Gravimetric
	CAS # 207-08-9.SEC	(Lot ER041513-01)			+/-	11.9678	µg/mL	Unstressed
	Purity 99%				+/-	19.0402	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.5	µg/mL	+/-	5.8302	µg/mL	Gravimetric
	CAS # 50-32-8.SEC	(Lot M8DFD)			+/-	11.9661	µg/mL	Unstressed
	Purity 97%				+/-	19.0375	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 193-39-5.SEC	(Lot 0012014)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 53-70-3.SEC	(Lot 0012011)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 191-24-2.SEC	(Lot 0022012)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Reagent

MS-571995_00002

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0136052

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

5163450
ID: MS-571995_00002
Exp: 09/30/19 Prpd: DCK
RES HSLB Mega Mix (2017)

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBH5677) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 161108JLM) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,011.2 µg/mL	+/- 11.6933 µg/mL +/- 24.0420 µg/mL +/- 38.2625 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,005.1 µg/mL	+/- 5.8439 µg/mL +/- 12.0154 µg/mL +/- 19.1224 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,002.6 µg/mL	+/- 5.8292 µg/mL +/- 11.9851 µg/mL +/- 19.0742 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 11.9708 µg/mL +/- 19.0513 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBH3926V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8180 µg/mL +/- 11.9620 µg/mL +/- 19.0374 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol CAS # 95-57-8 Purity 99%	(Lot STBF2690V)	1,007.1	µg/mL	+/- 5.8552 +/- 12.0385 +/- 19.1592	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	1,001.0	µg/mL	+/- 5.8199 +/- 11.9660 +/- 19.0437	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS4401V)	1,004.4	µg/mL	+/- 5.8397 +/- 12.0067 +/- 19.1084	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,005.2	µg/mL	+/- 5.8443 +/- 12.0162 +/- 19.1236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot 68996CMV)	1,001.2	µg/mL	+/- 5.8211 +/- 11.9684 +/- 19.0475	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBH6379)	1,001.6	µg/mL	+/- 5.8234 +/- 11.9732 +/- 19.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 98%	(Lot 5510800)	1,006.7	µg/mL	+/- 5.8528 +/- 12.0336 +/- 19.1513	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone CAS # 98-86-2 Purity 99%	(Lot STBG7113)	1,005.5	µg/mL	+/- 5.8459 +/- 12.0194 +/- 19.1287	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- 2.9196 +/- 5.9923 +/- 9.5334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	501.7	µg/mL	+/- 2.9235 +/- 6.0002 +/- 9.5461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot NOPCF)	1,003.1	µg/mL	+/- 5.8323 +/- 11.9915 +/- 19.0843	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,003.4	µg/mL	+/- 5.8339 +/- 11.9947 +/- 19.0894	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBG5577V)	1,002.3	µg/mL	+/- 5.8273 +/- 11.9812 +/- 19.0678	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 98%	(Lot MKBG2442V)	1,003.3	µg/mL	+/- 5.8334 +/- 11.9938 +/- 19.0879	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,007.7	µg/mL	+/- 5.8587 +/- 12.0457 +/- 19.1706	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,000.9	µg/mL	+/- 5.8191 +/- 11.9644 +/- 19.0412	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 4621000)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
25	2,4-Dichlorophenol		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.0	µg/mL	+/-	5.8432	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0138	µg/mL	Unstressed
	Purity 99%				+/-	19.1198	µg/mL	Stressed
27	Naphthalene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
29	4-Chloroaniline		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.5	µg/mL	+/-	5.8284	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9835	µg/mL	Unstressed
	Purity 99%				+/-	19.0716	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	12.0459	µg/mL	Unstressed
	Purity 96%				+/-	19.1708	µg/mL	Stressed
33	1-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,004.3	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0051	µg/mL	Unstressed
	Purity 99%				+/-	19.1059	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012017H)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,003.5	µg/mL	+/-	5.8342	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	11.9955	µg/mL	Unstressed
	Purity 99%				+/-	19.0907	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.4	µg/mL	+/-	5.8513	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0306	µg/mL	Unstressed
	Purity 99%				+/-	19.1465	µg/mL	Stressed
38	2-Chloronaphthalene		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
39	Biphenyl		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,004.5	µg/mL	+/- 5.8401 +/- 12.0075 +/- 19.1097	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,006.0	µg/mL	+/- 5.8491 +/- 12.0260 +/- 19.1392	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,001.8	µg/mL	+/- 5.8246 +/- 11.9756 +/- 19.0590	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,003.7	µg/mL	+/- 5.8358 +/- 11.9987 +/- 19.0957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606V)	1,000.7	µg/mL	+/- 5.8183 +/- 11.9628 +/- 19.0387	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,005.2	µg/mL	+/- 5.8443 +/- 12.0162 +/- 19.1236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,005.9	µg/mL	+/- 5.8482 +/- 12.0242 +/- 19.1363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBF9439V)	2,008.3	µg/mL	+/- 11.6766 +/- 24.0077 +/- 38.2080	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKBW2691V)	1,005.5	µg/mL	+/- 5.8463 +/- 12.0202 +/- 19.1300	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBV0501V)	2,009.3	µg/mL	+/- 11.6824 +/- 24.0197 +/- 38.2270	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,003.9	µg/mL	+/- 5.8366 +/- 12.0003 +/- 19.0983	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot B180305L)	1,001.9	µg/mL	+/- 5.8253 +/- 11.9772 +/- 19.0615	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 99%	(Lot 10193329)	1,002.0	µg/mL	+/- 5.8257 +/- 11.9780 +/- 19.0628	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBG2582V)	1,001.6	µg/mL	+/- 5.8234 +/- 11.9732 +/- 19.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKBV9622V)	1,003.3	µg/mL	+/- 5.8335 +/- 11.9939 +/- 19.0881	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,003.1	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9907	µg/mL	Unstressed
	Purity 98%				+/-	19.0830	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,003.7	µg/mL	+/-	11.6495	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC25844V)			+/-	23.9520	µg/mL	Unstressed
	Purity 99%				+/-	38.1192	µg/mL	Stressed
58	Diphenylamine		852.3	µg/mL	+/-	4.9555	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1888	µg/mL	Unstressed
	Purity 99%				+/-	16.2154	µg/mL	Stressed
59	Azobenzene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,022.3	µg/mL	+/-	5.9439	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.2210	µg/mL	Unstressed
	Purity 99%				+/-	19.4496	µg/mL	Stressed
61	Hexachlorobenzene		1,002.5	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7013600)			+/-	11.9843	µg/mL	Unstressed
	Purity 99%				+/-	19.0729	µg/mL	Stressed
62	Pentachlorophenol		2,002.1	µg/mL	+/-	11.6406	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9336	µg/mL	Unstressed
	Purity 99%				+/-	38.0900	µg/mL	Stressed
63	n-Octadecane (C18)		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot OGCDK)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
64	Phenanthrene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
65	Anthracene		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9573	µg/mL	Unstressed
	Purity 99%				+/-	19.0298	µg/mL	Stressed
66	Carbazole		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 6489700)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.7	µg/mL	+/-	5.8470	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0218	µg/mL	Unstressed
	Purity 99%				+/-	19.1325	µg/mL	Stressed
68	Fluoranthene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0204	µg/mL	Unstressed
	Purity 98%				+/-	19.1302	µg/mL	Stressed
69	Pyrene		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9571	µg/mL	Unstressed
	Purity 98%				+/-	19.0295	µg/mL	Stressed
71	Benz(a)anthracene		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012012)			+/-	11.9915	µg/mL	Unstressed
	Purity 98%				+/-	19.0842	µg/mL	Stressed

72	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot 012015)	1,004.6	µg/mL	+/- 5.8408 +/- 12.0091 +/- 19.1122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBZ3868V)	1,002.7	µg/mL	+/- 5.8296 +/- 11.9859 +/- 19.0754	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 6016000)	1,007.9	µg/mL	+/- 5.8602 +/- 12.0489 +/- 19.1756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot 012012B)	1,003.6	µg/mL	+/- 5.8350 +/- 11.9971 +/- 19.0932	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012017K)	1,006.2	µg/mL	+/- 5.8501 +/- 12.0282 +/- 19.1427	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,002.1	µg/mL	+/- 5.8261 +/- 11.9788 +/- 19.0640	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,004.0	µg/mL	+/- 5.8373 +/- 12.0019 +/- 19.1008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,001.9	µg/mL	+/- 5.8249 +/- 11.9764 +/- 19.0602	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER05121401)	1,000.9	µg/mL	+/- 5.8195 +/- 11.9652 +/- 19.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:
N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Reagent

MV-567650_00027

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

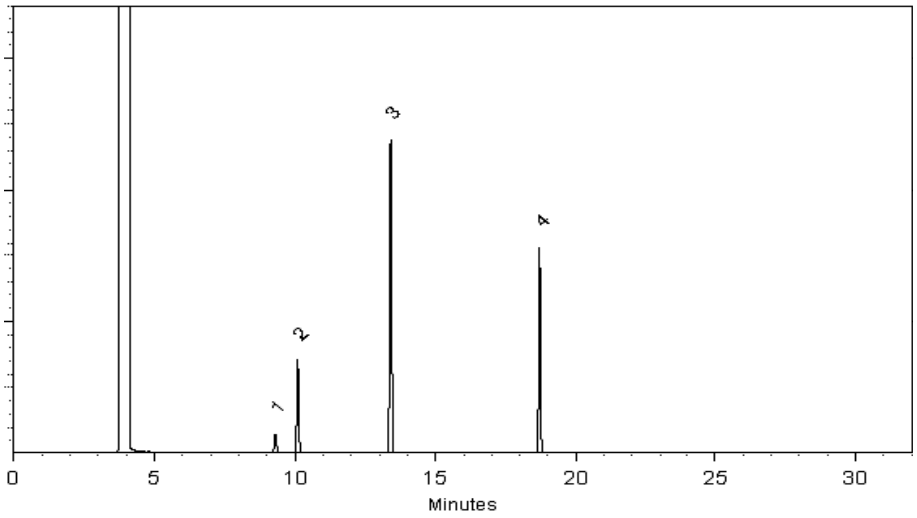
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Isaiah Harrison - Mix Technician

Date Mixed: 09-Jan-2017 **Balance:** 1128342314

Amanda Miller - Operations Tech-ARM QC

Date Passed: 11-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00010

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0127975

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol	5,022.1 µg/mL	+/- 29.1976 µg/mL	Gravimetric
	CAS # 25725-11-5 (Lot I-201)		+/- 107.5241 µg/mL	Unstressed
	Purity 99%		+/- 110.6500 µg/mL	Stressed
2	2-Butanone-d5	1,257.5 µg/mL	+/- 7.3114 µg/mL	Gravimetric
	CAS # 24313-50-6 (Lot M-276)		+/- 26.9239 µg/mL	Unstressed
	Purity 99%		+/- 27.7067 µg/mL	Stressed
3	Fluorobenzene	250.8 µg/mL	+/- 1.4613 µg/mL	Gravimetric
	CAS # 462-06-6 (Lot BCBK8171V)		+/- 5.3699 µg/mL	Unstressed
	Purity 99%		+/- 5.5259 µg/mL	Stressed
4	1,4-Dioxane-d8	5,009.4 µg/mL	+/- 29.1236 µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot I-19942)		+/- 107.2514 µg/mL	Unstressed
	Purity 99%		+/- 110.3694 µg/mL	Stressed
5	Chlorobenzene-d5	251.7 µg/mL	+/- 1.4666 µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-21944)		+/- 5.3891 µg/mL	Unstressed
	Purity 99%		+/- 5.5458 µg/mL	Stressed
6	1,4-Dichlorobenzene-d4	251.3 µg/mL	+/- 1.4645 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 5.3813 µg/mL	Unstressed
	Purity 99%		+/- 5.5377 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

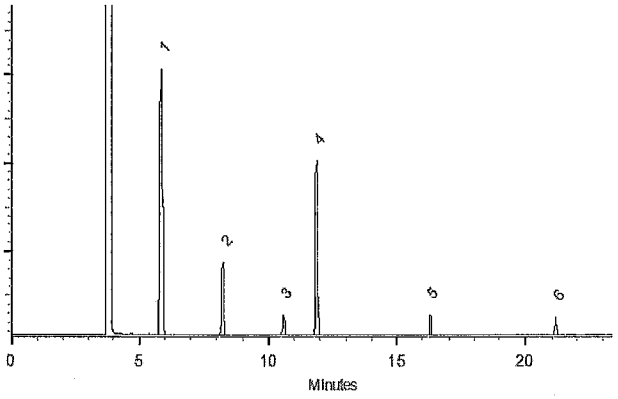
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568720_00022

Reagent

MV-569721.sec_00005

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone		12,501.6 µg/mL	+/- 73.1996 µg/mL	Gravimetric
	CAS # 67-64-1.SEC	(Lot P14A572)		+/- 754.3267 µg/mL	Unstressed
	Purity 99%			+/- 756.1173 µg/mL	Stressed
2	2-Butanone (MEK)		12,503.6 µg/mL	+/- 73.2113 µg/mL	Gravimetric
	CAS # 78-93-3.SEC	(Lot RA58J)		+/- 754.4473 µg/mL	Unstressed
	Purity 99%			+/- 756.2383 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)		12,506.0 µg/mL	+/- 73.2254 µg/mL	Gravimetric
	CAS # 108-10-1.SEC	(Lot E29T040)		+/- 754.5921 µg/mL	Unstressed
	Purity 99%			+/- 756.3834 µg/mL	Stressed
4	2-Hexanone		12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 591-78-6.SEC	(Lot V3NRA)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%			+/- 756.2625 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

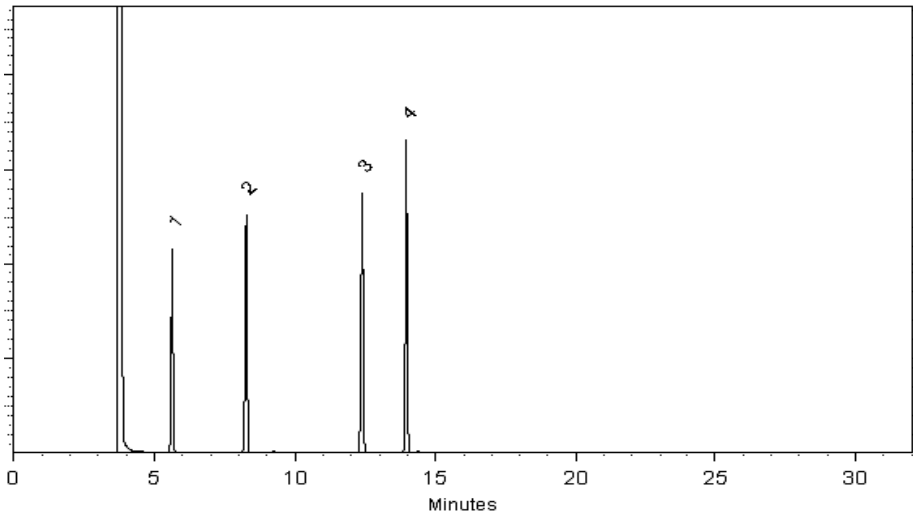
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Reagent

MV-569722.sec_00005

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0128832

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,505.9 µg/mL	+/- 22.3986 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 23586)		+/- 141.5312 µg/mL	Unstressed
	Purity 99%		+/- 144.7955 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.7 µg/mL	+/- 24.8413 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.8153 µg/mL	Unstressed
	Purity 99%		+/- 145.0675 µg/mL	Stressed
3	Vinyl chloride	2,503.2 µg/mL	+/- 25.9197 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.9813 µg/mL	Unstressed
	Purity 99%		+/- 145.2285 µg/mL	Stressed
4	1,3-Butadiene	2,508.9 µg/mL	+/- 20.6969 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 24033)		+/- 141.4379 µg/mL	Unstressed
	Purity 99%		+/- 144.7121 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,502.6 µg/mL	+/- 26.2540 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 142.0076 µg/mL	Unstressed
	Purity 99%		+/- 145.2526 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,510.6 µg/mL	+/- 24.9094 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 142.2038 µg/mL	Unstressed
	Purity 99%		+/- 145.4650 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,510.9 µg/mL	+/- 25.6719 µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 142.3575 µg/mL	Unstressed
	Purity 99%		+/- 145.6160 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.9	µg/mL	+/-	18.9312	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 253600)			+/-	140.9660	µg/mL	Unstressed
	Purity 99%				+/-	144.2404	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

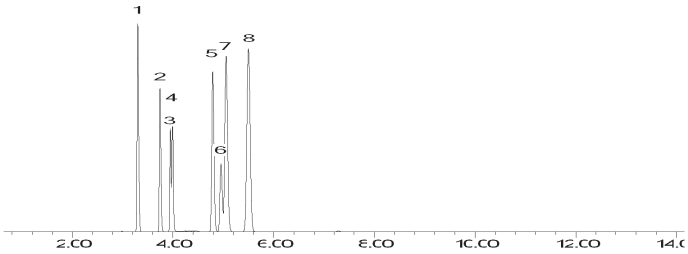
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 29-Jun-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 24-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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MV-569724_00016

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0124672

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2020 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,006.0 µg/mL	+/- 146.4156 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1,508.8223 µg/mL	Unstressed
	Purity 99%		+/- 1,512.4040 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

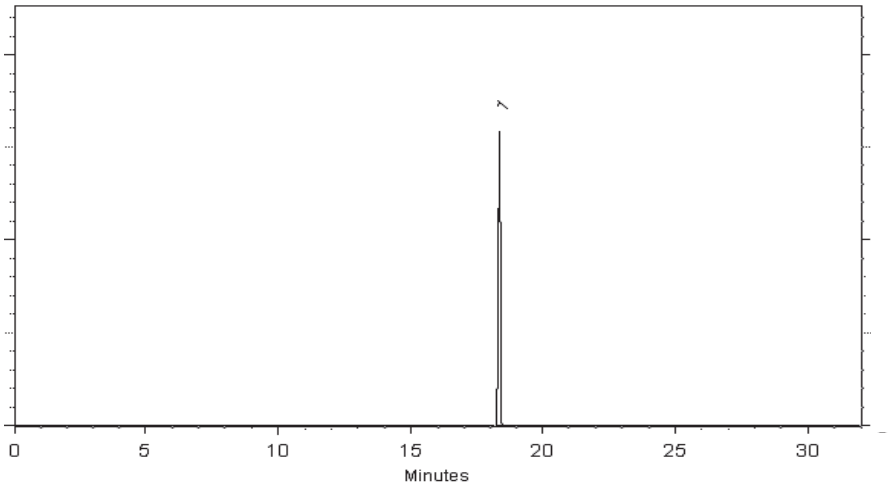
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 03-Feb-2017 **Balance:** 1125113331

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-571992.sec_00001

Reagent

MV-571992_00001

Reagent

MV-STS110N1_00066

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number: STS-110N **Page:** 1 of 1

Lot Number: CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Vincent Wang, Ph.D.
Director of QA/RA

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Reagent

OP-569732_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	Benzaldehyde **CAS #** 100-52-7 **Purity** 99%	(Lot SHBG8690V)	2,001.1 µg/mL	+/- 11.6345 µg/mL +/- 64.1460 µg/mL +/- 74.5673 µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 **Purity** 99%	(Lot I16X016)	2,002.0 µg/mL	+/- 11.6398 µg/mL +/- 64.1754 µg/mL +/- 74.6014 µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 **Purity** 99%	(Lot 77P7D)	2,002.6 µg/mL	+/- 11.6432 µg/mL +/- 64.1941 µg/mL +/- 74.6232 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

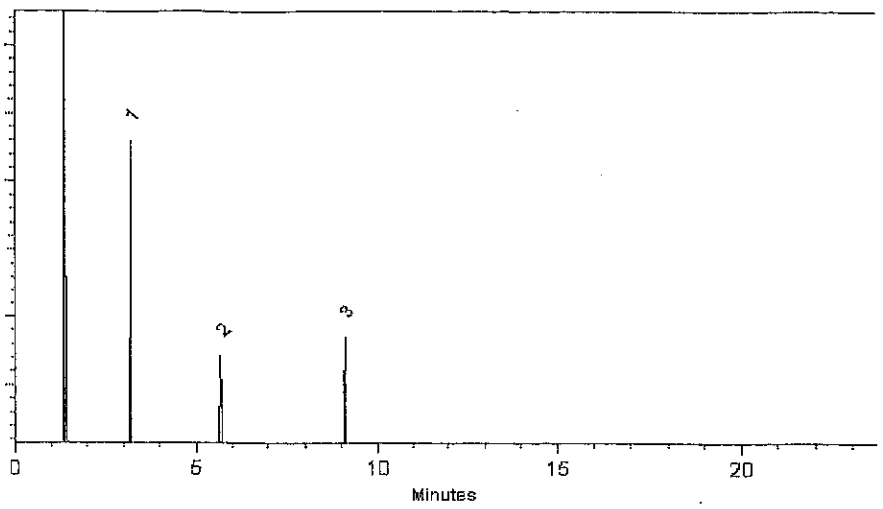
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 12-Apr-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Apr-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

OP-569732_00002

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	Benzaldehyde		2,001.1 µg/mL	+/- 11.6345	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBG8690V)		+/- 64.1460	µg/mL	Unstressed
	Purity 99%			+/- 74.5673	µg/mL	Stressed
2	epsilon-Caprolactam		2,002.0 µg/mL	+/- 11.6398	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)		+/- 64.1754	µg/mL	Unstressed
	Purity 99%			+/- 74.6014	µg/mL	Stressed
3	Atrazine		2,002.6 µg/mL	+/- 11.6432	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot 77P7D)		+/- 64.1941	µg/mL	Unstressed
	Purity 99%			+/- 74.6232	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

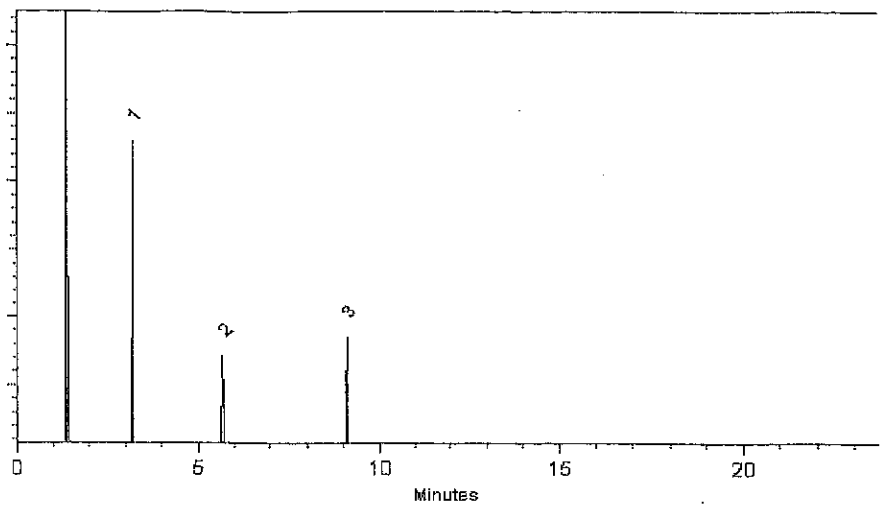
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 12-Apr-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Apr-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

OP-572556_00003

RESTEK®
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CERTIFIED REFERENCE MATERIAL

Gravimetric Certificate

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 572556 **Lot No.:** A0127376

Description : Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Hexachlorocyclopentadiene **CAS #** 77-47-4 (Lot 0012015) **Purity** 99%	4,019.0 µg/mL	+/- 23.585744 µg/mL +/- 225.364148 µg/mL +/- 230.636330 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Rebecca Sawver

Date Mixed: 08-May-2017 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

OP-572556_00006

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CERTIFIED REFERENCE MATERIAL

Gravimetric Certificate

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 572556 **Lot No.:** A0127376

Description : Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Hexachlorocyclopentadiene **CAS #** 77-47-4 (Lot 0012015) **Purity** 99%	4,019.0 µg/mL	+/- 23.585744 µg/mL +/- 225.364148 µg/mL +/- 230.636330 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Rebecca Sawver

Date Mixed: 08-May-2017 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

OP-CustBenz_00026

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CERTIFIED REFERENCE MATERIAL

Gravimetric Certificate

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

10x 5mL
Received 7/31/18
AMB

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 572555 **Lot No.:** A0139914

Description : Custom Benzidines Standard

Custom Benzidines Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	3,3'-Dichlorobenzidine	4,016.0 µg/mL	+/- 23.568138 µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 170112KJA)		+/- 121.518984 µg/mL	Unstressed
	Purity 99%		+/- 121.518984 µg/mL	Stressed
2	Benzidine	4,033.0 µg/mL	+/- 23.667904 µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 180406JNA)		+/- 122.033382 µg/mL	Unstressed
	Purity 99%		+/- 122.033382 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Lane Kibe - Mix Technician **Date Mixed:** 24-Jul-2018 **Balance:** 1122030677

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

PicricARestek_00080

RESTEK®
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Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31499 **Lot No.:** A0114009

Description : Picric Acid Standard

1000µg/mL, Methanol, 1mL/ampul *PGI BOX REQUIRED* SHIP FED EX GROUND ONLY

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Picric Acid **CAS #** 88-89-1 **Purity** 99% (Lot 06130CU)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 53.9873 µg/mL +/- 58.7028 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:
This is a derivatized analysis.

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SIM_LVI_SURR_00006

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_F\20181003-74690.b\F3780.D

Lims ID: SIM_LVI_SURR_00006 Inj. Date: 03-Oct-2018 18:34:30

Worklist ID: 280-0074690-004 Instrument: SMS_F

Method: SMSF_8270SIMX

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3510C_LVI
$ 4 Nitrobenzene-d5	2000.0	1816.9	90.8	43-120
$ 5 2-Fluorobiphenyl	2000.0	1789.6	89.5	42-120
$ 6 Terphenyl-d14	2000.0	1805.0	90.3	47-120
$ 53 2-methylnaphthalene-d10	2000.0	1964.1	98.2	
$ 54 Fluoranthene-d10	2000.0	1814.7	90.7	

Samples for Limit Group: 1, Lims Prep Method: 3510C_LVI

280-114217-H-1-A

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 (60. ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
FWGmw-018-181001-GW	280-116270-1	96	96	90	85
FWGTB-181006 TB	280-116270-2	99	97	97	93
FWGmw-020-181001-GW	280-116270-9	98	98	92	92
	MB 280-436980/4	103	97	103	102
	MB 280-437213/6	100	94	100	99
	LCS 280-436980/5	102	99	100	96
	LCS 280-437213/7	101	97	100	97
	LCSD 280-436980/6	99	99	99	94

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2440.D

Lab ID: LCS 280-436980/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	4.59	92	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.33	107	71-121	
1,1,2-Trichloroethane	5.00	5.36	107	80-119	
1,1-Dichloroethane	5.00	4.98	100	77-125	
1,1-Dichloroethene	5.00	4.73	95	71-131	
1,2-Dibromoethane	5.00	5.14	103	77-121	
1,2-Dichloroethane	5.00	4.59	92	73-128	
1,2-Dichloropropane	5.00	5.14	103	78-122	
2-Butanone (MEK)	20.0	17.2	86	56-143	
2-Hexanone	20.0	19.4	97	57-139	
4-Methyl-2-pentanone (MIBK)	20.0	21.0	105	67-130	
Acetone	20.0	19.5	97	39-160	
Benzene	5.00	4.88	98	79-120	
Bromobenzene	5.00	4.93	99	80-120	
Bromochloromethane	5.00	5.12	102	78-123	
Bromodichloromethane	5.00	4.69	94	79-125	
Bromoform	5.00	4.58	92	66-130	
Bromomethane	5.00	4.89	98	53-141	
Carbon disulfide	5.00	4.74	95	64-133	
Carbon tetrachloride	5.00	4.42	88	72-136	
Chlorobenzene	5.00	4.80	96	82-118	
Chloroethane	5.00	4.88	98	60-138	
Chloroform	5.00	4.81	96	79-124	
Chloromethane	5.00	4.19	84	50-139	
cis-1,3-Dichloropropene	5.00	5.17	103	75-124	
Dibromochloromethane	5.00	4.73	95	74-126	
Ethylbenzene	5.00	4.65	93	79-121	
Methylene Chloride	5.00	4.71 J	94	74-124	
Styrene	5.00	4.81	96	78-123	
Tetrachloroethene	5.00	4.63	93	74-129	
Toluene	5.00	4.94	99	80-121	
trans-1,3-Dichloropropene	5.00	4.65	93	73-127	
Trichloroethene	5.00	4.65	93	79-123	
Vinyl chloride	5.00	4.47	89	58-137	
Xylenes, Total	10.0	9.56	96	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2547.D

Lab ID: LCS 280-437213/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	4.93	99	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.32	106	71-121	
1,1,2-Trichloroethane	5.00	5.47	109	80-119	
1,1-Dichloroethane	5.00	5.22	104	77-125	
1,1-Dichloroethene	5.00	5.17	103	71-131	
1,2-Dibromoethane	5.00	5.28	106	77-121	
1,2-Dichloroethane	5.00	4.95	99	73-128	
1,2-Dichloropropane	5.00	5.55	111	78-122	
2-Butanone (MEK)	20.0	17.3	87	56-143	
2-Hexanone	20.0	19.8	99	57-139	
4-Methyl-2-pentanone (MIBK)	20.0	21.8	109	67-130	
Acetone	20.0	19.1	96	39-160	
Benzene	5.00	5.25	105	79-120	
Bromobenzene	5.00	5.06	101	80-120	
Bromochloromethane	5.00	5.37	107	78-123	
Bromodichloromethane	5.00	5.12	102	79-125	
Bromoform	5.00	4.58	92	66-130	
Bromomethane	5.00	5.13	103	53-141	
Carbon disulfide	5.00	5.18	104	64-133	
Carbon tetrachloride	5.00	4.78	96	72-136	
Chlorobenzene	5.00	5.11	102	82-118	
Chloroethane	5.00	5.07	101	60-138	
Chloroform	5.00	5.07	101	79-124	
Chloromethane	5.00	4.84	97	50-139	
cis-1,3-Dichloropropene	5.00	5.41	108	75-124	
Dibromochloromethane	5.00	4.94	99	74-126	
Ethylbenzene	5.00	5.04	101	79-121	
Methylene Chloride	5.00	5.01	100	74-124	
Styrene	5.00	5.09	102	78-123	
Tetrachloroethene	5.00	4.95	99	74-129	
Toluene	5.00	5.30	106	80-121	
trans-1,3-Dichloropropene	5.00	4.79	96	73-127	
Trichloroethene	5.00	5.01	100	79-123	
Vinyl chloride	5.00	4.90	98	58-137	
Xylenes, Total	10.0	10.2	102	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P2441.D

Lab ID: LCSD 280-436980/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	4.69	94	2	20	74-131	
1,1,2,2-Tetrachloroethane	5.00	5.54	111	4	20	71-121	
1,1,2-Trichloroethane	5.00	5.44	109	1	20	80-119	
1,1-Dichloroethane	5.00	5.01	100	1	20	77-125	
1,1-Dichloroethene	5.00	4.86	97	3	20	71-131	
1,2-Dibromoethane	5.00	5.47	109	6	20	77-121	
1,2-Dichloroethane	5.00	4.85	97	6	20	73-128	
1,2-Dichloropropane	5.00	5.46	109	6	20	78-122	
2-Butanone (MEK)	20.0	18.2	91	6	20	56-143	
2-Hexanone	20.0	21.0	105	8	20	57-139	
4-Methyl-2-pentanone (MIBK)	20.0	22.1	110	5	20	67-130	
Acetone	20.0	18.9	95	3	20	39-160	
Benzene	5.00	5.03	101	3	20	79-120	
Bromobenzene	5.00	5.07	101	3	20	80-120	
Bromochloromethane	5.00	5.30	106	3	20	78-123	
Bromodichloromethane	5.00	5.01	100	7	20	79-125	
Bromoform	5.00	4.56	91	0	20	66-130	
Bromomethane	5.00	4.98	100	2	20	53-141	
Carbon disulfide	5.00	4.84	97	2	20	64-133	
Carbon tetrachloride	5.00	4.54	91	3	20	72-136	
Chlorobenzene	5.00	5.06	101	5	20	82-118	
Chloroethane	5.00	4.98	100	2	20	60-138	
Chloroform	5.00	4.92	98	2	20	79-124	
Chloromethane	5.00	4.47	89	6	20	50-139	
cis-1,3-Dichloropropene	5.00	5.34	107	3	20	75-124	
Dibromochloromethane	5.00	5.00	100	5	20	74-126	
Ethylbenzene	5.00	4.98	100	7	20	79-121	
Methylene Chloride	5.00	4.92 J	98	4	20	74-124	
Styrene	5.00	5.19	104	8	20	78-123	
Tetrachloroethene	5.00	4.93	99	6	20	74-129	
Toluene	5.00	5.02	100	2	20	80-121	
trans-1,3-Dichloropropene	5.00	4.85	97	4	20	73-127	
Trichloroethene	5.00	4.83	97	4	20	79-123	
Vinyl chloride	5.00	4.73	95	6	20	58-137	
Xylenes, Total	10.0	10.3	103	7	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: P2439.D Lab Sample ID: MB 280-436980/4

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_P Date Analyzed: 11/09/2018 09:40

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-436980/5	P2440.D	11/09/2018 09:59
	LCSD 280-436980/6	P2441.D	11/09/2018 10:18
FWGmw-018-181001-GW	280-116270-1	P2462.D	11/09/2018 17:02
FWGmw-020-181001-GW	280-116270-9	P2464.D	11/09/2018 17:39

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: P2546.D Lab Sample ID: MB 280-437213/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_P Date Analyzed: 11/12/2018 11:58

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-437213/7	P2547.D	11/12/2018 12:17
FWGTB-181006 TB	280-116270-2	P2561.D	11/12/2018 16:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: P9151.D BFB Injection Date: 08/16/2018

Instrument ID: VMS_P BFB Injection Time: 19:34

Analysis Batch No.: 426490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.9	
75	30.0 - 60.0 % of mass 95	53.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	63.9	
175	5.0 - 9.0 % of mass 174	4.4	(6.8) 1
176	95.0 - 101.0 % of mass 174	63.3	(99.1) 1
177	5.0 - 9.0 % of mass 176	3.4	(5.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 280-426490/24	P9176.D	08/17/2018	03:28

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: P1530.D BFB Injection Date: 10/22/2018

Instrument ID: VMS_P BFB Injection Time: 21:54

Analysis Batch No.: 434433

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.2	
75	30.0 - 60.0 % of mass 95	56.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	8.2	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	70.9	
175	5.0 - 9.0 % of mass 174	5.3	(7.4) 1
176	95.0 - 101.0 % of mass 174	68.0	(95.9) 1
177	5.0 - 9.0 % of mass 176	5.3	(7.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-434433/10	P1532.D	10/22/2018	22:40
	STD01 280-434433/11	P1533.D	10/22/2018	22:59
	STD02 280-434433/12	P1534.D	10/22/2018	23:17
	STD05 280-434433/13	P1535.D	10/22/2018	23:36
	ICIS 280-434433/14	P1536.D	10/22/2018	23:54
	STD25 280-434433/15	P1537.D	10/23/2018	00:13
	STD60 280-434433/16	P1538.D	10/23/2018	00:32
	ICV 280-434433/17	P1540.D	10/23/2018	01:12

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: P2436.D BFB Injection Date: 11/09/2018

Instrument ID: VMS_P BFB Injection Time: 08:31

Analysis Batch No.: 436980

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.4	
75	30.0 - 60.0 % of mass 95	52.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.3	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	70.4	
175	5.0 - 9.0 % of mass 174	5.6	(8.0) 1
176	95.0 - 101.0 % of mass 174	67.9	(96.4) 1
177	5.0 - 9.0 % of mass 176	4.7	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-436980/2	P2437.D	11/09/2018	08:57
	CCV 280-436980/3	P2438.D	11/09/2018	09:17
	MB 280-436980/4	P2439.D	11/09/2018	09:40
	LCS 280-436980/5	P2440.D	11/09/2018	09:59
	LCSD 280-436980/6	P2441.D	11/09/2018	10:18
FWGmw-018-181001-GW	280-116270-1	P2462.D	11/09/2018	17:02
FWGmw-020-181001-GW	280-116270-9	P2464.D	11/09/2018	17:39
	CCVC 280-436980/39	P2469.D	11/09/2018	19:12

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: P2541.D BFB Injection Date: 11/12/2018

Instrument ID: VMS_P BFB Injection Time: 10:19

Analysis Batch No.: 437213

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	8.3	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	69.4	
175	5.0 - 9.0 % of mass 174	5.4	(7.8) 1
176	95.0 - 101.0 % of mass 174	68.9	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.7	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-437213/2	P2542.D	11/12/2018	10:44
	CCV 280-437213/3	P2543.D	11/12/2018	11:02
	CCV 280-437213/14	P2545.D	11/12/2018	11:40
	MB 280-437213/6	P2546.D	11/12/2018	11:58
	LCS 280-437213/7	P2547.D	11/12/2018	12:17
FWGTB-181006 TB	280-116270-2	P2561.D	11/12/2018	16:37
	CCVC 280-437213/38	P2572.D	11/12/2018	20:29

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: ICIS 280-434433/14 Date Analyzed: 10/22/2018 23:54

Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): P1536.D Heated Purge: (Y/N) N

Calibration ID: 34114

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		153710	5.61	1484900	7.56	293843	9.83
UPPER LIMIT		307420	6.11	2969800	8.06	587686	10.33
LOWER LIMIT		76855	5.11	742450	7.06	146922	9.33
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434433/17		194486	5.60	1789372	7.56	359716	9.83
CCV 280-436980/2		156020	5.60	1526340	7.56	299879	9.83
CCV 280-436980/3		163112	5.60	1538785	7.56	306791	9.83
MB 280-436980/4		147136	5.61	1473347	7.56	285639	9.83
LCS 280-436980/5		162282	5.59	1420306	7.55	283113	9.83
LCSD 280-436980/6		170280	5.61	1480977	7.56	290571	9.83
280-116270-1	FWGmw-018-181001-GW	110774	5.60	997034	7.55	196232	9.83
280-116270-9	FWGmw-020-181001-GW	106937	5.59	973133	7.55	193314	9.83
CCV 280-437213/2		201234	5.59	1834694	7.56	373450	9.83
CCV 280-437213/3		210775	5.59	1750116	7.56	348225	9.83
CCV 280-437213/14		102188	5.59	1782618	7.56	362991	9.83
MB 280-437213/6		202108	5.59	1807528	7.56	360439	9.83
LCS 280-437213/7		185477	5.59	1776991	7.56	357656	9.83
280-116270-2	FWGTB-181006 TB	149449	5.59	1336383	7.56	265424	9.83

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: ICIS 280-434433/14 Date Analyzed: 10/22/2018 23:54

Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): P1536.D Heated Purge: (Y/N) N

Calibration ID: 34114

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		434345	11.64				
UPPER LIMIT		868690	12.14				
LOWER LIMIT		217173	11.14				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-434433/17		529963	11.64				
CCV 280-436980/2		460042	11.65				
CCV 280-436980/3		428850	11.64				
MB 280-436980/4		404752	11.65				
LCS 280-436980/5		425613	11.64				
LCSD 280-436980/6		442555	11.64				
280-116270-1	FWGmw-018-181001-GW	282657	11.64				
280-116270-9	FWGmw-020-181001-GW	275096	11.64				
CCV 280-437213/2		554241	11.65				
CCV 280-437213/3		510001	11.64				
CCV 280-437213/14		539831	11.64				
MB 280-437213/6		510441	11.64				
LCS 280-437213/7		531738	11.64				
280-116270-2	FWGTB-181006 TB	380222	11.64				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: P2462.D

Analysis Method: 8260B | Date Collected: 10/26/2018 09:30

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 17:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.68	J	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: P2462.D

Analysis Method: 8260B | Date Collected: 10/26/2018 09:30

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 17:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
460-00-4	4-Bromofluorobenzene (Surr)	85		85-114
1868-53-7	Dibromofluoromethane (Surr)	96		80-119
2037-26-5	Toluene-d8 (Surr)	90		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2462.D
Lims ID: 280-116270-K-1
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 17:02:30 ALS Bottle#: 35 Worklist Smp#: 32
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116270-k-1 PH<2
Operator ID: SEIFERTJ Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 13:18:40 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: seifertj Date: 12-Nov-2018 13:14:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	94	110774	250.0	
* 1 Fluorobenzene	96	7.553	7.560	-0.007	98	997034	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.827	0.000	90	196232	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.650	-0.007	97	282657	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.017	0.000	92	185820	9.59	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	178332	9.58	
$ 7 Toluene-d8 (Surr)	98	8.754	8.754	0.000	96	743411	8.95	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.692	-0.007	84	214040	8.48	
26 Chloromethane	50		4.083				ND	
27 Vinyl chloride	62		4.209				ND	
29 Bromomethane	94		4.586				ND	
30 Chloroethane	64		4.642				ND	
41 Acetone	43		5.312				ND	
43 1,1-Dichloroethene	96		5.326				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84	5.701	5.701	0.000	95	6707	0.2671	
53 trans-1,2-Dichloroethene	96		5.916				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.631				ND	
63 cis-1,2-Dichloroethene	96		6.674				ND	
67 Chlorobromomethane	128		6.881				ND	
68 Chloroform	83		6.888				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
74 Carbon tetrachloride	117		7.238				ND	
76 1,2-Dichloroethane	62		7.374				ND	
77 Benzene	78		7.389				ND	
79 Trichloroethene	95		7.846				ND	
83 1,2-Dichloropropane	63		8.039				ND	
86 Dichlorobromomethane	83		8.218				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
91 Toluene	91	8.804	8.804	0.000	98	73161	0.6765	
93 trans-1,3-Dichloropropene	75		8.912				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.183				ND	
97 Tetrachloroethene	164		9.219				ND	
98 Chlorodibromomethane	129		9.398				ND	
100 Ethylene Dibromide	107		9.526				ND	
102 Chlorobenzene	112		9.855				ND	
103 Ethylbenzene	106		9.884				ND	
105 m-Xylene & p-Xylene	106		9.963				ND	U
107 o-Xylene	106		10.277				ND	
106 Styrene	104		10.277				ND	
108 Bromoform	173		10.492				ND	
112 1,1,2,2-Tetrachloroethane	83		10.749				ND	
116 Bromobenzene	156		10.856				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

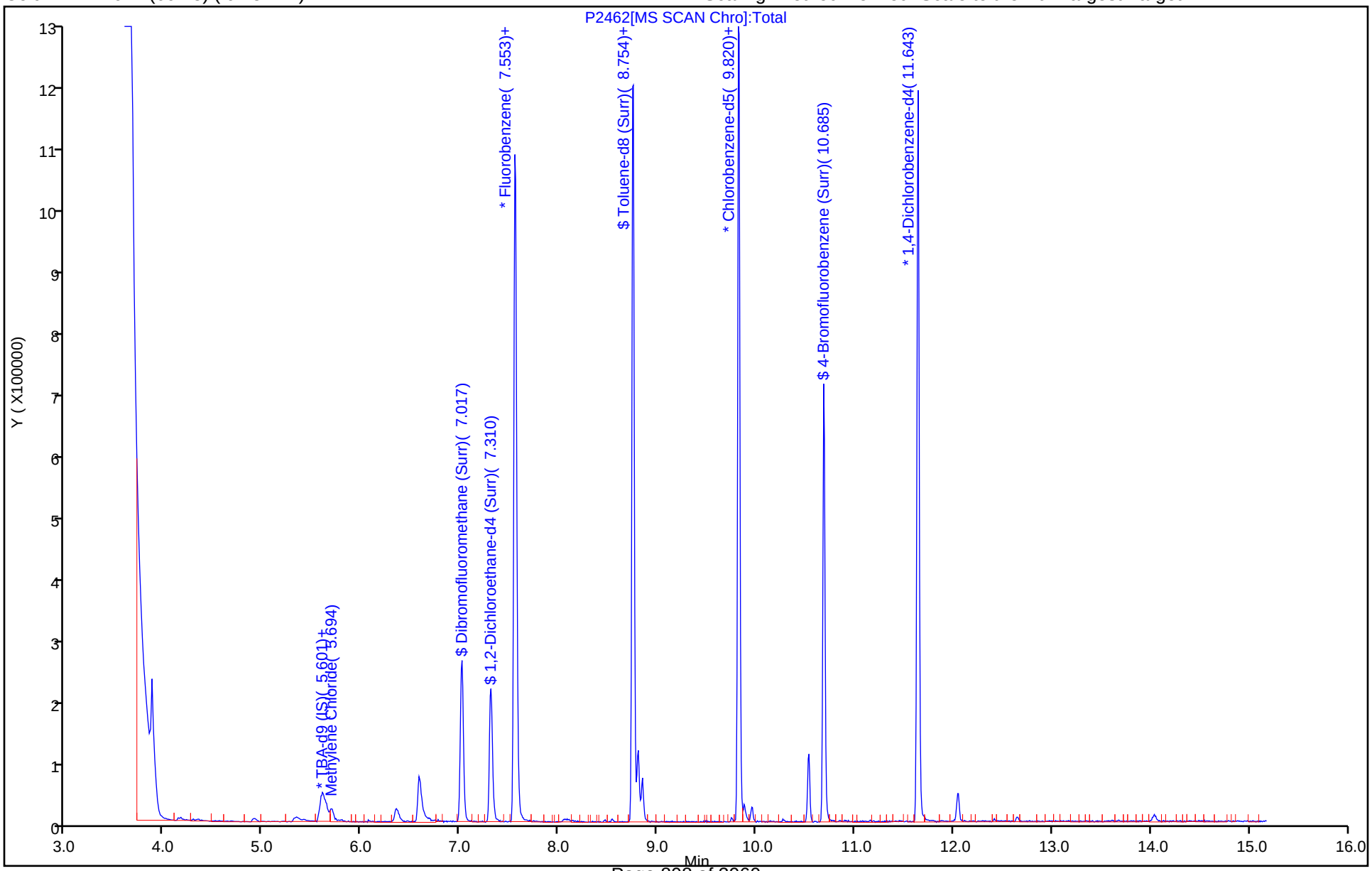
Report Date: 12-Nov-2018 13:21:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2462.D

Injection Date:	09-Nov-2018 17:02:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	280-116270-K-1	Lab Sample ID:	280-116270-1	Worklist Smp#:	32
Client ID:	FWGmw-018-181001-GW				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2462.D				
Lims ID:	280-116270-K-1				
Client ID:	FWGmw-018-181001-GW				
Sample Type:	Client				
Inject. Date:	09-Nov-2018 17:02:30	ALS Bottle#:	35	Worklist Smp#:	32
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116270-k-1 PH<2				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Nov-2018 13:18:40	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

First Level Reviewer: seifertj Date: 12-Nov-2018 13:14:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.59	95.86
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.58	95.83
$ 7 Toluene-d8 (Surr)	10.0	8.95	89.53
$ 8 4-Bromofluorobenzene (Surr)	10.0	8.48	84.79

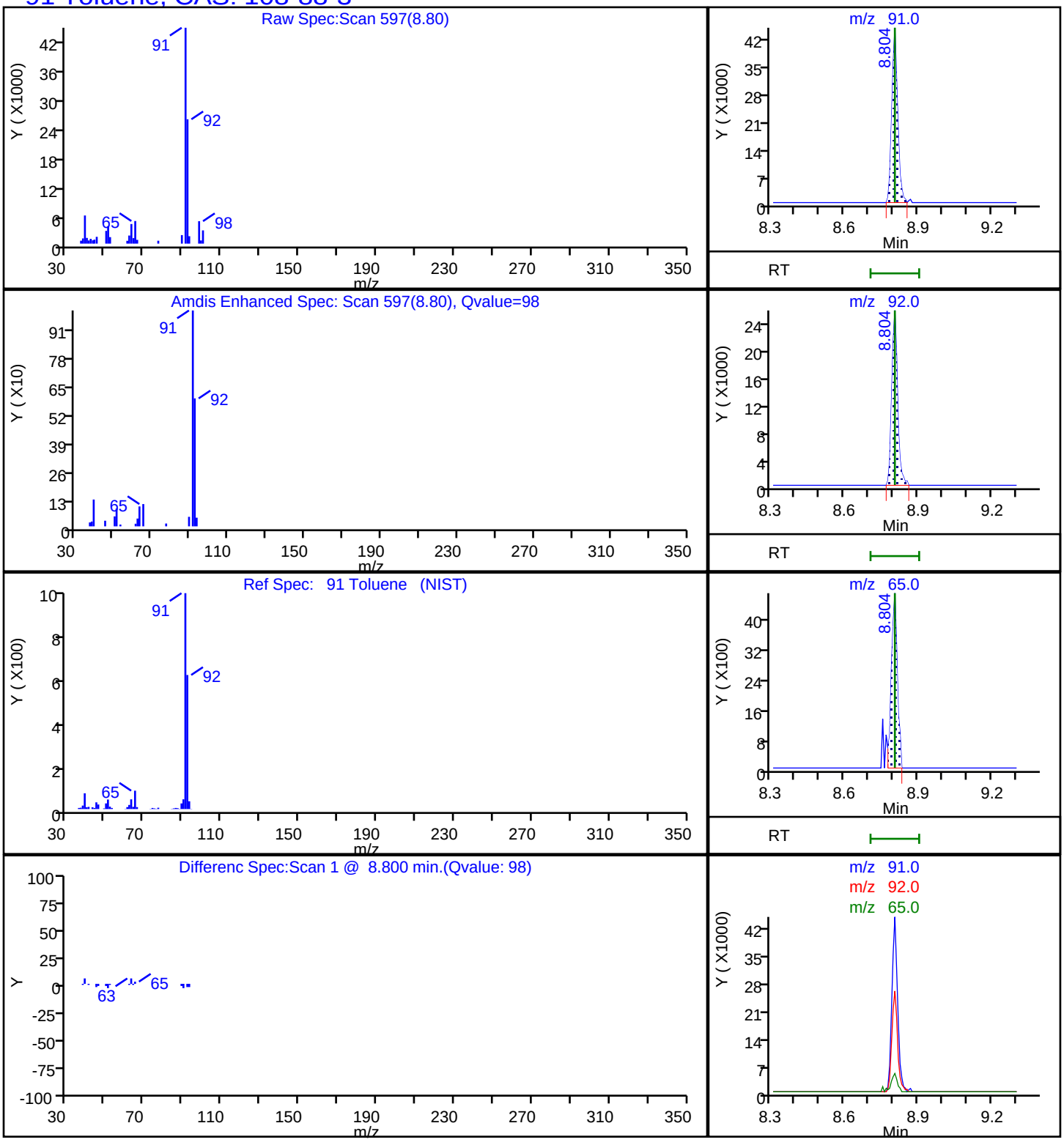
Report Date: 12-Nov-2018 13:21:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2462.D

Injection Date:	09-Nov-2018 17:02:30	Instrument ID:	VMS_P		
Lims ID:	280-116270-K-1	Lab Sample ID:	280-116270-1		
Client ID:	FWGmw-018-181001-GW				
Operator ID:	SEIFERTJ	ALS Bottle#:	35	Worklist Smp#:	32
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

91 Toluene, CAS: 108-88-3



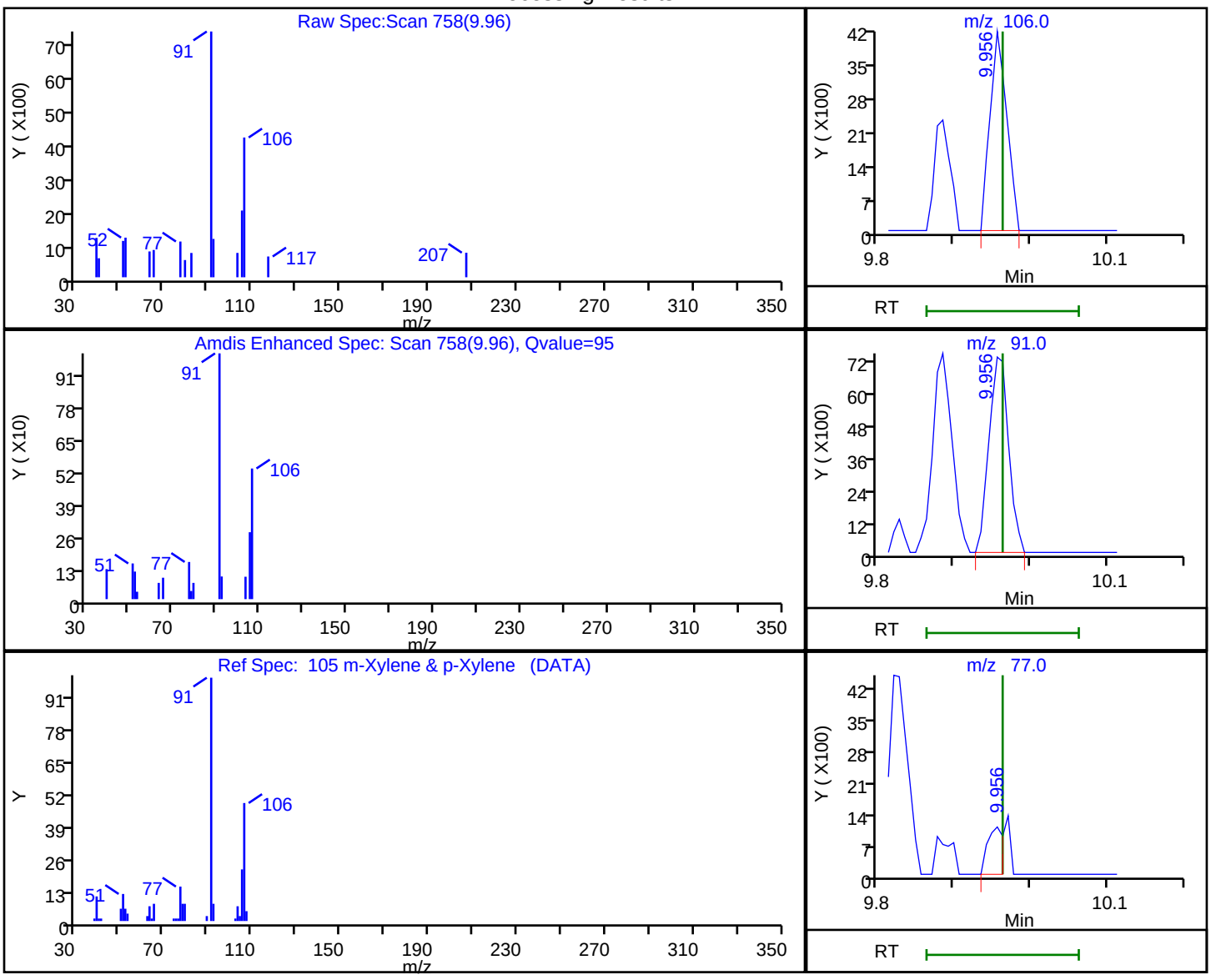
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2462.D				
Injection Date:	09-Nov-2018 17:02:30	Instrument ID:	VMS_P		
Lims ID:	280-116270-K-1	Lab Sample ID:	280-116270-1		
Client ID:	FWGmw-018-181001-GW				
Operator ID:	SEIFERTJ	ALS Bottle#:	35	Worklist Smp#:	32
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

105 m-Xylene & p-Xylene, CAS: 179601-23-1

Processing Results



RT	Mass	Response	Amount
9.96	106.00	6415	0.143771
9.96	91.00	13183	
9.96	77.00	1517	

Reviewer: seifertj, 12-Nov-2018 13:13:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGTB-181006 TB | Lab Sample ID: 280-116270-2

Matrix: Water | Lab File ID: P2561.D

Analysis Method: 8260B | Date Collected: 10/26/2018 09:30

Sample wt/vol: 20(mL) | Date Analyzed: 11/12/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437213 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U H	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U H	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U H	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U H	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U H	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U H	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U H	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U H	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U H	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U H	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U H	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U H	5.0	3.2	0.98
67-64-1	Acetone	6.4	U H	10	6.4	1.9
71-43-2	Benzene	0.40	U H	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U H	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U H	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U H	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U H	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U H	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U H	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U H	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U H	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U H	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U H	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U H	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U H	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U H	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.33	J H	5.0	0.80	0.32
100-42-5	Styrene	0.40	U H	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U H	1.0	0.40	0.20
108-88-3	Toluene	0.40	U H	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U H	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U H	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U H	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U H	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGTB-181006 TB | Lab Sample ID: 280-116270-2

Matrix: Water | Lab File ID: P2561.D

Analysis Method: 8260B | Date Collected: 10/26/2018 09:30

Sample wt/vol: 20(mL) | Date Analyzed: 11/12/2018 16:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437213 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		81-118
460-00-4	4-Bromofluorobenzene (Surr)	93		85-114
1868-53-7	Dibromofluoromethane (Surr)	99		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2561.D
Lims ID: 280-116270-B-2
Client ID: FWGTB-181006 TB
Sample Type: Client
Inject. Date: 12-Nov-2018 16:37:30 ALS Bottle#: 29 Worklist Smp#: 28
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116270-b-2 PH<2
Operator ID: seifertj Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 17:28:58 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0306

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.586	0.007	96	149449	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1336383	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	90	265424	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	380222	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.017	-0.001	92	256692	9.88	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	241353	9.68	
$ 7 Toluene-d8 (Surr)	98	8.754	8.754	0.000	95	1092043	9.72	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.692	-0.008	84	317085	9.34	
26 Chloromethane	50		4.086				ND	
27 Vinyl chloride	62		4.225				ND	
29 Bromomethane	94		4.589				ND	
30 Chloroethane	64		4.644				ND	
41 Acetone	43		5.315				ND	
43 1,1-Dichloroethene	96		5.329				ND	
48 Carbon disulfide	76		5.614				ND	
50 Methylene Chloride	84	5.694	5.700	-0.006	99	11018	0.3274	
53 trans-1,2-Dichloroethene	96		5.915				ND	
57 1,1-Dichloroethane	63		6.244				ND	
61 2-Butanone (MEK)	43		6.630				ND	
63 cis-1,2-Dichloroethene	96		6.680				ND	
67 Chlorobromomethane	128		6.880				ND	
68 Chloroform	83		6.887				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
74 Carbon tetrachloride	117		7.238				ND	
76 1,2-Dichloroethane	62		7.366				ND	
77 Benzene	78		7.381				ND	
79 Trichloroethene	95		7.845				ND	
83 1,2-Dichloropropane	63		8.038				ND	
86 Dichlorobromomethane	83		8.210				ND	
89 cis-1,3-Dichloropropene	75		8.532				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.589				ND	
91 Toluene	91		8.803				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
93 trans-1,3-Dichloropropene	75		8.911				ND	
94 1,1,2-Trichloroethane	97		9.068				ND	
95 2-Hexanone	43		9.182				ND	
97 Tetrachloroethene	164		9.211				ND	
98 Chlorodibromomethane	129		9.390				ND	
100 Ethylene Dibromide	107		9.518				ND	
102 Chlorobenzene	112		9.847				ND	
103 Ethylbenzene	106		9.883				ND	
105 m-Xylene & p-Xylene	106		9.955				ND	
107 o-Xylene	106		10.269				ND	
106 Styrene	104		10.276				ND	
108 Bromoform	173		10.484				ND	
112 1,1,2,2-Tetrachloroethane	83		10.741				ND	
116 Bromobenzene	156		10.856				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

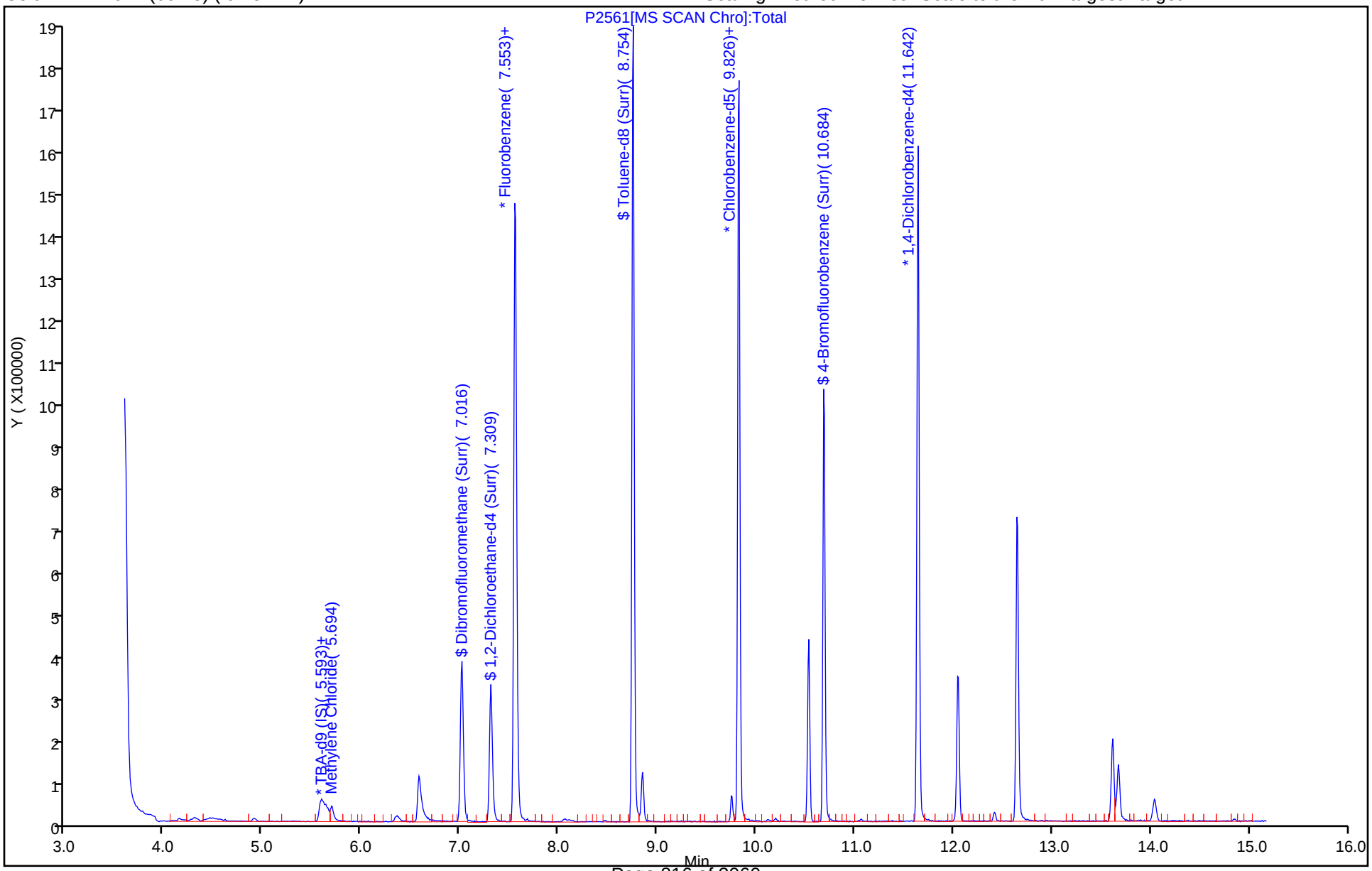
Report Date: 13-Nov-2018 17:30:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2561.D

Injection Date:	12-Nov-2018 16:37:30	Instrument ID:	VMS_P	Operator ID:	seifertj
Lims ID:	280-116270-B-2	Lab Sample ID:	280-116270-2	Worklist Smp#:	28
Client ID:	FWGTB-181006 TB				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2561.D				
Lims ID:	280-116270-B-2				
Client ID:	FWGTB-181006 TB				
Sample Type:	Client				
Inject. Date:	12-Nov-2018 16:37:30	ALS Bottle#:	29	Worklist Smp#:	28
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116270-b-2 PH<2				
Operator ID:	seifertj	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	13-Nov-2018 17:28:58	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0306				

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.88	98.79
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.68	96.76
$ 7 Toluene-d8 (Surr)	10.0	9.72	97.24
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.34	93.37

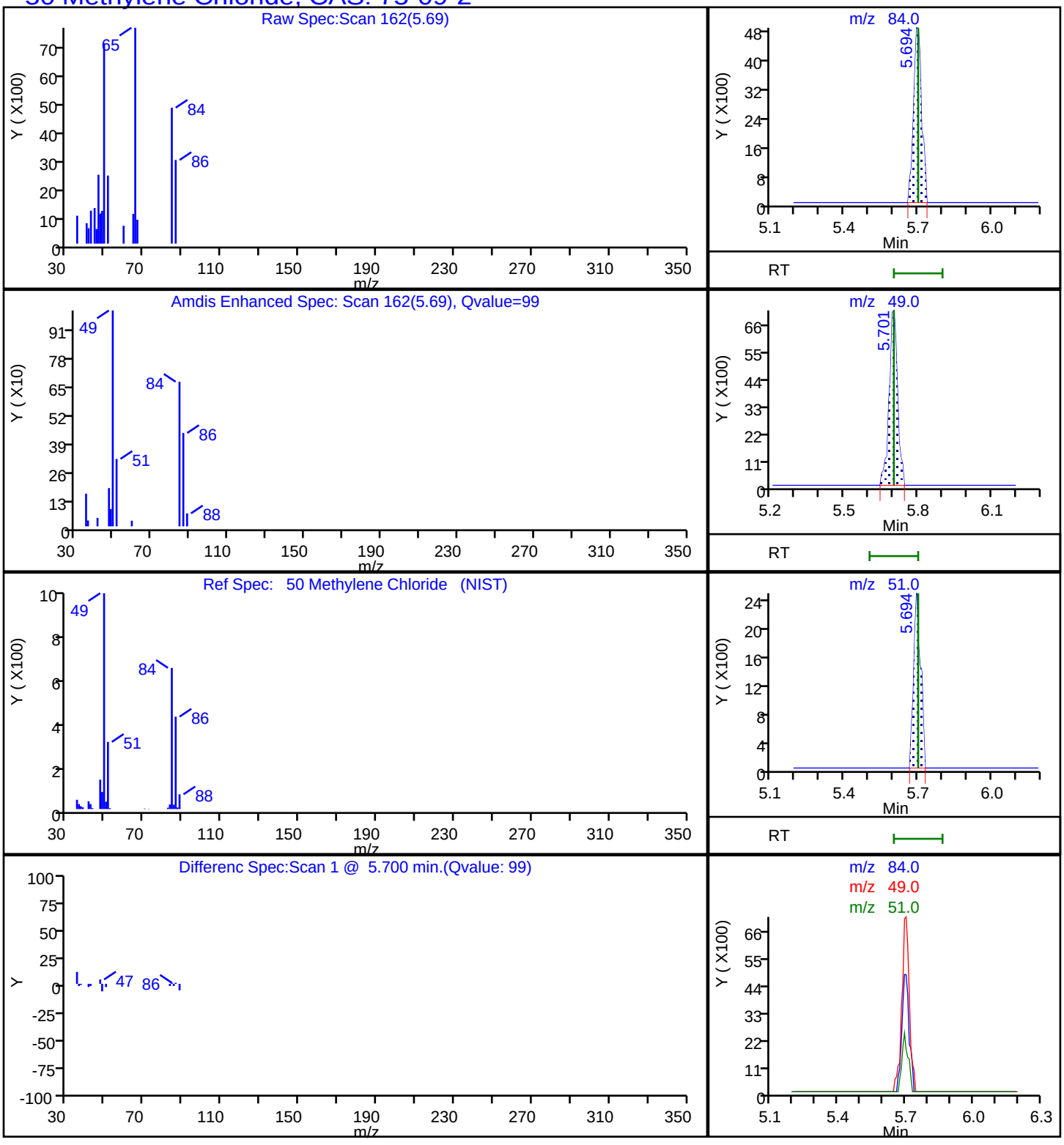
Report Date: 13-Nov-2018 17:30:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2561.D

Injection Date:	12-Nov-2018 16:37:30	Instrument ID:	VMS_P		
Lims ID:	280-116270-B-2	Lab Sample ID:	280-116270-2		
Client ID:	FWGTB-181006 TB				
Operator ID:	seifertj	ALS Bottle#:	29	Worklist Smp#:	28
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

50 Methylene Chloride, CAS: 75-09-2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-020-181001-GW | Lab Sample ID: 280-116270-9

Matrix: Water | Lab File ID: P2464.D

Analysis Method: 8260B | Date Collected: 10/26/2018 10:00

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 17:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.45	J	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-020-181001-GW | Lab Sample ID: 280-116270-9

Matrix: Water | Lab File ID: P2464.D

Analysis Method: 8260B | Date Collected: 10/26/2018 10:00

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 17:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
460-00-4	4-Bromofluorobenzene (Surr)	92		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	92		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2464.D
Lims ID: 280-116270-N-9
Client ID: FWGmw-020-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 17:39:30 ALS Bottle#: 37 Worklist Smp#: 34
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116270-n-9 PH<2
Operator ID: SEIFERTJ Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 13:18:40 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: seifertj Date: 12-Nov-2018 13:14:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.601	-0.008	94	106937	250.0	
* 1 Fluorobenzene	96	7.552	7.560	-0.008	98	973133	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.827	-0.001	90	193314	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.650	-0.008	97	275096	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.017	-0.001	91	185953	9.83	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	177870	9.79	
$ 7 Toluene-d8 (Surr)	98	8.753	8.754	-0.001	96	752215	9.20	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.692	-0.008	83	225925	9.20	
26 Chloromethane	50		4.083				ND	
27 Vinyl chloride	62		4.209				ND	
29 Bromomethane	94		4.586				ND	
30 Chloroethane	64		4.642				ND	
41 Acetone	43		5.312				ND	U
43 1,1-Dichloroethene	96		5.326				ND	
48 Carbon disulfide	76		5.608				ND	
50 Methylene Chloride	84	5.707	5.701	0.006	97	7364	0.3005	
53 trans-1,2-Dichloroethene	96		5.916				ND	
57 1,1-Dichloroethane	63		6.237				ND	
61 2-Butanone (MEK)	43		6.631				ND	
63 cis-1,2-Dichloroethene	96		6.674				ND	
67 Chlorobromomethane	128		6.881				ND	
68 Chloroform	83		6.888				ND	
71 1,1,1-Trichloroethane	97		7.095				ND	
74 Carbon tetrachloride	117		7.238				ND	
76 1,2-Dichloroethane	62		7.374				ND	
77 Benzene	78		7.389				ND	
79 Trichloroethene	95		7.846				ND	
83 1,2-Dichloropropane	63		8.039				ND	
86 Dichlorobromomethane	83		8.218				ND	
89 cis-1,3-Dichloropropene	75		8.533				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
91 Toluene	91	8.803	8.804	-0.001	97	47440	0.4495	
93 trans-1,3-Dichloropropene	75		8.912				ND	
94 1,1,2-Trichloroethane	97		9.069				ND	
95 2-Hexanone	43		9.183				ND	
97 Tetrachloroethene	164		9.219				ND	
98 Chlorodibromomethane	129		9.398				ND	
100 Ethylene Dibromide	107		9.526				ND	
102 Chlorobenzene	112		9.855				ND	
103 Ethylbenzene	106		9.884				ND	
105 m-Xylene & p-Xylene	106		9.963				ND	
107 o-Xylene	106		10.277				ND	
106 Styrene	104		10.277				ND	
108 Bromoform	173		10.492				ND	
112 1,1,2,2-Tetrachloroethane	83		10.749				ND	
116 Bromobenzene	156		10.856				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

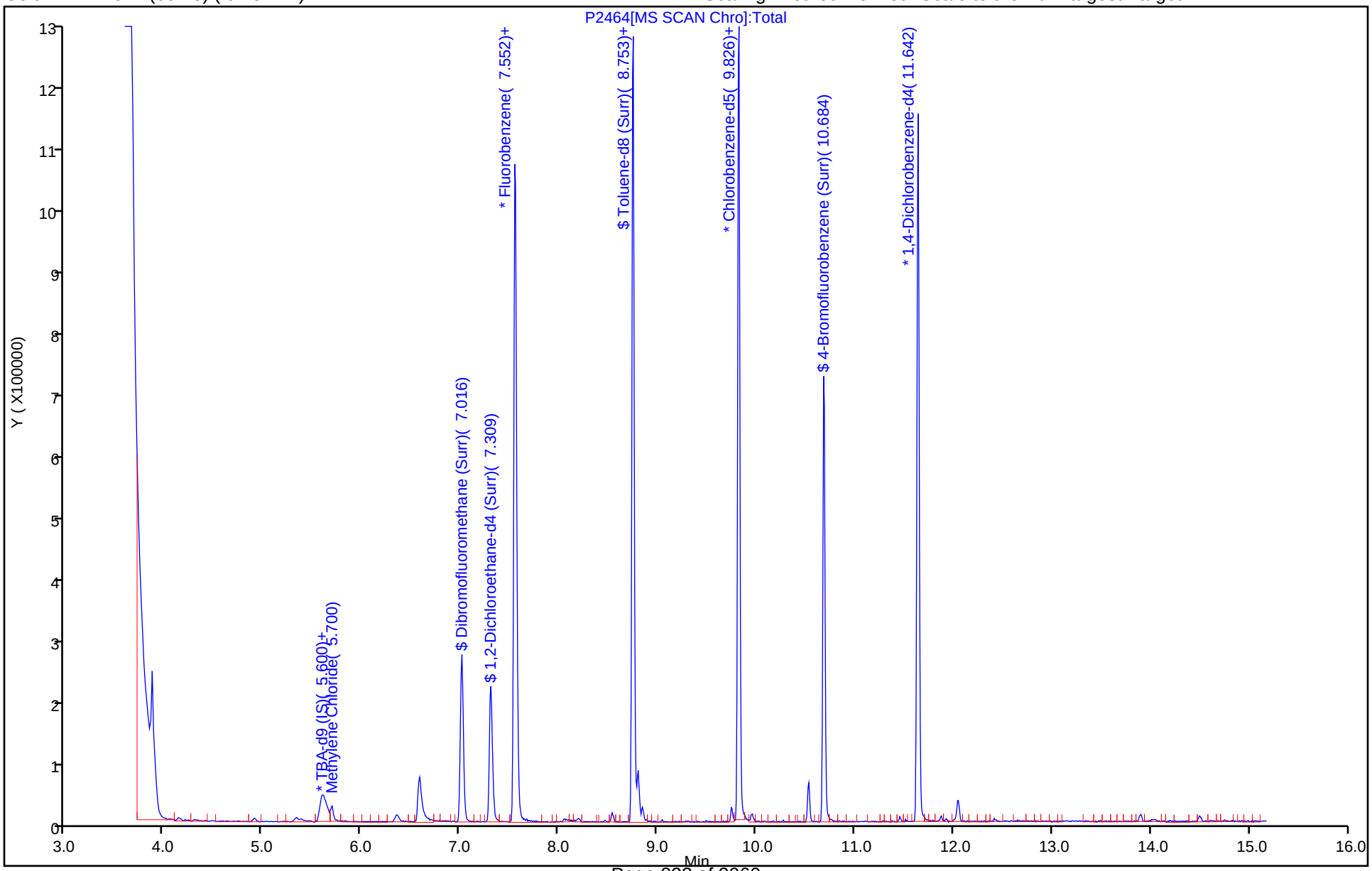
Report Date: 12-Nov-2018 13:21:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2464.D

Injection Date:	09-Nov-2018 17:39:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	280-116270-N-9	Lab Sample ID:	280-116270-9	Worklist Smp#:	34
Client ID:	FWGmw-020-181001-GW				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2464.D				
Lims ID:	280-116270-N-9				
Client ID:	FWGmw-020-181001-GW				
Sample Type:	Client				
Inject. Date:	09-Nov-2018 17:39:30	ALS Bottle#:	37	Worklist Smp#:	34
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116270-n-9 PH<2				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Nov-2018 13:18:40	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

First Level Reviewer: seifertj Date: 12-Nov-2018 13:14:44

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.83	98.28
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.79	97.93
$ 7 Toluene-d8 (Surr)	10.0	9.20	91.96
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.20	91.95

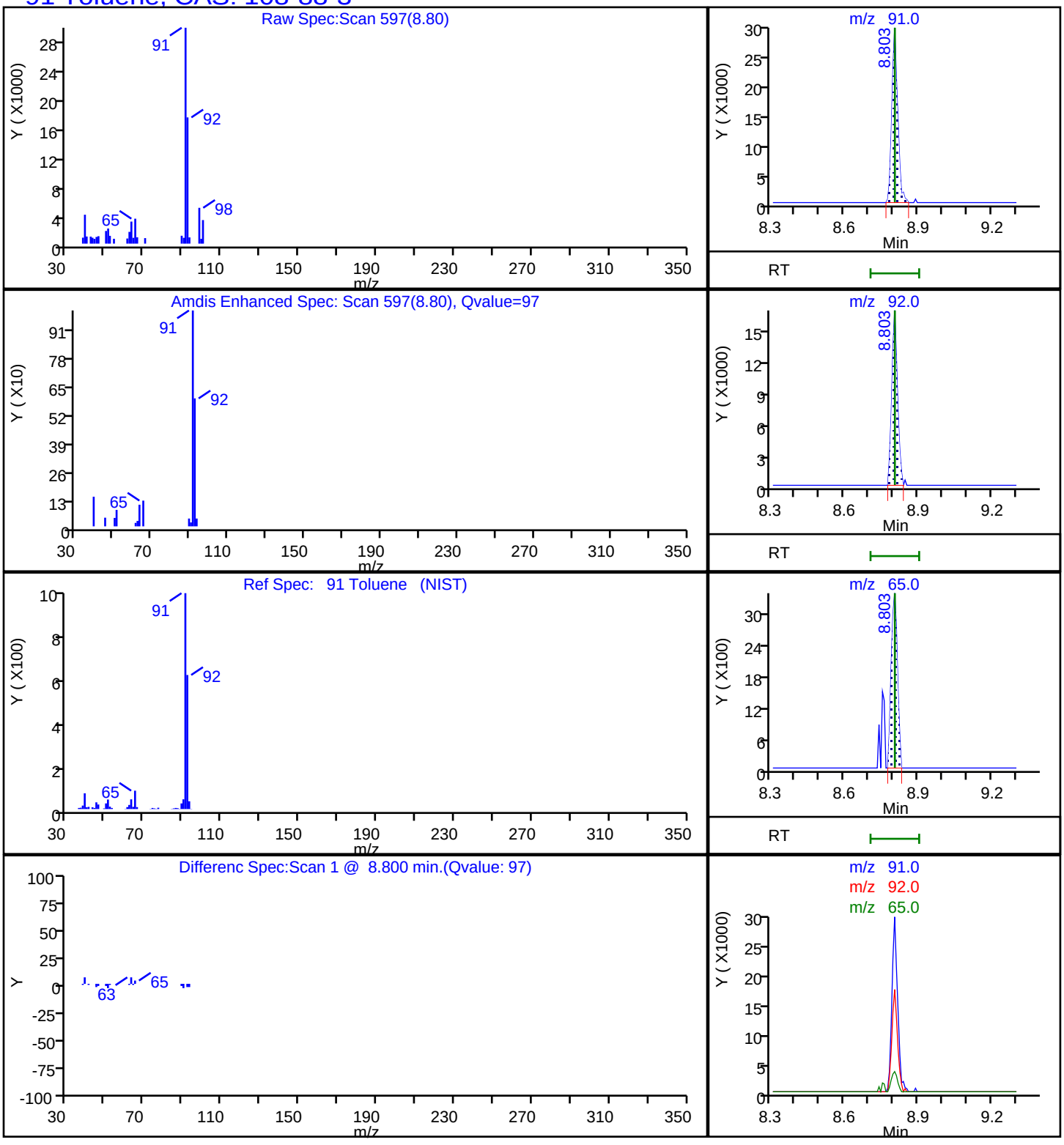
Report Date: 12-Nov-2018 13:21:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2464.D

Injection Date:	09-Nov-2018 17:39:30	Instrument ID:	VMS_P		
Lims ID:	280-116270-N-9	Lab Sample ID:	280-116270-9		
Client ID:	FWGmw-020-181001-GW				
Operator ID:	SEIFERTJ	ALS Bottle#:	37	Worklist Smp#:	34
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

91 Toluene, CAS: 108-88-3



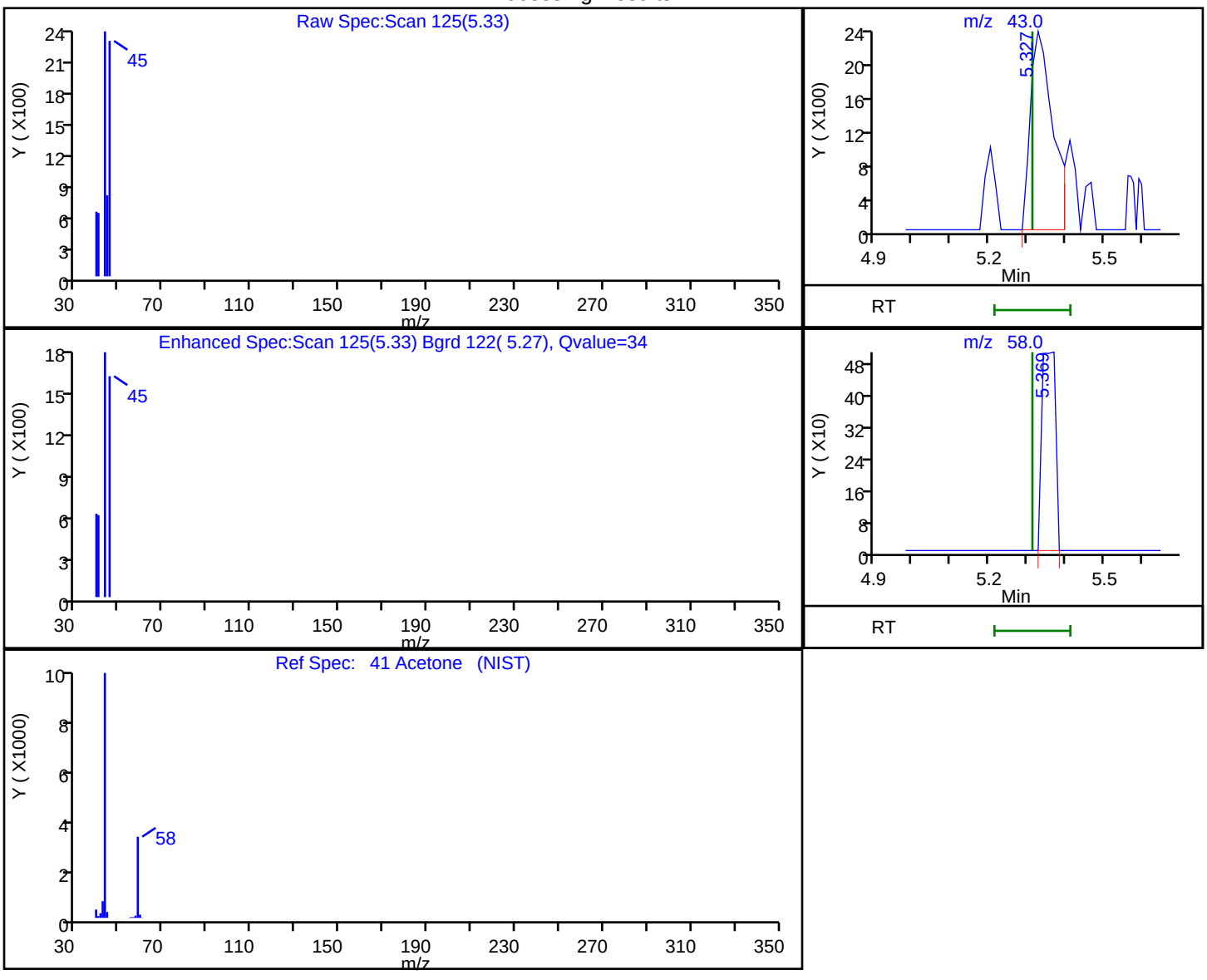
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2464.D				
Injection Date:	09-Nov-2018 17:39:30	Instrument ID:	VMS_P		
Lims ID:	280-116270-N-9	Lab Sample ID:	280-116270-9		
Client ID:	FWGmw-020-181001-GW				
Operator ID:	SEIFERTJ	ALS Bottle#:	37	Worklist Smp#:	34
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

41 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
5.33	43.00	9535	3.446765
5.37	58.00	1270	

Reviewer: seifertj, 12-Nov-2018 13:14:34

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434433/10	P1532.D
Level 2	STD01 280-434433/11	P1533.D
Level 3	STD02 280-434433/12	P1534.D
Level 4	STD05 280-434433/13	P1535.D
Level 5	ICIS 280-434433/14	P1536.D
Level 6	STD25 280-434433/15	P1537.D
Level 7	STD60 280-434433/16	P1538.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.5593 0.5814	0.5744 0.5541	0.5568	0.4972	0.6191	Ave		0.5632				6.5		15.0			
Chloromethane	0.3959 0.3699	0.3869 0.3418	0.3771	0.3478	0.3759	Ave		0.3707			0.1000	5.3		15.0			
Vinyl chloride	0.3763 0.3836	0.3854 0.3615	0.3845	0.3629	0.3942	Ave		0.3783				3.2		30.0			
Bromomethane	0.3373 0.3252	0.3481 0.2751	0.3306	0.3273	0.3444	Ave		0.3269				7.5		15.0			
Chloroethane	0.3270 0.3072	0.3350 0.2553	0.3166	0.3001	0.3275	Ave		0.3098				8.7		15.0			
Dichlorofluoromethane	0.8116 0.7824	0.7997 0.7443	0.8038	0.7723	0.7957	Ave		0.7871				2.9		15.0			
Trichlorofluoromethane	0.7188 0.7153	0.7215 0.7004	0.7284	0.6899	0.7157	Ave		0.7129				1.9		15.0			
Ethyl ether	0.1524 0.1592	0.1501 0.1551	0.1456	0.1502	0.1604	Ave		0.1533				3.5		15.0			
Acrolein	0.0113 0.0180	0.0133 0.0174	0.0155	0.0159	0.0176	Lin2	-0.033	0.0174							0.9980		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2935 0.3101	0.3003 0.3051	0.2983	0.2963	0.3014	Ave		0.3007				1.8		15.0			
Acetone	0.0344 0.0357	0.0378 0.0354	0.0346	0.0341	0.0367	Ave		0.0355				3.8		15.0			
1,1-Dichloroethene	0.3541 0.3801	0.3651 0.3612	0.3641	0.3565	0.3776	Ave		0.3655				2.7		30.0			
Iodomethane	0.4923 0.5224	0.4805 0.5166	0.5037	0.5006	0.5357	Ave		0.5074				3.7		15.0			
Methyl acetate	+++++ 0.0746	0.0962 0.0743	0.0846	0.0797	0.0758	Ave		0.0809				10.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.6225 0.6915	0.6251 0.6446	0.6361	0.6529	0.6963	Ave		0.6527				4.6		15.0			
Carbon disulfide	1.4486 1.5315	1.4515 1.4028	1.4922	1.4854	1.5808	Ave		1.4847				3.9		15.0			
t-Butyl alcohol	0.4640 1.2977	0.5374 1.2754	1.2747	1.0684	1.3021	Lin1	-4.778	1.2946							0.9980		0.9900
Methylene Chloride	0.3748 0.2943	0.3389 0.2797	0.3148	0.2980	0.3029	Ave		0.3148				10.3		15.0			
Methyl tert-butyl ether	0.3708 0.4152	0.3866 0.4048	0.3923	0.3937	0.4129	Ave		0.3966				4.0		15.0			
Acrylonitrile	0.0063 0.0343	0.0205 0.0340	0.0210	0.0294	0.0332	Lin2	-0.138	0.0331							0.9920		0.9900
trans-1,2-Dichloroethene	0.3467 0.3655	0.3644 0.3532	0.3606	0.3546	0.3707	Ave		0.3594				2.3		15.0			
Hexane	3.3878 3.3389	3.3784 3.1097	3.3685	3.4745	3.4567	Ave		3.3592				3.6		15.0			
Vinyl acetate	0.1833 0.3061	0.2466 0.2983	0.2467	0.2511	0.3043	Lin2	-0.112	0.2931							0.9950		0.9900
1,1-Dichloroethane	0.6230 0.6410	0.6309 0.6176	0.6299	0.6210	0.6457	Ave		0.6299			0.1000	1.7		15.0			
2-Butanone (MEK)	+++++ 0.0543	0.0453 0.0543	0.0456	0.0497	0.0551	Ave		0.0507				8.9		15.0			
cis-1,2-Dichloroethene	0.3305 0.3523	0.3333 0.3411	0.3406	0.3343	0.3489	Ave		0.3401				2.4		15.0			
sec-Butyl Alcohol	+++++ 1.1391	0.8853 1.1648	0.5555	0.6791	0.8601	Lin	-51.88	1.1916							0.9980		0.9900
2,2-Dichloropropane	0.4908 0.5687	0.5275 0.5655	0.5223	0.5112	0.5535	Ave		0.5342				5.5		15.0			
Bromochloromethane	0.0953 0.1071	0.0973 0.1064	0.1002	0.1001	0.1063	Ave		0.1018				4.7		15.0			
Chloroform	0.5231 0.5756	0.5416 0.5722	0.5495	0.5530	0.5677	Ave		0.5547				3.4		30.0			
Tetrahydrofuran	+++++ 0.0300	+++++ 0.0291	0.0235	0.0255	0.0261	Ave		0.0268				9.9		15.0			
1,1,1-Trichloroethane	0.5211 0.6082	0.5326 0.6109	0.5551	0.5483	0.5924	Ave		0.5669				6.5		15.0			
Isobutyl alcohol	+++++ 0.5848	+++++ 0.5591	0.3218	0.2107	0.3880	Lin	-29.06	0.5838							0.9960		0.9900
Cyclohexane	0.7503 0.7970	0.7857 0.7381	0.7701	0.7854	0.8095	Ave		0.7766				3.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.5076 0.5543	0.5104 0.5437	0.5174	0.5193	0.5566	Ave		0.5299				4.0		15.0			
Carbon tetrachloride	0.4056 0.5310	0.4306 0.5441	0.4524	0.4657	0.5033	Ave		0.4761				10.9		15.0			
1,2-Dichloroethane	0.2786 0.3167	0.2786 0.3220	0.2846	0.2937	0.3088	Ave		0.2976				6.1		15.0			
Benzene	1.2971 1.3624	1.3414 1.2694	1.3350	1.3236	1.3723	Ave		1.3287				2.7		15.0			
Trichloroethene	0.3334 0.3681	0.3249 0.3681	0.3421	0.3409	0.3513	Ave		0.3470				4.8		15.0			
2-Pentanone	+++++ 0.0710	0.0452 0.0715	0.0498	0.0584	0.0667	Lin2	-0.109	0.0689							0.9950		0.9900
Methylcyclohexane	0.5933 0.6596	0.6191 0.6272	0.6287	0.6311	0.6590	Ave		0.6311				3.6		15.0			
1,2-Dichloropropane	0.2784 0.3023	0.2919 0.2832	0.2880	0.2886	0.3025	Ave		0.2907				3.1		30.0			
1,4-Dioxane	+++++ 0.0009	+++++ 0.0009	0.0004	0.0007	0.0008	Lin2	-0.020	0.0009							0.9990		0.9900
Dibromomethane	0.0916 0.1062	0.0977 0.1054	0.0954	0.0993	0.1045	Ave		0.1000				5.6		15.0			
Bromodichloromethane	0.2737 0.3473	0.2969 0.3532	0.2892	0.3084	0.3320	Ave		0.3144				9.7		15.0			
2-Chloroethyl vinyl ether	0.0338 0.0728	0.0410 0.0754	0.0475	0.0559	0.0645	Lin1	-0.033	0.0739							0.9960		0.9900
cis-1,3-Dichloropropene	1.1954 1.7863	1.3352 1.7940	1.4248	1.5344	1.7179	Lin2	-0.291	1.7016							0.9950		0.9900
4-Methyl-2-pentanone (MIBK)	0.0827 0.1114	0.0846 0.1072	0.0934	0.0992	0.1083	Ave		0.0981				11.8		15.0			
Toluene	1.3250 1.4094	1.3493 1.3052	1.3577	1.3410	1.4032	Ave		1.3558				2.8		30.0			
Ethyl methacrylate	0.4238 0.7718	0.4789 0.7886	0.5591	0.6251	0.7356	Lin1	-0.282	0.7814							0.9980		0.9900
trans-1,3-Dichloropropene	0.1540 0.2680	0.1721 0.2722	0.1892	0.2180	0.2485	Lin1	-0.095	0.2695							0.9980		0.9900
1,1,2-Trichloroethane	0.1209 0.1379	0.1327 0.1350	0.1266	0.1251	0.1357	Ave		0.1305				4.9		15.0			
2-Hexanone	0.1786 0.3551	0.2333 0.3501	0.2733	0.3189	0.3421	Lin2	-0.359	0.3425							0.9970		0.9900
1,3-Dichloropropane	1.2052 1.3111	1.1997 1.2826	1.2340	1.2638	1.3072	Ave		1.2577				3.7		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.1508 1.3748	1.1949 1.4180	1.1966	1.2779	1.3367	Ave		1.2785				8.0		15.0			
Dibromochloromethane	0.4989 0.8136	0.5922 0.8433	0.6151	0.6908	0.7663	Lin2	-0.156	0.7748							0.9930		0.9900
1,2-Dibromoethane	0.4235 0.6042	0.5193 0.6062	0.5395	0.5610	0.5966	Ave		0.5501				11.8		15.0			
1-Chlorohexane	2.0433 2.6174	2.2939 2.5133	2.2687	2.4354	2.5784	Ave		2.3929				8.5		15.0			
Chlorobenzene	3.5852 3.7996	3.6467 3.6680	3.6310	3.6877	3.7567	Ave		3.6822			0.3000	2.0		15.0			
Ethylbenzene	2.1664 2.6094	2.3655 2.4850	2.3308	2.4724	2.5497	Ave		2.4256				6.2		30.0			
1,1,1,2-Tetrachloroethane	0.9447 1.2860	0.9708 1.3319	1.0285	1.1359	1.2076	Ave		1.1293				13.6		15.0			
m-Xylene & p-Xylene	2.6062 3.0314	2.6900 2.9564	2.6776	2.8982	3.0361	Ave		2.8423				6.4		15.0			
o-Xylene	2.2941 2.8541	2.4911 2.6852	2.5459	2.7072	2.8233	Ave		2.6287				7.5		15.0			
Styrene	2.9292 4.2332	3.1838 3.9265	3.4569	3.8056	4.0872	Ave		3.6603				13.2		15.0			
Bromoform	+++++ 0.3522	0.2397 0.3827	0.2730	0.2784	0.3170	Lin2	-0.119	0.3438			0.1000				0.9900		0.9900
Isopropylbenzene	4.7764 5.5416	5.0032 4.8380	5.0944	5.2145	5.5940	Ave		5.1517				6.2		15.0			
Cyclohexanone	0.0126 0.0224	0.0146 0.0228	0.0159	0.0185	0.0206	Lin2	-0.193	0.0209							0.9900		0.9900
1,1,2,2-Tetrachloroethane	0.3733 0.4794	0.4999 0.4417	0.4573	0.4608	0.4870	Ave		0.4570			0.3000	9.2		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1281	+++++ 0.1236	0.0906	0.1087	0.1122	Ave		0.1127				13.0		15.0			
1,2,3-Trichloropropane	0.0967 0.1309	0.1217 0.1231	0.1198	0.1207	0.1350	Ave		0.1211				10.1		15.0			
N-Propylbenzene	1.2659 1.5750	1.4012 1.4192	1.3857	1.4226	1.5604	Ave		1.4328				7.4		15.0			
Bromobenzene	0.7882 0.9713	0.8558 0.9058	0.8437	0.8635	0.9237	Ave		0.8789				6.8		15.0			
1,3,5-Trimethylbenzene	3.7113 4.6012	3.9853 4.1260	4.1280	4.1984	4.5200	Ave		4.1815				7.3		15.0			
2-Chlorotoluene	1.1260 1.1979	1.1042 1.1114	1.0534	1.1201	1.1843	Ave		1.1282				4.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	0.9773 1.1762	1.0672 1.1186	1.0455	1.1012	1.1399	Ave		1.0894				6.0		15.0			
tert-Butylbenzene	3.5294 4.5504	3.8332 4.1762	3.9327	4.1102	4.4260	Ave		4.0797				8.6		15.0			
1,2,4-Trimethylbenzene	3.7060 4.5296	4.1382 4.0949	4.1268	4.1880	4.5216	Ave		4.1864				6.7		15.0			
sec-Butylbenzene	0.9161 1.2727	1.0584 1.1741	1.1257	1.1579	1.2254	Ave		1.1329				10.4		15.0			
4-Isopropyltoluene	4.2319 5.1859	4.6574 4.5472	4.7093	4.8271	5.0960	Ave		4.7507				6.9		15.0			
1,3-Dichlorobenzene	1.8937 2.0637	1.9282 1.9623	1.9621	1.9155	2.0371	Ave		1.9661				3.2		15.0			
1,4-Dichlorobenzene	1.9588 2.0205	1.9505 1.9122	1.8918	1.9018	2.0286	Ave		1.9520				2.8		15.0			
n-Butylbenzene	4.6104 5.5790	5.1842 4.7544	5.1203	5.3399	5.5906	Ave		5.1684				7.3		15.0			
1,2-Dichlorobenzene	1.5022 1.6584	1.5994 1.5667	1.5383	1.5693	1.6375	Ave		1.5817				3.5		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0595	0.0265 0.0600	0.0376	0.0483	0.0547	Lin2	-0.034	0.0584							0.9960		0.9900
1,2,4-Trichlorobenzene	0.9649 1.1116	1.0055 1.0412	0.9461	1.0388	1.0933	Ave		1.0288				6.0		15.0			
Hexachlorobutadiene	0.7264 0.8420	0.7722 0.8082	0.8134	0.7845	0.8191	Ave		0.7951				4.8		15.0			
Naphthalene	1.2315 1.4745	1.2483 1.3373	1.2386	1.3391	1.4602	Ave		1.3328				7.7		15.0			
1,2,3-Trichlorobenzene	0.7441 0.8147	0.7696 0.7546	0.7234	0.7624	0.8292	Ave		0.7711				4.9		15.0			
Dibromofluoromethane (Surr)	0.2304 0.2609	0.2406 +++++	0.2406	0.2405	0.2452	Ave		0.2430				4.1		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2192 0.2427	0.2444 +++++	0.2299	0.2297	0.2340	Ave		0.2333				4.0		15.0			
Toluene-d8 (Surr)	4.8943 5.5371	5.2380 +++++	5.2448	5.4902	5.3298	Ave		5.2890				4.3		15.0			
4-Bromofluorobenzene (Surr)	+++++ 1.1856	1.0712 +++++	1.1205	1.0845	1.1202	Ave		1.1164				4.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-434433/10	P1532.D
Level 2	STD01 280-434433/11	P1533.D
Level 3	STD02 280-434433/12	P1534.D
Level 4	STD05 280-434433/13	P1535.D
Level 5	ICIS 280-434433/14	P1536.D
Level 6	STD25 280-434433/15	P1537.D
Level 7	STD60 280-434433/16	P1538.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	32727 1858093	64524 4693289	121060	288075	735470	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	23167 1182249	43460 2894998	81987	201527	446492	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	22017 1225859	43293 3061908	83596	210263	468232	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	19740 1039359	39108 2330479	71874	189648	409171	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	19133 981944	37628 2162819	68837	173908	388990	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	47489 2500432	89832 6305032	174761	447493	945199	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	42062 2286034	81045 5932606	158379	399761	850192	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	8919 508960	16866 1314028	31659	87003	190523	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Lin2	6634 573918	14887 1475122	33729	92160	209052	5.00 250	10.0 600	20.0	50.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	17174 991032	33735 2584242	64853	171677	358066	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	8044 456902	16981 1199807	30134	79019	174333	2.00 100	4.00 240	8.00	20.0	40.0
1,1-Dichloroethene	FB	Ave	20720 1214896	41013 3059955	79158	206552	448527	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Ave	28808 1669775	53981 4375661	109524	290041	636348	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	+++++ 477010	21612 1259076	36791	92314	180114	+++++ 50.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	36428 2210140	70224 5459964	138300	378288	827117	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	84768 4894616	163058 11882759	324432	860685	1877821	0.500 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Lin1	1282 227884	2960 620909	14574	32788	80061	5.00 250	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	21933 940718	38072 2369557	68450	172686	359867	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	21695 1326974	43426 3428838	85292	228132	490502	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Lin2	3705 1096397	22989 2883332	45668	170334	394024	5.00 250	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	20289 1168190	40932 2992033	78406	205469	440349	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZd5	Ave	38797 2172540	73818 5359904	143622	388299	812580	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Lin2	21450 1956800	55413 5053902	107261	290934	722969	1.00 50.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	36457 2048571	70878 5231410	136963	359804	767035	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 694115	20353 1838987	39668	115296	261640	+++++ 100	4.00 240	8.00	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	19339 1125825	37436 2889476	74044	193695	414480	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butyl Alcohol	TBAd9	Lin	+++++ 600116	14628 1701173	19054	62519	158648	+++++ 750	30.0 1800	60.0	150	300
2,2-Dichloropropane	FB	Ave	28717 1817586	59262 4790387	113569	296230	657503	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	5579 342377	10934 901336	21794	58002	126234	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	30608 1839496	60837 4846835	119482	320415	674374	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 191563	+++++ 492719	10227	29507	62125	+++++ 50.0	+++++ 120	4.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	30490 1943964	59831 5174443	120692	317711	703751	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd9	Lin	+++++ 256725	+++++ 680435	9197	16165	59640	+++++ 625	+++++ 1500	50.0	125	250
Cyclohexane	FB	Ave	43905 2547223	88259 6252132	167435	455095	961671	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	29704 1771456	57338 4605301	112494	300901	661228	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	23735 1697208	48372 4608704	98369	269831	597861	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	16304 1012106	31302 2727259	61884	170173	366821	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	75903 4354273	150687 10752710	290252	766954	1630124	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	19510 1176545	36496 3117767	74371	197532	417356	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Lin2	+++++ 908003	20310 2422968	43344	135385	317112	+++++ 100	4.00 240	8.00	20.0	40.0
Methylcyclohexane	FB	Ave	34719 2107985	69542 5312605	136683	365705	782852	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	16290 966306	32789 2398505	62620	167234	359294	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 54445	+++++ 154523	1795	8163	19825	+++++ 500	+++++ 1200	40.0	100	200
Dibromomethane	FB	Ave	5359 339447	10980 892486	20746	57520	124133	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	16015 1110029	33353 2991730	62887	178676	394336	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin1	1975 232604	4601 638560	10317	32379	76671	0.500 25.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Lin2	13690 1162264	29175 3092117	60749	171480	403835	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	19352 1423611	38008 3633639	81186	229983	514547	2.00 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	77531 4504430	151573 11055512	295185	777005	1666906	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin1	4853 502168	10463 1359256	23837	69856	172920	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Lin1	9014 856567	19335 2305617	41138	126342	295254	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	7072 440600	14903 1143505	27529	72468	161187	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Lin2	8179 924099	20394 2413876	46610	142570	321667	2.00 100	4.00 240	8.00	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	13802 853095	26213 2210702	52615	141240	307296	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	13179 894564	26109 2444032	51020	142816	314232	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Lin2	5713 529411	12939 1453495	26226	77205	180138	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	4850 393143	11346 1044908	23001	62700	140256	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	23399 1703083	50122 4331901	96728	272171	606115	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	41057 2472302	79681 6322200	154815	412129	883115	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	24809 1697879	51687 4283066	99377	276301	599364	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	10818 836763	21212 2295577	43853	126939	283865	0.500 25.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	29846 1972447	58776 5095712	114163	323887	713702	0.500 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	26272 1857075	54430 4628210	108550	302542	663675	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	33545 2754394	69566 6767658	147392	425301	960799	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Lin2	+++++ 229187	5238 659560	11638	31110	74512	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	79213 5332082	156766 12941106	320176	883990	1943780	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Lin2	5792 582097	12776 1568876	27187	82840	193401	20.0 1000	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	6191 461284	15663 1181451	28739	78114	169222	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	+++++ 123288	+++++ 330653	5696	18430	38987	+++++ 25.0	+++++ 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	1603 125958	3814 329287	7528	20458	46922	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	20993 1515447	43903 3796203	87089	241162	542206	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	13071 934605	26816 2422825	53027	146383	320968	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	61549 4427245	124872 11036786	259442	711741	1570604	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	18674 1152643	34598 2972965	66207	189887	411519	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	16208 1131730	33438 2992125	65710	186687	396075	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	58532 4378350	120107 11170940	247166	696794	1537937	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	61461 4358310	129664 10953609	259364	709970	1571155	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	15192 1224554	33162 3140484	70746	196300	425798	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 434433

SDG No.:

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/22/2018 22:40 Calibration End Date: 10/23/2018 00:32 Calibration ID: 34114

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	70182 4989795	145932 12163407	295972	818323	1770755	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	31405 1985697	60418 5248864	123316	324721	707859	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	32485 1944066	61114 5114875	118897	322407	704882	0.500 25.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	76459 5368086	162438 12717640	321804	905256	1942615	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	24912 1595669	50114 4190892	96678	266034	569001	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	+++++ 57253	830 160385	2360	8194	19021	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	16002 1069570	31506 2785041	59461	176111	379903	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	12046 810182	24196 2161747	51124	132994	284608	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	20424 1418730	39113 3577030	77845	227007	507371	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	12340 783888	24115 2018581	45464	129241	288132	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	13484 833783	27029 +++++	52307	139375	291273	0.500 25.0	1.00 +++++	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	12829 775548	27451 +++++	49986	133077	277981	0.500 25.0	1.00 +++++	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	56049 3602810	114452 +++++	223621	613563	1252902	0.500 25.0	1.00 +++++	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	+++++ 1140773	33565 +++++	70424	183848	389233	+++++ 25.0	1.00 +++++	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Oct-2018 22:40:30 ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD005
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:46 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:14:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.607	-0.007	88	138141	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.559	-0.007	98	1462893	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	90	286296	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	98	414602	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	86	13484	0.5000	0.4741	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.316	7.309	0.007	93	12829	0.5000	0.4699	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	56049	0.5000	0.4627	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	83	17319	0.5000	0.4677	
23 Dichlorodifluoromethane	85	3.847	3.845	0.002	99	32727	0.5000	0.4965	
26 Chloromethane	50	4.070	4.083	-0.013	97	23167	0.5000	0.5339	
27 Vinyl chloride	62	4.210	4.222	-0.012	96	22017	0.5000	0.4973	
29 Bromomethane	94	4.573	4.585	-0.012	92	19740	0.5000	0.5160	
30 Chloroethane	64	4.643	4.641	0.002	98	19133	0.5000	0.5277	
31 Dichlorofluoromethane	67	4.783	4.795	-0.012	98	47489	0.5000	0.5155	
32 Trichlorofluoromethane	101	4.894	4.893	0.001	99	42062	0.5000	0.5042	
35 Ethyl ether	59	5.048	5.060	-0.012	93	8919	0.5000	0.4971	
39 Acrolein	56	5.230	5.214	0.016	81	6634	5.00	5.15	
40 1,1,2-Trichloro-1,2,2-trif	151	5.285	5.298	-0.013	93	17174	0.5000	0.4880	
41 Acetone	43	5.327	5.326	0.001	27	8044	2.00	1.93	
43 1,1-Dichloroethene	96	5.327	5.326	0.001	95	20720	0.5000	0.4844	
44 Iodomethane	142	5.522	5.521	0.001	99	28808	0.5000	0.4851	
45 Methyl acetate	43		5.557				ND	ND	U
47 3-Chloro-1-propene	41	5.600	5.600	0.000	66	36428	0.5000	0.4769	
48 Carbon disulfide	76	5.608	5.614	-0.006	98	84768	0.5000	0.4879	
49 2-Methyl-2-propanol	59	5.701	5.664	0.037	29	1282	5.00	5.48	
50 Methylene Chloride	84	5.701	5.700	0.001	98	21933	0.5000	0.5953	
52 Acrylonitrile	53	5.872	5.872	0.000	1	3705	5.00	5.11	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	97	21695	0.5000	0.4674	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	95	20289	0.5000	0.4824	
54 Hexane	57	6.065	6.072	-0.007	94	38797	0.5000	0.5043	
55 Vinyl acetate	43	6.187	6.179	0.008	98	21450	1.00	1.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.237	6.243	-0.006	96	36457	0.5000	0.4946	
61 2-Butanone (MEK)	43		6.630				ND	ND	
62 sec-Butyl Alcohol	45	6.594	6.680	-0.086	31	9777	15.0	58.4	
63 cis-1,2-Dichloroethene	96	6.673	6.680	-0.007	86	19339	0.5000	0.4858	
64 2,2-Dichloropropane	77	6.694	6.701	-0.007	82	28717	0.5000	0.4593	
67 Chlorobromomethane	128	6.873	6.880	-0.007	55	5579	0.5000	0.4681	
68 Chloroform	83	6.880	6.887	-0.007	94	30608	0.5000	0.4715	
69 Tetrahydrofuran	42		6.908				ND	ND	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	97	30490	0.5000	0.4595	
70 Isobutyl alcohol	41		7.123				ND	ND	U
72 Cyclohexane	56	7.159	7.166	-0.007	95	43905	0.5000	0.4831	
73 1,1-Dichloropropene	75	7.195	7.194	0.001	95	29704	0.5000	0.4790	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	96	23735	0.5000	0.4260	
76 1,2-Dichloroethane	62	7.367	7.366	0.000	46	16304	0.5000	0.4682	a
77 Benzene	78	7.381	7.380	0.001	98	75903	0.5000	0.4881	
14 n-Heptane	43	7.445	7.445	0.000	95	41491	0.5000	0.4724	
79 Trichloroethene	95	7.846	7.845	0.001	93	19510	0.5000	0.4805	
80 2-Pentanone	43		7.902				ND	ND	
82 Methylcyclohexane	55	8.024	8.031	-0.007	89	34719	0.5000	0.4700	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	59	16290	0.5000	0.4788	
84 1,4-Dioxane	88		8.095				ND	ND	
85 Dibromomethane	93	8.146	8.145	0.001	96	5359	0.5000	0.4579	
86 Dichlorobromomethane	83	8.210	8.217	-0.007	96	16015	0.5000	0.4353	
87 2-Chloroethyl vinyl ether	63	8.368	8.353	0.015	79	1975	0.5000	0.6726	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	88	13690	0.5000	0.5224	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	97	19352	2.00	1.69	
91 Toluene	91	8.804	8.803	0.001	96	77531	0.5000	0.4886	
92 Ethyl methacrylate	69	8.897	8.889	0.008	81	4853	0.5000	0.6319	
93 trans-1,3-Dichloropropene	75	8.918	8.910	0.008	96	9014	0.5000	0.6365	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	86	7072	0.5000	0.4629	
95 2-Hexanone	43	9.183	9.182	0.001	55	8179	2.00	2.09	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	95	13802	0.5000	0.4791	
97 Tetrachloroethene	164	9.211	9.211	0.000	93	13179	0.5000	0.4500	
98 Chlorodibromomethane	129	9.390	9.390	0.000	92	5713	0.5000	0.5238	
100 Ethylene Dibromide	107	9.519	9.518	0.001	97	4850	0.5000	0.3850	
101 1-Chlorohexane	91	9.733	9.733	0.000	91	23399	0.5000	0.4269	
102 Chlorobenzene	112	9.848	9.847	0.001	95	41057	0.5000	0.4868	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	40	10818	0.5000	0.4182	
103 Ethylbenzene	106	9.883	9.883	0.000	98	24809	0.5000	0.4466	
105 m-Xylene & p-Xylene	106	9.955	9.954	0.001	99	29846	0.5000	0.4585	
107 o-Xylene	106	10.269	10.269	0.000	97	26272	0.5000	0.4364	
106 Styrene	104	10.277	10.276	0.001	86	33545	0.5000	0.4001	
108 Bromoform	173		10.483				ND	ND	
109 Isopropylbenzene	105	10.527	10.526	0.001	97	79213	0.5000	0.4636	
111 Cyclohexanone	55	10.677	10.677	0.000	47	5792	20.0	21.4	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.741	0.000	89	6191	0.5000	0.4084	
113 trans-1,4-Dichloro-2-buten	53		10.777				ND	ND	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	82	1603	0.5000	0.3990	
115 N-Propylbenzene	120	10.841	10.848	-0.007	99	20993	0.5000	0.4417	
116 Bromobenzene	156	10.856	10.855	0.001	94	13071	0.5000	0.4484	
117 1,3,5-Trimethylbenzene	105	10.956	10.955	0.001	93	61549	0.5000	0.4438	
118 2-Chlorotoluene	126	10.970	10.970	0.000	94	18674	0.5000	0.4990	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.056	11.048	0.008	99	16208	0.5000	0.4486	
120 tert-Butylbenzene	119	11.249	11.249	0.000	93	58532	0.5000	0.4326	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	61461	0.5000	0.4426	
122 sec-Butylbenzene	134	11.428	11.427	0.001	95	15192	0.5000	0.4043	
123 4-Isopropyltoluene	119	11.514	11.520	-0.006	97	70182	0.5000	0.4454	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	94	31405	0.5000	0.4816	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	90	32485	0.5000	0.5017	
127 n-Butylbenzene	91	11.885	11.878	0.007	99	76459	0.5000	0.4460	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	93	24912	0.5000	0.4749	
129 1,2-Dibromo-3-Chloropropan	157		12.772				ND	ND	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	92	16002	0.5000	0.4690	
131 Hexachlorobutadiene	225	13.852	13.844	0.008	90	12046	0.5000	0.4568	
132 Naphthalene	128	14.080	14.080	0.000	96	20424	0.5000	0.4620	
133 1,2,3-Trichlorobenzene	180	14.402	14.395	0.007	91	12340	0.5000	0.4825	
S 140 1,2-Dichloroethene, Total	96				0		1.00	0.9682	
S 138 1,2-Dichloroethene, Total	1				0		1.00	0.9682	
S 139 Xylenes, Total	106				0		1.00	0.8948	
S 137 1,3-Dichloropropene, Total	1				0		1.00	1.16	
S 134 Trihalomethanes, Total	1				0		2.00	1.43	
S 135 Xylenes, Total (URS)	1				0		1.00	0.8948	
S 136 Total BTEX	1				0			2.32	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.20	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.04	Units: uL

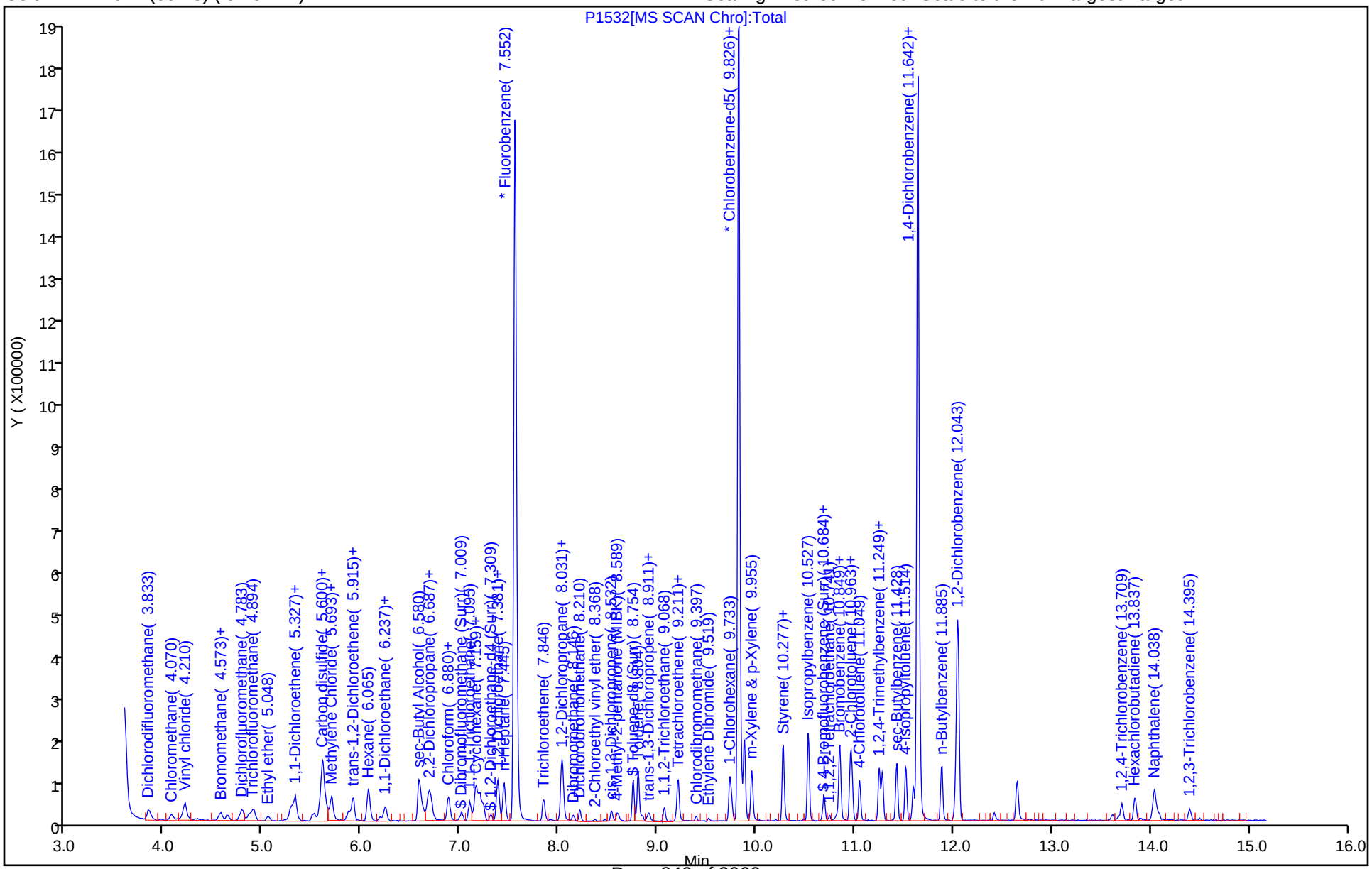
Report Date: 26-Oct-2018 10:27:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D

Injection Date:	22-Oct-2018 22:40:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD005			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

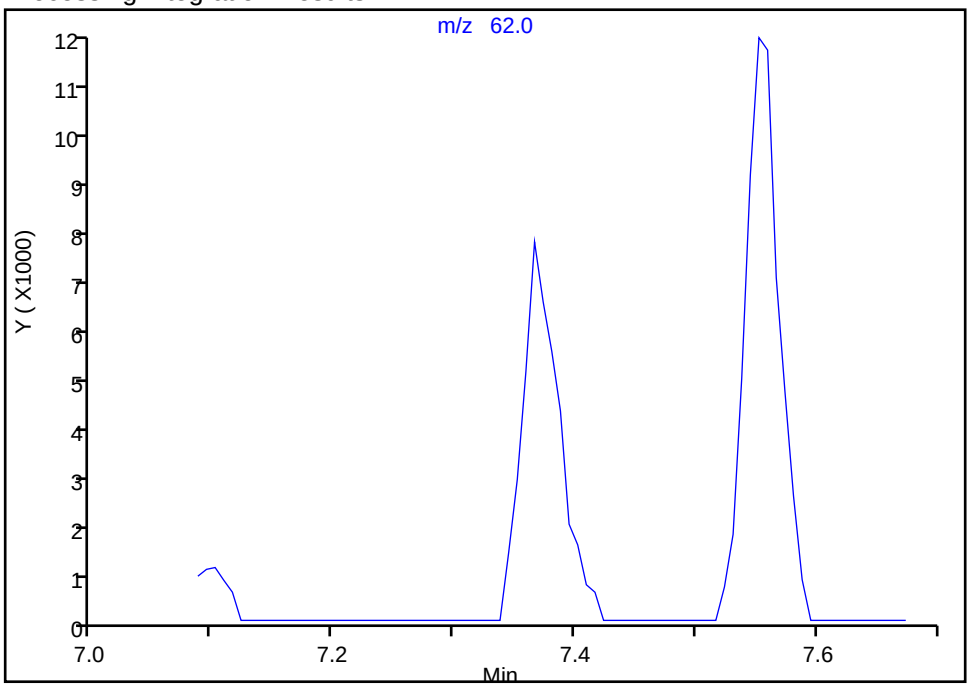
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D				
Injection Date:	22-Oct-2018 22:40:30	Instrument ID:	VMS_P		
Lims ID:	STD005				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	11	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

76 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

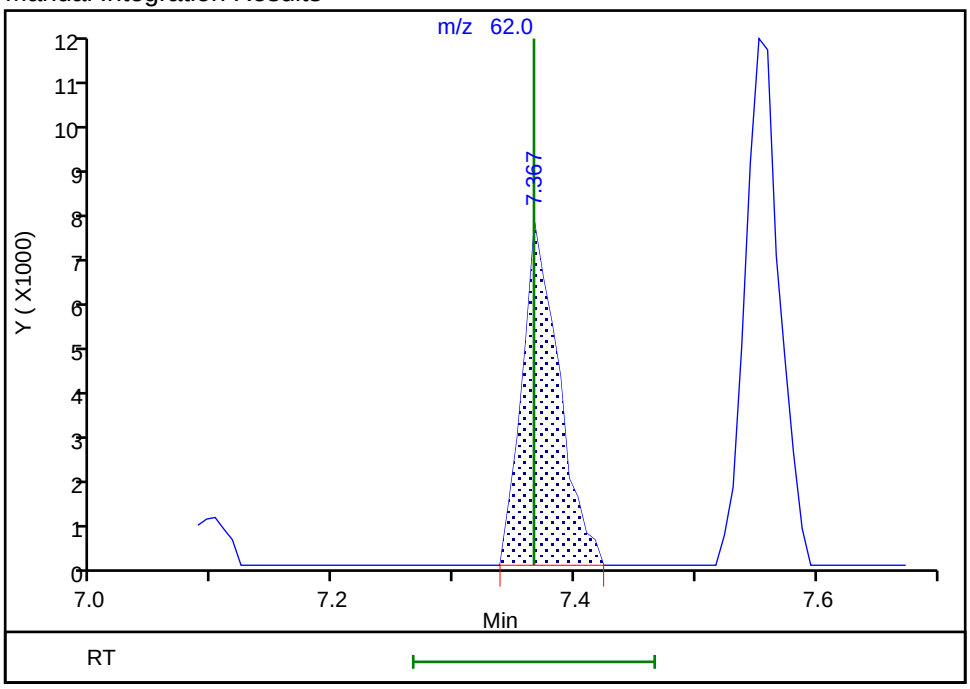
Not Detected
Expected RT: 7.37

Processing Integration Results



Manual Integration Results

RT: 7.37
Area: 16304
Amount: 0.468161
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:13:57
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

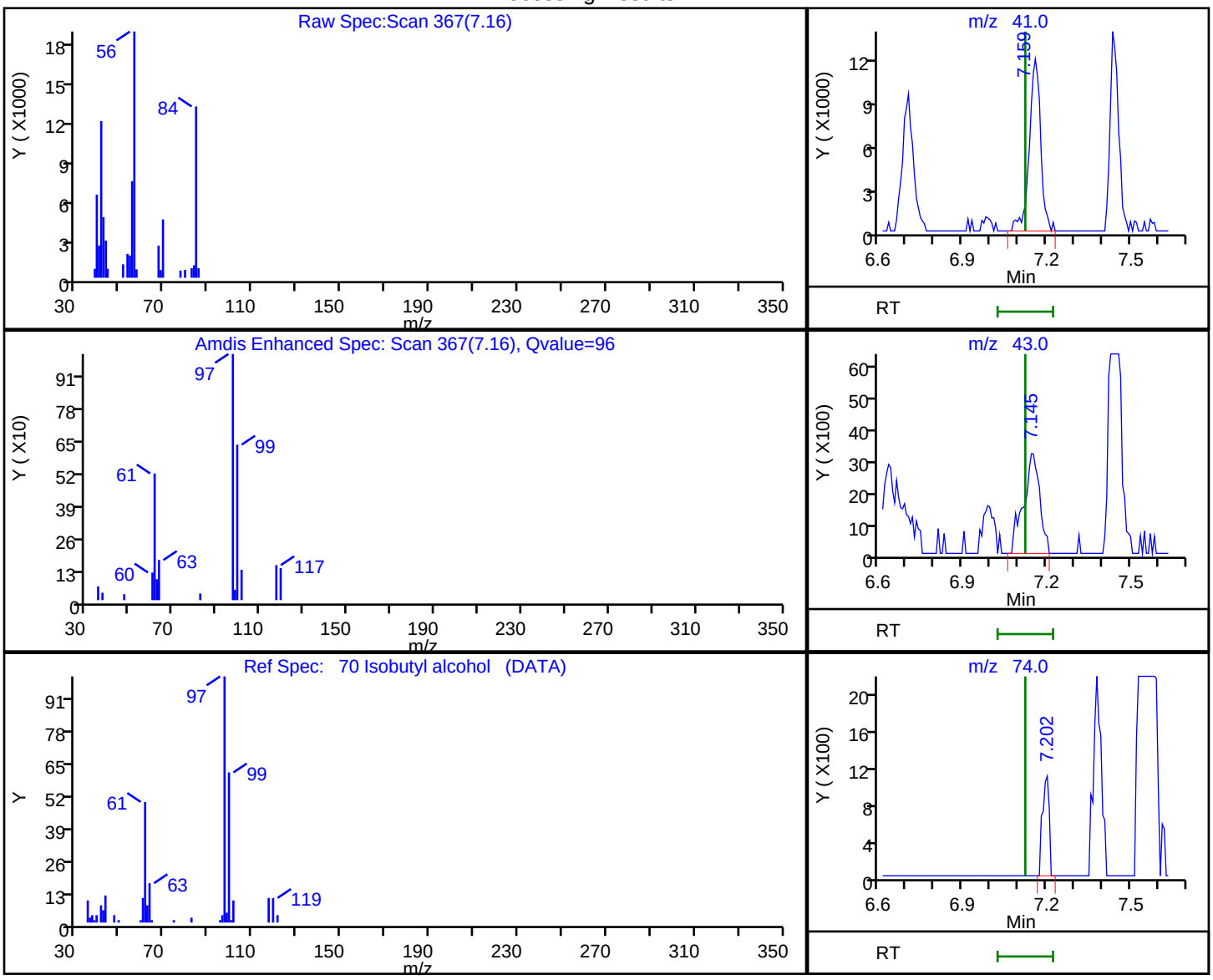
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D				
Injection Date:	22-Oct-2018 22:40:30	Instrument ID:	VMS_P		
Lims ID:	STD005				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	11	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

70 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
7.16	41.00	33154	14.120853
7.14	43.00	12869	
7.20	74.00	1770	

Reviewer: seifertj, 23-Oct-2018 08:13:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

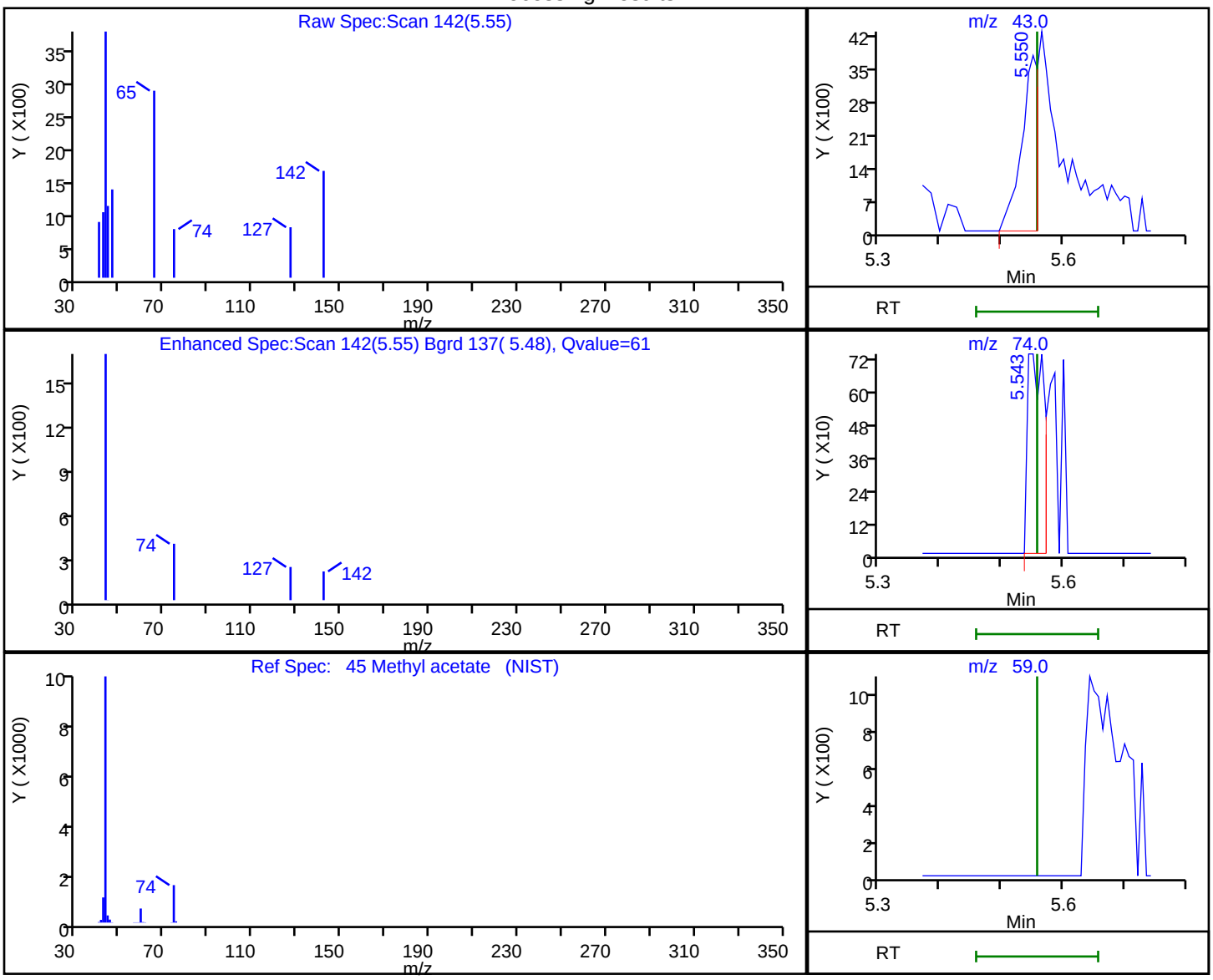
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1532.D
Injection Date: 22-Oct-2018 22:40:30 Instrument ID: VMS_P
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

45 Methyl acetate, CAS: 79-20-9

Processing Results



RT	Mass	Response	Amount
5.55	43.00	6364	0.617441
5.54	74.00	1408	
5.55	59.00	0	

Reviewer: seifertj, 23-Oct-2018 08:29:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1533.D
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Oct-2018 22:59:30 ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:50 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:15:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.607	5.607	0.000	74	137700	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1404201	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	90	273127	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	98	391666	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	90	27029	1.00	0.9900	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	27451	1.00	1.05	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	96	114452	1.00	0.99	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	84	33565	1.00	0.9595	
23 Dichlorodifluoromethane	85	3.844	3.845	-0.001	100	64524	1.00	1.02	
26 Chloromethane	50	4.082	4.083	-0.001	98	43460	1.00	1.04	
27 Vinyl chloride	62	4.221	4.222	-0.001	96	43293	1.00	1.02	
29 Bromomethane	94	4.570	4.585	-0.015	93	39108	1.00	1.07	
30 Chloroethane	64	4.640	4.641	-0.001	99	37628	1.00	1.08	
31 Dichlorofluoromethane	67	4.794	4.795	-0.001	98	89832	1.00	1.02	
32 Trichlorofluoromethane	101	4.892	4.893	-0.001	99	81045	1.00	1.01	
35 Ethyl ether	59	5.059	5.060	-0.001	94	16866	1.00	0.9794	
39 Acrolein	56	5.213	5.214	-0.001	92	14887	10.0	9.52	
40 1,1,2-Trichloro-1,2,2-trif	151	5.283	5.298	-0.015	94	33735	1.00	1.00	
41 Acetone	43	5.325	5.326	-0.001	29	16981	4.00	4.25	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	94	41013	1.00	1.00	
44 Iodomethane	142	5.522	5.521	0.001	99	53981	1.00	0.9470	
45 Methyl acetate	43	5.557	5.557	0.000	96	21612	2.00	2.38	
47 3-Chloro-1-propene	41	5.600	5.600	0.000	76	70224	1.00	0.9577	
48 Carbon disulfide	76	5.615	5.614	0.001	100	163058	1.00	0.9777	
49 2-Methyl-2-propanol	59	5.679	5.664	0.015	51	2960	10.0	7.84	
50 Methylene Chloride	84	5.700	5.700	0.000	98	38072	1.00	1.08	
52 Acrylonitrile	53	5.879	5.872	0.007	54	22989	10.0	10.3	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	96	43426	1.00	0.9747	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	96	40932	1.00	1.01	
54 Hexane	57	6.072	6.072	0.000	94	73818	1.00	1.01	
55 Vinyl acetate	43	6.187	6.179	0.008	97	55413	2.00	2.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.244	6.243	0.001	96	70878	1.00	1.00	
61 2-Butanone (MEK)	43	6.637	6.630	0.007	83	20353	4.00	3.57	M
62 sec-Butyl Alcohol	45	6.680	6.680	0.000	38	14628	30.0	65.8	M
63 cis-1,2-Dichloroethene	96	6.673	6.680	-0.007	86	37436	1.00	0.9798	
64 2,2-Dichloropropane	77	6.701	6.701	0.000	85	59262	1.00	0.9875	
67 Chlorobromomethane	128	6.873	6.880	-0.007	54	10934	1.00	0.9558	
68 Chloroform	83	6.880	6.887	-0.007	93	60837	1.00	0.9764	
69 Tetrahydrofuran	42		6.908				ND	ND	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	96	59831	1.00	0.9394	
70 Isobutyl alcohol	41	7.123	7.123	0.000	95	6297	25.0	69.3	M
72 Cyclohexane	56	7.159	7.166	-0.007	95	88259	1.00	1.01	
73 1,1-Dichloropropene	75	7.195	7.194	0.001	96	57338	1.00	0.9632	
74 Carbon tetrachloride	117	7.238	7.237	0.001	97	48372	1.00	0.9044	
76 1,2-Dichloroethane	62	7.366	7.366	0.000	49	31302	1.00	0.9364	
77 Benzene	78	7.381	7.380	0.001	98	150687	1.00	1.01	
14 n-Heptane	43	7.445	7.445	0.000	93	83917	1.00	1.00	
79 Trichloroethene	95	7.845	7.845	0.000	96	36496	1.00	0.9363	
80 2-Pentanone	43	7.910	7.902	0.008	95	20310	4.00	4.20	
82 Methylcyclohexane	55	8.031	8.031	0.000	96	69542	1.00	0.9809	
83 1,2-Dichloropropane	63	8.038	8.038	0.000	91	32789	1.00	1.00	
84 1,4-Dioxane	88		8.095				ND	ND	
85 Dibromomethane	93	8.146	8.145	0.001	87	10980	1.00	0.9773	
86 Dichlorobromomethane	83	8.210	8.217	-0.007	97	33353	1.00	0.9444	
87 2-Chloroethyl vinyl ether	63	8.360	8.353	0.007	91	4601	1.00	1.00	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	90	29175	1.00	0.9558	
90 4-Methyl-2-pentanone (MIBK	43	8.596	8.589	0.007	98	38008	4.00	3.45	
91 Toluene	91	8.804	8.803	0.001	97	151573	1.00	1.00	
92 Ethyl methacrylate	69	8.896	8.889	0.007	88	10463	1.00	0.9735	
93 trans-1,3-Dichloropropene	75	8.911	8.910	0.001	96	19335	1.00	0.9893	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	14903	1.00	1.02	
95 2-Hexanone	43	9.183	9.182	0.000	71	20394	4.00	3.77	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	26213	1.00	0.9539	
97 Tetrachloroethene	164	9.211	9.211	0.000	90	26109	1.00	0.9346	
98 Chlorodibromomethane	129	9.390	9.390	0.000	88	12939	1.00	0.9662	
100 Ethylene Dibromide	107	9.519	9.518	0.001	95	11346	1.00	0.9440	
101 1-Chlorohexane	91	9.733	9.733	0.000	87	50122	1.00	0.9586	
102 Chlorobenzene	112	9.847	9.847	0.000	95	79681	1.00	0.99	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	41	21212	1.00	0.8596	
103 Ethylbenzene	106	9.883	9.883	0.000	98	51687	1.00	0.9752	
105 m-Xylene & p-Xylene	106	9.955	9.954	0.001	99	58776	1.00	0.9464	
107 o-Xylene	106	10.269	10.269	0.000	91	54430	1.00	0.9476	
106 Styrene	104	10.276	10.276	0.000	80	69566	1.00	0.8698	
108 Bromoform	173	10.484	10.483	0.001	90	5238	1.00	1.04	
109 Isopropylbenzene	105	10.527	10.526	0.001	97	156766	1.00	0.9712	
111 Cyclohexanone	55	10.677	10.677	0.000	95	12776	40.0	37.3	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.741	0.000	94	15663	1.00	1.09	
113 trans-1,4-Dichloro-2-buten	53		10.777				ND	ND	
114 1,2,3-Trichloropropane	110	10.813	10.820	-0.007	81	3814	1.00	1.00	
115 N-Propylbenzene	120	10.848	10.848	0.000	99	43903	1.00	0.9779	
116 Bromobenzene	156	10.856	10.855	0.001	95	26816	1.00	0.9738	
117 1,3,5-Trimethylbenzene	105	10.956	10.955	0.001	95	124872	1.00	0.9531	
118 2-Chlorotoluene	126	10.970	10.970	0.000	93	34598	1.00	0.9787	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.049	11.048	0.001	99	33438	1.00	0.9796	
120 tert-Butylbenzene	119	11.249	11.249	0.000	92	120107	1.00	0.9396	
121 1,2,4-Trimethylbenzene	105	11.277	11.277	0.000	96	129664	1.00	0.9885	
122 sec-Butylbenzene	134	11.428	11.427	0.001	96	33162	1.00	0.9342	
123 4-Isopropyltoluene	119	11.521	11.520	0.001	97	145932	1.00	0.9804	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	96	60418	1.00	0.9807	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	92	61114	1.00	1.00	
127 n-Butylbenzene	91	11.885	11.878	0.007	99	162438	1.00	1.00	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	94	50114	1.00	1.01	
129 1,2-Dibromo-3-Chloropropan	157	12.779	12.772	0.007	66	830	1.00	1.04	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	90	31506	1.00	0.9774	
131 Hexachlorobutadiene	225	13.844	13.844	0.000	91	24196	1.00	0.9712	
132 Naphthalene	128	14.080	14.080	0.000	96	39113	1.00	0.9366	
133 1,2,3-Trichlorobenzene	180	14.402	14.395	0.007	92	24115	1.00	1.00	
S 140 1,2-Dichloroethene, Total	96				0		2.00	1.99	
S 138 1,2-Dichloroethene, Total	1				0		2.00	1.99	
S 139 Xylenes, Total	106				0		2.00	1.89	
S 137 1,3-Dichloropropene, Total	1				0		2.00	1.95	
S 134 Trihalomethanes, Total	1				0		4.00	3.93	
S 135 Xylenes, Total (URS)	1				0		2.00	1.89	
S 136 Total BTEX	1				0			4.87	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.40	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.08	Units: uL

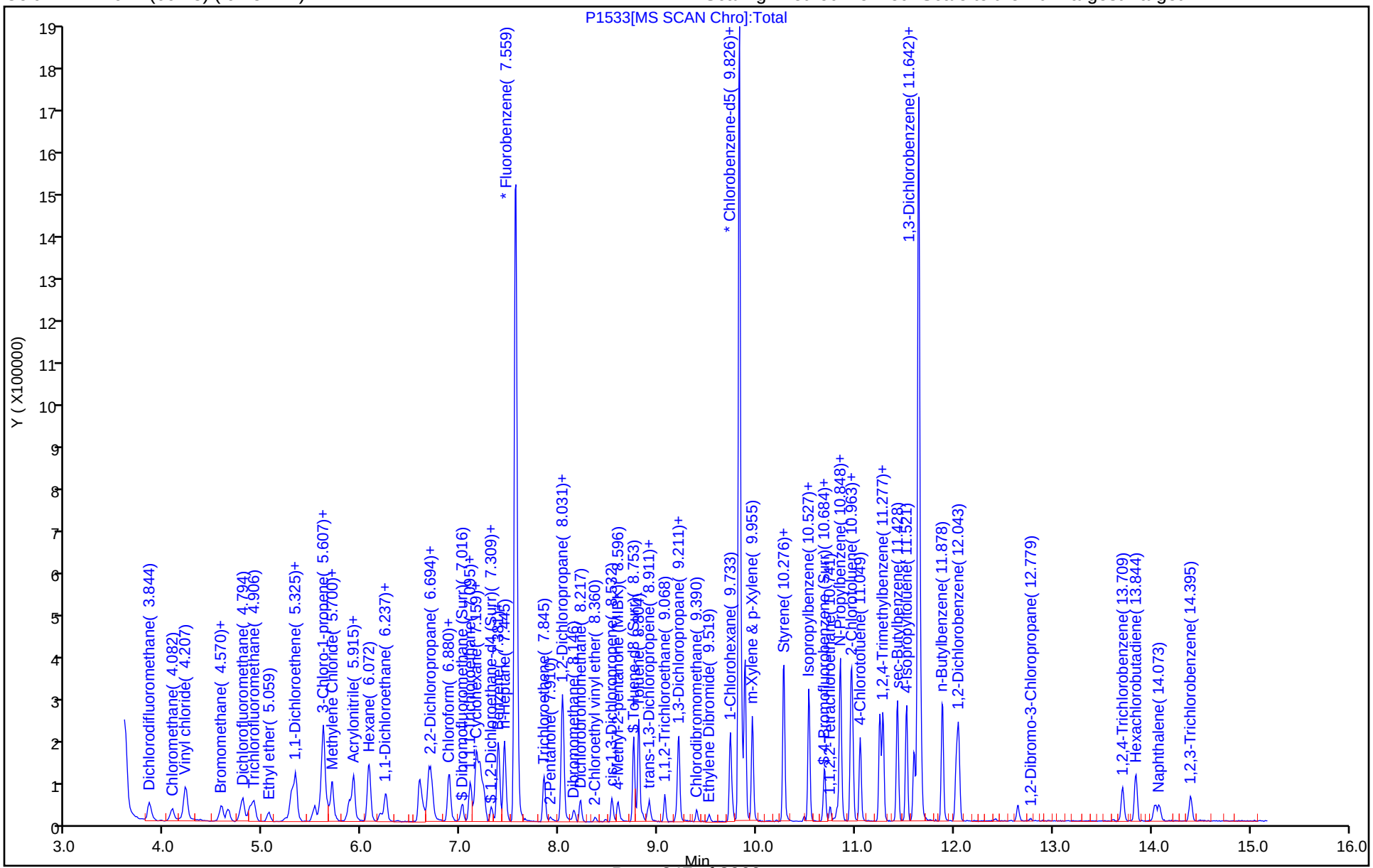
Report Date: 26-Oct-2018 10:27:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1533.D

Injection Date:	22-Oct-2018 22:59:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD01			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

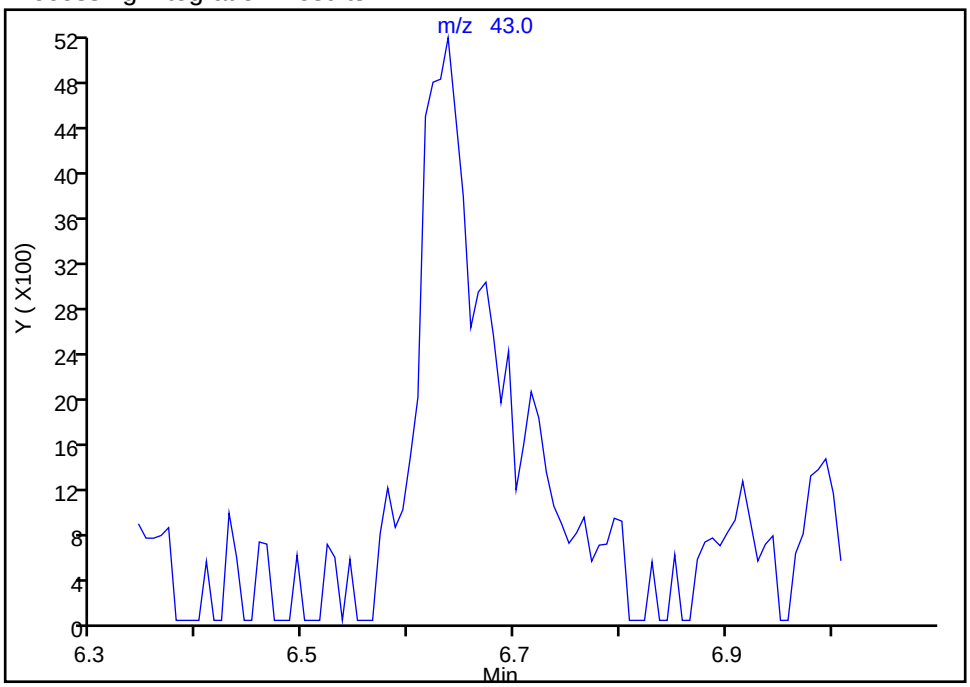
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1533.D				
Injection Date:	22-Oct-2018 22:59:30	Instrument ID:	VMS_P		
Lims ID:	STD01				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	12	Worklist Smp#:	11
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

61 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

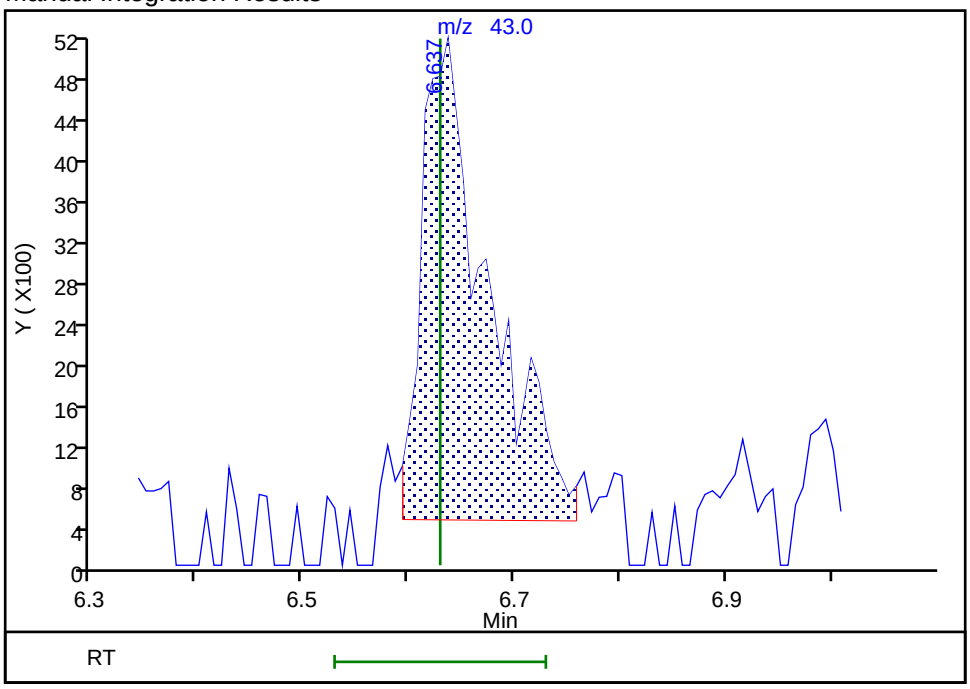
Not Detected
Expected RT: 6.63

Processing Integration Results



Manual Integration Results

RT: 6.64
Area: 20353
Amount: 3.572557
Amount Units: ug/l



Reviewer: newcomer, 26-Oct-2018 10:26:16
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

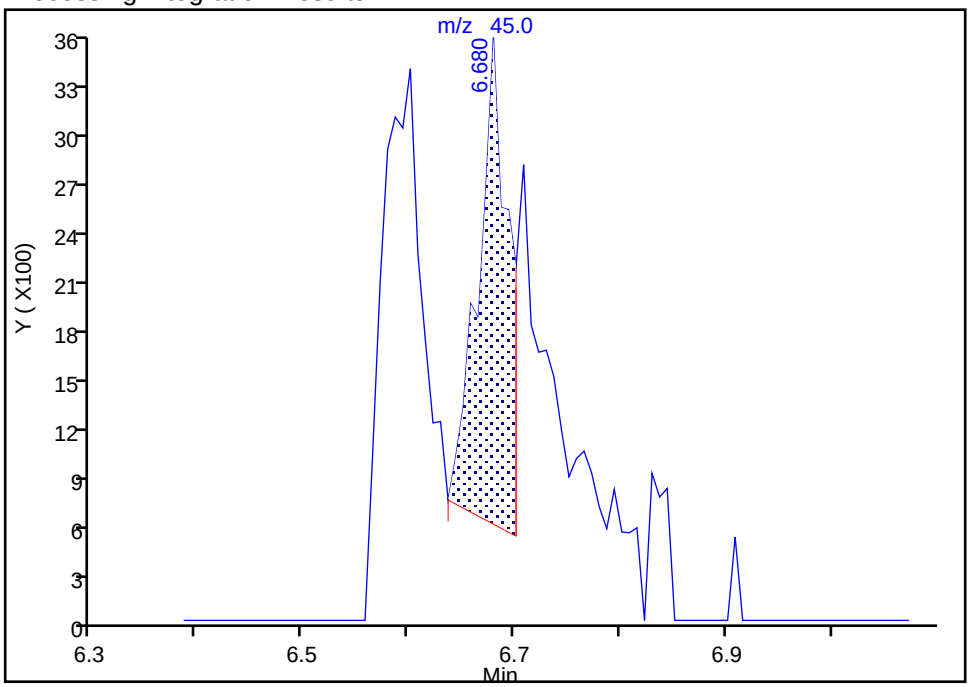
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1533.D
Injection Date: 22-Oct-2018 22:59:30 Instrument ID: VMS_P
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

62 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

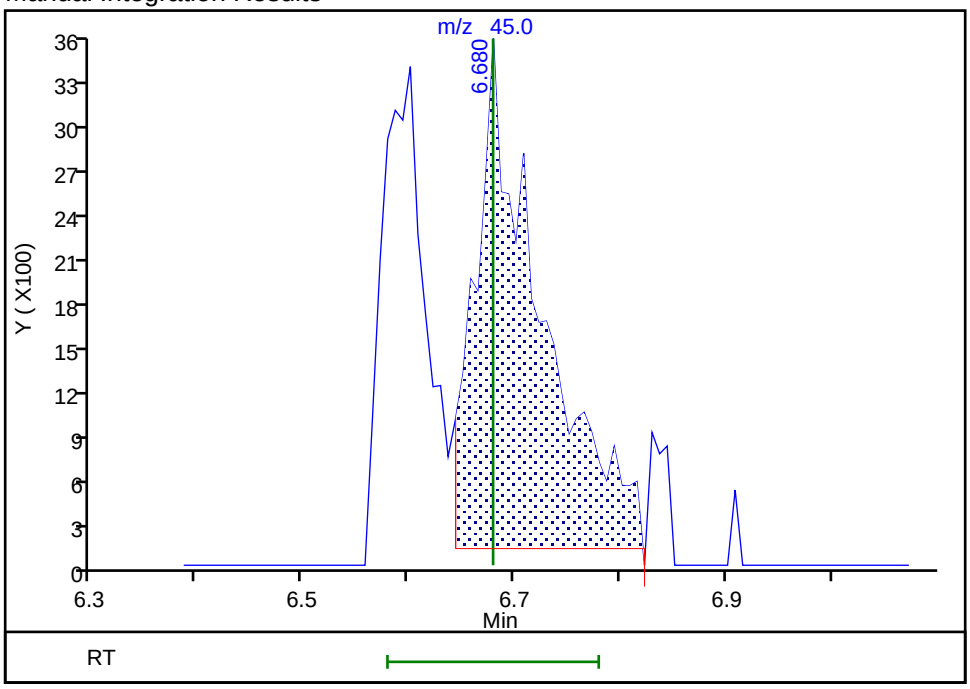
Processing Integration Results

RT: 6.68
Area: 5906
Amount: 46.191725
Amount Units: ug/l



Manual Integration Results

RT: 6.68
Area: 14628
Amount: 65.828306
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 12:15:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

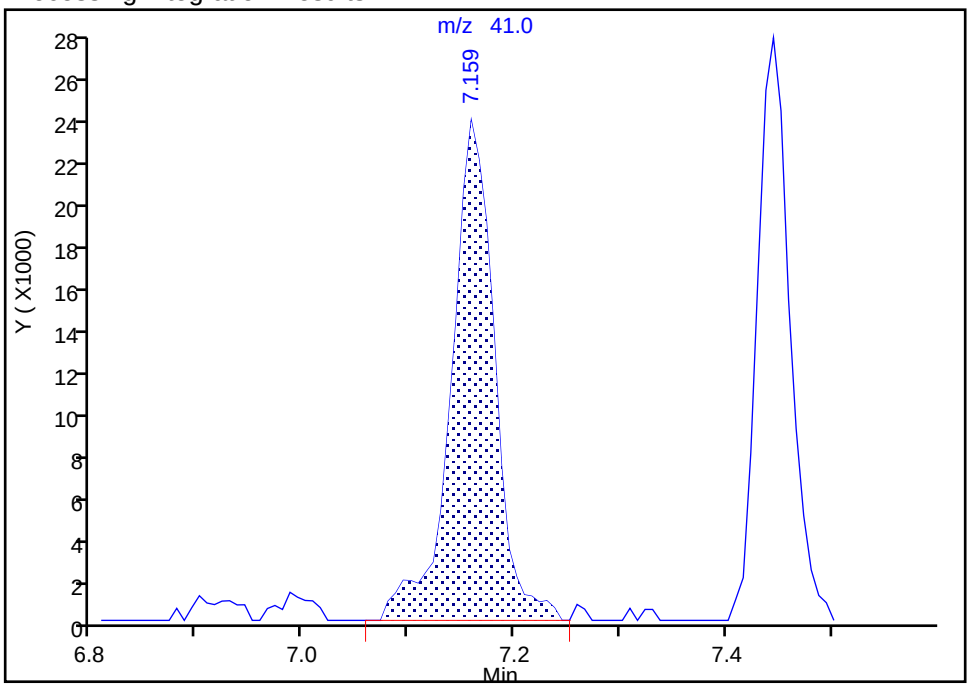
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1533.D				
Injection Date:	22-Oct-2018 22:59:30	Instrument ID:	VMS_P		
Lims ID:	STD01				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	12	Worklist Smp#:	11
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

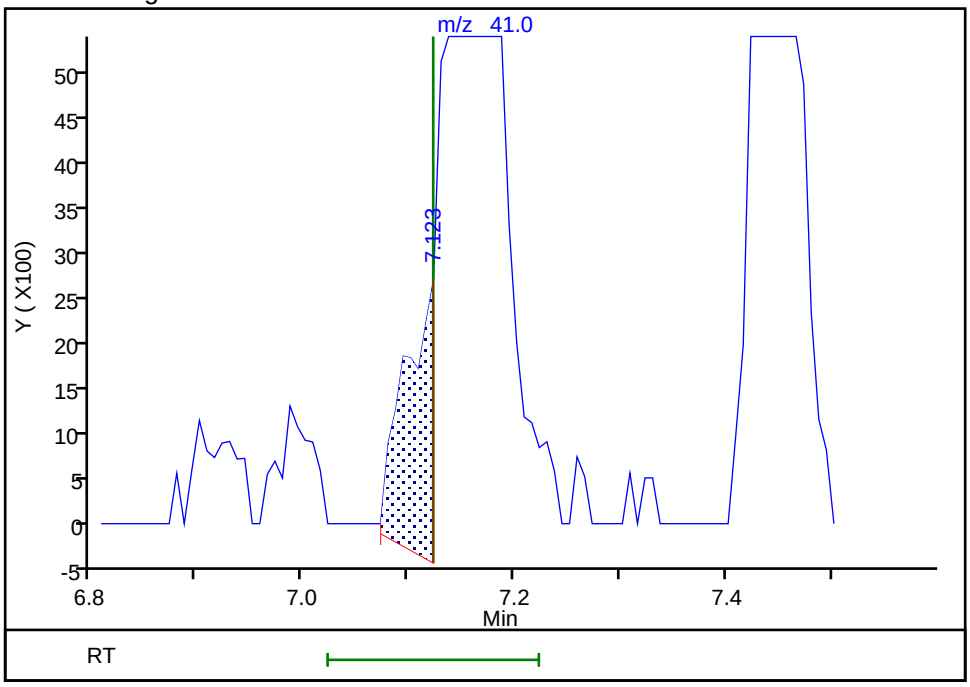
Processing Integration Results

RT: 7.16
Area: 66254
Amount: 104.9658
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 6297
Amount: 69.347337
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:27:53

Audit Action: Manually Integrated Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1534.D
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Oct-2018 23:17:30 ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:53 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:26:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.607	-0.014	56	142917	250.0	250.0	
* 1 Fluorobenzene	96	7.552	7.559	-0.007	98	1358893	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	266480	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	392806	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	52307	2.00	1.98	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	98	49986	2.00	1.97	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	96	223621	2.00	1.98	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	82	70424	2.00	2.01	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	121060	2.00	1.98	
26 Chloromethane	50	4.068	4.083	-0.015	99	81987	2.00	2.03	
27 Vinyl chloride	62	4.208	4.222	-0.014	92	83596	2.00	2.03	
29 Bromomethane	94	4.571	4.585	-0.014	92	71874	2.00	2.02	
30 Chloroethane	64	4.641	4.641	0.000	97	68837	2.00	2.04	
31 Dichlorofluoromethane	67	4.780	4.795	-0.015	98	174761	2.00	2.04	
32 Trichlorofluoromethane	101	4.892	4.893	-0.001	99	158379	2.00	2.04	
35 Ethyl ether	59	5.046	5.060	-0.014	93	31659	2.00	1.90	
39 Acrolein	56	5.213	5.214	-0.001	96	33729	20.0	19.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.283	5.298	-0.015	95	64853	2.00	1.98	
41 Acetone	43	5.325	5.326	-0.001	28	30134	8.00	7.80	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	95	79158	2.00	1.99	
44 Iodomethane	142	5.522	5.521	0.001	99	109524	2.00	1.99	
45 Methyl acetate	43	5.550	5.557	-0.007	97	36791	4.00	4.18	
47 3-Chloro-1-propene	41	5.593	5.600	-0.007	79	138300	2.00	1.95	
48 Carbon disulfide	76	5.608	5.614	-0.006	100	324432	2.00	2.01	
49 2-Methyl-2-propanol	59	5.665	5.664	0.001	91	14574	20.0	23.4	
50 Methylene Chloride	84	5.693	5.700	-0.007	98	68450	2.00	2.00	
52 Acrylonitrile	53	5.872	5.872	0.000	59	45668	20.0	16.8	
51 Methyl tert-butyl ether	73	5.858	5.872	-0.014	96	85292	2.00	1.98	
53 trans-1,2-Dichloroethene	96	5.908	5.915	-0.007	94	78406	2.00	2.01	
54 Hexane	57	6.065	6.072	-0.007	95	143622	2.00	2.01	
55 Vinyl acetate	43	6.180	6.179	0.001	97	107261	4.00	3.75	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.237	6.243	-0.006	96	136963	2.00	2.00	
61 2-Butanone (MEK)	43	6.630	6.630	0.000	98	39668	8.00	7.20	M
62 sec-Butyl Alcohol	45	6.673	6.680	-0.007	36	19054	60.0	71.5	
63 cis-1,2-Dichloroethene	96	6.673	6.680	-0.007	88	74044	2.00	2.00	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	90	113569	2.00	1.96	
67 Chlorobromomethane	128	6.880	6.880	0.000	54	21794	2.00	1.97	
68 Chloroform	83	6.880	6.887	-0.007	96	119482	2.00	1.98	
69 Tetrahydrofuran	42	6.909	6.908	0.001	89	10227	4.00	3.51	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	98	120692	2.00	1.96	
70 Isobutyl alcohol	41	7.123	7.123	0.000	97	9197	50.0	77.3	M
72 Cyclohexane	56	7.159	7.166	-0.007	96	167435	2.00	1.98	
73 1,1-Dichloropropene	75	7.195	7.194	0.001	96	112494	2.00	1.95	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	95	98369	2.00	1.90	
76 1,2-Dichloroethane	62	7.366	7.366	0.000	97	61884	2.00	1.91	
77 Benzene	78	7.381	7.380	0.001	98	290252	2.00	2.01	
14 n-Heptane	43	7.445	7.445	0.000	95	159827	2.00	1.96	
79 Trichloroethene	95	7.846	7.845	0.001	92	74371	2.00	1.97	
80 2-Pentanone	43	7.910	7.902	0.008	97	43344	8.00	7.37	
82 Methylcyclohexane	55	8.024	8.031	-0.007	95	136683	2.00	1.99	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	90	62620	2.00	1.98	
84 1,4-Dioxane	88	8.103	8.095	0.008	8	1795	40.0	40.1	a
85 Dibromomethane	93	8.146	8.145	0.001	90	20746	2.00	1.91	
86 Dichlorobromomethane	83	8.217	8.217	0.000	98	62887	2.00	1.84	
87 2-Chloroethyl vinyl ether	63	8.360	8.353	0.007	91	10317	2.00	1.73	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	90	60749	2.00	1.85	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	99	81186	8.00	7.61	
91 Toluene	91	8.804	8.803	0.001	96	295185	2.00	2.00	
92 Ethyl methacrylate	69	8.889	8.889	0.000	89	23837	2.00	1.79	
93 trans-1,3-Dichloropropene	75	8.911	8.910	0.001	97	41138	2.00	1.75	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	27529	2.00	1.94	
95 2-Hexanone	43	9.183	9.182	0.001	98	46610	8.00	7.43	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	52615	2.00	1.96	
97 Tetrachloroethene	164	9.211	9.211	0.000	92	51020	2.00	1.87	
98 Chlorodibromomethane	129	9.390	9.390	0.000	90	26226	2.00	1.79	
100 Ethylene Dibromide	107	9.519	9.518	0.001	98	23001	2.00	1.96	
101 1-Chlorohexane	91	9.733	9.733	0.000	88	96728	2.00	1.90	
102 Chlorobenzene	112	9.848	9.847	0.001	95	154815	2.00	1.97	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	40	43853	2.00	1.82	
103 Ethylbenzene	106	9.883	9.883	0.000	98	99377	2.00	1.92	
105 m-Xylene & p-Xylene	106	9.955	9.954	0.001	99	114163	2.00	1.88	
107 o-Xylene	106	10.277	10.269	0.008	89	108550	2.00	1.94	
106 Styrene	104	10.277	10.276	0.001	83	147392	2.00	1.89	
108 Bromoform	173	10.484	10.483	0.001	93	11638	2.00	1.93	
109 Isopropylbenzene	105	10.527	10.526	0.001	97	320176	2.00	1.98	
111 Cyclohexanone	55	10.677	10.677	0.000	94	27187	80.0	70.4	
112 1,1,2,2-Tetrachloroethane	83	10.748	10.741	0.007	96	28739	2.00	2.00	
113 trans-1,4-Dichloro-2-buten	53	10.777	10.777	0.000	61	5696	2.00	1.61	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	85	7528	2.00	1.98	
115 N-Propylbenzene	120	10.849	10.848	0.001	99	87089	2.00	1.93	
116 Bromobenzene	156	10.856	10.855	0.001	98	53027	2.00	1.92	
117 1,3,5-Trimethylbenzene	105	10.956	10.955	0.001	94	259442	2.00	1.97	
118 2-Chlorotoluene	126	10.970	10.970	0.000	94	66207	2.00	1.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.049	11.048	0.001	99	65710	2.00	1.92	
120 tert-Butylbenzene	119	11.249	11.249	0.000	93	247166	2.00	1.93	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	259364	2.00	1.97	
122 sec-Butylbenzene	134	11.428	11.427	0.001	95	70746	2.00	1.99	
123 4-Isopropyltoluene	119	11.521	11.520	0.001	97	295972	2.00	1.98	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	96	123316	2.00	2.00	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	95	118897	2.00	1.94	
127 n-Butylbenzene	91	11.878	11.878	0.000	99	321804	2.00	1.98	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	94	96678	2.00	1.95	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.772	0.000	63	2360	2.00	1.87	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	94	59461	2.00	1.84	
131 Hexachlorobutadiene	225	13.844	13.844	0.000	93	51124	2.00	2.05	
132 Naphthalene	128	14.080	14.080	0.000	97	77845	2.00	1.86	
133 1,2,3-Trichlorobenzene	180	14.395	14.395	0.000	92	45464	2.00	1.88	
S 140 1,2-Dichloroethene, Total	96				0		4.00	4.01	
S 138 1,2-Dichloroethene, Total	1				0		4.00	4.01	
S 139 Xylenes, Total	106				0		4.00	3.82	
S 137 1,3-Dichloropropene, Total	1				0		4.00	3.60	
S 134 Trihalomethanes, Total	1				0		8.00	7.54	
S 135 Xylenes, Total (URS)	1				0		4.00	3.82	
S 136 Total BTEX	1				0			9.76	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	0.80	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.16	Units: uL

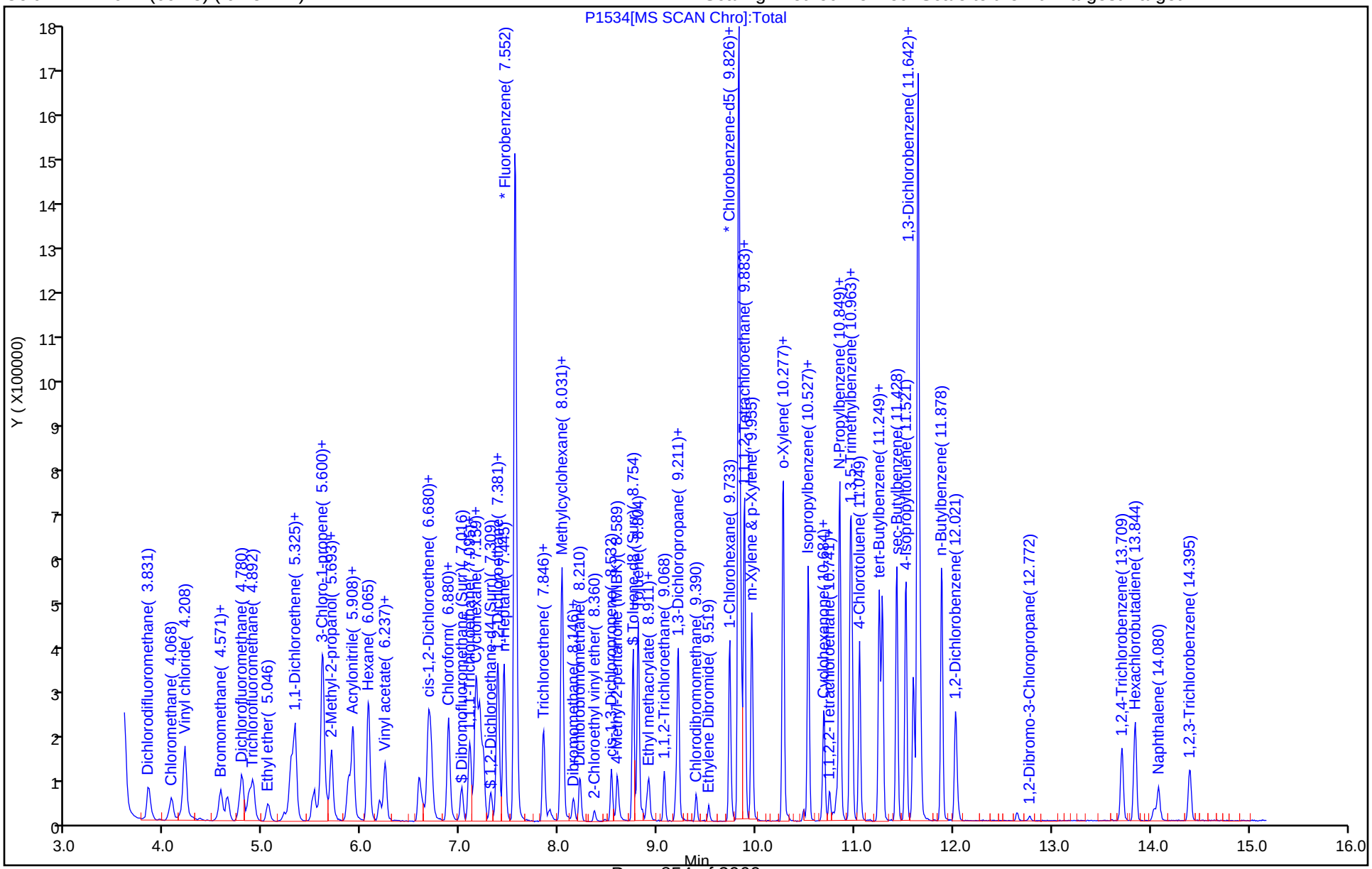
Report Date: 26-Oct-2018 10:27:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1534.D

Injection Date:	22-Oct-2018 23:17:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD02			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

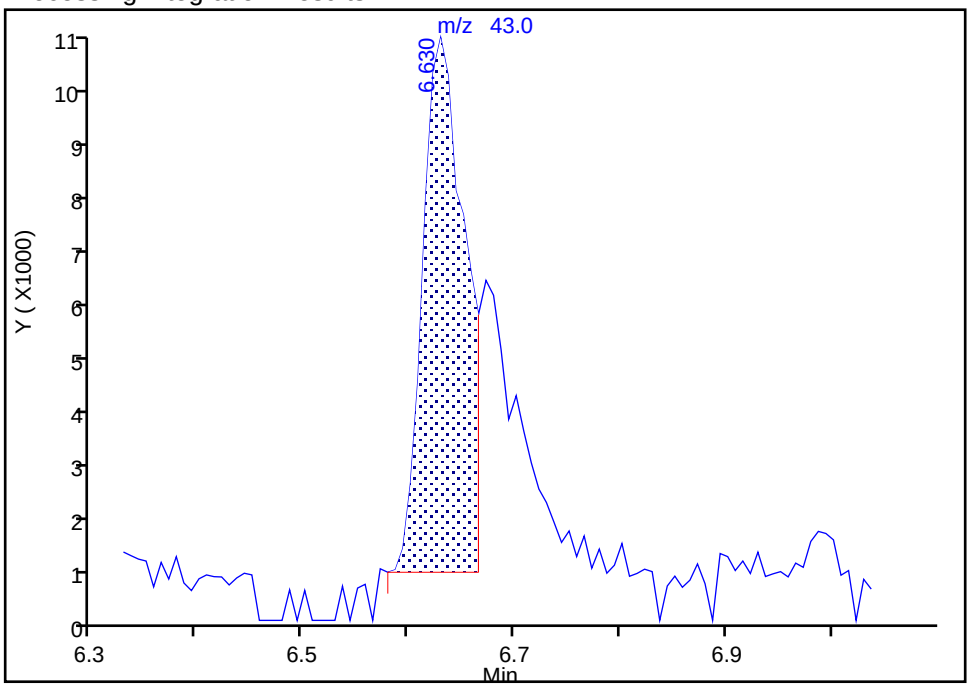
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1534.D
Injection Date: 22-Oct-2018 23:17:30 Instrument ID: VMS_P
Lims ID: STD02
Client ID:
Operator ID: newcomer ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

61 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

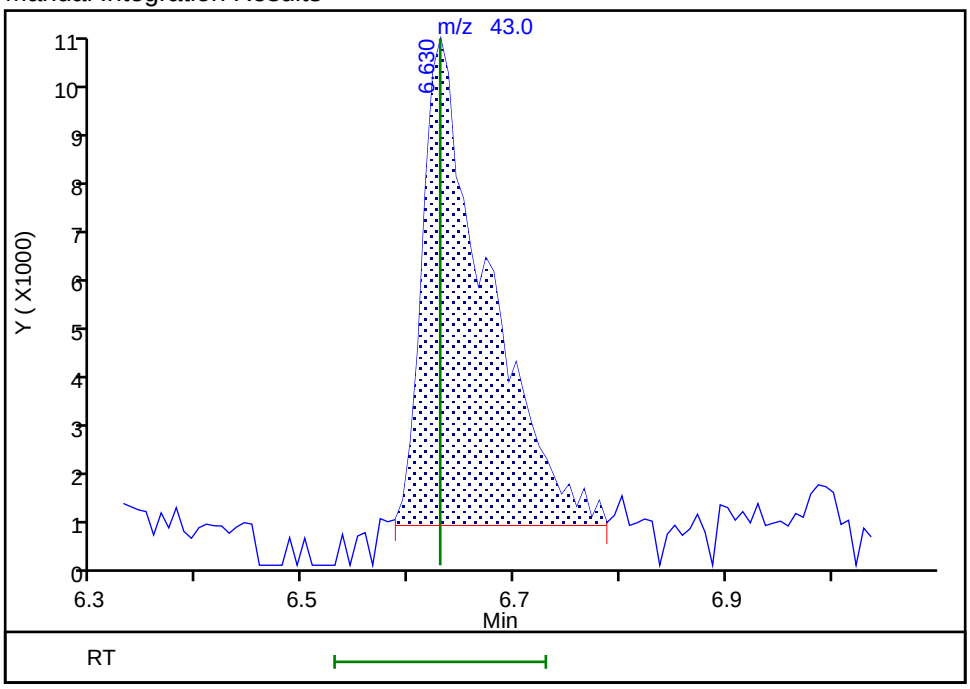
Processing Integration Results

RT: 6.63
Area: 26009
Amount: 7.808834
Amount Units: ug/l



Manual Integration Results

RT: 6.63
Area: 39668
Amount: 7.195071
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:24:34
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

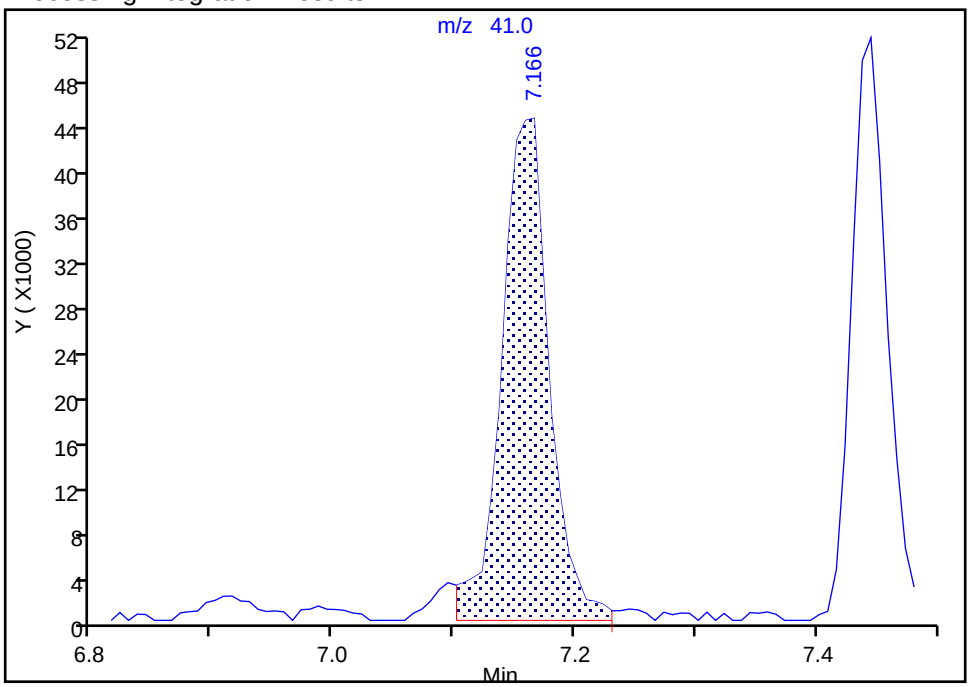
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1534.D				
Injection Date:	22-Oct-2018 23:17:30	Instrument ID:	VMS_P		
Lims ID:	STD02				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	13	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

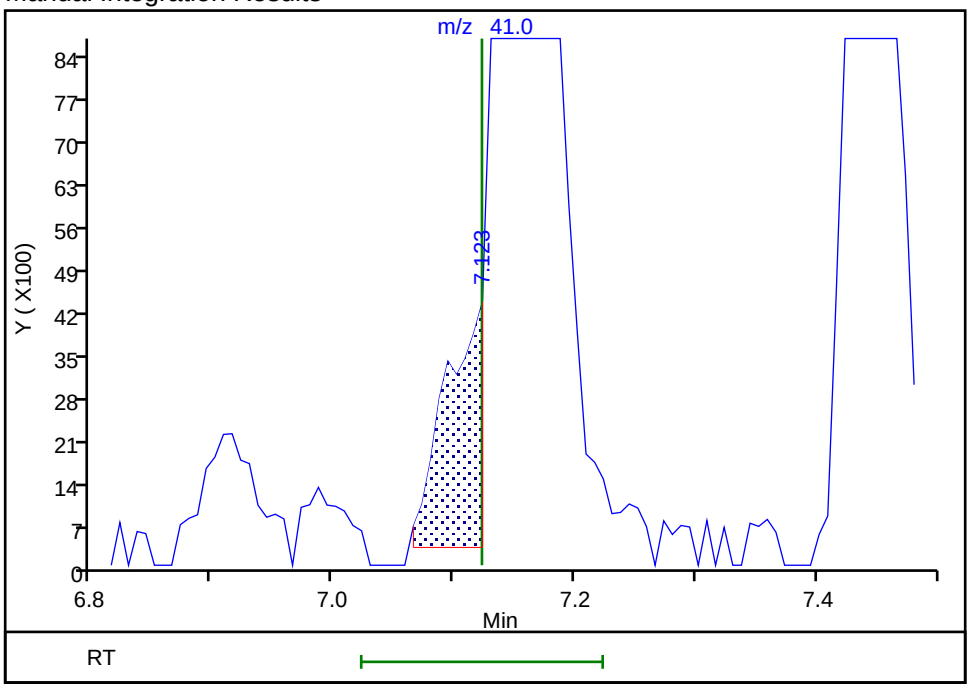
Processing Integration Results

RT: 7.17
Area: 122731
Amount: 118.7463
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 9197
Amount: 77.321401
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:25:09

Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

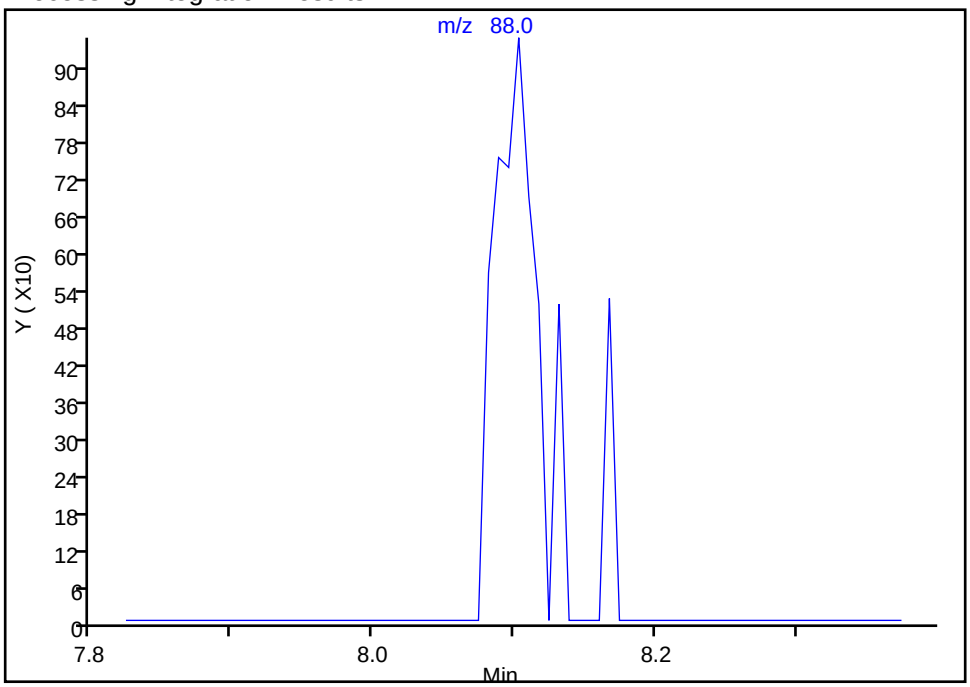
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1534.D				
Injection Date:	22-Oct-2018 23:17:30	Instrument ID:	VMS_P		
Lims ID:	STD02				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	13	Worklist Smp#:	12
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

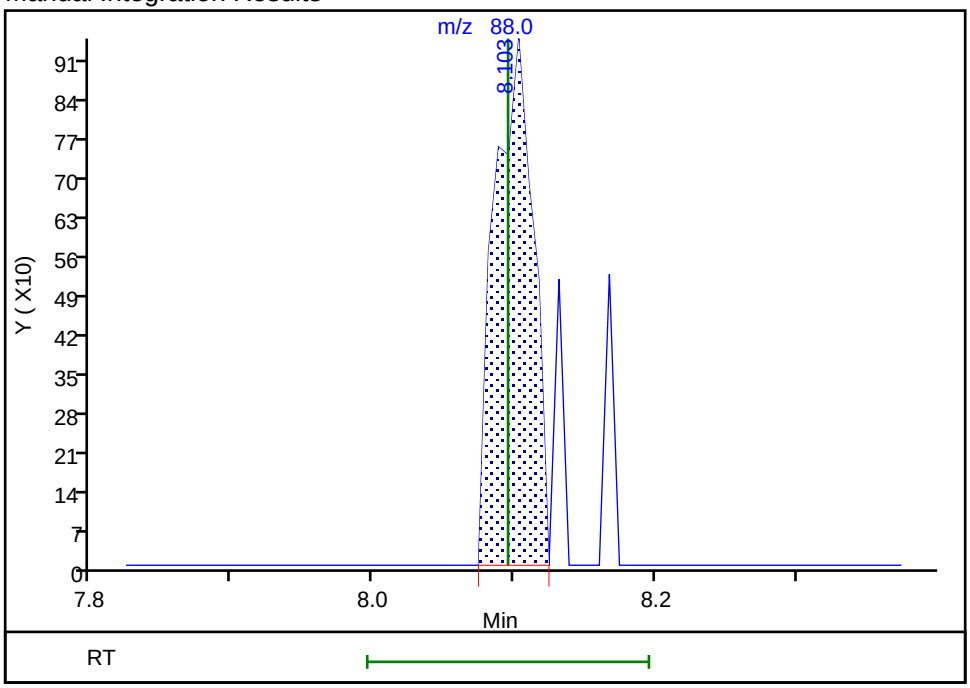
Not Detected
Expected RT: 8.10

Processing Integration Results



Manual Integration Results

RT: 8.10
Area: 1795
Amount: 40.066615
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:25:30
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1535.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Oct-2018 23:36:30 ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:27:57 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:23:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.607	-0.006	37	153438	250.0	250.0	
* 1 Fluorobenzene	96	7.561	7.559	0.002	98	1448567	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	90	279391	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	97	423817	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	91	139375	5.00	4.95	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	133077	5.00	4.92	
$ 7 Toluene-d8 (Surr)	98	8.755	8.753	0.002	95	613563	5.00	5.19	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	83	183848	5.00	4.86	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	288075	5.00	4.41	
26 Chloromethane	50	4.083	4.083	0.000	98	201527	5.00	4.69	
27 Vinyl chloride	62	4.208	4.222	-0.014	84	210263	5.00	4.80	
29 Bromomethane	94	4.572	4.585	-0.013	92	189648	5.00	5.01	
30 Chloroethane	64	4.641	4.641	0.000	98	173908	5.00	4.84	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	447493	5.00	4.91	
32 Trichlorofluoromethane	101	4.893	4.893	0.000	99	399761	5.00	4.84	
35 Ethyl ether	59	5.046	5.060	-0.014	94	87003	5.00	4.90	
39 Acrolein	56	5.214	5.214	0.000	98	92160	50.0	47.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.284	5.298	-0.014	95	171677	5.00	4.93	
41 Acetone	43	5.326	5.326	0.000	47	79019	20.0	19.2	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	95	206552	5.00	4.88	
44 Iodomethane	142	5.523	5.521	0.002	99	290041	5.00	4.93	
45 Methyl acetate	43	5.551	5.557	-0.006	99	92314	10.0	9.85	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	79	378288	5.00	5.00	
48 Carbon disulfide	76	5.609	5.614	-0.005	99	860685	5.00	5.00	
49 2-Methyl-2-propanol	59	5.659	5.664	-0.005	97	32788	50.0	45.0	
50 Methylene Chloride	84	5.694	5.700	-0.006	98	172686	5.00	4.73	
52 Acrylonitrile	53	5.873	5.872	0.001	73	170334	50.0	48.6	
51 Methyl tert-butyl ether	73	5.866	5.872	-0.006	98	228132	5.00	4.96	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	96	205469	5.00	4.93	
54 Hexane	57	6.066	6.072	-0.006	95	388299	5.00	5.17	
55 Vinyl acetate	43	6.181	6.179	0.002	97	290934	10.0	8.95	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.238	6.243	-0.005	98	359804	5.00	4.93	
61 2-Butanone (MEK)	43	6.638	6.630	0.008	99	115296	20.0	19.6	
62 sec-Butyl Alcohol	45	6.681	6.680	0.001	38	62519	150.0	129.0	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	88	193695	5.00	4.91	
64 2,2-Dichloropropane	77	6.703	6.701	0.002	89	296230	5.00	4.78	
67 Chlorobromomethane	128	6.874	6.880	-0.006	94	58002	5.00	4.92	
68 Chloroform	83	6.881	6.887	-0.006	95	320415	5.00	4.98	
69 Tetrahydrofuran	42	6.910	6.908	0.002	53	29507	10.0	9.49	
71 1,1,1-Trichloroethane	97	7.096	7.101	-0.005	97	317711	5.00	4.84	
70 Isobutyl alcohol	41	7.096	7.123	-0.027	97	16165	125.0	94.9	M
72 Cyclohexane	56	7.160	7.166	-0.006	96	455095	5.00	5.06	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	96	300901	5.00	4.90	
74 Carbon tetrachloride	117	7.232	7.237	-0.005	97	269831	5.00	4.89	
76 1,2-Dichloroethane	62	7.368	7.366	0.002	96	170173	5.00	4.93	
77 Benzene	78	7.382	7.380	0.002	98	766954	5.00	4.98	
14 n-Heptane	43	7.446	7.445	0.001	96	441331	5.00	5.07	
79 Trichloroethene	95	7.847	7.845	0.002	95	197532	5.00	4.91	
80 2-Pentanone	43	7.897	7.902	-0.005	98	135385	20.0	18.5	
82 Methylcyclohexane	55	8.025	8.031	-0.006	95	365705	5.00	5.00	
83 1,2-Dichloropropane	63	8.040	8.038	0.002	91	167234	5.00	4.96	
84 1,4-Dioxane	88	8.104	8.095	0.009	27	8163	100.0	98.9	M
85 Dibromomethane	93	8.147	8.145	0.002	91	57520	5.00	4.96	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	98	178676	5.00	4.90	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	92	32379	5.00	4.22	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	90	171480	5.00	4.68	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	229983	20.0	20.2	
91 Toluene	91	8.805	8.803	0.002	96	777005	5.00	4.95	
92 Ethyl methacrylate	69	8.891	8.889	0.001	93	69856	5.00	4.36	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	99	126342	5.00	4.40	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	72468	5.00	4.79	
95 2-Hexanone	43	9.184	9.182	0.002	96	142570	20.0	19.7	
96 1,3-Dichloropropane	76	9.198	9.204	-0.006	96	141240	5.00	5.02	
97 Tetrachloroethene	164	9.212	9.211	0.001	93	142816	5.00	5.00	
98 Chlorodibromomethane	129	9.391	9.390	0.001	89	77205	5.00	4.66	
100 Ethylene Dibromide	107	9.520	9.518	0.002	95	62700	5.00	5.10	
101 1-Chlorohexane	91	9.734	9.733	0.001	89	272171	5.00	5.09	
102 Chlorobenzene	112	9.849	9.847	0.002	96	412129	5.00	5.01	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	93	126939	5.00	5.03	
103 Ethylbenzene	106	9.877	9.883	-0.006	97	276301	5.00	5.10	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	99	323887	5.00	5.10	
107 o-Xylene	106	10.270	10.269	0.001	97	302542	5.00	5.15	
106 Styrene	104	10.278	10.276	0.002	88	425301	5.00	5.20	
108 Bromoform	173	10.485	10.483	0.002	91	31110	5.00	4.39	
109 Isopropylbenzene	105	10.528	10.526	0.002	97	883990	5.00	5.06	
111 Cyclohexanone	55	10.678	10.677	0.001	96	82840	200.0	186.9	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	94	78114	5.00	5.04	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	77	18430	5.00	4.82	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	85	20458	5.00	4.98	
115 N-Propylbenzene	120	10.842	10.848	-0.006	99	241162	5.00	4.96	
116 Bromobenzene	156	10.857	10.855	0.002	98	146383	5.00	4.91	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	94	711741	5.00	5.02	
118 2-Chlorotoluene	126	10.971	10.970	0.001	94	189887	5.00	4.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	186687	5.00	5.05	
120 tert-Butylbenzene	119	11.250	11.249	0.001	92	696794	5.00	5.04	
121 1,2,4-Trimethylbenzene	105	11.279	11.277	0.002	96	709970	5.00	5.00	
122 sec-Butylbenzene	134	11.429	11.427	0.002	95	196300	5.00	5.11	
123 4-Isopropyltoluene	119	11.522	11.520	0.002	97	818323	5.00	5.08	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	95	324721	5.00	4.87	
126 1,4-Dichlorobenzene	146	11.665	11.663	0.002	93	322407	5.00	4.87	
127 n-Butylbenzene	91	11.879	11.878	0.001	99	905256	5.00	5.17	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	95	266034	5.00	4.96	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.772	0.001	68	8194	5.00	4.73	
130 1,2,4-Trichlorobenzene	180	13.710	13.708	0.002	92	176111	5.00	5.05	
131 Hexachlorobutadiene	225	13.846	13.844	0.002	93	132994	5.00	4.93	
132 Naphthalene	128	14.081	14.080	0.001	98	227007	5.00	5.02	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	93	129241	5.00	4.94	
S 140 1,2-Dichloroethene, Total	96				0		10.0	9.85	
S 138 1,2-Dichloroethene, Total	1				0		10.0	9.85	
S 139 Xylenes, Total	106				0		10.0	10.2	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.08	
S 134 Trihalomethanes, Total	1				0		20.0	18.9	
S 135 Xylenes, Total (URS)	1				0		10.0	10.2	
S 136 Total BTEX	1				0			25.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	2.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.40	Units: uL

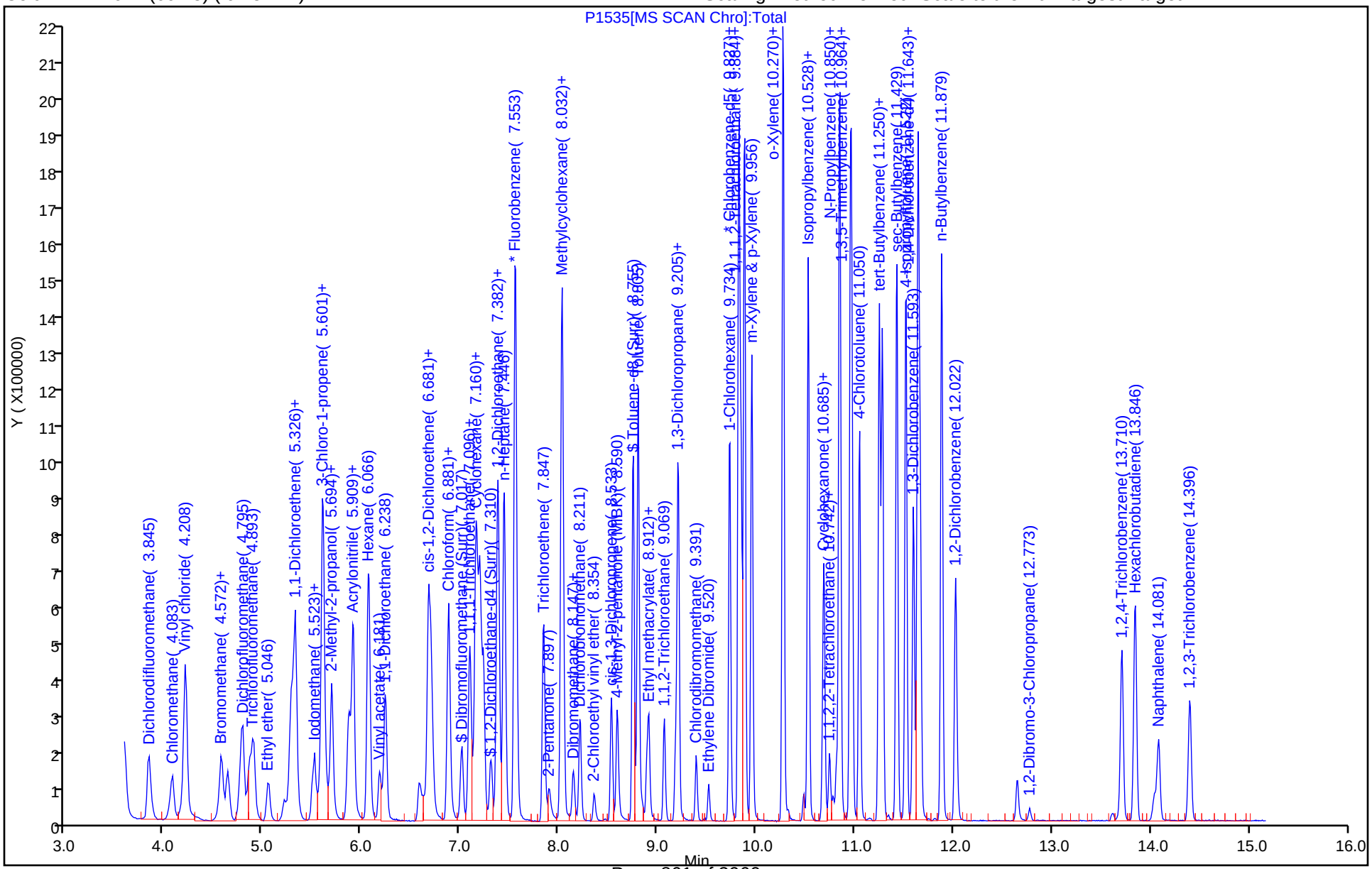
Report Date: 26-Oct-2018 10:27:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1535.D

Injection Date:	22-Oct-2018 23:36:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD05			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

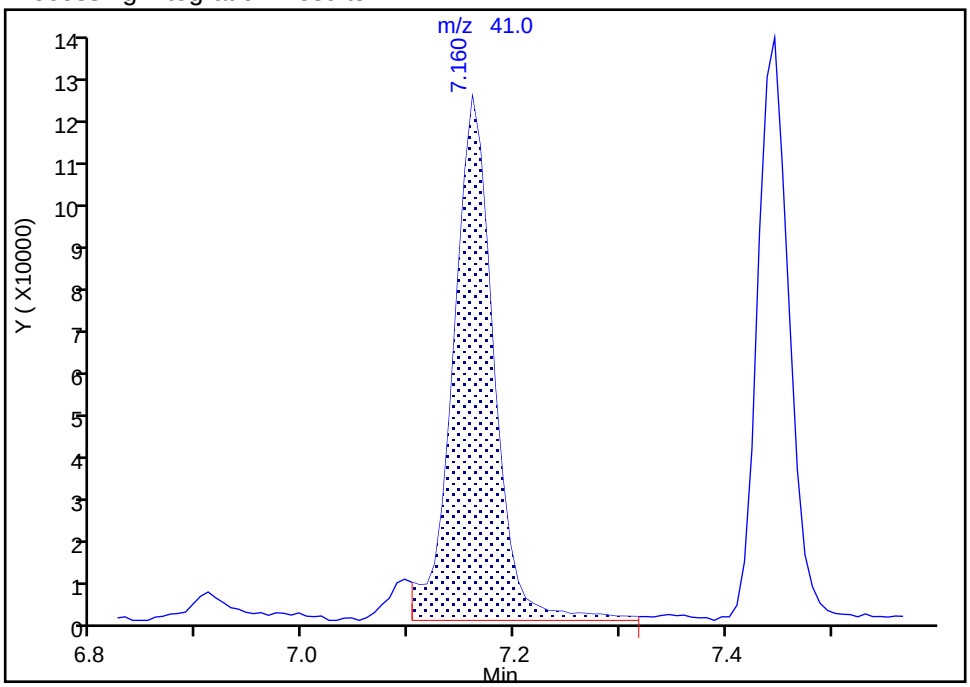
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1535.D
Injection Date: 22-Oct-2018 23:36:30 Instrument ID: VMS_P
Lims ID: STD05
Client ID:
Operator ID: newcomer ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

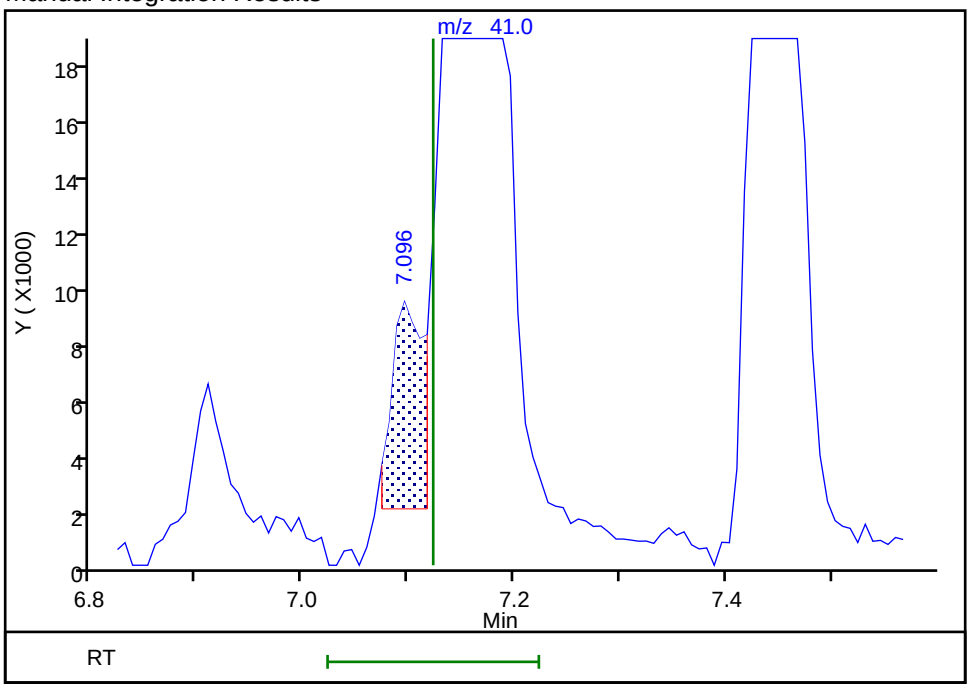
Processing Integration Results

RT: 7.16
Area: 321488
Amount: 211.9598
Amount Units: ug/l



Manual Integration Results

RT: 7.10
Area: 16165
Amount: 94.877681
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:21:53
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

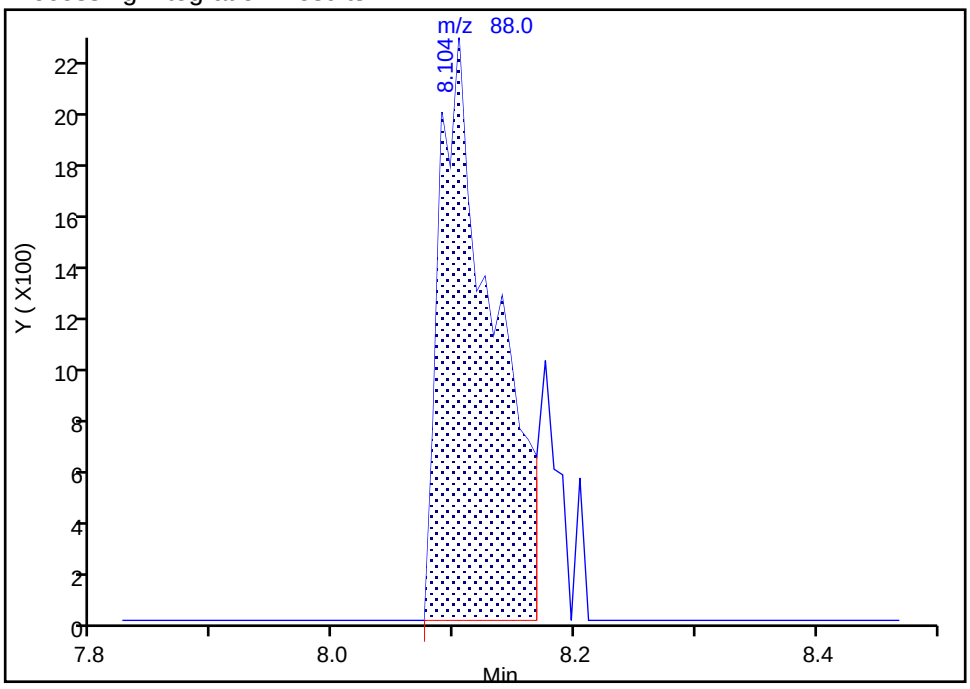
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1535.D
Injection Date: 22-Oct-2018 23:36:30 Instrument ID: VMS_P
Lims ID: STD05
Client ID:
Operator ID: newcomer ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

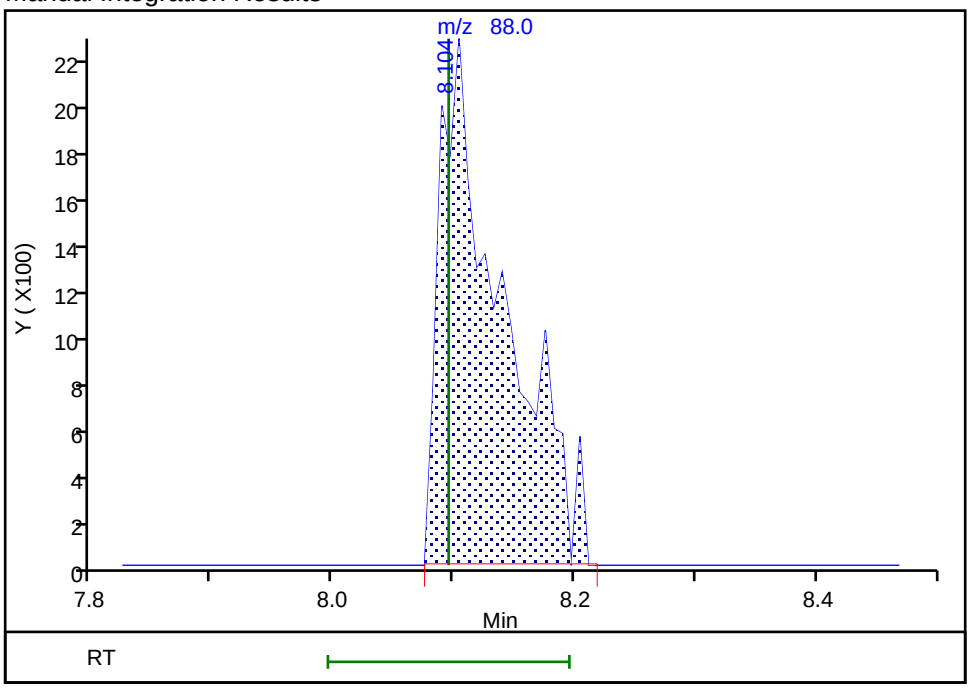
Processing Integration Results

RT: 8.10
Area: 7055
Amount: 97.969860
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 8163
Amount: 98.935101
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:22:56
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 22-Oct-2018 23:54:30 ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:00 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:17:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.607	5.607	0.000	45	153710	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1484900	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	293843	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	98	434345	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	291273	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.309	0.000	99	277981	10.0	10.0	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1252902	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.684	0.000	83	389233	10.0	10.0	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	735470	10.0	11.0	
26 Chloromethane	50	4.083	4.083	0.000	98	446492	10.0	10.1	
27 Vinyl chloride	62	4.222	4.222	0.000	81	468232	10.0	10.4	
29 Bromomethane	94	4.585	4.585	0.000	92	409171	10.0	10.5	
30 Chloroethane	64	4.641	4.641	0.000	99	388990	10.0	10.6	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	945199	10.0	10.1	
32 Trichlorofluoromethane	101	4.893	4.893	0.000	100	850192	10.0	10.0	
35 Ethyl ether	59	5.060	5.060	0.000	95	190523	10.0	10.5	
39 Acrolein	56	5.214	5.214	0.000	99	209052	100.0	103.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.298	0.000	96	358066	10.0	10.0	
41 Acetone	43	5.326	5.326	0.000	31	174333	40.0	41.3	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	95	448527	10.0	10.3	
44 Iodomethane	142	5.521	5.521	0.000	99	636348	10.0	10.6	
45 Methyl acetate	43	5.557	5.557	0.000	97	180114	20.0	18.7	
47 3-Chloro-1-propene	41	5.600	5.600	0.000	80	827117	10.0	10.7	
48 Carbon disulfide	76	5.614	5.614	0.000	99	1877821	10.0	10.6	
49 2-Methyl-2-propanol	59	5.664	5.664	0.000	93	80061	100.0	104.3	
50 Methylene Chloride	84	5.700	5.700	0.000	98	359867	10.0	9.62	
52 Acrylonitrile	53	5.872	5.872	0.000	97	394024	100.0	104.3	
51 Methyl tert-butyl ether	73	5.872	5.872	0.000	98	490502	10.0	10.4	
53 trans-1,2-Dichloroethene	96	5.915	5.915	0.000	96	440349	10.0	10.3	
54 Hexane	57	6.072	6.072	0.000	96	812580	10.0	10.3	
55 Vinyl acetate	43	6.179	6.179	0.000	97	722969	20.0	21.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.243	6.243	0.000	97	767035	10.0	10.3	
61 2-Butanone (MEK)	43	6.630	6.630	0.000	99	261640	40.0	43.4	
62 sec-Butyl Alcohol	45	6.680	6.680	0.000	48	158648	300.0	260.1	
63 cis-1,2-Dichloroethene	96	6.680	6.680	0.000	86	414480	10.0	10.3	
64 2,2-Dichloropropane	77	6.701	6.701	0.000	89	657503	10.0	10.4	
67 Chlorobromomethane	128	6.880	6.880	0.000	92	126234	10.0	10.4	
68 Chloroform	83	6.887	6.887	0.000	95	674374	10.0	10.2	
69 Tetrahydrofuran	42	6.908	6.908	0.000	90	62125	20.0	19.5	
71 1,1,1-Trichloroethane	97	7.101	7.101	0.000	98	703751	10.0	10.4	
70 Isobutyl alcohol	41	7.123	7.123	0.000	98	59640	250.0	215.9	M
72 Cyclohexane	56	7.166	7.166	0.000	95	961671	10.0	10.4	
73 1,1-Dichloropropene	75	7.194	7.194	0.000	96	661228	10.0	10.5	
74 Carbon tetrachloride	117	7.237	7.237	0.000	97	597861	10.0	10.6	
76 1,2-Dichloroethane	62	7.366	7.366	0.000	98	366821	10.0	10.4	
77 Benzene	78	7.380	7.380	0.000	98	1630124	10.0	10.3	
14 n-Heptane	43	7.445	7.445	0.000	96	940078	10.0	10.5	
79 Trichloroethene	95	7.845	7.845	0.000	95	417356	10.0	10.1	
80 2-Pentanone	43	7.902	7.902	0.000	98	317112	40.0	40.3	
82 Methylcyclohexane	55	8.031	8.031	0.000	95	782852	10.0	10.4	
83 1,2-Dichloropropane	63	8.038	8.038	0.000	91	359294	10.0	10.4	
84 1,4-Dioxane	88	8.095	8.095	0.000	96	19825	200.0	204.2	M
85 Dibromomethane	93	8.145	8.145	0.000	91	124133	10.0	10.4	
86 Dichlorobromomethane	83	8.217	8.217	0.000	98	394336	10.0	10.6	
87 2-Chloroethyl vinyl ether	63	8.353	8.353	0.000	94	76671	10.0	9.18	
89 cis-1,3-Dichloropropene	75	8.532	8.532	0.000	91	403835	10.0	10.3	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.589	0.000	99	514547	40.0	44.2	
91 Toluene	91	8.803	8.803	0.000	97	1666906	10.0	10.3	
92 Ethyl methacrylate	69	8.889	8.889	0.000	94	172920	10.0	9.77	
93 trans-1,3-Dichloropropene	75	8.910	8.910	0.000	99	295254	10.0	9.57	
94 1,1,2-Trichloroethane	97	9.068	9.068	0.000	93	161187	10.0	10.4	
95 2-Hexanone	43	9.182	9.182	0.000	99	321667	40.0	41.0	
96 1,3-Dichloropropane	76	9.204	9.204	0.000	98	307296	10.0	10.4	
97 Tetrachloroethene	164	9.211	9.211	0.000	92	314232	10.0	10.5	
98 Chlorodibromomethane	129	9.390	9.390	0.000	90	180138	10.0	10.1	
100 Ethylene Dibromide	107	9.518	9.518	0.000	97	140256	10.0	10.8	
101 1-Chlorohexane	91	9.733	9.733	0.000	90	606115	10.0	10.8	
102 Chlorobenzene	112	9.847	9.847	0.000	93	883115	10.0	10.2	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.883	0.000	91	283865	10.0	10.7	
103 Ethylbenzene	106	9.883	9.883	0.000	97	599364	10.0	10.5	
105 m-Xylene & p-Xylene	106	9.954	9.954	0.000	99	713702	10.0	10.7	
107 o-Xylene	106	10.269	10.269	0.000	89	663675	10.0	10.7	
106 Styrene	104	10.276	10.276	0.000	85	960799	10.0	11.2	
108 Bromoform	173	10.483	10.483	0.000	94	74512	10.0	9.56	
109 Isopropylbenzene	105	10.526	10.526	0.000	97	1943780	10.0	10.9	
111 Cyclohexanone	55	10.677	10.677	0.000	97	193401	400.0	403.7	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.741	0.000	96	169222	10.0	10.7	
113 trans-1,4-Dichloro-2-buten	53	10.777	10.777	0.000	83	38987	10.0	9.96	
114 1,2,3-Trichloropropane	110	10.820	10.820	0.000	89	46922	10.0	11.1	
115 N-Propylbenzene	120	10.848	10.848	0.000	99	542206	10.0	10.9	
116 Bromobenzene	156	10.855	10.855	0.000	98	320968	10.0	10.5	
117 1,3,5-Trimethylbenzene	105	10.955	10.955	0.000	94	1570604	10.0	10.8	
118 2-Chlorotoluene	126	10.970	10.970	0.000	94	411519	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.048	11.048	0.000	99	396075	10.0	10.5	
120 tert-Butylbenzene	119	11.249	11.249	0.000	93	1537937	10.0	10.8	
121 1,2,4-Trimethylbenzene	105	11.277	11.277	0.000	96	1571155	10.0	10.8	
122 sec-Butylbenzene	134	11.427	11.427	0.000	95	425798	10.0	10.8	
123 4-Isopropyltoluene	119	11.520	11.520	0.000	97	1770755	10.0	10.7	
124 1,3-Dichlorobenzene	146	11.592	11.592	0.000	95	707859	10.0	10.4	
126 1,4-Dichlorobenzene	146	11.663	11.663	0.000	91	704882	10.0	10.4	
127 n-Butylbenzene	91	11.878	11.878	0.000	99	1942615	10.0	10.8	
128 1,2-Dichlorobenzene	146	12.021	12.021	0.000	95	569001	10.0	10.4	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.772	0.000	70	19021	10.0	9.97	
130 1,2,4-Trichlorobenzene	180	13.708	13.708	0.000	93	379903	10.0	10.6	
131 Hexachlorobutadiene	225	13.844	13.844	0.000	93	284608	10.0	10.3	
132 Naphthalene	128	14.080	14.080	0.000	98	507371	10.0	11.0	
133 1,2,3-Trichlorobenzene	180	14.395	14.395	0.000	93	288132	10.0	10.8	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.6	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.6	
S 139 Xylenes, Total	106				0		20.0	21.4	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 134 Trihalomethanes, Total	1				0		40.0	40.4	
S 135 Xylenes, Total (URS)	1				0		20.0	21.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	4.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL

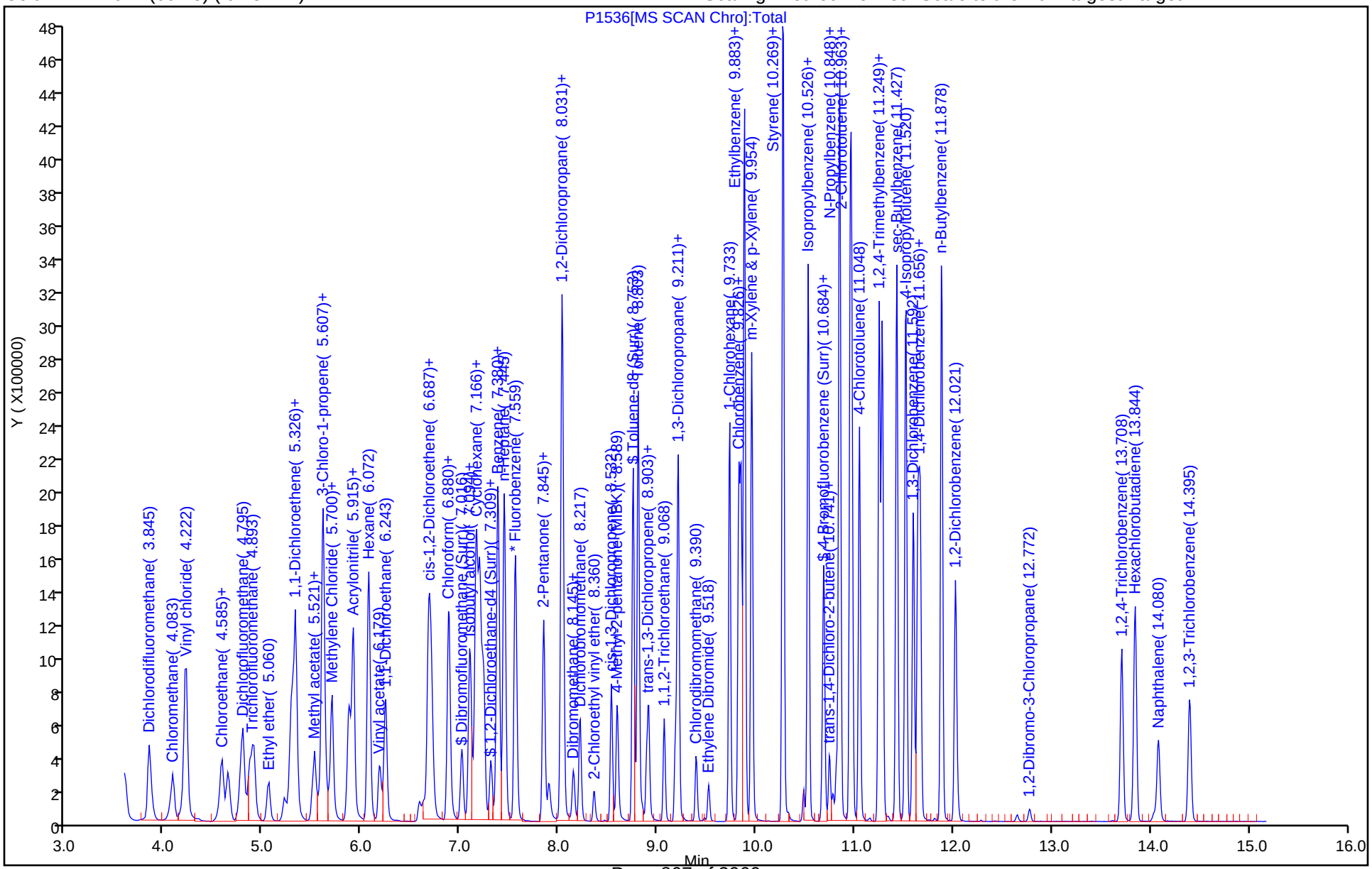
Report Date: 26-Oct-2018 10:28:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D

Injection Date:	22-Oct-2018 23:54:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

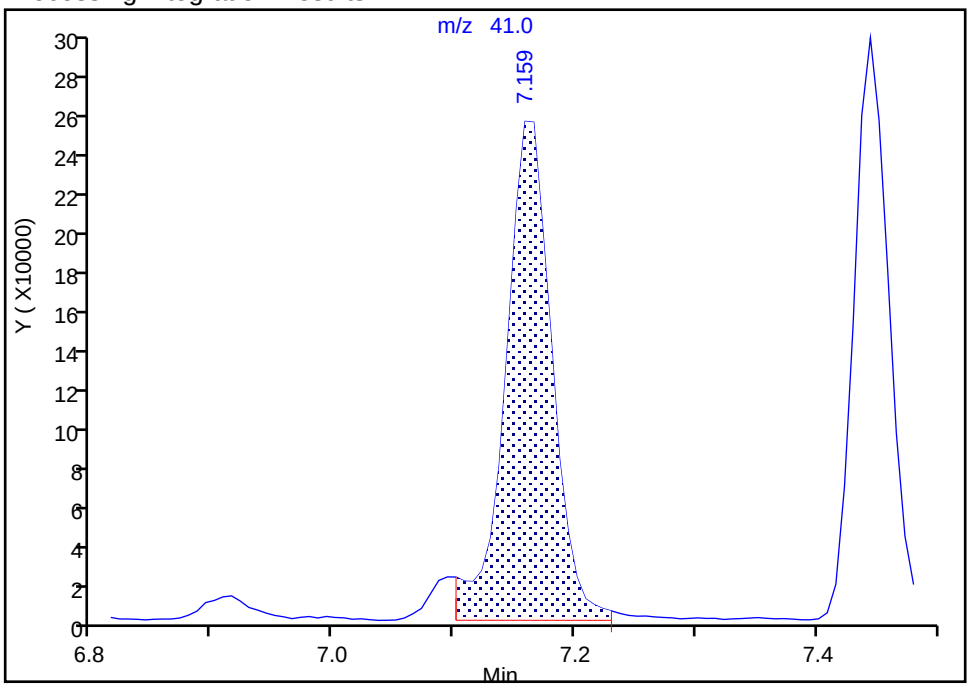
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D
Injection Date: 22-Oct-2018 23:54:30 Instrument ID: VMS_P
Lims ID: ICIS
Client ID:
Operator ID: newcomer ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

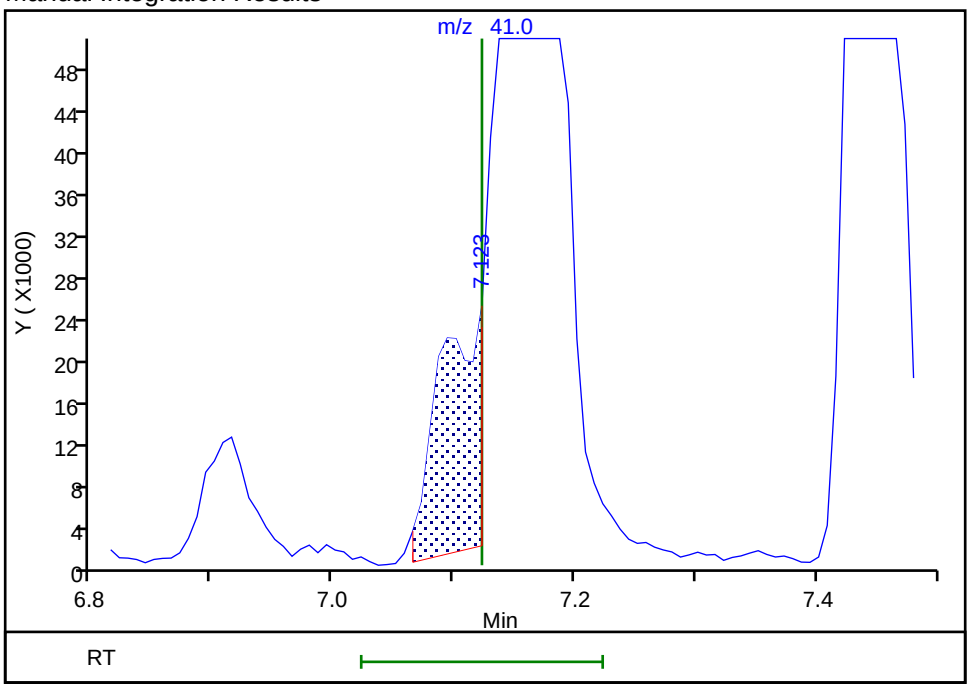
Processing Integration Results

RT: 7.16
Area: 666750
Amount: 260.8538
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 59640
Amount: 215.9097
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:16:46
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

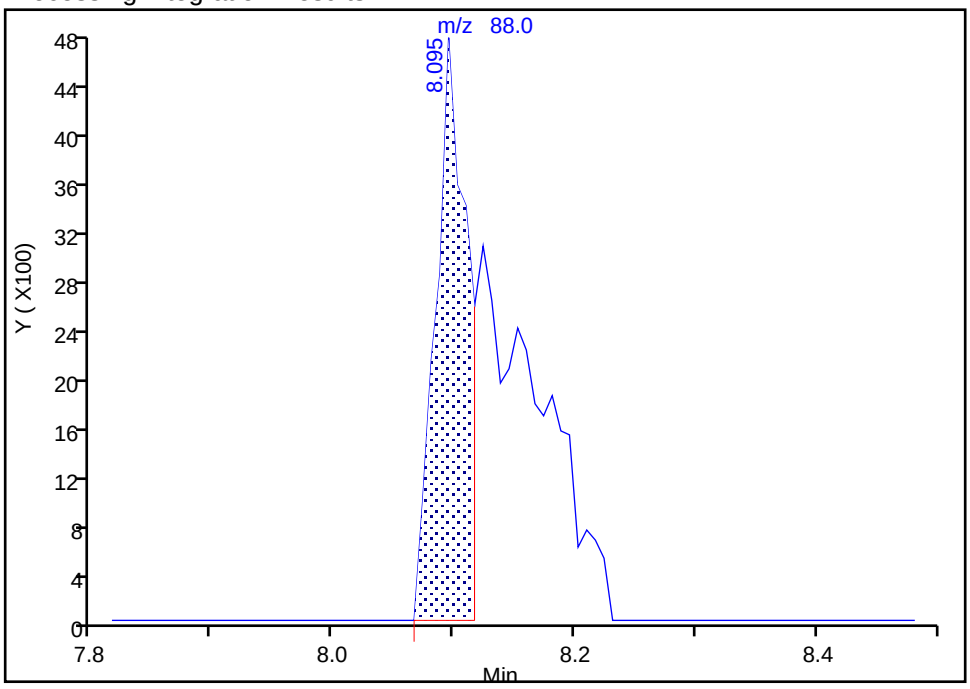
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1536.D
Injection Date: 22-Oct-2018 23:54:30 Instrument ID: VMS_P
Lims ID: ICIS
Client ID:
Operator ID: newcomer ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

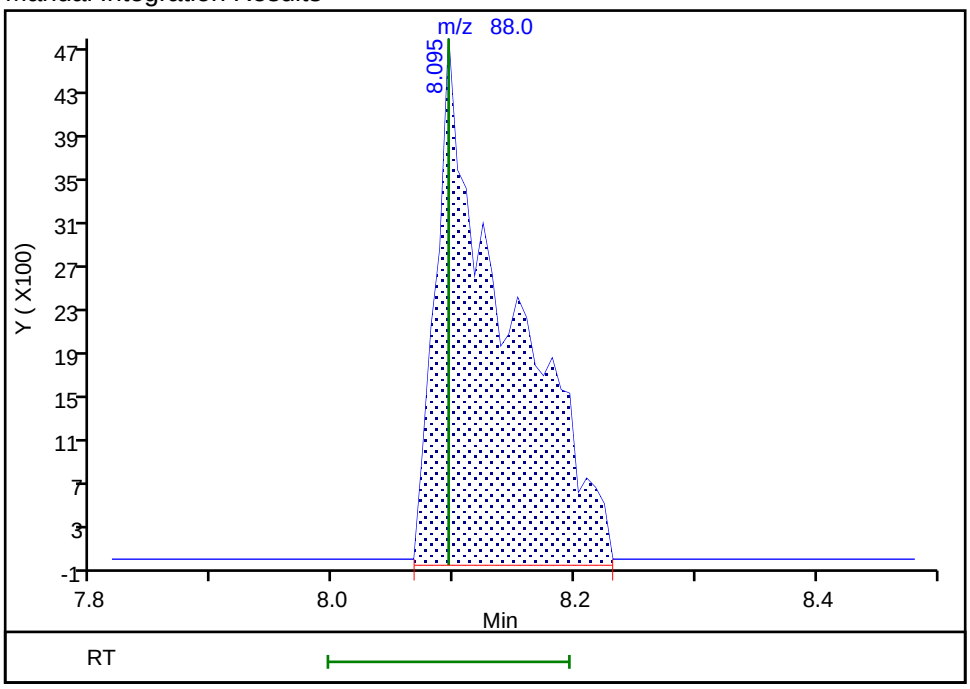
Processing Integration Results

RT: 8.10
Area: 8592
Amount: 149.5101
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 19825
Amount: 204.2176
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:21:36
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1537.D
Lims ID: STD25
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 23-Oct-2018 00:13:30 ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD25
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:04 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:19:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.607	-0.006	29	175609	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1598025	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	88	325333	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	97	481097	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	92	833783	25.0	26.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	775548	25.0	26.0	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	3602810	25.0	26.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	85	1140773	25.0	26.5	
23 Dichlorodifluoromethane	85	3.844	3.845	-0.001	100	1858093	25.0	25.8	
26 Chloromethane	50	4.082	4.083	-0.001	98	1182249	25.0	24.9	
27 Vinyl chloride	62	4.221	4.222	-0.001	98	1225859	25.0	25.3	
29 Bromomethane	94	4.584	4.585	-0.001	92	1039359	25.0	24.9	
30 Chloroethane	64	4.640	4.641	-0.001	99	981944	25.0	24.8	
31 Dichlorofluoromethane	67	4.794	4.795	-0.001	98	2500432	25.0	24.8	
32 Trichlorofluoromethane	101	4.906	4.893	0.013	100	2286034	25.0	25.1	
35 Ethyl ether	59	5.059	5.060	-0.001	95	508960	25.0	26.0	
39 Acrolein	56	5.213	5.214	-0.001	100	573918	250.0	260.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.297	5.298	-0.001	96	991032	25.0	25.8	
41 Acetone	43	5.325	5.326	-0.001	98	456902	100.0	100.6	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	96	1214896	25.0	26.0	
44 Iodomethane	142	5.522	5.521	0.001	99	1669775	25.0	25.7	
45 Methyl acetate	43	5.558	5.557	0.001	99	477010	50.0	46.1	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	79	2210140	25.0	26.5	
48 Carbon disulfide	76	5.615	5.614	0.001	99	4894616	25.0	25.8	
49 2-Methyl-2-propanol	59	5.665	5.664	0.001	95	227884	250.0	254.3	
50 Methylene Chloride	84	5.694	5.700	-0.006	97	940718	25.0	23.4	
52 Acrylonitrile	53	5.866	5.872	-0.006	88	1096397	250.0	263.2	
51 Methyl tert-butyl ether	73	5.873	5.872	0.001	97	1326974	25.0	26.2	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	95	1168190	25.0	25.4	
54 Hexane	57	6.073	6.072	0.001	95	2172540	25.0	24.8	
55 Vinyl acetate	43	6.180	6.179	0.001	97	1956800	50.0	52.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.245	6.243	0.002	97	2048571	25.0	25.4	
61 2-Butanone (MEK)	43	6.631	6.630	0.001	99	694115	100.0	107.1	
62 sec-Butyl Alcohol	45	6.674	6.680	-0.006	45	600116	750.0	760.5	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	87	1125825	25.0	25.9	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	91	1817586	25.0	26.6	
67 Chlorobromomethane	128	6.874	6.880	-0.006	93	342377	25.0	26.3	
68 Chloroform	83	6.888	6.887	0.001	96	1839496	25.0	25.9	
69 Tetrahydrofuran	42	6.910	6.908	0.002	89	191563	50.0	55.8	
71 1,1,1-Trichloroethane	97	7.095	7.101	-0.006	98	1943964	25.0	26.8	
70 Isobutyl alcohol	41	7.095	7.123	-0.028	99	256725	625.0	675.8	M
72 Cyclohexane	56	7.160	7.166	-0.006	93	2547223	25.0	25.7	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	96	1771456	25.0	26.1	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	97	1697208	25.0	27.9	
76 1,2-Dichloroethane	62	7.374	7.366	0.008	97	1012106	25.0	26.6	
77 Benzene	78	7.382	7.380	0.002	99	4354273	25.0	25.6	
14 n-Heptane	43	7.446	7.445	0.001	95	2503147	25.0	26.1	
79 Trichloroethene	95	7.846	7.845	0.001	95	1176545	25.0	26.5	
80 2-Pentanone	43	7.896	7.902	-0.006	98	908003	100.0	104.7	
82 Methylcyclohexane	55	8.032	8.031	0.001	95	2107985	25.0	26.1	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	91	966306	25.0	26.0	
84 1,4-Dioxane	88	8.097	8.095	0.002	98	54445	500.0	486.9	
85 Dibromomethane	93	8.147	8.145	0.002	91	339447	25.0	26.5	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	98	1110029	25.0	27.6	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	92	232604	25.0	25.1	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	91	1162264	25.0	26.4	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	1423611	100.0	113.5	
91 Toluene	91	8.804	8.803	0.001	97	4504430	25.0	26.0	
92 Ethyl methacrylate	69	8.890	8.889	0.001	92	502168	25.0	25.1	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	97	856567	25.0	25.2	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	440600	25.0	26.4	
95 2-Hexanone	43	9.176	9.182	-0.006	98	924099	100.0	104.7	
96 1,3-Dichloropropane	76	9.205	9.204	0.001	98	853095	25.0	26.1	
97 Tetrachloroethene	164	9.212	9.211	0.001	94	894564	25.0	26.9	
98 Chlorodibromomethane	129	9.391	9.390	0.001	90	529411	25.0	26.5	
100 Ethylene Dibromide	107	9.519	9.518	0.001	98	393143	25.0	27.5	
101 1-Chlorohexane	91	9.734	9.733	0.001	91	1703083	25.0	27.3	
102 Chlorobenzene	112	9.848	9.847	0.001	92	2472302	25.0	25.8	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	94	836763	25.0	28.5	
103 Ethylbenzene	106	9.884	9.883	0.001	98	1697879	25.0	26.9	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	99	1972447	25.0	26.7	
107 o-Xylene	106	10.270	10.269	0.001	88	1857075	25.0	27.1	
106 Styrene	104	10.277	10.276	0.001	85	2754394	25.0	28.9	
108 Bromoform	173	10.485	10.483	0.002	93	229187	25.0	26.0	
109 Isopropylbenzene	105	10.528	10.526	0.002	98	5332082	25.0	26.9	
111 Cyclohexanone	55	10.678	10.677	0.001	96	582097	1000.0	1081.7	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	95	461284	25.0	26.2	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	92	123288	25.0	28.4	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	88	125958	25.0	27.0	
115 N-Propylbenzene	120	10.849	10.848	0.001	99	1515447	25.0	27.5	
116 Bromobenzene	156	10.849	10.855	-0.006	98	934605	25.0	27.6	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	94	4427245	25.0	27.5	
118 2-Chlorotoluene	126	10.971	10.970	0.001	94	1152643	25.0	26.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	1131730	25.0	27.0	
120 tert-Butylbenzene	119	11.250	11.249	0.001	92	4378350	25.0	27.9	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	4358310	25.0	27.0	
122 sec-Butylbenzene	134	11.428	11.427	0.001	96	1224554	25.0	28.1	
123 4-Isopropyltoluene	119	11.521	11.520	0.001	96	4989795	25.0	27.3	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	96	1985697	25.0	26.2	
126 1,4-Dichlorobenzene	146	11.664	11.663	0.001	92	1944066	25.0	25.9	
127 n-Butylbenzene	91	11.879	11.878	0.001	99	5368086	25.0	27.0	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	94	1595669	25.0	26.2	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.772	0.001	71	57253	25.0	26.1	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	93	1069570	25.0	27.0	
131 Hexachlorobutadiene	225	13.845	13.844	0.001	93	810182	25.0	26.5	
132 Naphthalene	128	14.081	14.080	0.001	98	1418730	25.0	27.7	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	94	783888	25.0	26.4	
S 140 1,2-Dichloroethene, Total	96				0		50.0	51.3	
S 138 1,2-Dichloroethene, Total	1				0		50.0	51.3	
S 139 Xylenes, Total	106				0		50.0	53.8	
S 137 1,3-Dichloropropene, Total	1				0		50.0	51.6	
S 134 Trihalomethanes, Total	1				0		100.0	106.0	
S 135 Xylenes, Total (URS)	1				0		50.0	53.8	
S 136 Total BTEX	1				0			132.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	10.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	2.00	Units: uL

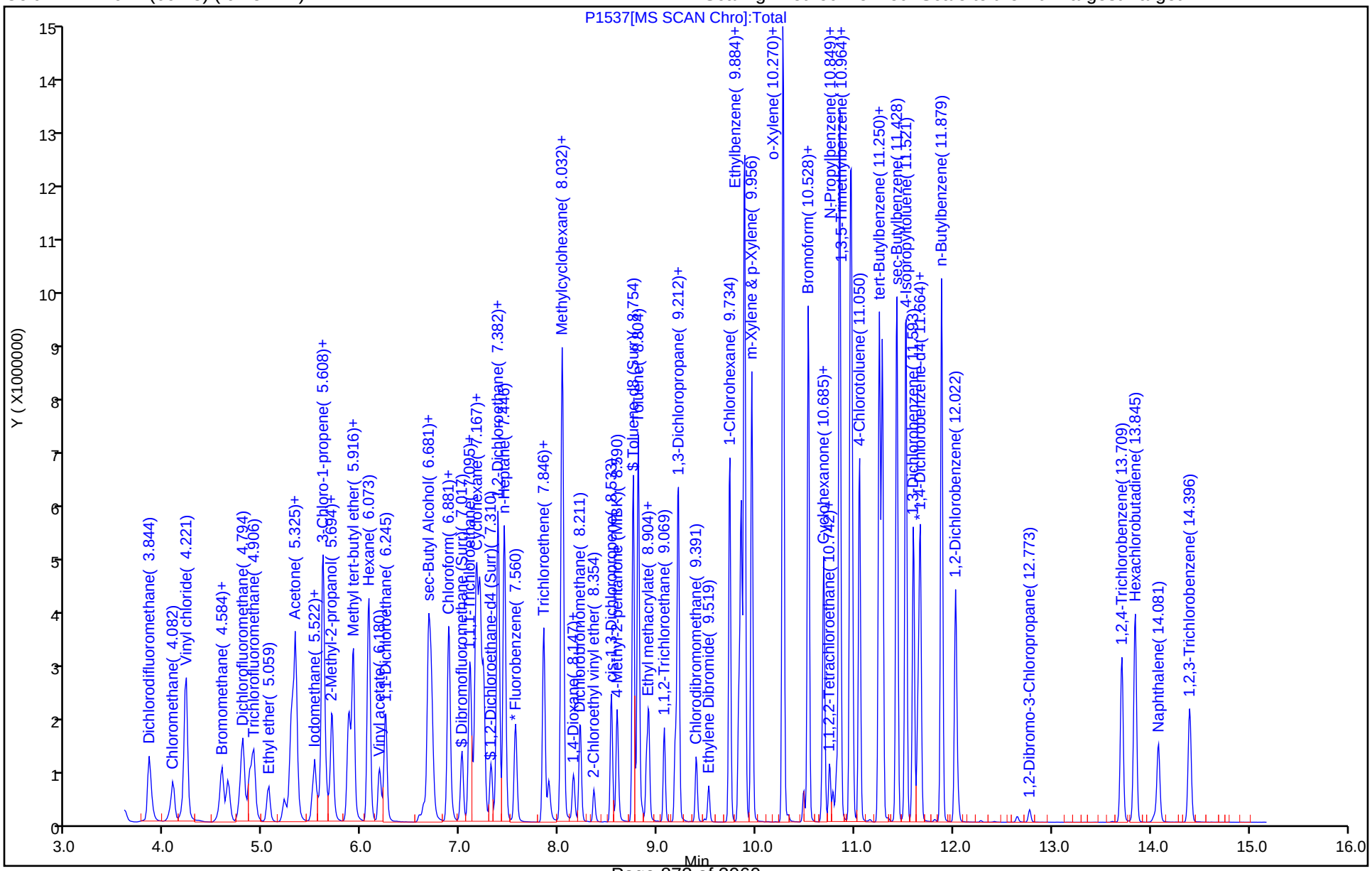
Report Date: 26-Oct-2018 10:28:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1537.D

Injection Date:	23-Oct-2018 00:13:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD25			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

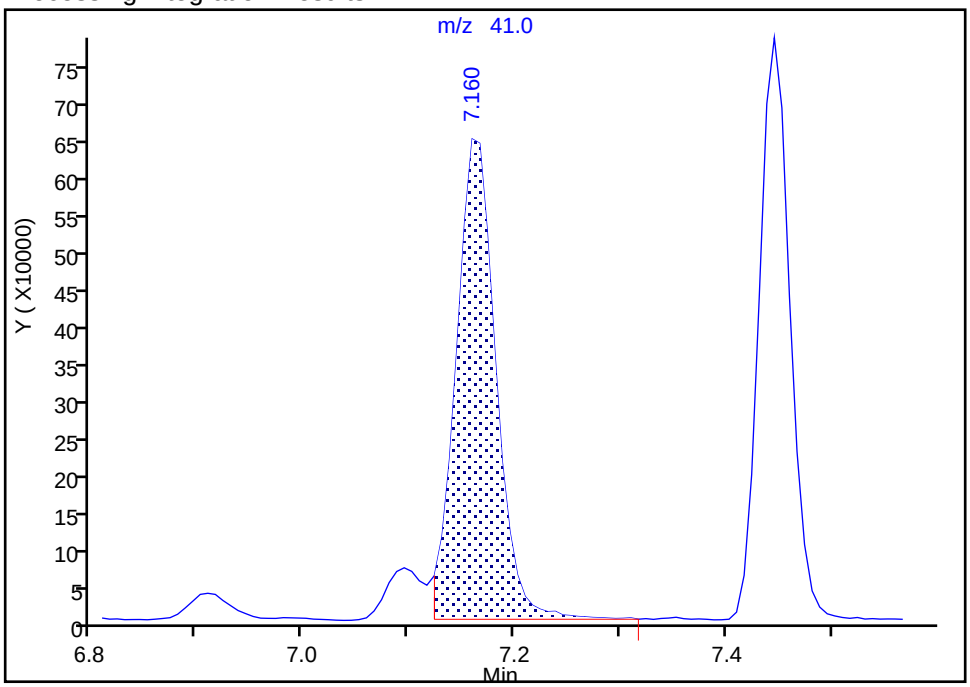
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1537.D
Injection Date: 23-Oct-2018 00:13:30 Instrument ID: VMS_P
Lims ID: STD25
Client ID:
Operator ID: newcomer ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

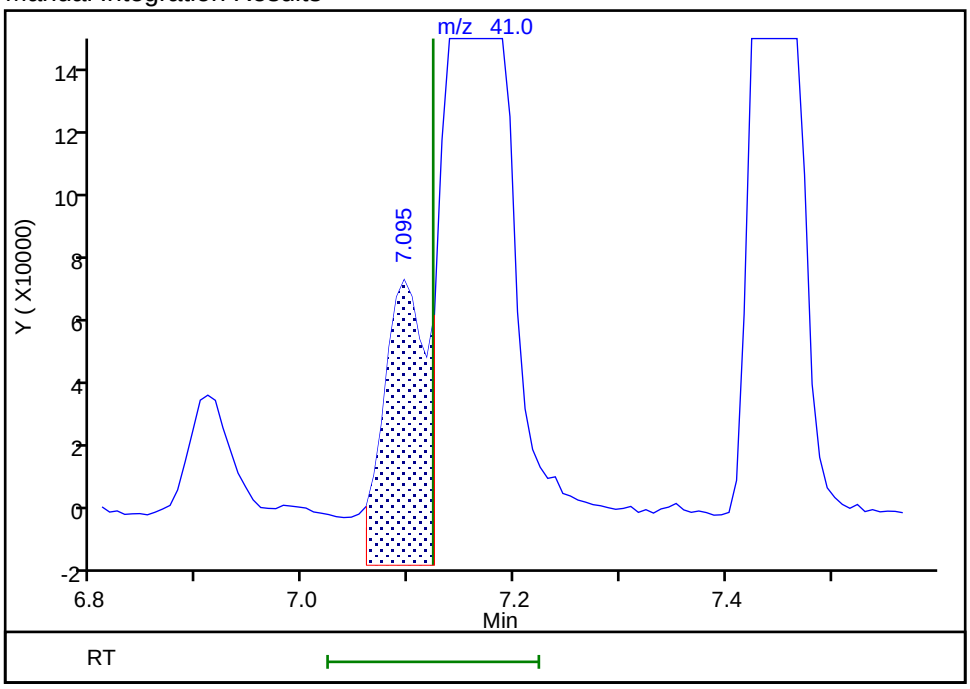
Processing Integration Results

RT: 7.16
Area: 1693011
Amount: 688.8365
Amount Units: ug/l



Manual Integration Results

RT: 7.10
Area: 256725
Amount: 675.7601
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:18:31
Audit Action: Manually Integrated Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Oct-2018 00:32:30 ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD60
Operator ID: newcomer Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:08 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 08:21:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.608	5.607	0.001	32	202848	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1764698	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	87	359083	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	98	557273	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	92	2188809	50.0	63.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	2014622	50.0	61.2	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	8943247	50.0	58.9	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	88	3013369	50.0	60.5	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	4693289	60.0	59.0	
26 Chloromethane	50	4.082	4.083	-0.001	98	2894998	60.0	55.3	
27 Vinyl chloride	62	4.208	4.222	-0.014	98	3061908	60.0	57.3	
29 Bromomethane	94	4.571	4.585	-0.014	94	2330479	60.0	50.5	
30 Chloroethane	64	4.641	4.641	0.000	98	2162819	60.0	49.4	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	6305032	60.0	56.7	
32 Trichlorofluoromethane	101	4.893	4.893	-0.001	100	5932606	60.0	59.0	
35 Ethyl ether	59	5.046	5.060	-0.014	95	1314028	60.0	60.7	
39 Acrolein	56	5.214	5.214	0.000	99	1475122	600.1	603.4	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.298	0.000	95	2584242	60.0	60.9	
41 Acetone	43	5.311	5.326	-0.015	98	1199807	240.0	239.2	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	95	3059955	60.0	59.3	
44 Iodomethane	142	5.523	5.521	0.002	99	4375661	60.0	61.1	
45 Methyl acetate	43	5.551	5.557	-0.006	98	1259076	120.0	110.3	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	84	5459964	60.0	59.3	
48 Carbon disulfide	76	5.608	5.614	-0.006	100	11882759	60.0	56.7	
49 2-Methyl-2-propanol	59	5.666	5.664	0.002	94	620909	600.0	594.8	
50 Methylene Chloride	84	5.694	5.700	-0.006	97	2369557	60.0	53.3	
52 Acrylonitrile	53	5.866	5.872	-0.006	97	2883332	600.0	621.0	
51 Methyl tert-butyl ether	73	5.866	5.872	-0.006	99	3428838	60.0	61.2	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	95	2992033	60.0	59.0	
54 Hexane	57	6.066	6.072	-0.006	95	5359904	60.0	55.5	
55 Vinyl acetate	43	6.180	6.179	0.001	97	5053902	120.0	122.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.238	6.243	-0.005	97	5231410	60.0	58.8	
61 2-Butanone (MEK)	43	6.631	6.630	0.001	99	1838987	240.0	256.9	
62 sec-Butyl Alcohol	45	6.674	6.680	-0.006	95	1701173	1800.0	1803.0	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	87	2889476	60.0	60.2	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	90	4790387	60.0	63.5	
67 Chlorobromomethane	128	6.874	6.880	-0.006	95	901336	60.0	62.7	
68 Chloroform	83	6.881	6.887	-0.006	97	4846835	60.0	61.9	
69 Tetrahydrofuran	42	6.910	6.908	0.002	90	492719	120.0	130.1	
71 1,1,1-Trichloroethane	97	7.096	7.101	-0.005	98	5174443	60.0	64.6	
70 Isobutyl alcohol	41	7.088	7.123	-0.035	98	680435	1500.0	1486.1	M
72 Cyclohexane	56	7.160	7.166	-0.006	96	6252132	60.0	57.0	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	95	4605301	60.0	61.6	
74 Carbon tetrachloride	117	7.231	7.237	-0.006	98	4608704	60.0	68.6	
76 1,2-Dichloroethane	62	7.367	7.366	0.001	97	2727259	60.0	64.9	
77 Benzene	78	7.382	7.380	0.002	99	10752710	60.0	57.3	
14 n-Heptane	43	7.446	7.445	0.001	94	6152650	60.0	58.1	
79 Trichloroethene	95	7.846	7.845	0.001	96	3117767	60.0	63.6	
80 2-Pentanone	43	7.896	7.902	-0.006	98	2422968	240.0	250.9	
82 Methylcyclohexane	55	8.032	8.031	0.001	96	5312605	60.0	59.6	
83 1,2-Dichloropropane	63	8.039	8.038	0.001	89	2398505	60.0	58.4	
84 1,4-Dioxane	88	8.097	8.095	0.002	94	154523	1200.0	1216.8	M
85 Dibromomethane	93	8.147	8.145	0.002	93	892486	60.0	63.2	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	99	2991730	60.0	67.4	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	93	638560	60.0	61.6	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	91	3092117	60.0	63.4	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	3633639	240.0	262.4	
91 Toluene	91	8.804	8.803	0.001	97	11055512	60.0	57.8	
92 Ethyl methacrylate	69	8.890	8.889	0.001	92	1359256	60.0	60.9	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	98	2305617	60.0	60.9	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	1143505	60.0	62.1	
95 2-Hexanone	43	9.176	9.182	-0.006	98	2413876	240.0	246.4	
96 1,3-Dichloropropane	76	9.205	9.204	0.001	98	2210702	60.0	61.2	
97 Tetrachloroethene	164	9.212	9.211	0.001	93	2444032	60.0	66.5	
98 Chlorodibromomethane	129	9.391	9.390	0.001	91	1453495	60.0	65.5	
100 Ethylene Dibromide	107	9.519	9.518	0.001	98	1044908	60.0	66.1	
101 1-Chlorohexane	91	9.734	9.733	0.001	92	4331901	60.0	63.0	
102 Chlorobenzene	112	9.848	9.847	0.001	91	6322200	60.0	59.8	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	93	2295577	60.0	70.8	
103 Ethylbenzene	106	9.884	9.883	0.001	97	4283066	60.0	61.5	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	98	5095712	60.0	62.4	
107 o-Xylene	106	10.270	10.269	0.001	85	4628210	60.0	61.3	
106 Styrene	104	10.277	10.276	0.001	83	6767658	60.0	64.4	
108 Bromoform	173	10.485	10.483	0.002	94	659560	60.0	67.1	
109 Isopropylbenzene	105	10.528	10.526	0.002	98	12941106	60.0	56.3	
111 Cyclohexanone	55	10.678	10.677	0.001	96	1568876	2400.0	2628.0	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	95	1181451	60.0	58.0	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	89	330653	60.0	65.8	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	89	329287	60.0	61.0	
115 N-Propylbenzene	120	10.842	10.848	-0.006	97	3796203	60.0	59.4	e
116 Bromobenzene	156	10.857	10.855	0.002	97	2422825	60.0	61.8	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	94	11036786	60.0	59.2	
118 2-Chlorotoluene	126	10.971	10.970	0.001	93	2972965	60.0	59.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	2992125	60.0	61.6	
120 tert-Butylbenzene	119	11.250	11.249	0.001	91	11170940	60.0	61.4	
121 1,2,4-Trimethylbenzene	105	11.278	11.277	0.001	96	10953609	60.0	58.7	
122 sec-Butylbenzene	134	11.429	11.427	0.002	97	3140484	60.0	62.2	e
123 4-Isopropyltoluene	119	11.522	11.520	0.002	95	12163407	60.0	57.4	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	96	5248864	60.0	59.9	
126 1,4-Dichlorobenzene	146	11.665	11.663	0.002	92	5114875	60.0	58.8	
127 n-Butylbenzene	91	11.879	11.878	0.001	97	12717640	60.0	55.2	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	94	4190892	60.0	59.4	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.772	0.001	75	160385	60.0	62.2	
130 1,2,4-Trichlorobenzene	180	13.709	13.708	0.001	93	2785041	60.0	60.7	
131 Hexachlorobutadiene	225	13.845	13.844	0.001	95	2161747	60.0	61.0	
132 Naphthalene	128	14.081	14.080	0.001	98	3577030	60.0	60.2	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	94	2018581	60.0	58.7	
S 140 1,2-Dichloroethene, Total	96				0		120.0	119.1	
S 138 1,2-Dichloroethene, Total	1				0		120.0	119.1	
S 139 Xylenes, Total	106				0		120.0	123.7	
S 137 1,3-Dichloropropene, Total	1				0		120.0	124.4	
S 134 Trihalomethanes, Total	1				0		240.0	261.9	
S 135 Xylenes, Total (URS)	1				0		120.0	123.7	
S 136 Total BTEX	1				0			300.2	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMainA_00002	Amount Added:	24.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	4.00	Units: uL

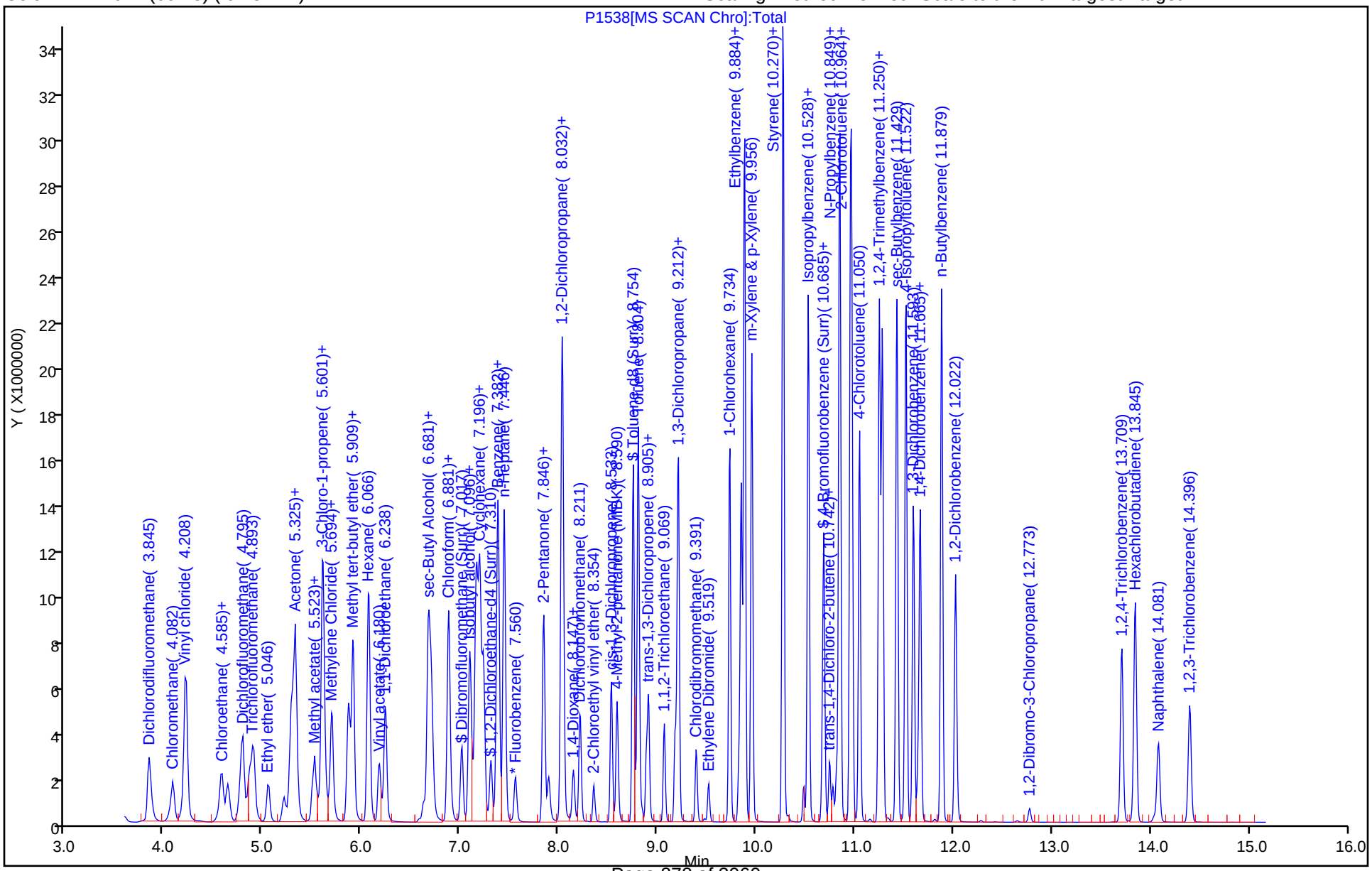
Report Date: 26-Oct-2018 10:28:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Injection Date:	23-Oct-2018 00:32:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	STD60			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

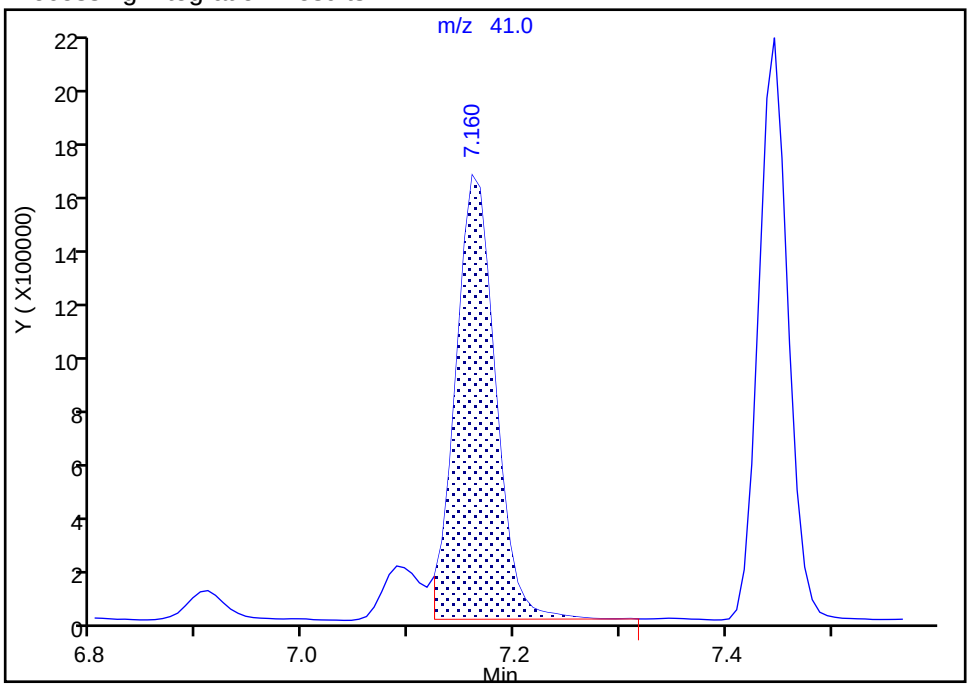
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D
Injection Date: 23-Oct-2018 00:32:30 Instrument ID: VMS_P
Lims ID: STD60
Client ID:
Operator ID: newcomer ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

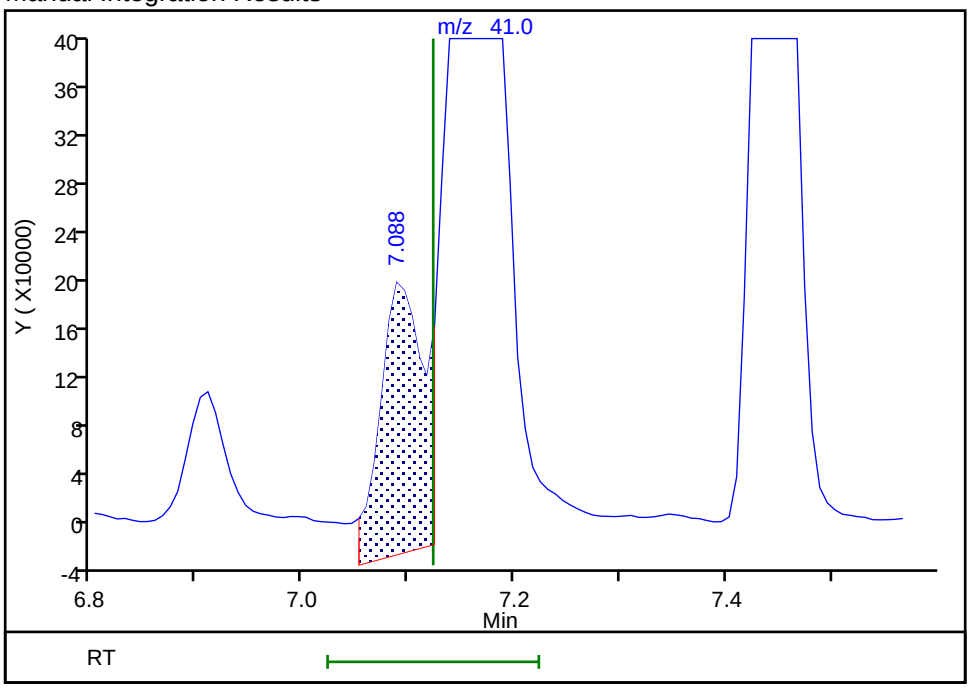
Processing Integration Results

RT: 7.16
Area: 4203350
Amount: 1753.8839
Amount Units: ug/l



Manual Integration Results

RT: 7.09
Area: 680435
Amount: 1486.1312
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:20:45
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

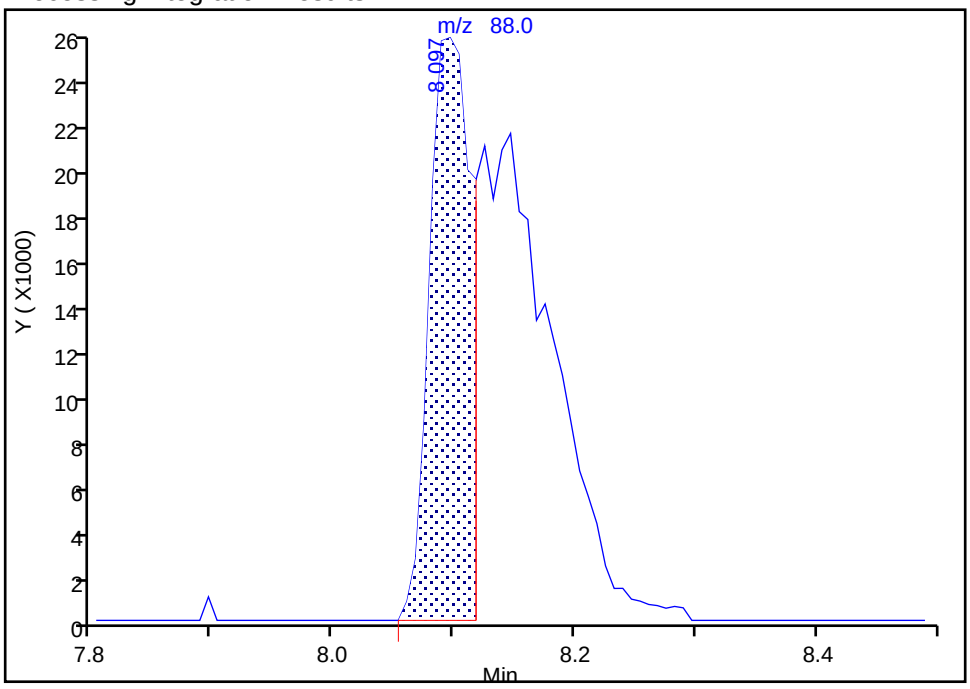
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D
Injection Date: 23-Oct-2018 00:32:30 Instrument ID: VMS_P
Lims ID: STD60
Client ID:
Operator ID: newcomer ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

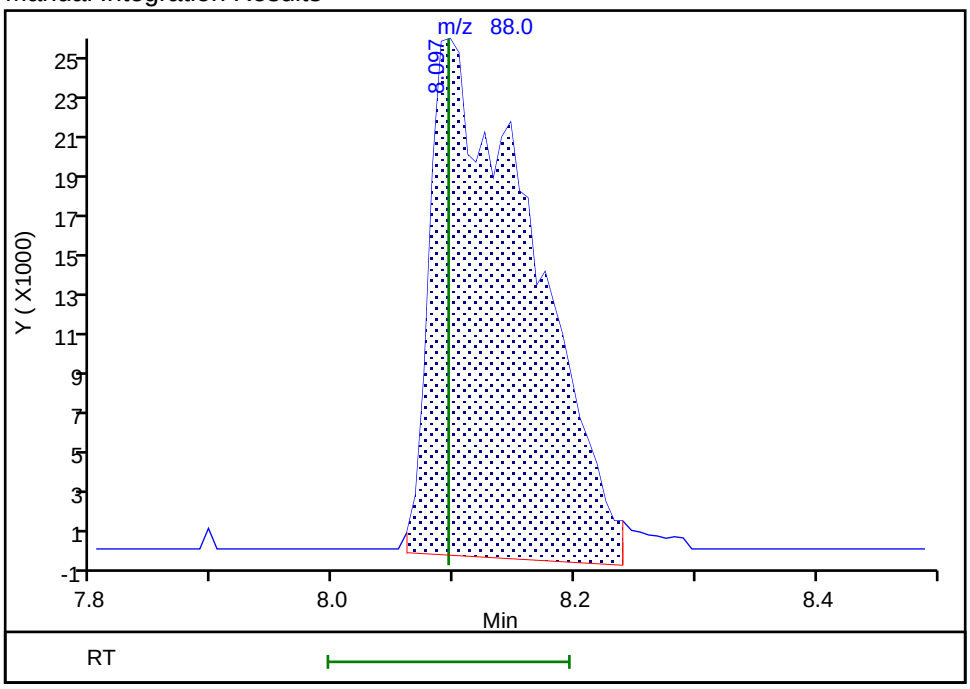
Processing Integration Results

RT: 8.10
Area: 63503
Amount: 818.9501
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 154523
Amount: 1216.8438
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:21:15
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-434433/17 Calibration Date: 10/23/2018 01:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P1540.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.6322		11.2	10.0	12.3	20.0
Chloromethane	Ave	0.3707	0.3878	0.1000	10.5	10.0	4.6	20.0
Vinyl chloride	Ave	0.3783	0.3958		10.5	10.0	4.6	20.0
Bromomethane	Ave	0.3269	0.3447		10.5	10.0	5.5	20.0
Chloroethane	Ave	0.3098	0.3302		10.7	10.0	6.6	20.0
Dichlorofluoromethane	Ave	0.7871	0.8669		11.0	10.0	10.1	20.0
Trichlorofluoromethane	Ave	0.7129	0.7361		10.3	10.0	3.3	20.0
Ethyl ether	Ave	0.1533	0.1722		11.2	10.0	12.4	20.0
Acrolein	Lin2		0.0179		105	100	5.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.3231		10.7	10.0	7.5	20.0
1,1-Dichloroethene	Ave	0.3655	0.3964		10.8	10.0	8.4	20.0
Acetone	Ave	0.0355	0.0321		36.2	40.0	-9.6	20.0
Iodomethane	Ave	0.5074	0.5652		11.1	10.0	11.4	20.0
Methyl acetate	Ave	0.0809	0.0802		19.8	20.0	-0.8	20.0
3-Chloro-1-propene	Ave	0.6527	0.7196		11.0	10.0	10.2	20.0
Carbon disulfide	Ave	1.485	1.620		10.9	10.0	9.1	20.0
t-Butyl alcohol	Lin1		1.345		108	100	7.6	20.0
Methylene Chloride	Ave	0.3148	0.3042		9.66	10.0	-3.4	20.0
Methyl tert-butyl ether	Ave	0.3966	0.4224		10.7	10.0	6.5	20.0
Acrylonitrile	Lin2		0.0328		103	100	3.1	20.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3904		10.9	10.0	8.6	20.0
Hexane	Ave	3.359	3.479		10.4	10.0	3.6	20.0
Vinyl acetate	Lin2		0.2606		18.2	20.0	-9.2	20.0
1,1-Dichloroethane	Ave	0.6299	0.6602	0.1000	10.5	10.0	4.8	20.0
2-Butanone (MEK)	Ave	0.0507	0.0503		39.7	40.0	-0.9	20.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3562		10.5	10.0	4.7	20.0
sec-Butyl Alcohol	Lin		0.9597		237	240	-1.3	20.0
2,2-Dichloropropane	Ave	0.5342	0.5609		10.5	10.0	5.0	20.0
Bromochloromethane	Ave	0.1018	0.1083		10.6	10.0	6.3	20.0
Chloroform	Ave	0.5547	0.5811		10.5	10.0	4.8	20.0
Tetrahydrofuran	Ave	0.0268	0.0304		22.7	20.0	13.3	20.0
1,1,1-Trichloroethane	Ave	0.5669	0.6143		10.8	10.0	8.4	20.0
Isobutyl alcohol	Lin		0.4072		224	250	-10.3	20.0
Cyclohexane	Ave	0.7766	0.8233		10.6	10.0	6.0	20.0
1,1-Dichloropropene	Ave	0.5299	0.5587		10.5	10.0	5.4	20.0
Carbon tetrachloride	Ave	0.4761	0.5165		10.8	10.0	8.5	20.0
1,2-Dichloroethane	Ave	0.2976	0.3061		10.3	10.0	2.9	20.0
Benzene	Ave	1.329	1.383		10.4	10.0	4.1	20.0
Trichloroethene	Ave	0.3470	0.3705		10.7	10.0	6.8	20.0
2-Pentanone	Lin2		0.0644		31.5	32.0	-1.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-434433/17 Calibration Date: 10/23/2018 01:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P1540.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6311	0.6502		10.3	10.0	3.0	20.0
1,2-Dichloropropane	Ave	0.2907	0.3141		10.8	10.0	8.0	20.0
1,4-Dioxane	Lin2		0.0009		213	200	6.3	20.0
Dibromomethane	Ave	0.1000	0.1043		10.4	10.0	4.2	20.0
Bromodichloromethane	Ave	0.3144	0.3370		10.7	10.0	7.2	20.0
2-Chloroethyl vinyl ether	Lin1		0.0646		9.19	10.0	-8.1	20.0
cis-1,3-Dichloropropene	Lin2		1.836		11.0	10.0	9.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1070		43.6	40.0	9.0	20.0
Toluene	Ave	1.356	1.433		10.6	10.0	5.7	20.0
Ethyl methacrylate	Lin1		0.7426		9.86	10.0	-1.4	20.0
trans-1,3-Dichloropropene	Lin1		0.2527		9.73	10.0	-2.7	20.0
1,1,2-Trichloroethane	Ave	0.1305	0.1397		10.7	10.0	7.0	20.0
2-Hexanone	Lin2		0.3342		40.1	40.0	0.2	20.0
1,3-Dichloropropane	Ave	1.258	1.302		10.4	10.0	3.5	20.0
Tetrachloroethene	Ave	1.279	1.351		10.6	10.0	5.6	20.0
Dibromochloromethane	Lin2		0.8060		10.6	10.0	6.0	20.0
1,2-Dibromoethane	Ave	0.5501	0.5980		10.9	10.0	8.7	20.0
1-Chlorohexane	Ave	2.393	2.578		8.62	8.00	7.7	20.0
Chlorobenzene	Ave	3.682	3.799	0.3000	10.3	10.0	3.2	20.0
Ethylbenzene	Ave	2.426	2.536		10.5	10.0	4.6	20.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.226		10.9	10.0	8.6	20.0
m-Xylene & p-Xylene	Ave	2.842	3.005		10.6	10.0	5.7	20.0
o-Xylene	Ave	2.629	2.818		10.7	10.0	7.2	20.0
Styrene	Ave	3.660	4.017		11.0	10.0	9.7	20.0
Bromoform	Lin2		0.3277	0.1000	9.88	10.0	-1.2	20.0
Isopropylbenzene	Ave	5.152	5.553		10.8	10.0	7.8	20.0
Cyclohexanone	Lin2		0.0196		385	400	-3.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4779	0.3000	10.5	10.0	4.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.1218		10.8	10.0	8.1	20.0
1,2,3-Trichloropropane	Ave	0.1211	0.1326		11.0	10.0	9.5	20.0
N-Propylbenzene	Ave	1.433	1.559		10.9	10.0	8.8	20.0
Bromobenzene	Ave	0.8789	0.9356		10.6	10.0	6.5	20.0
1,3,5-Trimethylbenzene	Ave	4.181	4.493		10.7	10.0	7.5	20.0
2-Chlorotoluene	Ave	1.128	1.191		10.6	10.0	5.6	20.0
4-Chlorotoluene	Ave	1.089	1.163		10.7	10.0	6.8	20.0
tert-Butylbenzene	Ave	4.080	4.418		10.8	10.0	8.3	20.0
1,2,4-Trimethylbenzene	Ave	4.186	4.389		10.5	10.0	4.8	20.0
sec-Butylbenzene	Ave	1.133	1.249		11.0	10.0	10.2	20.0
4-Isopropyltoluene	Ave	4.751	5.089		10.7	10.0	7.1	20.0
1,3-Dichlorobenzene	Ave	1.966	2.004		10.2	10.0	1.9	20.0
1,4-Dichlorobenzene	Ave	1.952	2.018		10.3	10.0	3.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-434433/17 Calibration Date: 10/23/2018 01:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P1540.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.168	5.423		10.5	10.0	4.9	20.0
1,2-Dichlorobenzene	Ave	1.582	1.642		10.4	10.0	3.8	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0553		10.1	10.0	0.6	20.0
1,2,4-Trichlorobenzene	Ave	1.029	1.085		10.5	10.0	5.5	20.0
Hexachlorobutadiene	Ave	0.7951	0.8382		10.5	10.0	5.4	20.0
Naphthalene	Ave	1.333	1.454		10.9	10.0	9.1	20.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.8282		10.7	10.0	7.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2479		10.2	10.0	2.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2420		10.4	10.0	3.7	20.0
Toluene-d8 (Surr)	Ave	5.289	5.318		10.1	10.0	0.5	20.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.120		10.0	10.0	0.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1540.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Oct-2018 01:12:30 ALS Bottle#: 19 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: newcomer Instrument ID: VMS_P
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 26-Oct-2018 10:28:08 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0313

First Level Reviewer: seifertj Date: 23-Oct-2018 07:23:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.607	-0.006	31	194486	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1789372	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	88	359716	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	98	529963	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.016	0.001	92	354866	10.0	10.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.309	0.001	99	346469	10.0	10.4	
$ 7 Toluene-d8 (Surr)	98	8.755	8.753	0.002	95	1530342	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.684	0.001	85	474859	10.0	10.0	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	905006	10.0	11.2	
26 Chloromethane	50	4.082	4.083	-0.001	99	555060	10.0	10.5	
27 Vinyl chloride	62	4.222	4.222	0.000	85	566593	10.0	10.5	
29 Bromomethane	94	4.585	4.585	0.000	92	493446	10.0	10.5	
30 Chloroethane	64	4.641	4.641	0.000	99	472660	10.0	10.7	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	1241000	10.0	11.0	
32 Trichlorofluoromethane	101	4.906	4.893	0.013	100	1053658	10.0	10.3	
35 Ethyl ether	59	5.060	5.060	0.000	95	246561	10.0	11.2	
39 Acrolein	56	5.214	5.214	0.000	99	256558	100.0	105.1	
40 1,1,2-Trichloro-1,2,2-trif	151	5.297	5.298	-0.001	97	462540	10.0	10.7	
41 Acetone	43	5.325	5.326	-0.001	99	183928	40.0	36.2	
43 1,1-Dichloroethene	96	5.325	5.326	-0.001	96	567436	10.0	10.8	
44 Iodomethane	142	5.523	5.521	0.002	99	809031	10.0	11.1	
45 Methyl acetate	43	5.558	5.557	0.001	99	229632	20.0	19.8	
47 3-Chloro-1-propene	41	5.601	5.600	0.001	81	1030094	10.0	11.0	
48 Carbon disulfide	76	5.616	5.614	0.002	99	2319182	10.0	10.9	
49 2-Methyl-2-propanol	59	5.666	5.664	0.002	92	104658	100.0	107.6	
50 Methylene Chloride	84	5.701	5.700	0.001	97	435461	10.0	9.66	
52 Acrylonitrile	53	5.873	5.872	0.001	94	469139	100.0	103.1	
51 Methyl tert-butyl ether	73	5.866	5.872	-0.006	98	604664	10.0	10.7	
53 trans-1,2-Dichloroethene	96	5.916	5.915	0.001	96	558890	10.0	10.9	
54 Hexane	57	6.073	6.072	0.001	96	1001257	10.0	10.4	
55 Vinyl acetate	43	6.181	6.179	0.001	97	746215	20.0	18.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.245	6.243	0.002	97	945102	10.0	10.5	
61 2-Butanone (MEK)	43	6.631	6.630	0.001	100	287907	40.0	39.7	
62 sec-Butyl Alcohol	45	6.674	6.680	-0.006	38	179173	240.0	236.8	
63 cis-1,2-Dichloroethene	96	6.674	6.680	-0.006	89	509848	10.0	10.5	
64 2,2-Dichloropropane	77	6.702	6.701	0.001	90	802944	10.0	10.5	
67 Chlorobromomethane	128	6.881	6.880	0.001	93	154975	10.0	10.6	
68 Chloroform	83	6.888	6.887	0.001	97	831903	10.0	10.5	
69 Tetrahydrofuran	42	6.910	6.908	0.002	93	87015	20.0	22.7	
71 1,1,1-Trichloroethane	97	7.096	7.101	-0.005	98	879432	10.0	10.8	
70 Isobutyl alcohol	41	7.124	7.123	0.001	97	79194	250.0	224.1	M
72 Cyclohexane	56	7.160	7.166	-0.006	95	1178583	10.0	10.6	
73 1,1-Dichloropropene	75	7.196	7.194	0.002	96	799774	10.0	10.5	
74 Carbon tetrachloride	117	7.232	7.237	-0.005	97	739330	10.0	10.8	
76 1,2-Dichloroethane	62	7.367	7.366	0.001	98	438224	10.0	10.3	
77 Benzene	78	7.382	7.380	0.002	98	1979818	10.0	10.4	
14 n-Heptane	43	7.446	7.445	0.001	95	1126342	10.0	10.5	
79 Trichloroethene	95	7.846	7.845	0.001	95	530380	10.0	10.7	
80 2-Pentanone	43	7.904	7.902	0.002	97	294907	32.0	31.5	
82 Methylcyclohexane	55	8.032	8.031	0.001	95	930800	10.0	10.3	
83 1,2-Dichloropropane	63	8.040	8.038	0.002	93	449574	10.0	10.8	
84 1,4-Dioxane	88	8.097	8.095	0.002	95	24977	200.0	212.5	M
85 Dibromomethane	93	8.147	8.145	0.002	92	149234	10.0	10.4	
86 Dichlorobromomethane	83	8.211	8.217	-0.006	99	482471	10.0	10.7	
87 2-Chloroethyl vinyl ether	63	8.354	8.353	0.001	92	92510	10.0	9.19	
89 cis-1,3-Dichloropropene	75	8.533	8.532	0.001	92	528246	10.0	11.0	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.589	0.001	99	612542	40.0	43.6	
91 Toluene	91	8.805	8.803	0.002	97	2051435	10.0	10.6	
92 Ethyl methacrylate	69	8.890	8.889	0.001	93	213690	10.0	9.86	
93 trans-1,3-Dichloropropene	75	8.912	8.910	0.002	98	361777	10.0	9.73	
94 1,1,2-Trichloroethane	97	9.069	9.068	0.001	94	200018	10.0	10.7	
95 2-Hexanone	43	9.176	9.182	-0.006	98	384734	40.0	40.1	
96 1,3-Dichloropropane	76	9.205	9.204	0.001	97	374701	10.0	10.4	
97 Tetrachloroethene	164	9.212	9.211	0.001	95	388679	10.0	10.6	
98 Chlorodibromomethane	129	9.391	9.390	0.001	90	231939	10.0	10.6	
100 Ethylene Dibromide	107	9.520	9.518	0.002	98	172084	10.0	10.9	
101 1-Chlorohexane	91	9.734	9.733	0.001	92	593547	8.00	8.62	
102 Chlorobenzene	112	9.849	9.847	0.002	93	1093171	10.0	10.3	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.883	0.001	95	352811	10.0	10.9	
103 Ethylbenzene	106	9.877	9.883	-0.006	98	729830	10.0	10.5	
105 m-Xylene & p-Xylene	106	9.956	9.954	0.002	99	864897	10.0	10.6	
107 o-Xylene	106	10.270	10.269	0.001	88	811057	10.0	10.7	
106 Styrene	104	10.278	10.276	0.002	86	1155883	10.0	11.0	
108 Bromoform	173	10.485	10.483	0.002	93	94310	10.0	9.88	
109 Isopropylbenzene	105	10.528	10.526	0.002	97	2354223	10.0	10.8	
111 Cyclohexanone	55	10.678	10.677	0.001	96	225308	400.0	384.6	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.741	0.001	95	202621	10.0	10.5	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.777	0.001	85	51636	10.0	10.8	
114 1,2,3-Trichloropropane	110	10.814	10.820	-0.006	86	56235	10.0	11.0	
115 N-Propylbenzene	120	10.842	10.848	-0.006	99	661055	10.0	10.9	
116 Bromobenzene	156	10.850	10.855	-0.005	96	396649	10.0	10.6	
117 1,3,5-Trimethylbenzene	105	10.957	10.955	0.002	95	1904933	10.0	10.7	
118 2-Chlorotoluene	126	10.971	10.970	0.001	94	505029	10.0	10.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.050	11.048	0.002	99	493274	10.0	10.7	
120 tert-Butylbenzene	119	11.250	11.249	0.001	92	1872960	10.0	10.8	
121 1,2,4-Trimethylbenzene	105	11.279	11.277	0.002	96	1860915	10.0	10.5	
122 sec-Butylbenzene	134	11.429	11.427	0.002	95	529384	10.0	11.0	
123 4-Isopropyltoluene	119	11.522	11.520	0.002	96	2157686	10.0	10.7	
124 1,3-Dichlorobenzene	146	11.593	11.592	0.001	95	849713	10.0	10.2	
126 1,4-Dichlorobenzene	146	11.665	11.663	0.002	92	855646	10.0	10.3	
127 n-Butylbenzene	91	11.879	11.878	0.001	99	2299310	10.0	10.5	
128 1,2-Dichlorobenzene	146	12.022	12.021	0.001	95	696292	10.0	10.4	
129 1,2-Dibromo-3-Chloropropan	157	12.780	12.772	0.008	71	23435	10.0	10.1	
130 1,2,4-Trichlorobenzene	180	13.710	13.708	0.002	93	460078	10.0	10.5	
131 Hexachlorobutadiene	225	13.845	13.844	0.001	93	355376	10.0	10.5	
132 Naphthalene	128	14.081	14.080	0.001	98	616390	10.0	10.9	
133 1,2,3-Trichlorobenzene	180	14.396	14.395	0.001	94	351113	10.0	10.7	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.3	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.3	
S 139 Xylenes, Total	106				0		20.0	21.3	
S 137 1,3-Dichloropropene, Total	1				0		20.0	20.7	
S 134 Trihalomethanes, Total	1				0		40.0	41.7	
S 135 Xylenes, Total (URS)	1				0		20.0	21.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL
MV-MegaMain B_00002	Amount Added:	4.00	Units: uL
MV-MainBaddon_00001	Amount Added:	4.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL

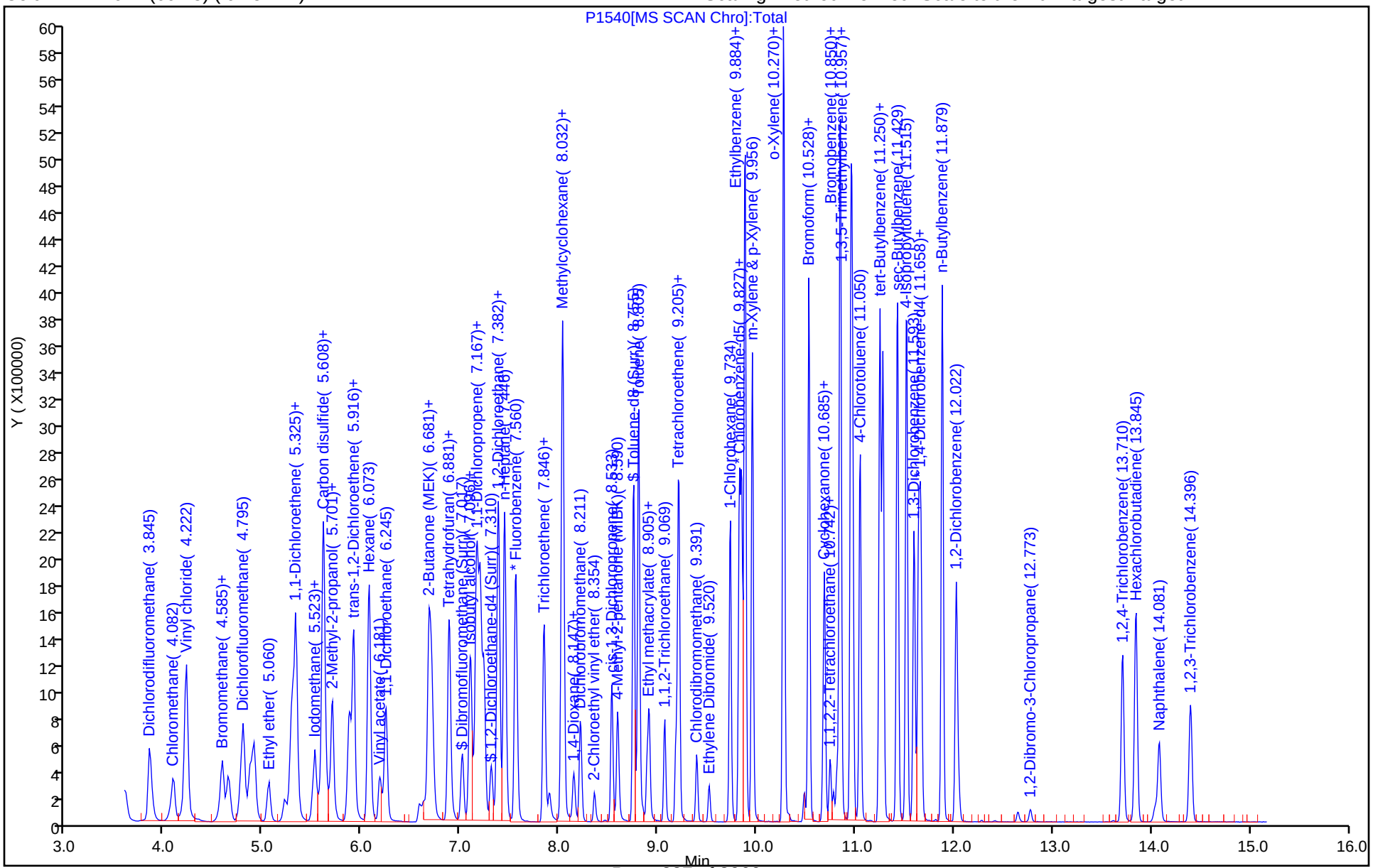
Report Date: 26-Oct-2018 10:28:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1540.D

Injection Date:	23-Oct-2018 01:12:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

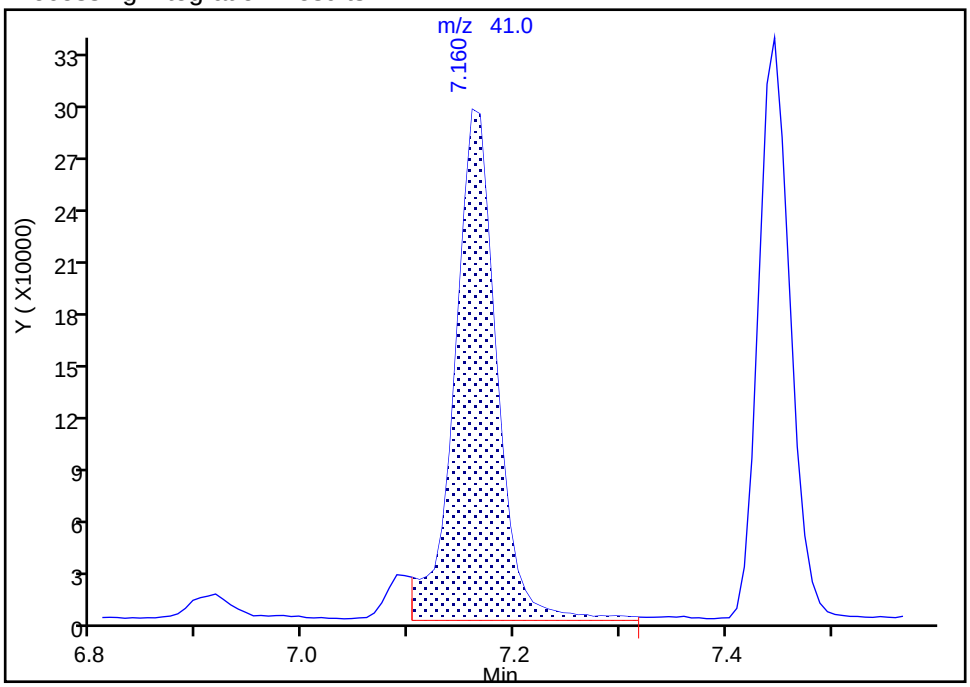
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1540.D
Injection Date: 23-Oct-2018 01:12:30 Instrument ID: VMS_P
Lims ID: ICV
Client ID:
Operator ID: newcomer ALS Bottle#: 19 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

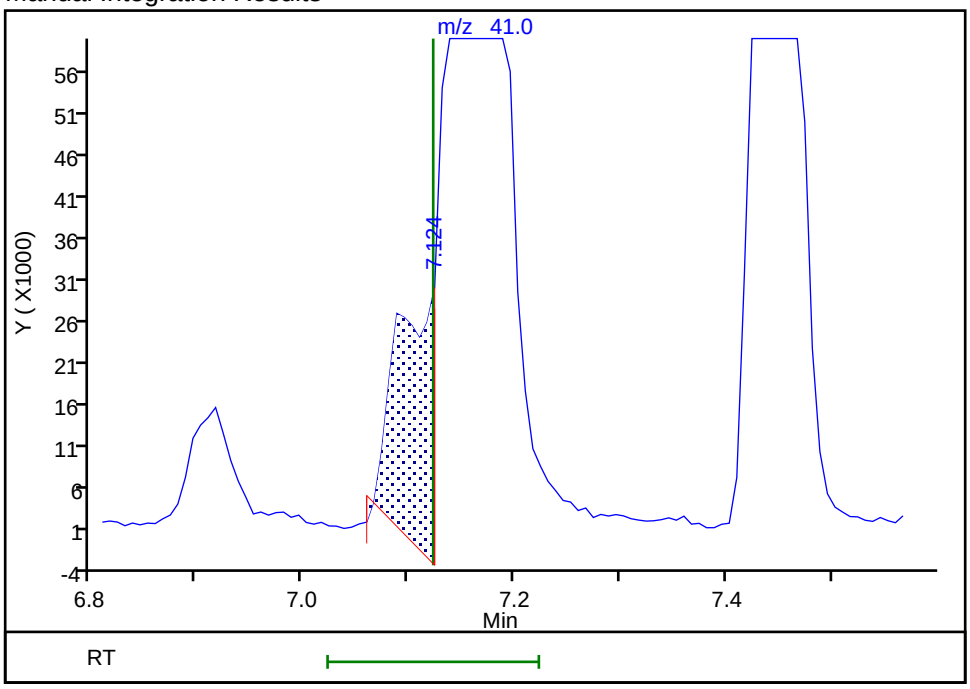
Processing Integration Results

RT: 7.16
Area: 825188
Amount: 1875.2328
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 79194
Amount: 224.1282
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:31:16
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

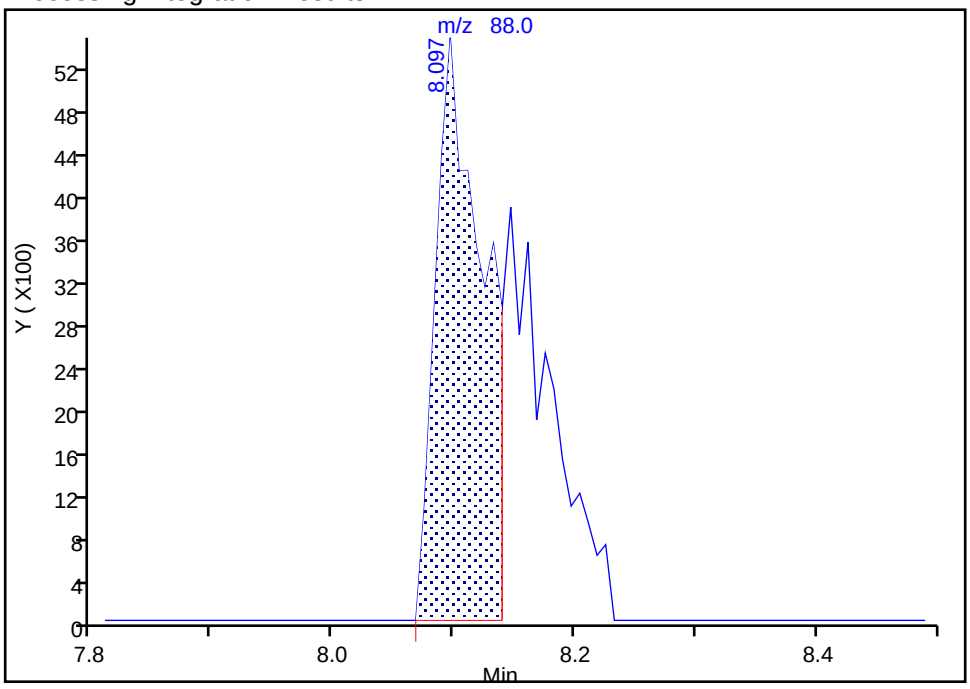
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1540.D
Injection Date: 23-Oct-2018 01:12:30 Instrument ID: VMS_P
Lims ID: ICV
Client ID:
Operator ID: newcomer ALS Bottle#: 19 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

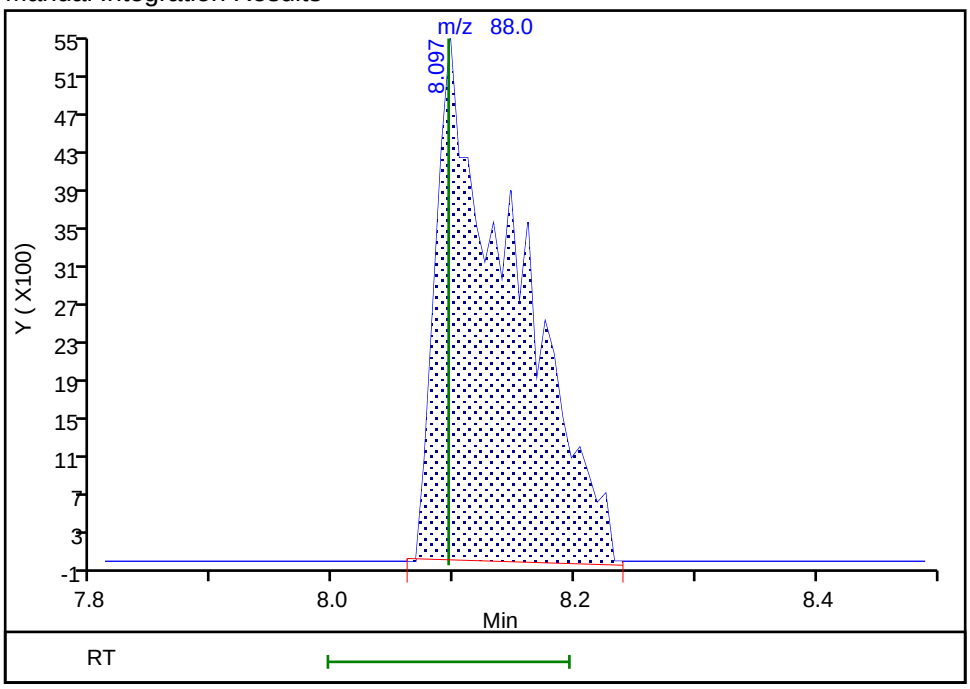
Processing Integration Results

RT: 8.10
Area: 15129
Amount: 137.4098
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 24977
Amount: 212.5064
Amount Units: ug/l



Reviewer: seifertj, 23-Oct-2018 08:31:35
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436980/2 Calibration Date: 11/09/2018 08:57

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2437.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.4833		8.58	10.0	-14.2	20.0
Chloromethane	Ave	0.3707	0.3553	0.1000	9.58	10.0	-4.2	20.0
Vinyl chloride	Ave	0.3783	0.3772		9.97	10.0	-0.3	20.0
Bromomethane	Ave	0.3269	0.3461		10.6	10.0	5.9	20.0
Chloroethane	Ave	0.3098	0.3305		10.7	10.0	6.7	20.0
Dichlorofluoromethane	Ave	0.7871	0.7560		9.60	10.0	-4.0	20.0
Trichlorofluoromethane	Ave	0.7129	0.6493		9.11	10.0	-8.9	20.0
Ethyl ether	Ave	0.1533	0.1675		10.9	10.0	9.3	20.0
Acrolein	Lin2		0.0173		101	100	1.2	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.2894		9.62	10.0	-3.8	20.0
Acetone	Ave	0.0355	0.0316		35.6	40.0	-11.1	20.0
1,1-Dichloroethene	Ave	0.3655	0.3649		9.98	10.0	-0.2	20.0
Iodomethane	Ave	0.5074	0.5047		9.95	10.0	-0.5	20.0
Methyl acetate	Ave	0.0809	0.0750		18.6	20.0	-7.2	20.0
3-Chloro-1-propene	Ave	0.6527	0.6708		10.3	10.0	2.8	20.0
Carbon disulfide	Ave	1.485	1.510		10.2	10.0	1.7	20.0
t-Butyl alcohol	Lin1		1.239		99.4	100	-0.6	20.0
Methylene Chloride	Ave	0.3148	0.3054		9.70	10.0	-3.0	20.0
Acrylonitrile	Lin2		0.0331		104	100	4.2	20.0
Methyl tert-butyl ether	Ave	0.3966	0.3921		9.89	10.0	-1.1	20.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3594		10.0	10.0	0.0	20.0
Hexane	Ave	3.359	3.367		10.0	10.0	0.2	20.0
Vinyl acetate	Lin2		0.3145		21.8	20.0	9.2	20.0
1,1-Dichloroethane	Ave	0.6299	0.6334	0.1000	10.1	10.0	0.6	20.0
2-Butanone (MEK)	Ave	0.0507	0.0488		38.5	40.0	-3.7	20.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3423		10.1	10.0	0.6	20.0
sec-Butyl Alcohol	Lin		0.9849		292	300	-2.8	20.0
2,2-Dichloropropane	Ave	0.5342	0.5002		9.36	10.0	-6.4	20.0
Bromochloromethane	Ave	0.1018	0.1033		10.1	10.0	1.5	20.0
Chloroform	Ave	0.5547	0.5377		9.69	10.0	-3.1	20.0
Tetrahydrofuran	Ave	0.0268	0.0281		20.9	20.0	4.6	20.0
1,1,1-Trichloroethane	Ave	0.5669	0.5261		9.28	10.0	-7.2	20.0
Isobutyl alcohol	Lin		0.4021		222	250	-11.2	20.0
Cyclohexane	Ave	0.7766	0.7712		9.93	10.0	-0.7	20.0
1,1-Dichloropropene	Ave	0.5299	0.5124		9.67	10.0	-3.3	20.0
Carbon tetrachloride	Ave	0.4761	0.4406		9.26	10.0	-7.4	20.0
1,2-Dichloroethane	Ave	0.2976	0.2769		9.31	10.0	-6.9	20.0
Benzene	Ave	1.329	1.332		10.0	10.0	0.2	20.0
Trichloroethene	Ave	0.3470	0.3294		9.49	10.0	-5.1	20.0
2-Pentanone	Lin2		0.0652		39.5	40.0	-1.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436980/2 Calibration Date: 11/09/2018 08:57

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2437.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6311	0.6171		9.78	10.0	-2.2	20.0
1,2-Dichloropropane	Ave	0.2907	0.3014		10.4	10.0	3.7	20.0
1,4-Dioxane	Lin2		0.0007		180	200	-10.0	20.0
Dibromomethane	Ave	0.1000	0.0994		9.94	10.0	-0.6	20.0
Bromodichloromethane	Ave	0.3144	0.3147		10.0	10.0	0.0	20.0
2-Chloroethyl vinyl ether	Lin1		0.0635		9.04	10.0	-9.6	20.0
cis-1,3-Dichloropropene	Lin2		1.691		10.1	10.0	1.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1047		42.7	40.0	6.7	20.0
Toluene	Ave	1.356	1.338		9.87	10.0	-1.3	20.0
Ethyl methacrylate	Lin1		0.7561		10.0	10.0	0.4	20.0
trans-1,3-Dichloropropene	Lin1		0.2408		9.29	10.0	-7.1	20.0
1,1,2-Trichloroethane	Ave	0.1305	0.1321		10.1	10.0	1.2	20.0
2-Hexanone	Lin2		0.3376		40.5	40.0	1.2	20.0
1,3-Dichloropropane	Ave	1.258	1.302		10.4	10.0	3.5	20.0
Tetrachloroethene	Ave	1.279	1.257		9.83	10.0	-1.7	20.0
Dibromochloromethane	Lin2		0.7216		9.52	10.0	-4.8	20.0
1,2-Dibromoethane	Ave	0.5501	0.5772		10.5	10.0	4.9	20.0
1-Chlorohexane	Ave	2.393	2.454		10.3	10.0	2.5	20.0
Chlorobenzene	Ave	3.682	3.643	0.3000	9.89	10.0	-1.1	20.0
Ethylbenzene	Ave	2.426	2.408		9.93	10.0	-0.7	20.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.127		9.98	10.0	-0.2	20.0
m-Xylene & p-Xylene	Ave	2.842	2.829		9.95	10.0	-0.5	20.0
o-Xylene	Ave	2.629	2.685		10.2	10.0	2.2	20.0
Styrene	Ave	3.660	3.881		10.6	10.0	6.0	20.0
Bromoform	Lin2		0.3039	0.1000	9.18	10.0	-8.2	20.0
Isopropylbenzene	Ave	5.152	4.997		9.70	10.0	-3.0	20.0
Cyclohexanone	Lin2		0.0276		539	400	34.8*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4680	0.3000	10.2	10.0	2.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.1053		9.34	10.0	-6.6	20.0
1,2,3-Trichloropropane	Ave	0.1211	0.1184		9.78	10.0	-2.2	20.0
N-Propylbenzene	Ave	1.433	1.440		10.1	10.0	0.5	20.0
Bromobenzene	Ave	0.8789	0.8706		9.91	10.0	-0.9	20.0
1,3,5-Trimethylbenzene	Ave	4.181	4.078		9.75	10.0	-2.5	20.0
2-Chlorotoluene	Ave	1.128	1.093		9.68	10.0	-3.2	20.0
4-Chlorotoluene	Ave	1.089	1.078		9.90	10.0	-1.0	20.0
tert-Butylbenzene	Ave	4.080	4.004		9.81	10.0	-1.9	20.0
1,2,4-Trimethylbenzene	Ave	4.186	4.057		9.69	10.0	-3.1	20.0
sec-Butylbenzene	Ave	1.133	1.124		9.92	10.0	-0.8	20.0
4-Isopropyltoluene	Ave	4.751	4.602		9.69	10.0	-3.1	20.0
1,3-Dichlorobenzene	Ave	1.966	1.887		9.60	10.0	-4.0	20.0
1,4-Dichlorobenzene	Ave	1.952	1.864		9.55	10.0	-4.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436980/2 Calibration Date: 11/09/2018 08:57

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2437.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.168	5.006		9.69	10.0	-3.1	20.0
1,2-Dichlorobenzene	Ave	1.582	1.542		9.75	10.0	-2.5	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0491		9.00	10.0	-10.0	20.0
1,2,4-Trichlorobenzene	Ave	1.029	1.012		9.84	10.0	-1.6	20.0
Hexachlorobutadiene	Ave	0.7951	0.7203		9.06	10.0	-9.4	20.0
Naphthalene	Ave	1.333	1.387		10.4	10.0	4.1	20.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.7680		9.96	10.0	-0.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2436		10.0	10.0	0.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2184		9.36	10.0	-6.4	20.0
Toluene-d8 (Surr)	Ave	5.289	5.331		10.1	10.0	0.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.060		9.50	10.0	-5.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2437.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 08:57:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 14:47:18 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

First Level Reviewer: newcomer Date: 09-Nov-2018 19:32:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.601	0.000	32	156020	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.560	0.000	98	1526340	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.827	0.000	88	299879	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.650	11.650	0.000	97	460042	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.017	0.000	92	297470	10.0	10.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	266684	10.0	9.36	
$ 7 Toluene-d8 (Surr)	98	8.754	8.754	0.000	94	1278821	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.692	10.692	0.000	84	390260	10.0	9.50	
23 Dichlorodifluoromethane	85	3.846	3.846	0.000	100	590152	10.0	8.58	
26 Chloromethane	50	4.083	4.083	0.000	98	433852	10.0	9.58	
27 Vinyl chloride	62	4.209	4.209	0.000	97	460628	10.0	9.97	
29 Bromomethane	94	4.586	4.586	0.000	91	422589	10.0	10.6	
30 Chloroethane	64	4.642	4.642	0.000	99	403573	10.0	10.7	
31 Dichlorofluoromethane	67	4.796	4.796	0.000	98	923128	10.0	9.60	
32 Trichlorofluoromethane	101	4.893	4.893	0.000	100	792892	10.0	9.11	
35 Ethyl ether	59	5.061	5.061	0.000	96	204550	10.0	10.9	
39 Acrolein	56	5.215	5.215	0.000	99	210606	100.0	101.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.284	5.284	0.000	97	353405	10.0	9.62	
41 Acetone	43	5.312	5.312	0.000	99	154294	40.0	35.6	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	96	445610	10.0	9.98	
44 Iodomethane	142	5.522	5.522	0.000	99	616252	10.0	9.95	
45 Methyl acetate	43	5.558	5.558	0.000	99	183207	20.0	18.6	
47 3-Chloro-1-propene	41	5.601	5.601	0.000	82	819080	10.0	10.3	
48 Carbon disulfide	76	5.608	5.608	0.000	99	1844230	10.0	10.2	
49 2-Methyl-2-propanol	59	5.658	5.658	0.000	92	77301	100.0	99.4	
50 Methylene Chloride	84	5.701	5.701	0.000	98	372907	10.0	9.70	
52 Acrylonitrile	53	5.873	5.873	0.000	83	404583	100.0	104.2	
51 Methyl tert-butyl ether	73	5.873	5.873	0.000	98	478724	10.0	9.89	
53 trans-1,2-Dichloroethene	96	5.916	5.916	0.000	96	438885	10.0	10.0	
54 Hexane	57	6.073	6.073	0.000	96	807642	10.0	10.0	
55 Vinyl acetate	43	6.180	6.180	0.000	97	768117	20.0	21.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.237	6.237	0.000	97	773435	10.0	10.1	
61 2-Butanone (MEK)	43	6.631	6.631	0.000	99	238463	40.0	38.5	
62 sec-Butyl Alcohol	45	6.674	6.674	0.000	43	184395	300.0	291.5	a
63 cis-1,2-Dichloroethene	96	6.674	6.674	0.000	87	417994	10.0	10.1	
64 2,2-Dichloropropane	77	6.702	6.702	0.000	91	610788	10.0	9.36	
67 Chlorobromomethane	128	6.881	6.881	0.000	92	126185	10.0	10.1	
68 Chloroform	83	6.888	6.888	0.000	96	656529	10.0	9.69	
69 Tetrahydrofuran	42	6.910	6.910	0.000	54	68546	20.0	20.9	
70 Isobutyl alcohol	41	7.095	7.095	0.000	98	62730	250.0	221.9	
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	98	642440	10.0	9.28	
72 Cyclohexane	56	7.167	7.167	0.000	95	941742	10.0	9.93	
73 1,1-Dichloropropene	75	7.196	7.196	0.000	96	625688	10.0	9.67	
74 Carbon tetrachloride	117	7.238	7.238	0.000	96	538050	10.0	9.26	
76 1,2-Dichloroethane	62	7.374	7.374	0.000	97	338107	10.0	9.31	
77 Benzene	78	7.389	7.389	0.000	98	1626437	10.0	10.0	
14 n-Heptane	43	7.446	7.446	0.000	96	905883	10.0	9.88	
79 Trichloroethene	95	7.846	7.846	0.000	96	402276	10.0	9.49	
80 2-Pentanone	43	7.903	7.903	0.000	98	318566	40.0	39.5	a
82 Methylcyclohexane	55	8.032	8.032	0.000	95	753461	10.0	9.78	
83 1,2-Dichloropropane	63	8.039	8.039	0.000	94	367979	10.0	10.4	
84 1,4-Dioxane	88	8.096	8.096	0.000	86	17659	200.0	179.9	M
85 Dibromomethane	93	8.146	8.146	0.000	91	121396	10.0	9.94	
86 Dichlorobromomethane	83	8.218	8.218	0.000	98	384240	10.0	10.0	
87 2-Chloroethyl vinyl ether	63	8.361	8.361	0.000	92	77538	10.0	9.04	
89 cis-1,3-Dichloropropene	75	8.533	8.533	0.000	92	405567	10.0	10.1	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.590	0.000	98	511165	40.0	42.7	
91 Toluene	91	8.804	8.804	0.000	97	1633626	10.0	9.87	
92 Ethyl methacrylate	69	8.890	8.890	0.000	92	181383	10.0	10.0	
93 trans-1,3-Dichloropropene	75	8.912	8.912	0.000	99	294081	10.0	9.29	
94 1,1,2-Trichloroethane	97	9.069	9.069	0.000	93	161287	10.0	10.1	
95 2-Hexanone	43	9.183	9.183	0.000	97	323960	40.0	40.5	
96 1,3-Dichloropropane	76	9.205	9.205	0.000	98	312388	10.0	10.4	
97 Tetrachloroethene	164	9.219	9.219	0.000	96	301585	10.0	9.83	
98 Chlorodibromomethane	129	9.398	9.398	0.000	91	173118	10.0	9.52	
100 Ethylene Dibromide	107	9.526	9.526	0.000	99	138481	10.0	10.5	
101 1-Chlorohexane	91	9.734	9.734	0.000	91	588649	10.0	10.3	a
102 Chlorobenzene	112	9.855	9.855	0.000	93	873963	10.0	9.89	
103 Ethylbenzene	106	9.884	9.884	0.000	98	577689	10.0	9.93	
104 1,1,1,2-Tetrachloroethane	131	9.891	9.891	0.000	95	270464	10.0	9.98	
105 m-Xylene & p-Xylene	106	9.963	9.963	0.000	99	678677	10.0	9.95	
107 o-Xylene	106	10.277	10.277	0.000	88	644238	10.0	10.2	
106 Styrene	104	10.277	10.277	0.000	83	931139	10.0	10.6	
108 Bromoform	173	10.492	10.492	0.000	94	72910	10.0	9.18	
109 Isopropylbenzene	105	10.535	10.535	0.000	97	1839212	10.0	9.70	
111 Cyclohexanone	55	10.678	10.678	0.000	96	265220	400.0	539.3	
112 1,1,2,2-Tetrachloroethane	83	10.749	10.749	0.000	95	172223	10.0	10.2	
113 trans-1,4-Dichloro-2-buten	53	10.785	10.785	0.000	82	38744	10.0	9.34	
114 1,2,3-Trichloropropane	110	10.821	10.821	0.000	88	43577	10.0	9.78	
115 N-Propylbenzene	120	10.849	10.849	0.000	99	530123	10.0	10.1	
116 Bromobenzene	156	10.856	10.856	0.000	97	320414	10.0	9.91	
117 1,3,5-Trimethylbenzene	105	10.964	10.964	0.000	95	1500977	10.0	9.75	
118 2-Chlorotoluene	126	10.978	10.978	0.000	94	402125	10.0	9.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.057	11.057	0.000	99	396917	10.0	9.90	
120 tert-Butylbenzene	119	11.257	11.257	0.000	94	1473671	10.0	9.81	
121 1,2,4-Trimethylbenzene	105	11.285	11.285	0.000	99	1493240	10.0	9.69	
122 sec-Butylbenzene	134	11.436	11.436	0.000	95	413785	10.0	9.92	
123 4-Isopropyltoluene	119	11.521	11.521	0.000	97	1693602	10.0	9.69	
124 1,3-Dichlorobenzene	146	11.600	11.600	0.000	97	694308	10.0	9.60	
126 1,4-Dichlorobenzene	146	11.672	11.672	0.000	92	686113	10.0	9.55	
127 n-Butylbenzene	91	11.886	11.886	0.000	99	1842331	10.0	9.69	
128 1,2-Dichlorobenzene	146	12.029	12.029	0.000	95	567522	10.0	9.75	
129 1,2-Dibromo-3-Chloropropan	157	12.787	12.787	0.000	70	18070	10.0	9.00	
130 1,2,4-Trichlorobenzene	180	13.716	13.716	0.000	93	372554	10.0	9.84	
131 Hexachlorobutadiene	225	13.852	13.852	0.000	93	265089	10.0	9.06	
132 Naphthalene	128	14.088	14.088	0.000	97	510535	10.0	10.4	
133 1,2,3-Trichlorobenzene	180	14.410	14.410	0.000	95	282638	10.0	9.96	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.1	
S 139 Xylenes, Total	106				0		20.0	20.2	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 134 Trihalomethanes, Total	1				0		40.0	38.4	
S 135 Xylenes, Total (URS)	1				0		20.0	20.2	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MV-MegaMainA_00006	Amount Added:	4.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

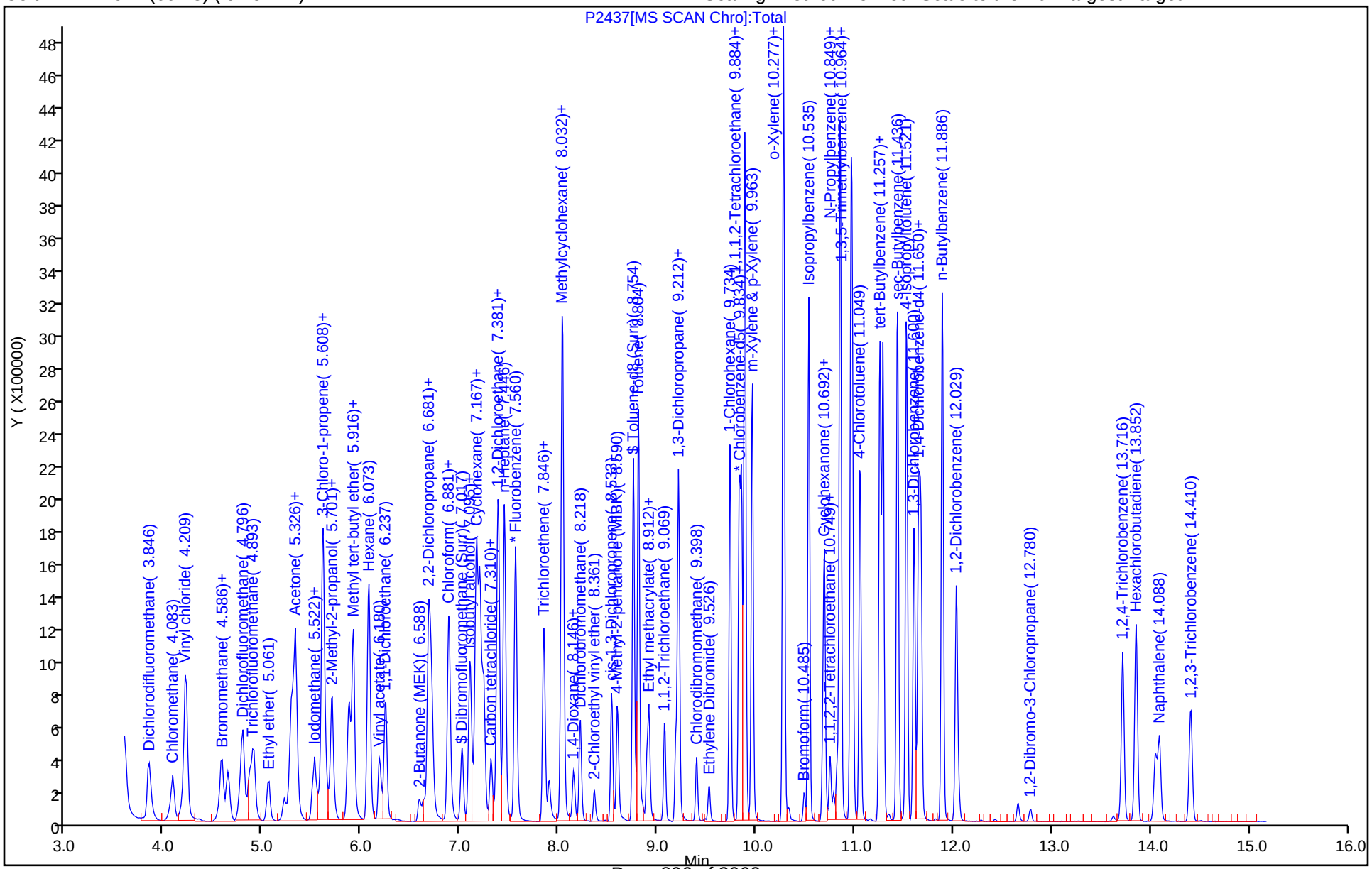
Report Date: 14-Nov-2018 14:47:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2437.D

Injection Date:	09-Nov-2018 08:57:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

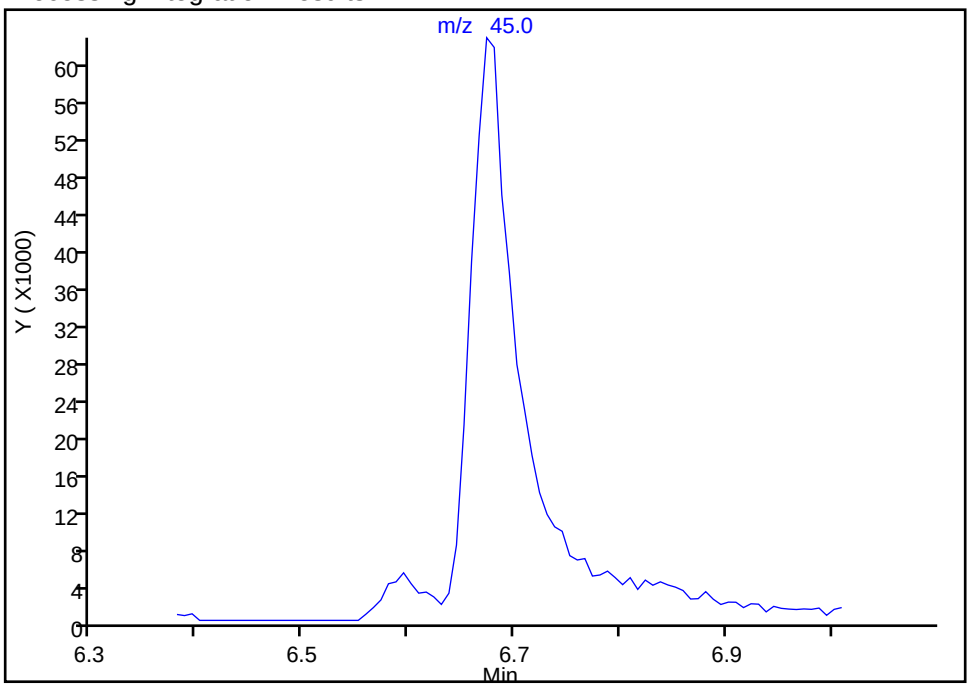
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2437.D				
Injection Date:	09-Nov-2018 08:57:30	Instrument ID:	VMS_P		
Lims ID:	CCV				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	10	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

62 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

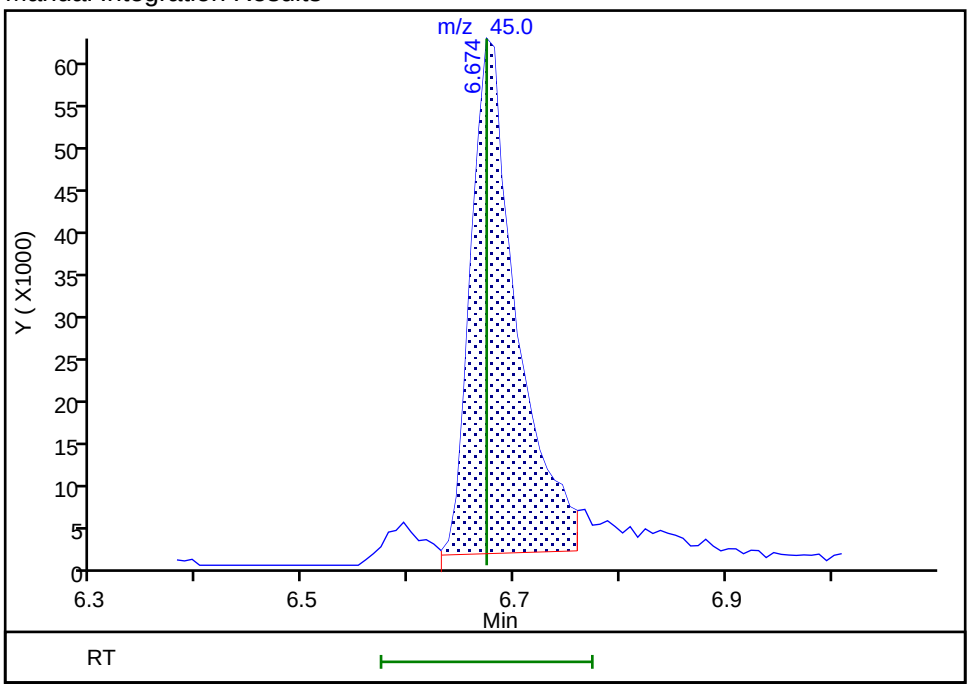
Not Detected
Expected RT: 6.67

Processing Integration Results



Manual Integration Results

RT: 6.67
Area: 184395
Amount: 291.5001
Amount Units: ug/l



Reviewer: seifertj, 12-Nov-2018 13:00:10
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

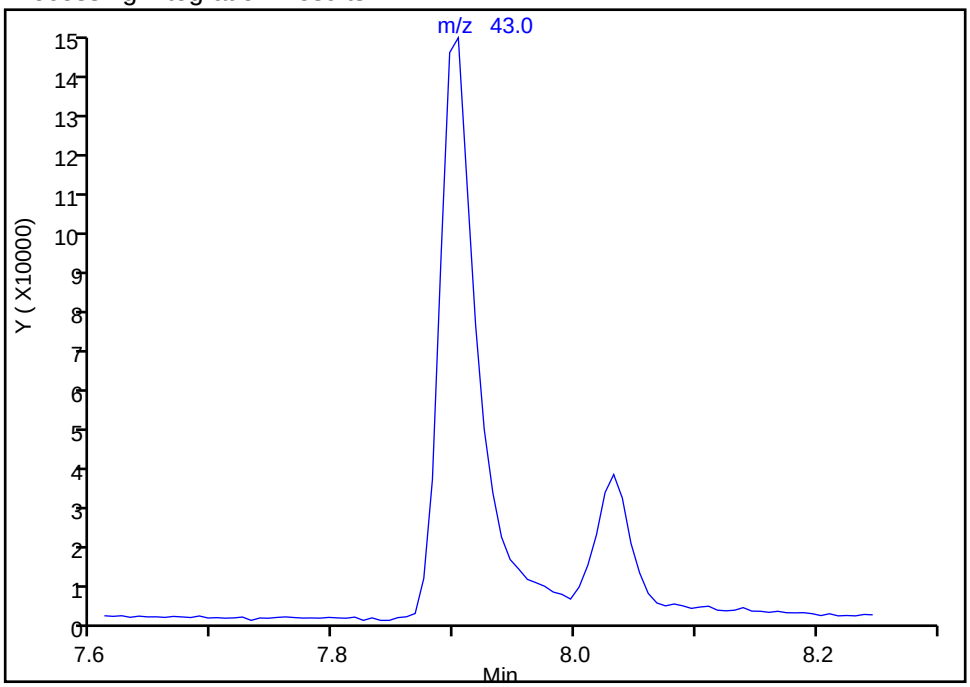
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2437.D				
Injection Date:	09-Nov-2018 08:57:30	Instrument ID:	VMS_P		
Lims ID:	CCV				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	10	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

80 2-Pentanone, CAS: 107-87-9

Signal: 1

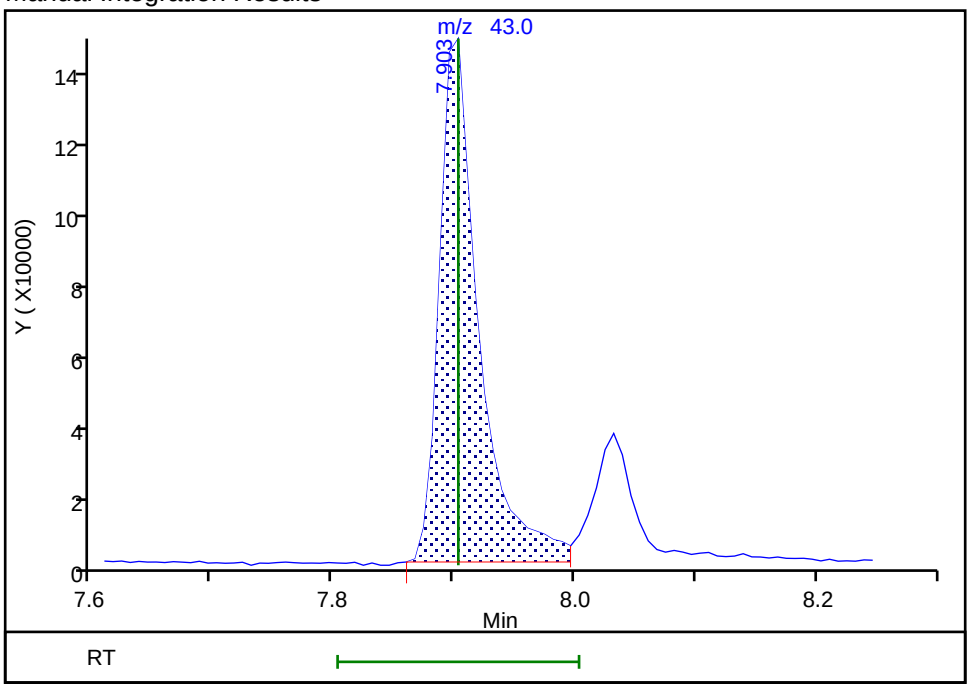
Not Detected
Expected RT: 7.90

Processing Integration Results



Manual Integration Results

RT: 7.90
Area: 318566
Amount: 39.468698
Amount Units: ug/l



Reviewer: seifertj, 12-Nov-2018 13:00:28
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

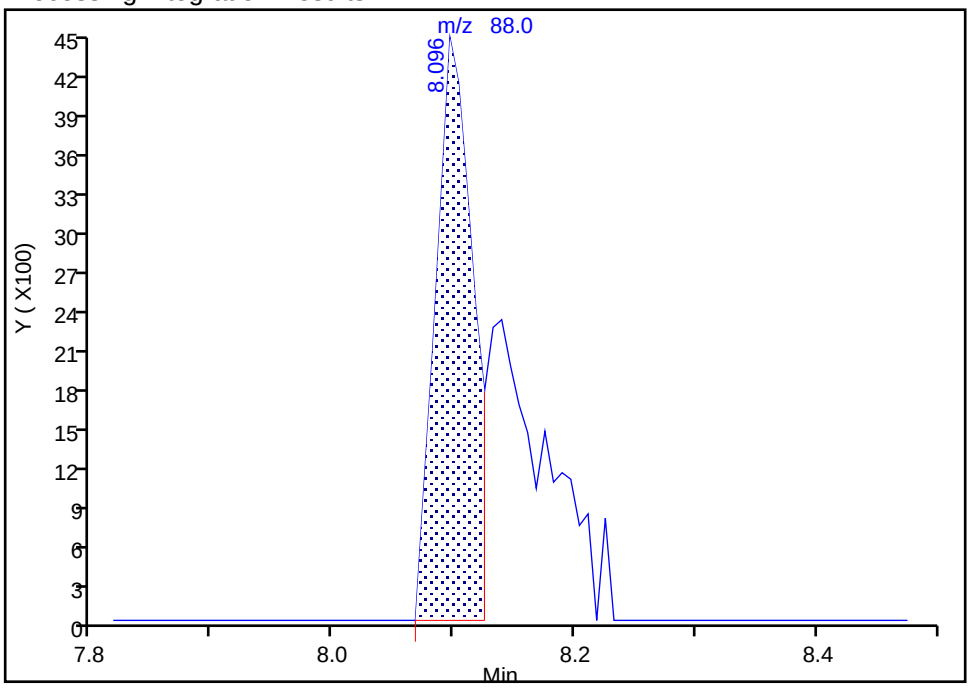
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2437.D
Injection Date: 09-Nov-2018 08:57:30 Instrument ID: VMS_P
Lims ID: CCV
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

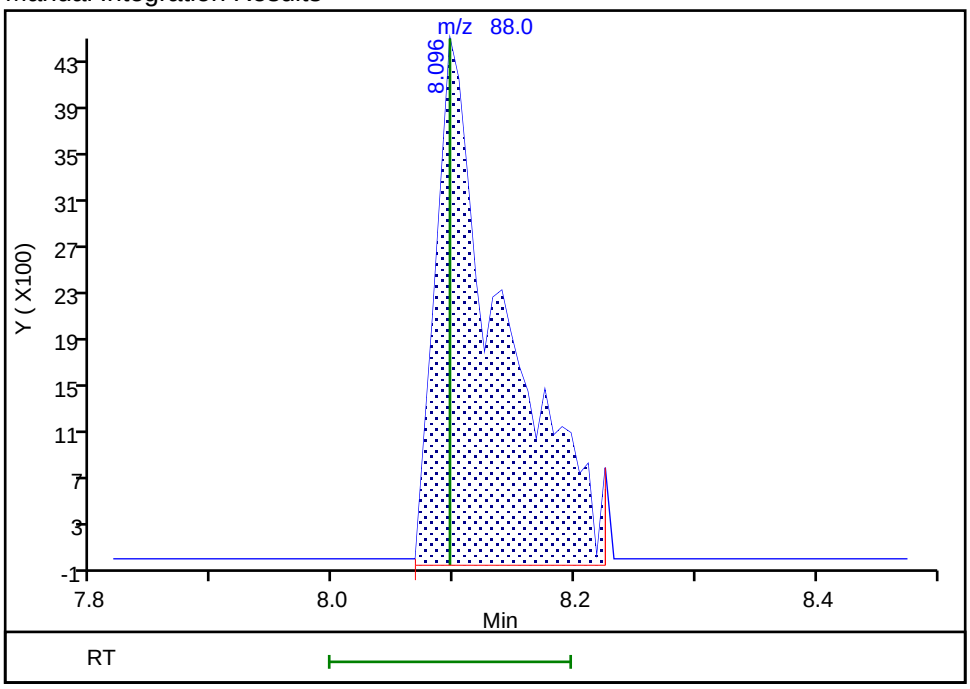
Processing Integration Results

RT: 8.10
Area: 9577
Amount: 107.6578
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 17659
Amount: 179.9083
Amount Units: ug/l



Reviewer: seifertj, 12-Nov-2018 13:00:40
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

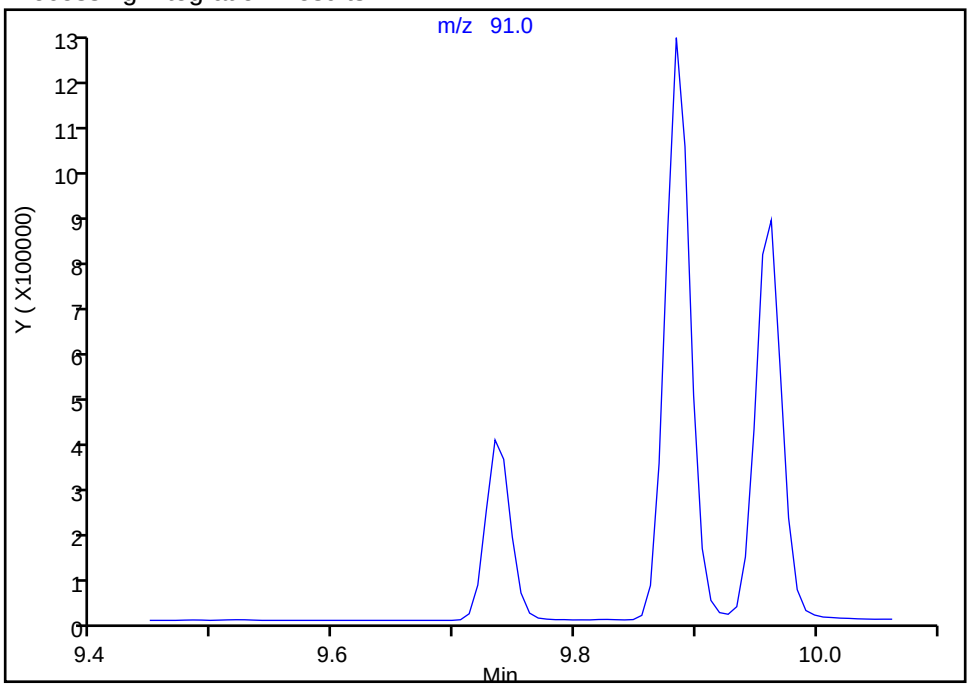
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2437.D				
Injection Date:	09-Nov-2018 08:57:30	Instrument ID:	VMS_P		
Lims ID:	CCV				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	10	Worklist Smp#:	2
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

101 1-Chlorohexane, CAS: 544-10-5

Signal: 1

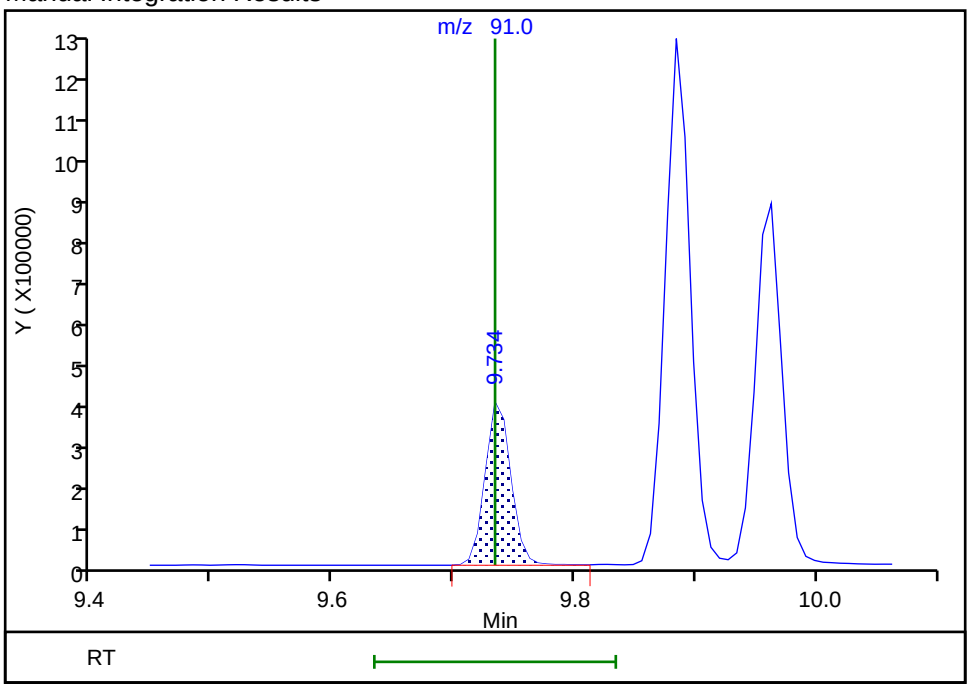
Not Detected
Expected RT: 9.73

Processing Integration Results



Manual Integration Results

RT: 9.73
Area: 588649
Amount: 10.254043
Amount Units: ug/l



Reviewer: seifertj, 12-Nov-2018 13:00:51
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436980/3 Calibration Date: 11/09/2018 09:17

Instrument ID: VMS_P Calib Start Date: 08/17/2018 01:38

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 08/17/2018 03:10

Lab File ID: P2438.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene oxide	Ave	0.0033	0.0021		645	1000	-35.5*	20.0
Ethanol	Lin1		0.1554		638	600	6.4	20.0
Isopropyl alcohol	Ave	0.9689	0.7767		80.2	100	-19.8	20.0
Acetonitrile	Lin1		0.0097		102	100	2.2	20.0
Isopropyl ether	Ave	0.1887	0.1857		9.84	10.0	-1.6	20.0
2-Chloro-1,3-butadiene	Ave	0.6158	0.5324		8.64	10.0	-13.6	20.0
Tert-butyl ethyl ether	Ave	0.5878	0.5333		9.07	10.0	-9.3	20.0
Ethyl acetate	Ave	0.0815	0.0779		19.1	20.0	-4.5	20.0
Propionitrile	Lin2		0.0073		75.0	100	-25.0*	20.0
Methacrylonitrile	Ave	0.0637	0.0637		99.9	100	-0.0	20.0
Tert-amyl methyl ether	Ave	0.4231	0.4083		9.65	10.0	-3.5	20.0
n-Butanol	Lin2		0.1618		150	250	-40.0*	20.0
Methyl methacrylate	Lin2		0.0188		18.7	20.0	-6.6	20.0
2-Nitropropane	Ave	0.0172	0.0146		17.0	20.0	-14.9	20.0
cis-1,4-Dichloro-2-butene	Ave	0.0697	0.0524		15.1	20.0	-24.7*	20.0
1,2,3-Trimethylbenzene	Ave	3.790	3.330		8.79	10.0	-12.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2438.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 09:17:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 13:22:00 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: seifertj Date: 12-Nov-2018 13:01:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.600	0.000	98	163112	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1538785	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	306791	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	428850	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	307049	10.0	10.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.316	7.316	0.000	98	287486	10.0	10.0	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1307186	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.691	10.691	0.000	86	384883	10.0	10.0	
28 Ethylene oxide	43	4.529	4.529	0.000	99	264048	1000.0	644.9	
33 Ethanol	45	4.962	4.962	0.000	50	60819	600.0	638.4	M
38 Propene oxide	58	5.158	5.158	0.000	96	1499182	1000.0	926.4	
42 Isopropyl alcohol	45	5.353	5.353	0.000	97	50678	100.0	80.2	
46 Acetonitrile	41	5.600	5.600	0.000	40	119801	100.0	102.2	M
56 Isopropyl ether	87	6.187	6.187	0.000	94	228642	10.0	9.84	
58 2-Chloro-1,3-butadiene	53	6.308	6.308	0.000	95	655333	10.0	8.64	
59 Tert-butyl ethyl ether	59	6.465	6.465	0.000	98	656498	10.0	9.07	
60 Ethyl acetate	43	6.608	6.608	0.000	99	191696	20.0	19.1	
65 Propionitrile	54	6.716	6.716	0.000	99	89870	100.0	75.0	
66 Methacrylonitrile	41	6.816	6.816	0.000	96	783978	100.0	99.9	
75 Tert-amyl methyl ether	73	7.366	7.366	0.000	55	502666	10.0	9.65	
78 n-Butanol	56	7.602	7.602	0.000	96	26394	250.0	150.0	
81 Methyl methacrylate	100	7.988	7.988	0.000	93	46197	20.0	18.7	
88 2-Nitropropane	41	8.374	8.374	0.000	98	35999	20.0	17.0	
99 Tetrahydrothiophene	60	9.440	9.440	0.000	92	12837	20.0	13.3	
110 cis-1,4-Dichloro-2-butene	53	10.577	10.577	0.000	95	35984	20.0	15.1	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	98	1142509	10.0	8.79	
16 1,3,5-Trichlorobenzene	180	12.979	12.979	0.000	95	436211	10.0	10.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

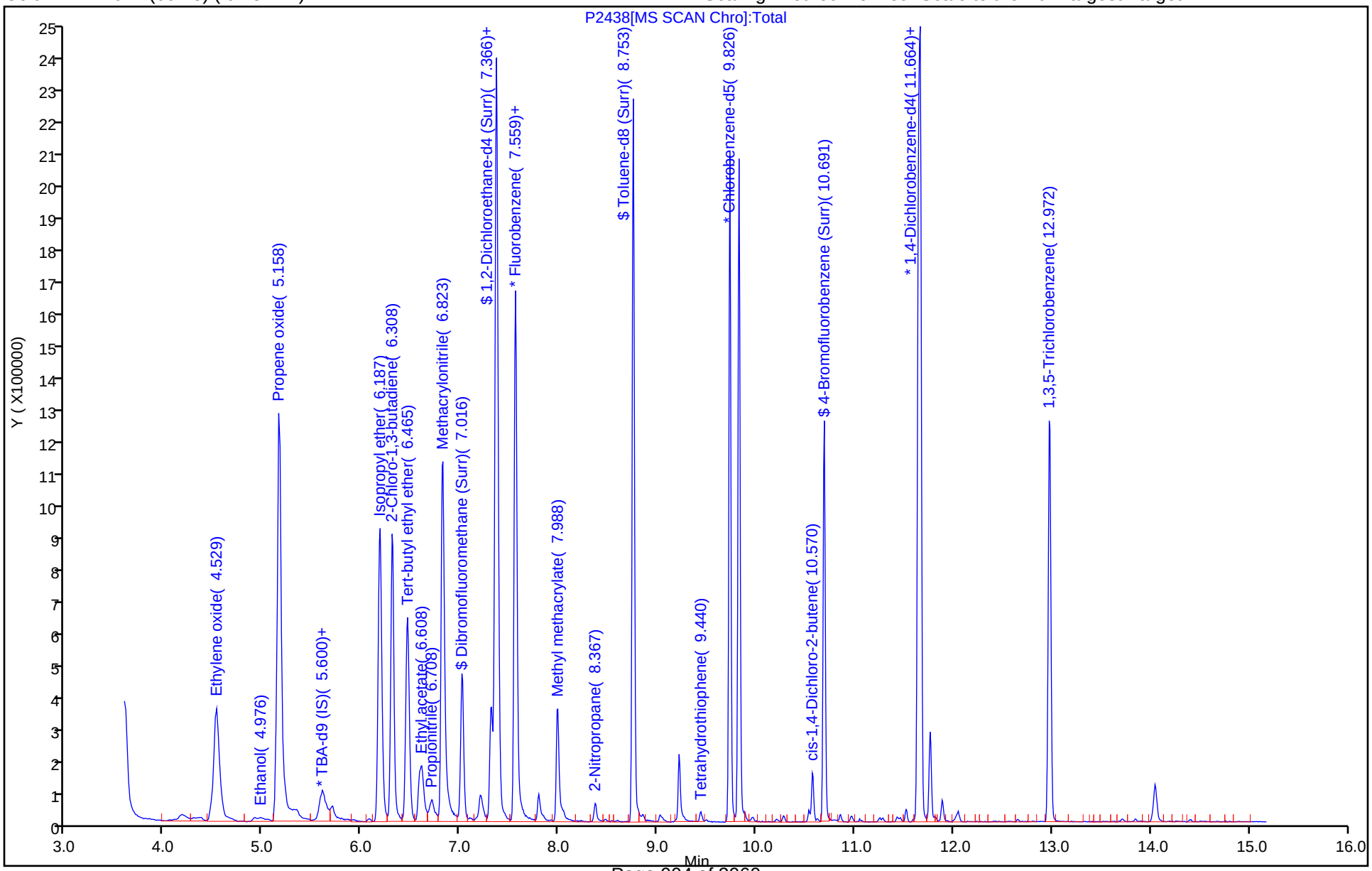
Report Date: 12-Nov-2018 13:22:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2438.D

Injection Date:	09-Nov-2018 09:17:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

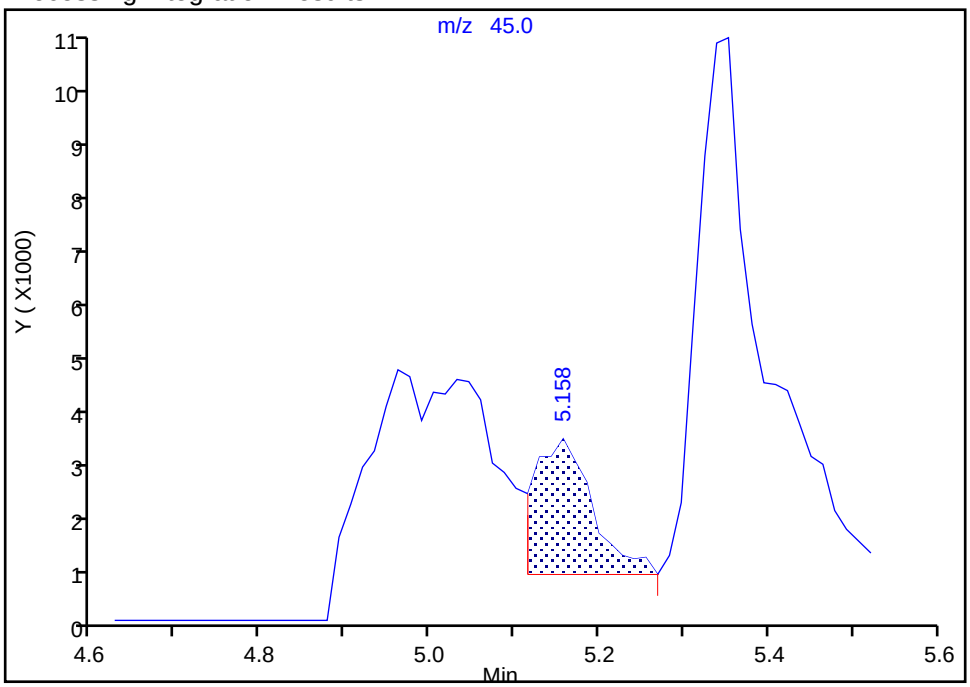
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2438.D
Injection Date: 09-Nov-2018 09:17:30 Instrument ID: VMS_P
Lims ID: CCV
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

33 Ethanol, CAS: 64-17-5

Signal: 1

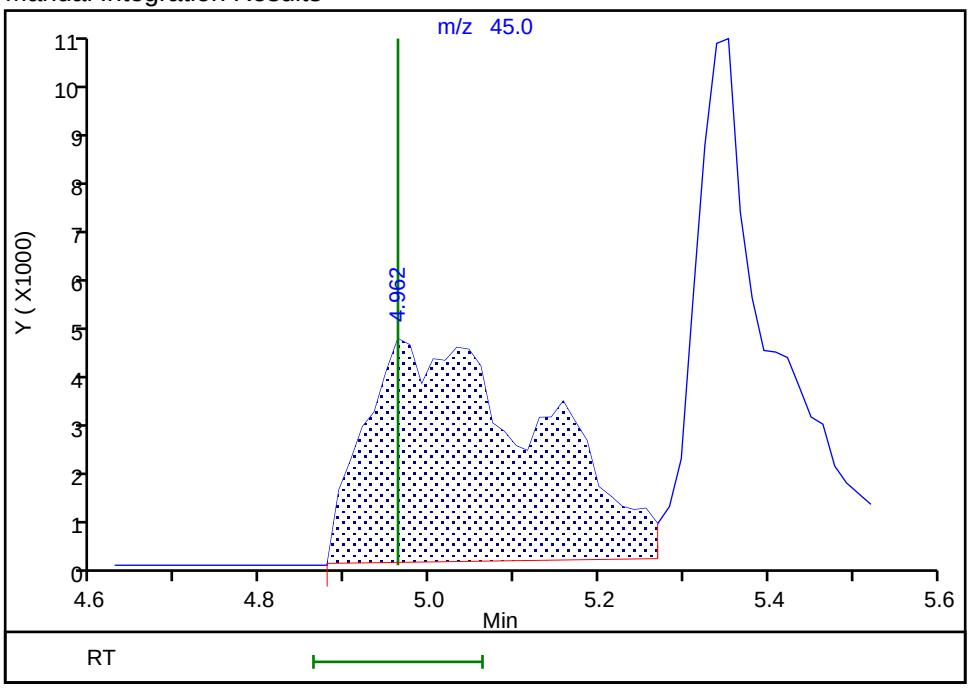
Processing Integration Results

RT: 5.16
Area: 11249
Amount: 86.390984
Amount Units: ug/l



Manual Integration Results

RT: 4.96
Area: 60819
Amount: 638.3723
Amount Units: ug/l



Reviewer: seifertj, 12-Nov-2018 13:01:31
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

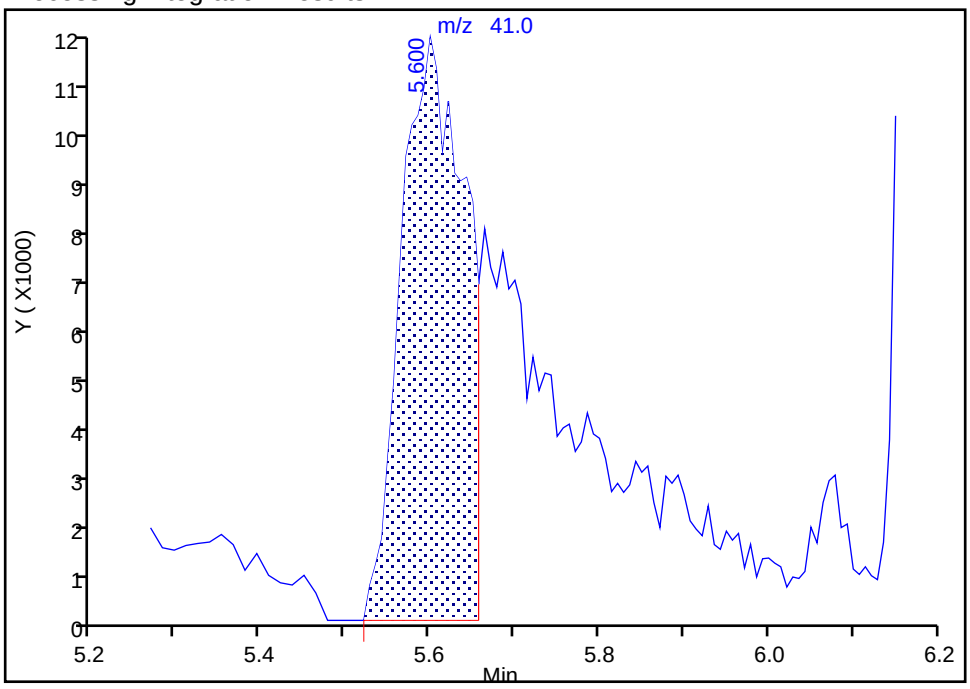
Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2438.D				
Injection Date:	09-Nov-2018 09:17:30	Instrument ID:	VMS_P		
Lims ID:	CCV				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	11	Worklist Smp#:	3
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

46 Acetonitrile, CAS: 75-05-8

Signal: 1

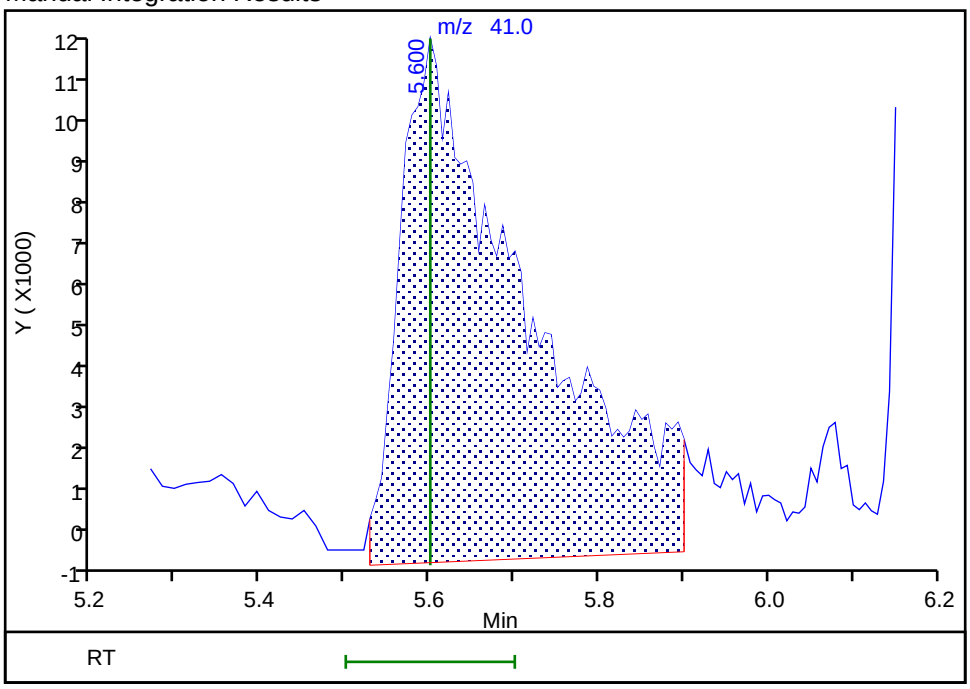
Processing Integration Results

RT: 5.60
Area: 58120
Amount: 51.575446
Amount Units: ug/l



Manual Integration Results

RT: 5.60
Area: 119801
Amount: 102.1980
Amount Units: ug/l



Reviewer: seifertj, 12-Nov-2018 13:01:43

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436980/3 Calibration Date: 11/09/2018 09:17

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2438.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2430	0.2494		10.3	10.0	2.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2335		10.0	10.0	0.1	20.0
Toluene-d8 (Surr)	Ave	5.289	5.326		10.1	10.0	0.7	20.0
4-Bromofluorobenzene (Surr)	Ave	1.116	1.122		10.0	10.0	0.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2438.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 09:17:30 ALS Bottle#: 11 Worklist Smp#: 3
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub114

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 13:22:00 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: seifertj Date: 12-Nov-2018 13:01:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.600	0.000	98	163112	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1538785	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	306791	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	428850	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	92	307049	10.0	10.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.316	7.316	0.000	98	287486	10.0	10.0	
$ 7 Toluene-d8 (Surr)	98	8.753	8.753	0.000	95	1307186	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.691	10.691	0.000	86	384883	10.0	10.0	
28 Ethylene oxide	43	4.529	4.529	0.000	99	264048	1000.0	644.9	
33 Ethanol	45	4.962	4.962	0.000	50	60819	600.0	638.4	M
38 Propene oxide	58	5.158	5.158	0.000	96	1499182	1000.0	926.4	
42 Isopropyl alcohol	45	5.353	5.353	0.000	97	50678	100.0	80.2	
46 Acetonitrile	41	5.600	5.600	0.000	40	119801	100.0	102.2	M
56 Isopropyl ether	87	6.187	6.187	0.000	94	228642	10.0	9.84	
58 2-Chloro-1,3-butadiene	53	6.308	6.308	0.000	95	655333	10.0	8.64	
59 Tert-butyl ethyl ether	59	6.465	6.465	0.000	98	656498	10.0	9.07	
60 Ethyl acetate	43	6.608	6.608	0.000	99	191696	20.0	19.1	
65 Propionitrile	54	6.716	6.716	0.000	99	89870	100.0	75.0	
66 Methacrylonitrile	41	6.816	6.816	0.000	96	783978	100.0	99.9	
75 Tert-amyl methyl ether	73	7.366	7.366	0.000	55	502666	10.0	9.65	
78 n-Butanol	56	7.602	7.602	0.000	96	26394	250.0	150.0	
81 Methyl methacrylate	100	7.988	7.988	0.000	93	46197	20.0	18.7	
88 2-Nitropropane	41	8.374	8.374	0.000	98	35999	20.0	17.0	
99 Tetrahydrothiophene	60	9.440	9.440	0.000	92	12837	20.0	13.3	
110 cis-1,4-Dichloro-2-butene	53	10.577	10.577	0.000	95	35984	20.0	15.1	
125 1,2,3-Trimethylbenzene	105	11.664	11.664	0.000	98	1142509	10.0	8.79	
16 1,3,5-Trichlorobenzene	180	12.979	12.979	0.000	95	436211	10.0	10.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-Supp A_00031	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

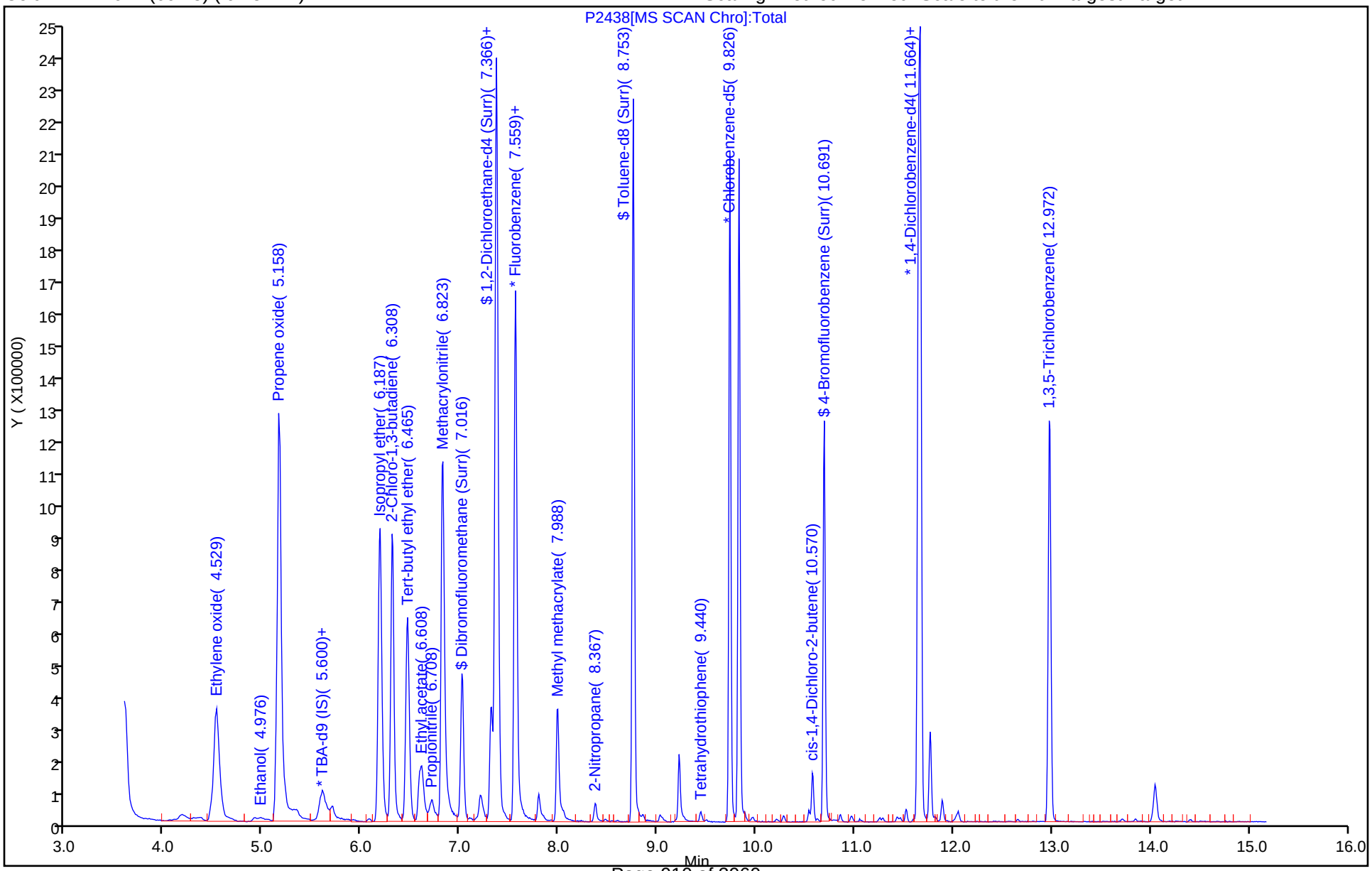
Report Date: 12-Nov-2018 13:22:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2438.D

Injection Date:	09-Nov-2018 09:17:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	CCV			Worklist Smp#:	3
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-436980/39 Calibration Date: 11/09/2018 19:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2469.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.4842		8.60	10.0	-14.0	50.0
Chloromethane	Ave	0.3707	0.3443	0.1000	9.29	10.0	-7.1	50.0
Vinyl chloride	Ave	0.3783	0.3783		10.0	10.0	-0.0	50.0
Bromomethane	Ave	0.3269	0.3323		10.2	10.0	1.7	50.0
Chloroethane	Ave	0.3098	0.3185		10.3	10.0	2.8	50.0
Dichlorofluoromethane	Ave	0.7871	0.7832		9.95	10.0	-0.5	50.0
Trichlorofluoromethane	Ave	0.7129	0.6568		9.21	10.0	-7.9	50.0
Ethyl ether	Ave	0.1533	0.1536		10.0	10.0	0.2	50.0
Acrolein	Lin2		0.0163		95.9	100	-4.2	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.2833		9.42	10.0	-5.8	50.0
1,1-Dichloroethene	Ave	0.3655	0.3538		9.68	10.0	-3.2	50.0
Acetone	Ave	0.0355	0.0336		37.8	40.0	-5.5	50.0
Iodomethane	Ave	0.5074	0.4740		9.34	10.0	-6.6	50.0
Methyl acetate	Ave	0.0809	0.0737		18.2	20.0	-8.9	50.0
3-Chloro-1-propene	Ave	0.6527	0.6488		9.94	10.0	-0.6	50.0
Carbon disulfide	Ave	1.485	1.464		9.86	10.0	-1.4	50.0
t-Butyl alcohol	Lin1		1.474		118	100	17.6	50.0
Methylene Chloride	Ave	0.3148	0.3237		10.3	10.0	2.8	50.0
Acrylonitrile	Lin2		0.0310		97.7	100	-2.3	50.0
Methyl tert-butyl ether	Ave	0.3966	0.3777		9.52	10.0	-4.8	50.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3397		9.45	10.0	-5.5	50.0
Hexane	Ave	3.359	3.017		8.98	10.0	-10.2	50.0
Vinyl acetate	Lin2		0.2839		19.8	20.0	-1.2	50.0
1,1-Dichloroethane	Ave	0.6299	0.6388	0.1000	10.1	10.0	1.4	50.0
2-Butanone (MEK)	Ave	0.0507	0.0550		43.4	40.0	8.4	50.0
sec-Butyl Alcohol	Lin		0.9606		285	300	-4.9	50.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3285		9.66	10.0	-3.4	50.0
2,2-Dichloropropane	Ave	0.5342	0.4880		9.13	10.0	-8.7	50.0
Bromochloromethane	Ave	0.1018	0.0977		9.59	10.0	-4.1	50.0
Chloroform	Ave	0.5547	0.5531		9.97	10.0	-0.3	50.0
Tetrahydrofuran	Ave	0.0268	0.0266		19.8	20.0	-0.9	50.0
1,1,1-Trichloroethane	Ave	0.5669	0.5584		9.85	10.0	-1.5	50.0
Isobutyl alcohol	Lin		0.2331		150	250	-40.2	50.0
Cyclohexane	Ave	0.7766	0.7499		9.66	10.0	-3.4	50.0
1,1-Dichloropropene	Ave	0.5299	0.5107		9.64	10.0	-3.6	50.0
Carbon tetrachloride	Ave	0.4761	0.4652		9.77	10.0	-2.3	50.0
1,2-Dichloroethane	Ave	0.2976	0.2997		10.1	10.0	0.7	50.0
Benzene	Ave	1.329	1.320		9.94	10.0	-0.6	50.0
Trichloroethene	Ave	0.3470	0.3262		9.40	10.0	-6.0	50.0
2-Pentanone	Lin2		0.0618		37.5	40.0	-6.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-436980/39 Calibration Date: 11/09/2018 19:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2469.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6311	0.6202		9.83	10.0	-1.7	50.0
1,2-Dichloropropane	Ave	0.2907	0.2995		10.3	10.0	3.0	50.0
1,4-Dioxane	Lin2		0.0008		194	200	-3.1	50.0
Dibromomethane	Ave	0.1000	0.1027		10.3	10.0	2.7	50.0
Bromodichloromethane	Ave	0.3144	0.3254		10.4	10.0	3.5	50.0
2-Chloroethyl vinyl ether	Lin1		0.0580		8.30	10.0	-17.0	50.0
cis-1,3-Dichloropropene	Lin2		1.592		9.52	10.0	-4.8	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1090		44.5	40.0	11.1	50.0
Toluene	Ave	1.356	1.445		10.7	10.0	6.6	50.0
Ethyl methacrylate	Lin1		0.6572		8.77	10.0	-12.3	50.0
trans-1,3-Dichloropropene	Lin1		0.2406		9.28	10.0	-7.2	50.0
1,1,2-Trichloroethane	Ave	0.1305	0.1340		10.3	10.0	2.6	50.0
2-Hexanone	Lin2		0.3143		37.8	40.0	-5.6	50.0
1,3-Dichloropropane	Ave	1.258	1.273		10.1	10.0	1.2	50.0
Tetrachloroethene	Ave	1.279	1.197		9.36	10.0	-6.4	50.0
Dibromochloromethane	Lin2		0.7137		9.41	10.0	-5.9	50.0
1,2-Dibromoethane	Ave	0.5501	0.5541		10.1	10.0	0.7	50.0
1-Chlorohexane	Ave	2.393	2.300		9.61	10.0	-3.9	50.0
Chlorobenzene	Ave	3.682	3.518	0.3000	9.56	10.0	-4.4	50.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.141		10.1	10.0	1.0	50.0
Ethylbenzene	Ave	2.426	2.362		9.74	10.0	-2.6	50.0
m-Xylene & p-Xylene	Ave	2.842	2.788		9.81	10.0	-1.9	50.0
o-Xylene	Ave	2.629	2.663		10.1	10.0	1.3	50.0
Styrene	Ave	3.660	3.778		10.3	10.0	3.2	50.0
Bromoform	Lin2		0.2859	0.1000	8.66	10.0	-13.4	50.0
Isopropylbenzene	Ave	5.152	4.812		9.34	10.0	-6.6	50.0
Cyclohexanone	Lin2		0.0295		576	400	43.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4671	0.3000	10.2	10.0	2.2	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.1009		8.95	10.0	-10.5	50.0
1,2,3-Trichloropropane	Ave	0.1211	0.1146		9.46	10.0	-5.4	50.0
Bromobenzene	Ave	0.8789	0.8335		9.48	10.0	-5.2	50.0
N-Propylbenzene	Ave	1.433	1.339		9.34	10.0	-6.6	50.0
1,3,5-Trimethylbenzene	Ave	4.181	3.970		9.49	10.0	-5.1	50.0
2-Chlorotoluene	Ave	1.128	1.043		9.24	10.0	-7.6	50.0
4-Chlorotoluene	Ave	1.089	0.996		9.14	10.0	-8.6	50.0
tert-Butylbenzene	Ave	4.080	3.863		9.47	10.0	-5.3	50.0
1,2,4-Trimethylbenzene	Ave	4.186	3.976		9.50	10.0	-5.0	50.0
sec-Butylbenzene	Ave	1.133	1.085		9.58	10.0	-4.2	50.0
4-Isopropyltoluene	Ave	4.751	4.544		9.56	10.0	-4.4	50.0
1,3-Dichlorobenzene	Ave	1.966	1.830		9.31	10.0	-6.9	50.0
1,4-Dichlorobenzene	Ave	1.952	1.812		9.28	10.0	-7.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-436980/39 Calibration Date: 11/09/2018 19:12

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2469.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.168	4.930		9.54	10.0	-4.6	50.0
1,2-Dichlorobenzene	Ave	1.582	1.519		9.60	10.0	-4.0	50.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0524		9.57	10.0	-4.3	50.0
1,2,4-Trichlorobenzene	Ave	1.029	0.9074		8.82	10.0	-11.8	50.0
Hexachlorobutadiene	Ave	0.7951	0.6896		8.67	10.0	-13.3	50.0
Naphthalene	Ave	1.333	1.211		9.09	10.0	-9.1	50.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.7222		9.37	10.0	-6.3	50.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2461		10.1	10.0	1.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2282		9.78	10.0	-2.2	50.0
Toluene-d8 (Surr)	Ave	5.289	5.083		9.61	10.0	-3.9	50.0
4-Bromofluorobenzene (Surr)	Ave	1.116	0.996		8.92	10.0	-10.8	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2469.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 09-Nov-2018 19:12:30 ALS Bottle#: 42 Worklist Smp#: 39
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: SEIFERTJ Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 15:43:05 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

First Level Reviewer: seifertj Date: 14-Nov-2018 15:43:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.601	5.600	0.001	31	108600	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.559	-0.006	97	1004084	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	207941	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	96	329758	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.016	0.000	91	197669	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.316	-0.006	98	183283	10.0	9.78	
$ 7 Toluene-d8 (Surr)	98	8.754	8.753	0.001	95	845593	10.0	9.61	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.691	-0.007	83	262663	10.0	8.92	
23 Dichlorodifluoromethane	85	3.845	3.846	-0.001	99	388931	10.0	8.60	
26 Chloromethane	50	4.083	4.083	0.000	97	276563	10.0	9.29	
27 Vinyl chloride	62	4.222	4.209	0.013	97	303851	10.0	10.0	
29 Bromomethane	94	4.585	4.586	-0.001	92	266902	10.0	10.2	
30 Chloroethane	64	4.655	4.642	0.013	98	255809	10.0	10.3	
31 Dichlorofluoromethane	67	4.795	4.796	-0.001	99	629103	10.0	9.95	
32 Trichlorofluoromethane	101	4.907	4.893	0.014	100	527558	10.0	9.21	
35 Ethyl ether	59	5.060	5.061	-0.001	94	123362	10.0	10.0	
39 Acrolein	56	5.214	5.215	-0.001	100	131126	100.0	95.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.284	0.014	96	227535	10.0	9.42	
41 Acetone	43	5.326	5.312	0.014	30	107840	40.0	37.8	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	95	284229	10.0	9.68	
44 Iodomethane	142	5.522	5.522	0.000	99	380724	10.0	9.34	
45 Methyl acetate	43	5.558	5.558	0.000	98	118400	20.0	18.2	
47 3-Chloro-1-propene	41	5.601	5.601	0.000	80	521170	10.0	9.94	
48 Carbon disulfide	76	5.615	5.608	0.007	99	1175588	10.0	9.86	
49 2-Methyl-2-propanol	59	5.658	5.658	0.000	94	64040	100.0	117.6	
50 Methylene Chloride	84	5.701	5.701	0.000	98	260051	10.0	10.3	
52 Acrylonitrile	53	5.872	5.873	-0.001	81	248846	100.0	97.7	
51 Methyl tert-butyl ether	73	5.872	5.873	-0.001	97	303383	10.0	9.52	
53 trans-1,2-Dichloroethene	96	5.915	5.916	-0.001	94	272843	10.0	9.45	
54 Hexane	57	6.073	6.073	0.000	96	501913	10.0	8.98	
55 Vinyl acetate	43	6.180	6.180	0.000	97	456128	20.0	19.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.237	6.237	0.000	97	513099	10.0	10.1	
61 2-Butanone (MEK)	43	6.630	6.631	-0.001	98	176596	40.0	43.4	
62 sec-Butyl Alcohol	45	6.673	6.674	-0.001	41	125180	300.0	285.4	
63 cis-1,2-Dichloroethene	96	6.680	6.674	0.006	89	263855	10.0	9.66	
64 2,2-Dichloropropane	77	6.702	6.702	0.000	89	391992	10.0	9.13	
67 Chlorobromomethane	128	6.873	6.881	-0.008	88	78438	10.0	9.59	
68 Chloroform	83	6.881	6.888	-0.007	97	444293	10.0	9.97	
69 Tetrahydrofuran	42	6.902	6.910	-0.008	89	42721	20.0	19.8	
70 Isobutyl alcohol	41	7.095	7.095	0.000	98	25319	250.0	149.6	
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	97	448526	10.0	9.85	
72 Cyclohexane	56	7.159	7.167	-0.008	97	602382	10.0	9.66	
73 1,1-Dichloropropene	75	7.195	7.196	-0.001	95	410255	10.0	9.64	
74 Carbon tetrachloride	117	7.231	7.238	-0.007	96	373649	10.0	9.77	
76 1,2-Dichloroethane	62	7.367	7.374	-0.007	97	240763	10.0	10.1	
77 Benzene	78	7.381	7.389	-0.008	98	1060446	10.0	9.94	
14 n-Heptane	43	7.445	7.446	-0.001	96	580802	10.0	9.63	
79 Trichloroethene	95	7.846	7.846	0.000	94	262056	10.0	9.40	
80 2-Pentanone	43	7.896	7.903	-0.007	97	198628	40.0	37.5	
82 Methylcyclohexane	55	8.032	8.032	0.000	95	498182	10.0	9.83	
83 1,2-Dichloropropane	63	8.039	8.039	0.000	89	240573	10.0	10.3	
84 1,4-Dioxane	88	8.103	8.096	0.007	90	12639	200.0	193.8	M
85 Dibromomethane	93	8.146	8.146	0.000	90	82507	10.0	10.3	
86 Dichlorobromomethane	83	8.210	8.218	-0.008	98	261374	10.0	10.4	
87 2-Chloroethyl vinyl ether	63	8.353	8.361	-0.008	92	46619	10.0	8.30	
89 cis-1,3-Dichloropropene	75	8.532	8.533	-0.001	91	264750	10.0	9.52	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.590	-0.001	99	350311	40.0	44.5	
91 Toluene	91	8.804	8.804	0.000	97	1161051	10.0	10.7	
92 Ethyl methacrylate	69	8.890	8.890	0.000	93	109320	10.0	8.77	
93 trans-1,3-Dichloropropene	75	8.911	8.912	-0.001	99	193258	10.0	9.28	
94 1,1,2-Trichloroethane	97	9.069	9.069	-0.001	93	107623	10.0	10.3	
95 2-Hexanone	43	9.176	9.183	-0.007	98	209164	40.0	37.8	
96 1,3-Dichloropropane	76	9.204	9.205	-0.001	97	211739	10.0	10.1	
97 Tetrachloroethene	164	9.212	9.219	-0.007	91	199133	10.0	9.36	
98 Chlorodibromomethane	129	9.390	9.398	-0.008	89	118717	10.0	9.41	
100 Ethylene Dibromide	107	9.519	9.526	-0.007	97	92172	10.0	10.1	
101 1-Chlorohexane	91	9.733	9.734	-0.001	91	382546	10.0	9.61	
102 Chlorobenzene	112	9.848	9.855	-0.007	92	585288	10.0	9.56	
103 Ethylbenzene	106	9.884	9.884	0.000	97	392857	10.0	9.74	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.891	-0.007	94	189796	10.0	10.1	
105 m-Xylene & p-Xylene	106	9.955	9.963	-0.008	99	463786	10.0	9.81	
107 o-Xylene	106	10.270	10.277	-0.007	88	442972	10.0	10.1	
106 Styrene	104	10.277	10.277	0.000	85	628557	10.0	10.3	
108 Bromoform	173	10.484	10.492	-0.008	92	47559	10.0	8.66	
109 Isopropylbenzene	105	10.527	10.535	-0.008	97	1269556	10.0	9.34	
111 Cyclohexanone	55	10.677	10.678	-0.001	97	196489	400.0	575.6	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.749	-0.007	95	123222	10.0	10.2	
113 trans-1,4-Dichloro-2-buten	53	10.785	10.785	0.000	85	26608	10.0	8.95	
114 1,2,3-Trichloropropane	110	10.813	10.821	-0.008	91	30225	10.0	9.46	
115 N-Propylbenzene	120	10.849	10.849	0.000	100	353179	10.0	9.34	
116 Bromobenzene	156	10.849	10.856	-0.007	97	219881	10.0	9.48	
117 1,3,5-Trimethylbenzene	105	10.956	10.964	-0.008	94	1047289	10.0	9.49	
118 2-Chlorotoluene	126	10.970	10.978	-0.008	94	275110	10.0	9.24	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.049	11.057	-0.008	99	262710	10.0	9.14	
120 tert-Butylbenzene	119	11.249	11.257	-0.008	92	1018958	10.0	9.47	
121 1,2,4-Trimethylbenzene	105	11.278	11.285	-0.007	96	1048887	10.0	9.50	
122 sec-Butylbenzene	134	11.428	11.436	-0.008	96	286235	10.0	9.58	
123 4-Isopropyltoluene	119	11.521	11.521	0.000	97	1198724	10.0	9.56	
124 1,3-Dichlorobenzene	146	11.592	11.600	-0.008	95	482731	10.0	9.31	
126 1,4-Dichlorobenzene	146	11.664	11.672	-0.008	91	477962	10.0	9.28	
127 n-Butylbenzene	91	11.879	11.886	-0.008	99	1300674	10.0	9.54	
128 1,2-Dichlorobenzene	146	12.022	12.029	-0.007	94	400668	10.0	9.60	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.787	-0.015	72	13823	10.0	9.57	
130 1,2,4-Trichlorobenzene	180	13.709	13.716	-0.007	93	239379	10.0	8.82	
131 Hexachlorobutadiene	225	13.845	13.852	-0.007	92	181907	10.0	8.67	
132 Naphthalene	128	14.081	14.088	-0.007	98	319542	10.0	9.09	
133 1,2,3-Trichlorobenzene	180	14.395	14.410	-0.015	93	190529	10.0	9.37	
S 140 1,2-Dichloroethene, Total	96				0		20.0	19.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	19.1	
S 139 Xylenes, Total	106				0		20.0	19.9	
S 137 1,3-Dichloropropene, Total	1				0		20.0	18.8	
S 134 Trihalomethanes, Total	1				0		40.0	38.4	
S 135 Xylenes, Total (URS)	1				0		20.0	19.9	
S 136 Total BTEX	1				0			50.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMainA_00006	Amount Added:	4.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

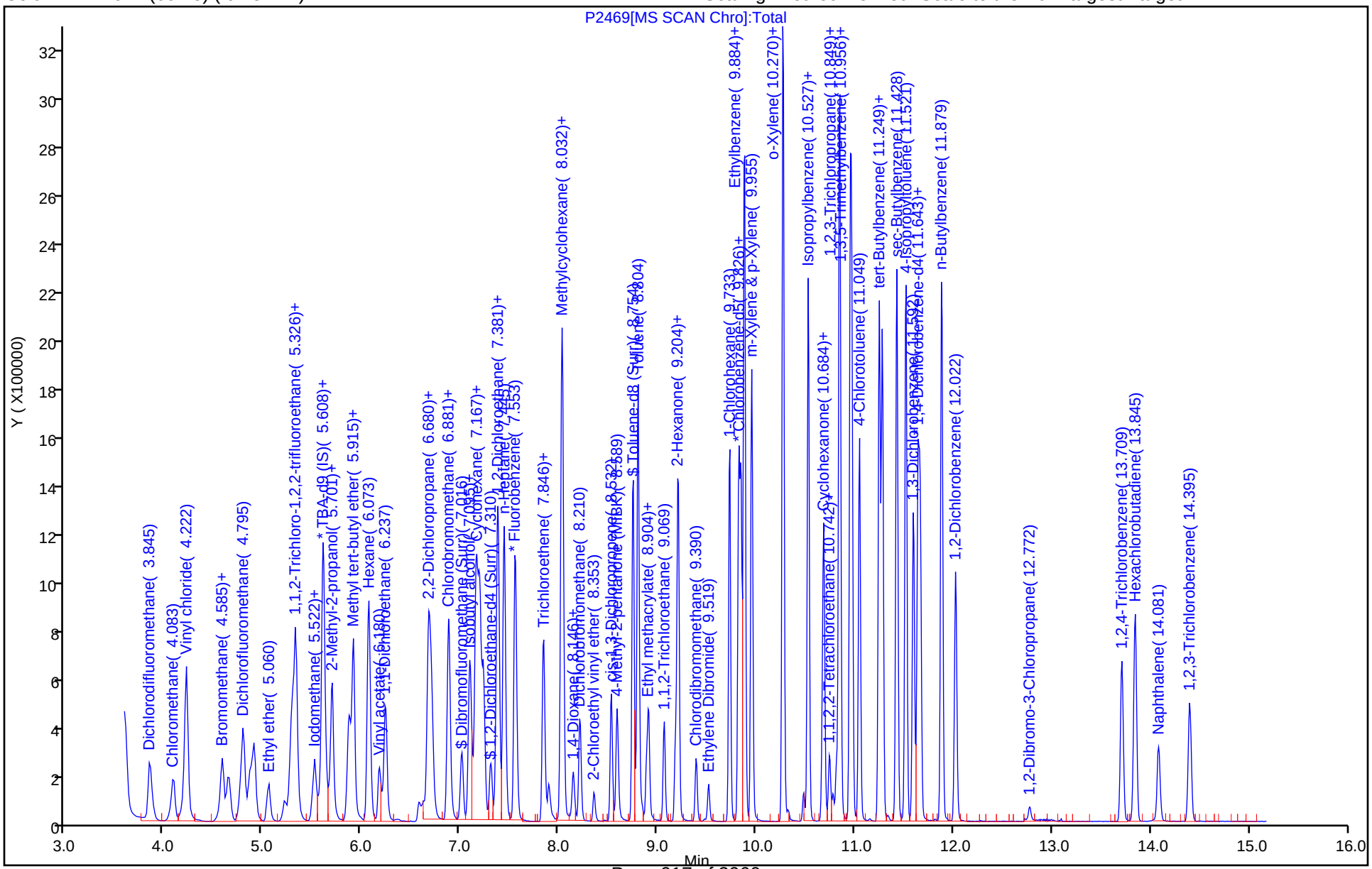
Report Date: 14-Nov-2018 15:43:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2469.D

Injection Date:	09-Nov-2018 19:12:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	CCVC			Worklist Smp#:	39
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

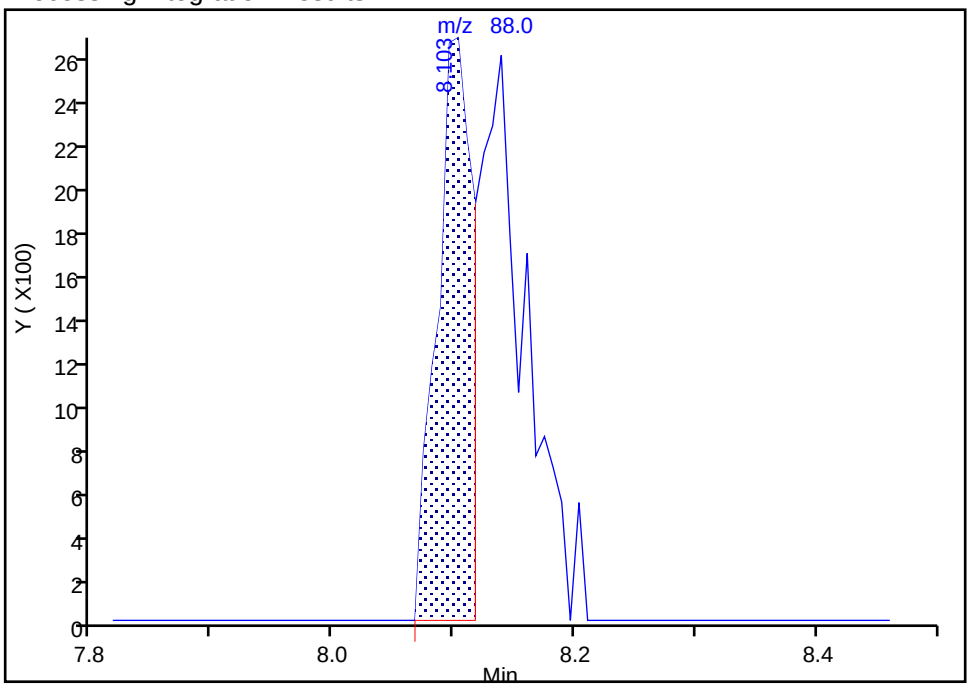
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2469.D
Injection Date: 09-Nov-2018 19:12:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 42 Worklist Smp#: 39
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

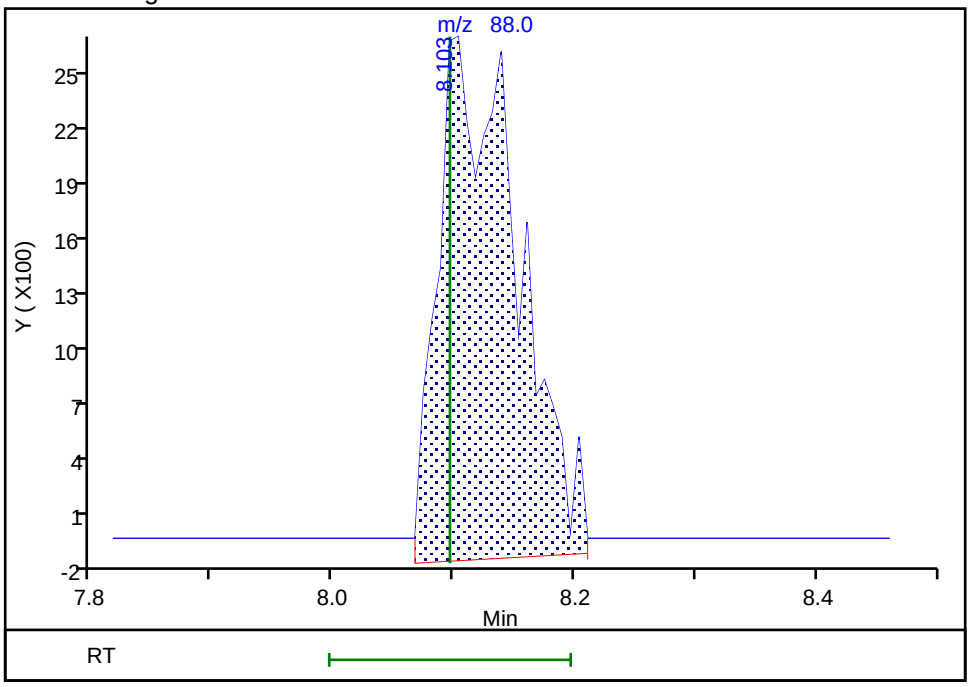
Processing Integration Results

RT: 8.10
Area: 5414
Amount: 95.616025
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 12639
Amount: 193.8000
Amount Units: ug/l



Reviewer: seifertj, 14-Nov-2018 15:42:57
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437213/2 Calibration Date: 11/12/2018 10:44

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2542.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.4653		8.26	10.0	-17.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2309		9.50	10.0	-5.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2047		8.78	10.0	-12.2	20.0
Toluene-d8 (Surr)	Ave	5.289	4.879		9.22	10.0	-7.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.116	0.9657		8.65	10.0	-13.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2542.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Nov-2018 10:44:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: seifertj Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub152

Method: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 17:30:49 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0306

First Level Reviewer: seifertj Date: 13-Nov-2018 17:06:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.594	0.000	33	201234	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.560	0.000	98	1834694	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.827	0.000	89	373450	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.650	11.650	0.000	97	554241	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.017	0.000	92	338848	10.0	9.50	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	300508	10.0	8.78	
$ 7 Toluene-d8 (Surr)	98	8.754	8.754	0.000	95	1457585	10.0	9.22	
$ 8 4-Bromofluorobenzene (Surr	95	10.692	10.692	0.000	83	428199	10.0	8.65	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	682905	10.0	8.26	
26 Chloromethane	50		4.096				ND	ND	U
27 Vinyl chloride	62		4.222				ND	ND	U
29 Bromomethane	94		4.585				ND	ND	U
30 Chloroethane	64		4.641				ND	ND	U
31 Dichlorofluoromethane	67		4.795				ND	ND	U
32 Trichlorofluoromethane	101		4.906				ND	ND	U
41 Acetone	43		5.325				ND	ND	U
61 2-Butanone (MEK)	43		6.631				ND	ND	U
90 4-Methyl-2-pentanone (MIBK	43		8.590				ND	ND	U
95 2-Hexanone	43		9.176				ND	ND	U

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
U - Marked Undetected

Reagents:

MV-Gas/Ket B_00046	Amount Added:	4.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

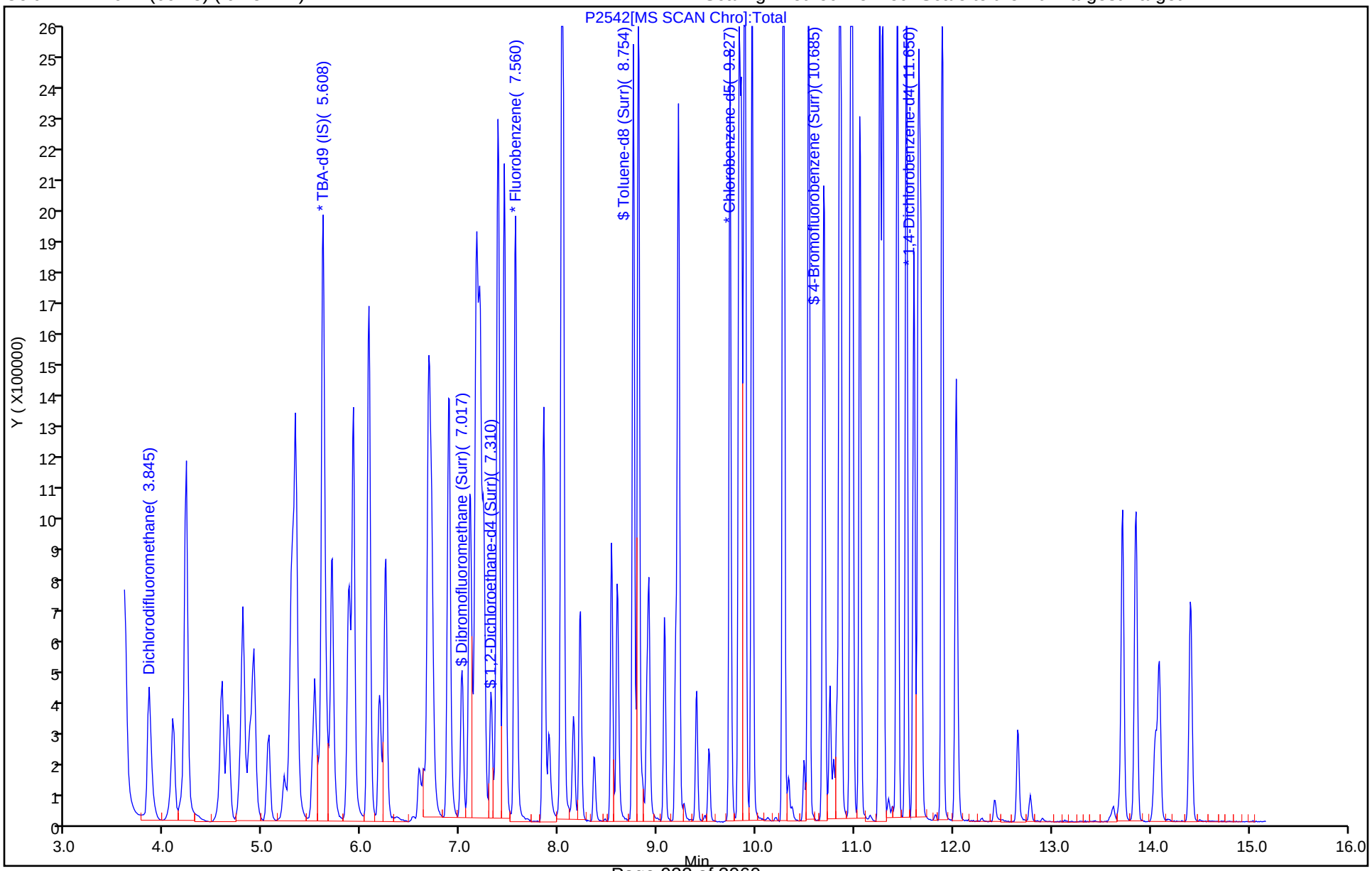
Report Date: 13-Nov-2018 17:30:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2542.D

Injection Date:	12-Nov-2018 10:44:30	Instrument ID:	VMS_P	Operator ID:	seifertj
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437213/14 Calibration Date: 11/12/2018 11:40

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2545.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chloromethane	Ave	0.3707	0.3502	0.1000	9.45	10.0	-5.5	20.0
Vinyl chloride	Ave	0.3783	0.3767		9.96	10.0	-0.4	20.0
Bromomethane	Ave	0.3269	0.3205		9.81	10.0	-1.9	20.0
Chloroethane	Ave	0.3098	0.3053		9.86	10.0	-1.4	20.0
Dichlorofluoromethane	Ave	0.7871	0.7506		9.54	10.0	-4.6	20.0
Trichlorofluoromethane	Ave	0.7129	0.6486		9.10	10.0	-9.0	20.0
Ethyl ether	Ave	0.1533	0.1658		10.8	10.0	8.1	20.0
Acrolein	Lin2		0.0166		97.6	100	-2.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.2856		9.50	10.0	-5.0	20.0
Acetone	Ave	0.0355	0.0348		39.2	40.0	-2.1	20.0
1,1-Dichloroethene	Ave	0.3655	0.3638		9.95	10.0	-0.5	20.0
Iodomethane	Ave	0.5074	0.5052		9.96	10.0	-0.4	20.0
Methyl acetate	Ave	0.0809	0.0808		20.0	20.0	-0.0	20.0
3-Chloro-1-propene	Ave	0.6527	0.6743		10.3	10.0	3.3	20.0
Carbon disulfide	Ave	1.485	1.430		9.63	10.0	-3.7	20.0
t-Butyl alcohol	Lin1		2.692		212	100	111.6*	20.0
Methylene Chloride	Ave	0.3148	0.3014		9.57	10.0	-4.3	20.0
Acrylonitrile	Lin2		0.0332		104	100	4.3	20.0
Methyl tert-butyl ether	Ave	0.3966	0.4059		10.2	10.0	2.3	20.0
trans-1,2-Dichloroethene	Ave	0.3594	0.3517		9.79	10.0	-2.1	20.0
Hexane	Ave	3.359	3.098		9.22	10.0	-7.8	20.0
Vinyl acetate	Lin2		0.3085		21.4	20.0	7.2	20.0
1,1-Dichloroethane	Ave	0.6299	0.6339	0.1000	10.1	10.0	0.6	20.0
2-Butanone (MEK)	Ave	0.0507	0.0519		40.9	40.0	2.4	20.0
sec-Butyl Alcohol	Lin		2.091		570	300	90.0*	20.0
cis-1,2-Dichloroethene	Ave	0.3401	0.3470		10.2	10.0	2.0	20.0
2,2-Dichloropropane	Ave	0.5342	0.5144		9.63	10.0	-3.7	20.0
Bromochloromethane	Ave	0.1018	0.1081		10.6	10.0	6.1	20.0
Chloroform	Ave	0.5547	0.5486		9.89	10.0	-1.1	20.0
Tetrahydrofuran	Ave	0.0268	0.0273		20.4	20.0	1.8	20.0
Isobutyl alcohol	Lin		0.6290		319	250	27.6*	20.0
1,1,1-Trichloroethane	Ave	0.5669	0.5479		9.66	10.0	-3.4	20.0
Cyclohexane	Ave	0.7766	0.7637		9.83	10.0	-1.7	20.0
1,1-Dichloropropene	Ave	0.5299	0.5148		9.71	10.0	-2.9	20.0
Carbon tetrachloride	Ave	0.4761	0.4519		9.49	10.0	-5.1	20.0
1,2-Dichloroethane	Ave	0.2976	0.2872		9.65	10.0	-3.5	20.0
Benzene	Ave	1.329	1.345		10.1	10.0	1.2	20.0
Trichloroethene	Ave	0.3470	0.3386		9.76	10.0	-2.4	20.0
2-Pentanone	Lin2		0.0674		40.8	40.0	1.9	20.0
Methylcyclohexane	Ave	0.6311	0.6172		9.78	10.0	-2.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437213/14 Calibration Date: 11/12/2018 11:40

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2545.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.2907	0.3048		10.5	10.0	4.9	20.0
1,4-Dioxane	Lin2		0.0010		236	200	18.1	20.0
Dibromomethane	Ave	0.1000	0.1027		10.3	10.0	2.7	20.0
Bromodichloromethane	Ave	0.3144	0.3224		10.3	10.0	2.6	20.0
2-Chloroethyl vinyl ether	Lin1		0.0671		9.52	10.0	-4.8	20.0
cis-1,3-Dichloropropene	Lin2		1.702		10.2	10.0	1.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.1073		43.8	40.0	9.4	20.0
Toluene	Ave	1.356	1.369		10.1	10.0	1.0	20.0
Ethyl methacrylate	Lin1		0.7283		9.68	10.0	-3.2	20.0
trans-1,3-Dichloropropene	Lin1		0.2488		9.58	10.0	-4.2	20.0
1,1,2-Trichloroethane	Ave	0.1305	0.1359		10.4	10.0	4.1	20.0
2-Hexanone	Lin2		0.3231		38.8	40.0	-3.0	20.0
1,3-Dichloropropane	Ave	1.258	1.271		10.1	10.0	1.1	20.0
Tetrachloroethene	Ave	1.279	1.231		9.63	10.0	-3.7	20.0
Dibromochloromethane	Lin2		0.7316		9.65	10.0	-3.5	20.0
1,2-Dibromoethane	Ave	0.5501	0.5747		10.4	10.0	4.5	20.0
1-Chlorohexane	Ave	2.393	2.428		10.1	10.0	1.5	20.0
Chlorobenzene	Ave	3.682	3.594	0.3000	9.76	10.0	-2.4	20.0
1,1,1,2-Tetrachloroethane	Ave	1.129	1.123		9.94	10.0	-0.6	20.0
Ethylbenzene	Ave	2.426	2.385		9.83	10.0	-1.7	20.0
m-Xylene & p-Xylene	Ave	2.842	2.823		9.93	10.0	-0.7	20.0
o-Xylene	Ave	2.629	2.690		10.2	10.0	2.3	20.0
Styrene	Ave	3.660	3.881		10.6	10.0	6.0	20.0
Bromoform	Lin2		0.3137	0.1000	9.47	10.0	-5.3	20.0
Isopropylbenzene	Ave	5.152	5.071		9.84	10.0	-1.6	20.0
Cyclohexanone	Lin2		0.0379		736	400	84.1*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.4681	0.3000	10.2	10.0	2.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.1088		9.66	10.0	-3.4	20.0
1,2,3-Trichloropropane	Ave	0.1211	0.1181		9.75	10.0	-2.5	20.0
Bromobenzene	Ave	0.8789	0.8758		9.96	10.0	-0.4	20.0
N-Propylbenzene	Ave	1.433	1.419		9.90	10.0	-1.0	20.0
1,3,5-Trimethylbenzene	Ave	4.181	4.107		9.82	10.0	-1.8	20.0
2-Chlorotoluene	Ave	1.128	1.098		9.74	10.0	-2.6	20.0
4-Chlorotoluene	Ave	1.089	1.082		9.93	10.0	-0.7	20.0
tert-Butylbenzene	Ave	4.080	4.038		9.90	10.0	-1.0	20.0
1,2,4-Trimethylbenzene	Ave	4.186	4.101		9.80	10.0	-2.0	20.0
sec-Butylbenzene	Ave	1.133	1.117		9.86	10.0	-1.4	20.0
4-Isopropyltoluene	Ave	4.751	4.613		9.71	10.0	-2.9	20.0
1,3-Dichlorobenzene	Ave	1.966	1.893		9.63	10.0	-3.7	20.0
1,4-Dichlorobenzene	Ave	1.952	1.854		9.50	10.0	-5.0	20.0
n-Butylbenzene	Ave	5.168	4.931		9.54	10.0	-4.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437213/14 Calibration Date: 11/12/2018 11:40

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2545.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.582	1.549		9.80	10.0	-2.0	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0560		10.2	10.0	1.9	20.0
1,2,4-Trichlorobenzene	Ave	1.029	1.011		9.82	10.0	-1.8	20.0
Hexachlorobutadiene	Ave	0.7951	0.6928		8.71	10.0	-12.9	20.0
Naphthalene	Ave	1.333	1.389		10.4	10.0	4.2	20.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.7604		9.86	10.0	-1.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2545.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Nov-2018 11:40:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV Q5
Operator ID: seifertj Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub70

Method: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 17:30:56 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0306

First Level Reviewer: seifertj Date: 13-Nov-2018 17:08:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.587	5.587	0.000	70	102188	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.560	0.000	98	1782618	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.827	0.000	95	362991	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.643	0.000	97	539831	12.5	12.5	
23 Dichlorodifluoromethane	85		3.845				ND	ND	U
26 Chloromethane	50	4.096	4.096	0.000	99	499438	10.0	9.45	
27 Vinyl chloride	62	4.222	4.222	0.000	97	537194	10.0	9.96	
29 Bromomethane	94	4.585	4.585	0.000	91	457072	10.0	9.81	
30 Chloroethane	64	4.641	4.641	0.000	99	435435	10.0	9.86	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	99	1070392	10.0	9.54	
32 Trichlorofluoromethane	101	4.906	4.906	0.000	100	925000	10.0	9.10	
35 Ethyl ether	59	5.060	5.060	0.000	95	236399	10.0	10.8	
39 Acrolein	56	5.214	5.214	0.000	98	236989	100.0	97.6	
40 1,1,2-Trichloro-1,2,2-trif	151	5.297	5.297	0.000	97	407333	10.0	9.50	
41 Acetone	43	5.325	5.325	0.000	99	198494	40.0	39.2	
43 1,1-Dichloroethene	96	5.339	5.339	0.000	97	518868	10.0	9.95	
44 Iodomethane	142	5.522	5.522	0.000	100	720506	10.0	9.96	
45 Methyl acetate	43	5.558	5.558	0.000	98	230488	20.0	20.0	
47 3-Chloro-1-propene	41	5.601	5.601	0.000	81	961580	10.0	10.3	
48 Carbon disulfide	76	5.615	5.615	0.000	99	2039036	10.0	9.63	
49 2-Methyl-2-propanol	59	5.658	5.658	0.000	29	110017	100.0	211.6	
50 Methylene Chloride	84	5.701	5.701	0.000	97	429784	10.0	9.57	
51 Methyl tert-butyl ether	73	5.873	5.873	0.000	98	578862	10.0	10.2	
52 Acrylonitrile	53	5.873	5.873	0.000	75	473030	100.0	104.3	
53 trans-1,2-Dichloroethene	96	5.916	5.916	0.000	96	501534	10.0	9.79	
54 Hexane	57	6.073	6.073	0.000	96	899540	10.0	9.22	
55 Vinyl acetate	43	6.180	6.180	0.000	97	879922	20.0	21.4	
57 1,1-Dichloroethane	63	6.245	6.245	0.000	97	904047	10.0	10.1	
61 2-Butanone (MEK)	43	6.631	6.631	0.000	99	296152	40.0	40.9	
62 sec-Butyl Alcohol	45	6.674	6.674	0.000	40	256438	300.0	570.0	
63 cis-1,2-Dichloroethene	96	6.681	6.681	0.000	88	494857	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
64 2,2-Dichloropropane	77	6.702	6.702	0.000	91	733588	10.0	9.63	
67 Chlorobromomethane	128	6.881	6.881	0.000	92	154091	10.0	10.6	
68 Chloroform	83	6.888	6.888	0.000	96	782337	10.0	9.89	
69 Tetrahydrofuran	42	6.909	6.909	0.000	93	77949	20.0	20.4	
70 Isobutyl alcohol	41	7.088	7.088	0.000	99	64271	250.0	319.1	
71 1,1,1-Trichloroethane	97	7.103	7.103	0.000	98	781411	10.0	9.66	
72 Cyclohexane	56	7.167	7.167	0.000	95	1089082	10.0	9.83	
73 1,1-Dichloropropene	75	7.195	7.195	0.000	96	734151	10.0	9.71	
74 Carbon tetrachloride	117	7.231	7.231	0.000	98	644443	10.0	9.49	
76 1,2-Dichloroethane	62	7.367	7.367	0.000	97	409500	10.0	9.65	
77 Benzene	78	7.381	7.381	0.000	98	1918488	10.0	10.1	
14 n-Heptane	43	7.446	7.446	0.000	96	1053122	10.0	9.84	
79 Trichloroethene	95	7.846	7.846	0.000	96	482893	10.0	9.76	
80 2-Pentanone	43	7.896	7.896	0.000	98	384680	40.0	40.8	
82 Methylcyclohexane	55	8.032	8.032	0.000	95	880214	10.0	9.78	
83 1,2-Dichloropropane	63	8.039	8.039	0.000	93	434708	10.0	10.5	
84 1,4-Dioxane	88	8.096	8.096	0.000	96	27991	200.0	236.3	M
85 Dibromomethane	93	8.146	8.146	0.000	91	146447	10.0	10.3	
86 Dichlorobromomethane	83	8.211	8.211	0.000	98	459787	10.0	10.3	
87 2-Chloroethyl vinyl ether	63	8.354	8.354	0.000	91	95716	10.0	9.52	
89 cis-1,3-Dichloropropene	75	8.533	8.533	0.000	92	494205	10.0	10.2	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.590	0.000	99	612227	40.0	43.8	
91 Toluene	91	8.804	8.804	0.000	97	1952289	10.0	10.1	
92 Ethyl methacrylate	69	8.890	8.890	0.000	93	211488	10.0	9.68	
93 trans-1,3-Dichloropropene	75	8.912	8.912	0.000	98	354836	10.0	9.58	
94 1,1,2-Trichloroethane	97	9.069	9.069	0.000	93	193870	10.0	10.4	
95 2-Hexanone	43	9.176	9.176	0.000	98	375302	40.0	38.8	
96 1,3-Dichloropropane	76	9.205	9.205	0.000	97	369219	10.0	10.1	
97 Tetrachloroethene	164	9.212	9.212	0.000	94	357508	10.0	9.63	
98 Chlorodibromomethane	129	9.391	9.391	0.000	90	212463	10.0	9.65	
100 Ethylene Dibromide	107	9.519	9.519	0.000	99	166880	10.0	10.4	
101 1-Chlorohexane	91	9.734	9.734	0.000	92	705084	10.0	10.1	
102 Chlorobenzene	112	9.848	9.848	0.000	94	1043799	10.0	9.76	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.884	0.000	95	325971	10.0	9.94	
103 Ethylbenzene	106	9.884	9.884	0.000	97	692469	10.0	9.83	
105 m-Xylene & p-Xylene	106	9.955	9.955	0.000	99	819910	10.0	9.93	
107 o-Xylene	106	10.270	10.270	0.000	97	781151	10.0	10.2	
106 Styrene	104	10.277	10.277	0.000	89	1126889	10.0	10.6	
108 Bromoform	173	10.485	10.485	0.000	94	91105	10.0	9.47	
109 Isopropylbenzene	105	10.527	10.527	0.000	97	2189965	10.0	9.84	
111 Cyclohexanone	55	10.678	10.678	0.000	97	440443	400.0	736.5	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.742	0.000	95	202161	10.0	10.2	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.778	0.000	88	46990	10.0	9.66	
114 1,2,3-Trichloropropane	110	10.813	10.813	0.000	88	51011	10.0	9.75	
115 N-Propylbenzene	120	10.849	10.849	0.000	99	612845	10.0	9.90	
116 Bromobenzene	156	10.849	10.849	0.000	97	378218	10.0	9.96	
117 1,3,5-Trimethylbenzene	105	10.956	10.956	0.000	95	1773652	10.0	9.82	
118 2-Chlorotoluene	126	10.971	10.971	0.000	95	474348	10.0	9.74	
119 4-Chlorotoluene	126	11.049	11.049	0.000	99	467151	10.0	9.93	
120 tert-Butylbenzene	119	11.250	11.250	0.000	92	1743930	10.0	9.90	
121 1,2,4-Trimethylbenzene	105	11.278	11.278	0.000	96	1770983	10.0	9.80	
122 sec-Butylbenzene	134	11.428	11.428	0.000	95	482599	10.0	9.86	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.521	11.521	0.000	97	1992321	10.0	9.71	
124 1,3-Dichlorobenzene	146	11.593	11.593	0.000	96	817363	10.0	9.63	
126 1,4-Dichlorobenzene	146	11.664	11.664	0.000	92	800658	10.0	9.50	
127 n-Butylbenzene	91	11.879	11.879	0.000	99	2129387	10.0	9.54	
128 1,2-Dichlorobenzene	146	12.022	12.022	0.000	95	669111	10.0	9.80	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.773	0.000	74	24202	10.0	10.2	
130 1,2,4-Trichlorobenzene	180	13.709	13.709	0.000	93	436503	10.0	9.82	
131 Hexachlorobutadiene	225	13.845	13.845	0.000	94	299205	10.0	8.71	
132 Naphthalene	128	14.081	14.081	0.000	97	599901	10.0	10.4	
133 1,2,3-Trichlorobenzene	180	14.396	14.396	0.000	94	328369	10.0	9.86	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.0	
S 134 Trihalomethanes, Total	1				0		40.0	39.3	
S 135 Xylenes, Total (URS)	1				0		20.0	20.2	
S 136 Total BTEX	1				0			50.2	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.8	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.0	
S 139 Xylenes, Total	106				0		20.0	20.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-MegaMainA_00006	Amount Added:	4.00	Units: uL
MV-568718-D_00010	Amount Added:	1.00	Units: uL

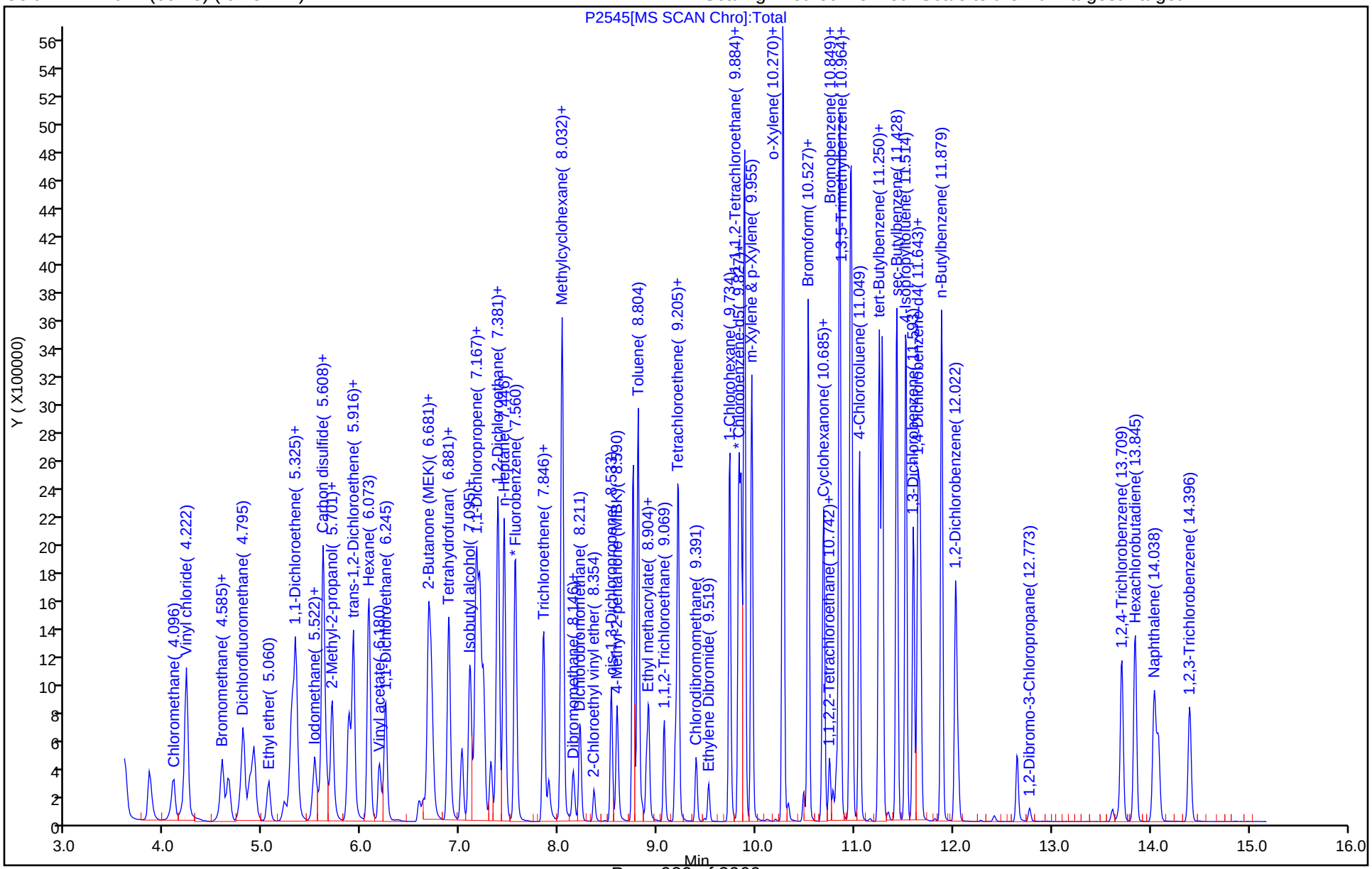
Report Date: 13-Nov-2018 17:30:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2545.D

Injection Date:	12-Nov-2018 11:40:30	Instrument ID:	VMS_P	Operator ID:	seifertj
Lims ID:	CCV			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

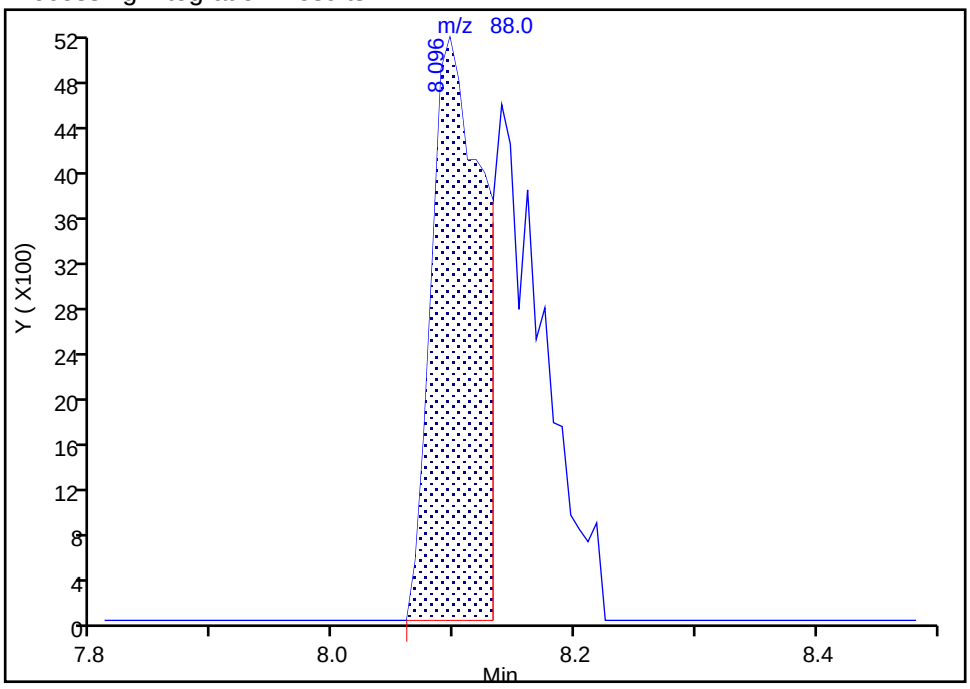
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2545.D
Injection Date: 12-Nov-2018 11:40:30 Instrument ID: VMS_P
Lims ID: CCV
Client ID:
Operator ID: seifertj ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

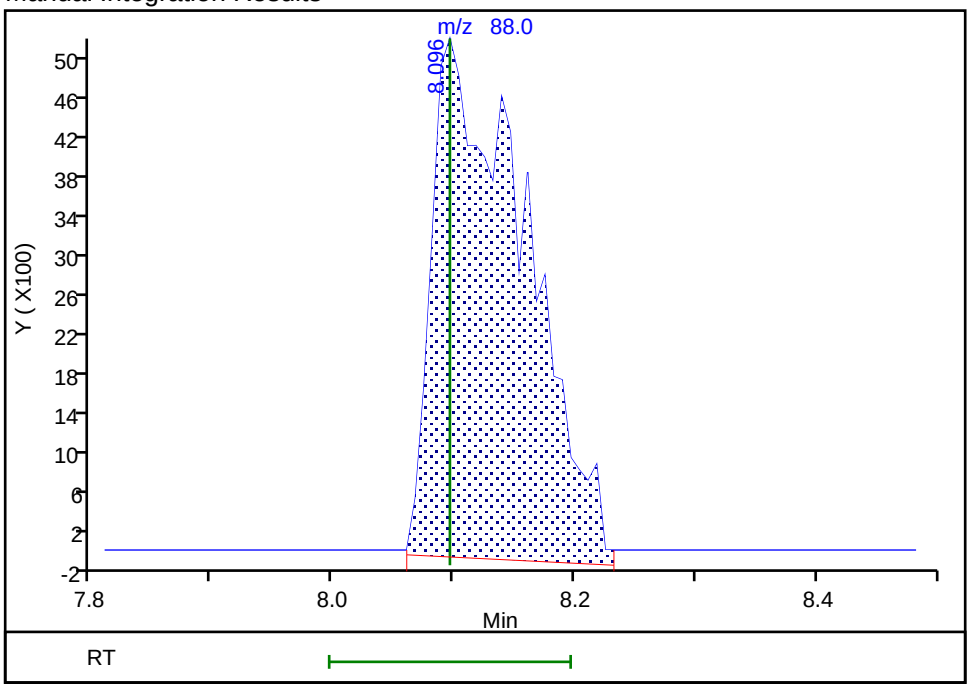
Processing Integration Results

RT: 8.10
Area: 15302
Amount: 139.1711
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 27991
Amount: 236.2986
Amount Units: ug/l



Reviewer: seifertj, 13-Nov-2018 17:08:24
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-437213/38 Calibration Date: 11/12/2018 20:29

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2572.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5632	0.3574		7.93	12.5	-36.5	50.0
Chloromethane	Ave	0.3707	0.2851	0.1000	9.61	12.5	-23.1	50.0
Vinyl chloride	Ave	0.3783	0.3128		10.3	12.5	-17.3	50.0
Bromomethane	Ave	0.3269	0.2685		10.3	12.5	-17.9	50.0
Chloroethane	Ave	0.3098	0.2609		10.5	12.5	-15.8	50.0
Dichlorofluoromethane	Ave	0.7871	0.6116		9.71	12.5	-22.3	50.0
Trichlorofluoromethane	Ave	0.7129	0.5167		9.06	12.5	-27.5	50.0
Ethyl ether	Ave	0.1533	0.1202		9.80	12.5	-21.6	50.0
Acrolein	Lin2		0.0134		98.4	125	-21.3	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3007	0.2262		9.40	12.5	-24.8	50.0
1,1-Dichloroethene	Ave	0.3655	0.2845		9.73	12.5	-22.2	50.0
Acetone	Ave	0.0355	0.0279		39.3	50.0	-21.5	50.0
Iodomethane	Ave	0.5074	0.3890		9.58	12.5	-23.3	50.0
Methyl acetate	Ave	0.0809	0.0545		16.9	25.0	-32.6	50.0
3-Chloro-1-propene	Ave	0.6527	0.5437		10.4	12.5	-16.7	50.0
Carbon disulfide	Ave	1.485	1.164		9.80	12.5	-21.6	50.0
t-Butyl alcohol	Lin1		0.8603		86.8	125	-30.6	50.0
Methylene Chloride	Ave	0.3148	0.2257		8.96	12.5	-28.3	50.0
Acrylonitrile	Lin2		0.0253		99.7	125	-20.2	50.0
Methyl tert-butyl ether	Ave	0.3966	0.2879		9.07	12.5	-27.4	50.0
trans-1,2-Dichloroethene	Ave	0.3594	0.2726		9.48	12.5	-24.1	50.0
Hexane	Ave	3.359	2.566		9.55	12.5	-23.6	50.0
Vinyl acetate	Lin2		0.2239		19.5	25.0	-22.1	50.0
1,1-Dichloroethane	Ave	0.6299	0.4921	0.1000	9.77	12.5	-21.9	50.0
2-Butanone (MEK)	Ave	0.0507	0.0378		37.3	50.0	-25.4	50.0
sec-Butyl Alcohol	Lin		0.7214		271	375	-27.8	50.0
cis-1,2-Dichloroethene	Ave	0.3401	0.2593		9.53	12.5	-23.8	50.0
2,2-Dichloropropane	Ave	0.5342	0.4047		9.47	12.5	-24.2	50.0
Bromochloromethane	Ave	0.1018	0.0776		9.53	12.5	-23.8	50.0
Chloroform	Ave	0.5547	0.4120		9.29	12.5	-25.7	50.0
Tetrahydrofuran	Ave	0.0268	0.0213		19.9	25.0	-20.6	50.0
1,1,1-Trichloroethane	Ave	0.5669	0.4237		9.34	12.5	-25.3	50.0
Isobutyl alcohol	Lin		0.2917		206	313	-34.1	50.0
Cyclohexane	Ave	0.7766	0.6150		9.90	12.5	-20.8	50.0
1,1-Dichloropropene	Ave	0.5299	0.4093		9.66	12.5	-22.8	50.0
Carbon tetrachloride	Ave	0.4761	0.3563		9.35	12.5	-25.2	50.0
1,2-Dichloroethane	Ave	0.2976	0.2172		9.12	12.5	-27.0	50.0
Benzene	Ave	1.329	1.041		9.80	12.5	-21.6	50.0
Trichloroethene	Ave	0.3470	0.2567		9.25	12.5	-26.0	50.0
2-Pentanone	Lin2		0.0488		37.0	50.0	-26.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-437213/38 Calibration Date: 11/12/2018 20:29

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2572.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.6311	0.4884		9.67	12.5	-22.6	50.0
1,2-Dichloropropane	Ave	0.2907	0.2345		10.1	12.5	-19.3	50.0
1,4-Dioxane	Lin2		0.0006		195	250	-22.1	50.0
Dibromomethane	Ave	0.1000	0.0784		9.80	12.5	-21.6	50.0
Bromodichloromethane	Ave	0.3144	0.2426		9.65	12.5	-22.8	50.0
2-Chloroethyl vinyl ether	Lin1		0.0466		8.33	12.5	-33.4	50.0
cis-1,3-Dichloropropene	Lin2		1.311		9.80	12.5	-21.6	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.0981	0.0778		39.6	50.0	-20.7	50.0
Toluene	Ave	1.356	1.052		9.70	12.5	-22.4	50.0
Ethyl methacrylate	Lin1		0.5129		8.57	12.5	-31.5	50.0
trans-1,3-Dichloropropene	Lin1		0.1828		8.83	12.5	-29.4	50.0
1,1,2-Trichloroethane	Ave	0.1305	0.0999		9.57	12.5	-23.4	50.0
2-Hexanone	Lin2		0.2498		37.5	50.0	-25.0	50.0
1,3-Dichloropropane	Ave	1.258	0.9585		9.53	12.5	-23.8	50.0
Tetrachloroethene	Ave	1.279	0.9775		9.56	12.5	-23.5	50.0
Dibromochloromethane	Lin2		0.5438		8.98	12.5	-28.2	50.0
1,2-Dibromoethane	Ave	0.5501	0.4166		9.47	12.5	-24.3	50.0
1-Chlorohexane	Ave	2.393	1.906		9.95	12.5	-20.4	50.0
Chlorobenzene	Ave	3.682	2.779	0.3000	9.43	12.5	-24.5	50.0
1,1,1,2-Tetrachloroethane	Ave	1.129	0.8615		9.54	12.5	-23.7	50.0
Ethylbenzene	Ave	2.426	1.886		9.72	12.5	-22.2	50.0
m-Xylene & p-Xylene	Ave	2.842	2.252		9.90	12.5	-20.8	50.0
o-Xylene	Ave	2.629	2.090		9.94	12.5	-20.5	50.0
Styrene	Ave	3.660	2.971		10.1	12.5	-18.8	50.0
Bromoform	Lin2		0.2270	0.1000	8.60	12.5	-31.2	50.0
Isopropylbenzene	Ave	5.152	3.933		9.54	12.5	-23.7	50.0
Cyclohexanone	Lin2		0.0283		687	500	37.4	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4570	0.3529	0.3000	9.65	12.5	-22.8	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1127	0.0820		9.10	12.5	-27.2	50.0
1,2,3-Trichloropropane	Ave	0.1211	0.0890		9.19	12.5	-26.5	50.0
N-Propylbenzene	Ave	1.433	1.107		9.66	12.5	-22.7	50.0
Bromobenzene	Ave	0.8789	0.6517		9.27	12.5	-25.9	50.0
1,3,5-Trimethylbenzene	Ave	4.181	3.160		9.45	12.5	-24.4	50.0
2-Chlorotoluene	Ave	1.128	0.8359		9.26	12.5	-25.9	50.0
4-Chlorotoluene	Ave	1.089	0.8250		9.47	12.5	-24.3	50.0
tert-Butylbenzene	Ave	4.080	3.119		9.56	12.5	-23.5	50.0
1,2,4-Trimethylbenzene	Ave	4.186	3.158		9.43	12.5	-24.6	50.0
sec-Butylbenzene	Ave	1.133	0.8697		9.60	12.5	-23.2	50.0
4-Isopropyltoluene	Ave	4.751	3.637		9.57	12.5	-23.5	50.0
1,3-Dichlorobenzene	Ave	1.966	1.455		9.25	12.5	-26.0	50.0
1,4-Dichlorobenzene	Ave	1.952	1.431		9.16	12.5	-26.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-437213/38 Calibration Date: 11/12/2018 20:29

Instrument ID: VMS_P Calib Start Date: 10/22/2018 22:40

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 10/23/2018 00:32

Lab File ID: P2572.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.168	4.008		9.69	12.5	-22.5	50.0
1,2-Dichlorobenzene	Ave	1.582	1.155		9.13	12.5	-27.0	50.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0363		8.35	12.5	-33.2	50.0
1,2,4-Trichlorobenzene	Ave	1.029	0.7405		9.00	12.5	-28.0	50.0
Hexachlorobutadiene	Ave	0.7951	0.5584		8.78	12.5	-29.8	50.0
Naphthalene	Ave	1.333	1.002		9.40	12.5	-24.8	50.0
1,2,3-Trichlorobenzene	Ave	0.7711	0.5567		9.02	12.5	-27.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2430	0.2220		9.13	10.0	-8.7	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2333	0.2087		8.94	10.0	-10.6	50.0
Toluene-d8 (Surr)	Ave	5.289	4.919		9.30	10.0	-7.0	50.0
4-Bromofluorobenzene (Surr)	Ave	1.116	0.9681		8.67	10.0	-13.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2572.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 12-Nov-2018 20:29:30 ALS Bottle#: 40 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: seifertj Instrument ID: VMS_P
Sublist: chrom-AQ_VMSP_8260*sub78

Method: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 15-Nov-2018 14:56:44 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0321

First Level Reviewer: seifertj Date: 13-Nov-2018 17:28:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.600	5.593	0.007	31	141819	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1307206	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	258463	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	398292	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.017	-0.001	91	232105	10.0	9.13	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	218223	10.0	8.94	
$ 7 Toluene-d8 (Surr)	98	8.754	8.754	0.000	95	1017089	10.0	9.30	
$ 8 4-Bromofluorobenzene (Surr	95	10.691	10.692	-0.001	86	308456	10.0	8.67	
23 Dichlorodifluoromethane	85	3.844	3.845	-0.001	100	467215	12.5	7.93	
26 Chloromethane	50	4.082	4.096	-0.014	99	372738	12.5	9.61	
27 Vinyl chloride	62	4.207	4.222	-0.015	98	408880	12.5	10.3	
29 Bromomethane	94	4.584	4.585	-0.001	92	350948	12.5	10.3	
30 Chloroethane	64	4.640	4.641	-0.001	99	341106	12.5	10.5	
31 Dichlorofluoromethane	67	4.794	4.795	-0.001	98	799437	12.5	9.71	
32 Trichlorofluoromethane	101	4.892	4.906	-0.014	100	675469	12.5	9.06	
35 Ethyl ether	59	5.059	5.060	-0.001	95	157078	12.5	9.80	
39 Acrolein	56	5.213	5.214	-0.001	99	175362	125.0	98.4	
40 1,1,2-Trichloro-1,2,2-trif	151	5.297	5.297	0.000	97	295624	12.5	9.40	
41 Acetone	43	5.325	5.325	0.000	98	145911	50.0	39.3	
43 1,1-Dichloroethene	96	5.325	5.339	-0.014	96	371877	12.5	9.73	
44 Iodomethane	142	5.522	5.522	0.000	99	508432	12.5	9.58	
45 Methyl acetate	43	5.557	5.558	-0.001	99	142509	25.0	16.9	
47 3-Chloro-1-propene	41	5.600	5.601	-0.001	81	710674	12.5	10.4	
48 Carbon disulfide	76	5.615	5.615	0.000	100	1522019	12.5	9.80	
49 2-Methyl-2-propanol	59	5.672	5.658	0.014	94	61000	125.0	86.8	
50 Methylene Chloride	84	5.700	5.701	-0.001	99	295070	12.5	8.96	
51 Methyl tert-butyl ether	73	5.872	5.873	-0.001	97	376301	12.5	9.07	
52 Acrylonitrile	53	5.872	5.873	-0.001	86	330882	125.0	99.7	
53 trans-1,2-Dichloroethene	96	5.915	5.916	-0.001	95	356400	12.5	9.48	
54 Hexane	57	6.072	6.073	-0.001	97	663186	12.5	9.55	
55 Vinyl acetate	43	6.179	6.180	-0.001	97	585413	25.0	19.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.244	6.245	-0.001	97	643298	12.5	9.77	
61 2-Butanone (MEK)	43	6.630	6.631	-0.001	99	197804	50.0	37.3	
62 sec-Butyl Alcohol	45	6.673	6.674	-0.001	55	153468	375.0	270.6	
63 cis-1,2-Dichloroethene	96	6.680	6.681	-0.001	86	338962	12.5	9.53	
64 2,2-Dichloropropane	77	6.701	6.702	-0.001	91	529082	12.5	9.47	
67 Chlorobromomethane	128	6.880	6.881	-0.001	89	101455	12.5	9.53	
68 Chloroform	83	6.887	6.888	-0.001	96	538604	12.5	9.29	
69 Tetrahydrofuran	42	6.909	6.909	0.000	56	55742	25.0	19.9	
70 Isobutyl alcohol	41	7.123	7.088	0.035	98	51716	312.5	205.9	M
71 1,1,1-Trichloroethane	97	7.102	7.103	-0.001	97	553890	12.5	9.34	
72 Cyclohexane	56	7.166	7.167	-0.001	96	803870	12.5	9.90	
73 1,1-Dichloropropene	75	7.195	7.195	0.000	97	535048	12.5	9.66	
74 Carbon tetrachloride	117	7.231	7.231	0.000	97	465779	12.5	9.35	
76 1,2-Dichloroethane	62	7.374	7.367	0.007	97	283935	12.5	9.12	
77 Benzene	78	7.381	7.381	0.000	98	1361109	12.5	9.80	
14 n-Heptane	43	7.445	7.446	-0.001	96	778526	12.5	9.92	
79 Trichloroethene	95	7.845	7.846	-0.001	96	335558	12.5	9.25	
80 2-Pentanone	43	7.903	7.896	0.007	97	255163	50.0	37.0	
82 Methylcyclohexane	55	8.031	8.032	-0.001	96	638472	12.5	9.67	
83 1,2-Dichloropropane	63	8.038	8.039	-0.001	95	306583	12.5	10.1	
84 1,4-Dioxane	88	8.096	8.096	0.000	76	16554	250.0	194.8	M
85 Dibromomethane	93	8.146	8.146	0.000	89	102535	12.5	9.80	
86 Dichlorobromomethane	83	8.217	8.211	0.006	98	317169	12.5	9.65	
87 2-Chloroethyl vinyl ether	63	8.360	8.354	0.006	93	60952	12.5	8.33	
89 cis-1,3-Dichloropropene	75	8.532	8.533	-0.001	92	338754	12.5	9.80	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.590	-0.001	98	406549	50.0	39.6	
91 Toluene	91	8.804	8.804	0.000	97	1375648	12.5	9.70	
92 Ethyl methacrylate	69	8.889	8.890	-0.001	92	132570	12.5	8.57	
93 trans-1,3-Dichloropropene	75	8.911	8.912	-0.001	99	239016	12.5	8.83	
94 1,1,2-Trichloroethane	97	9.068	9.069	-0.001	94	130647	12.5	9.57	
95 2-Hexanone	43	9.183	9.176	0.006	97	258258	50.0	37.5	
96 1,3-Dichloropropane	76	9.204	9.205	-0.001	98	247746	12.5	9.53	
97 Tetrachloroethene	164	9.211	9.212	-0.001	93	252649	12.5	9.56	
98 Chlorodibromomethane	129	9.397	9.391	0.006	90	140554	12.5	8.98	
100 Ethylene Dibromide	107	9.519	9.519	0.000	99	107666	12.5	9.47	
101 1-Chlorohexane	91	9.733	9.734	-0.001	91	492530	12.5	9.95	
102 Chlorobenzene	112	9.847	9.848	-0.001	96	718271	12.5	9.43	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.884	-0.001	94	222658	12.5	9.54	
103 Ethylbenzene	106	9.883	9.884	-0.001	98	487478	12.5	9.72	
105 m-Xylene & p-Xylene	106	9.955	9.955	0.000	99	582075	12.5	9.90	
107 o-Xylene	106	10.276	10.270	0.006	88	540147	12.5	9.94	
106 Styrene	104	10.276	10.277	-0.001	83	767832	12.5	10.1	
108 Bromoform	173	10.484	10.485	-0.001	94	58657	12.5	8.60	
109 Isopropylbenzene	105	10.534	10.527	0.007	97	1566384	12.5	9.54	
111 Cyclohexanone	55	10.677	10.678	-0.001	97	292341	500.0	687.2	
112 1,1,2,2-Tetrachloroethane	83	10.748	10.742	0.006	94	140545	12.5	9.65	
113 trans-1,4-Dichloro-2-buten	53	10.784	10.778	0.006	82	32656	12.5	9.10	
114 1,2,3-Trichloropropane	110	10.820	10.813	0.007	87	35463	12.5	9.19	
115 N-Propylbenzene	120	10.848	10.849	-0.001	99	441030	12.5	9.66	
116 Bromobenzene	156	10.856	10.849	0.007	96	259548	12.5	9.27	
117 1,3,5-Trimethylbenzene	105	10.956	10.956	0.000	94	1258753	12.5	9.45	
118 2-Chlorotoluene	126	10.977	10.971	0.006	95	332937	12.5	9.26	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.049	11.049	0.000	99	328582	12.5	9.47	
120 tert-Butylbenzene	119	11.249	11.250	-0.001	92	1242322	12.5	9.56	
121 1,2,4-Trimethylbenzene	105	11.285	11.278	0.007	99	1257843	12.5	9.43	
122 sec-Butylbenzene	134	11.428	11.428	0.000	95	346408	12.5	9.60	
123 4-Isopropyltoluene	119	11.521	11.521	0.000	97	1448401	12.5	9.57	
124 1,3-Dichlorobenzene	146	11.599	11.593	0.006	96	579430	12.5	9.25	
126 1,4-Dichlorobenzene	146	11.671	11.664	0.007	93	570005	12.5	9.16	
127 n-Butylbenzene	91	11.885	11.879	0.006	99	1596319	12.5	9.69	
128 1,2-Dichlorobenzene	146	12.028	12.022	0.006	95	460000	12.5	9.13	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.773	-0.001	69	14438	12.5	8.35	
130 1,2,4-Trichlorobenzene	180	13.716	13.709	0.007	93	294948	12.5	9.00	
131 Hexachlorobutadiene	225	13.852	13.845	0.007	92	222388	12.5	8.78	
132 Naphthalene	128	14.088	14.081	0.007	98	398982	12.5	9.40	
133 1,2,3-Trichlorobenzene	180	14.402	14.396	0.006	94	221711	12.5	9.02	
S 140 1,2-Dichloroethene, Total	96				0		25.0	19.0	
S 134 Trihalomethanes, Total	1				0		50.0	36.5	
S 135 Xylenes, Total (URS)	1				0		25.0	19.8	
S 136 Total BTEX	1				0			49.1	
S 137 1,3-Dichloropropene, Total	1				0		25.0	18.6	
S 138 1,2-Dichloroethene, Total	1				0		25.0	19.0	
S 139 Xylenes, Total	106				0		25.0	19.8	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMainA_00006	Amount Added:	5.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

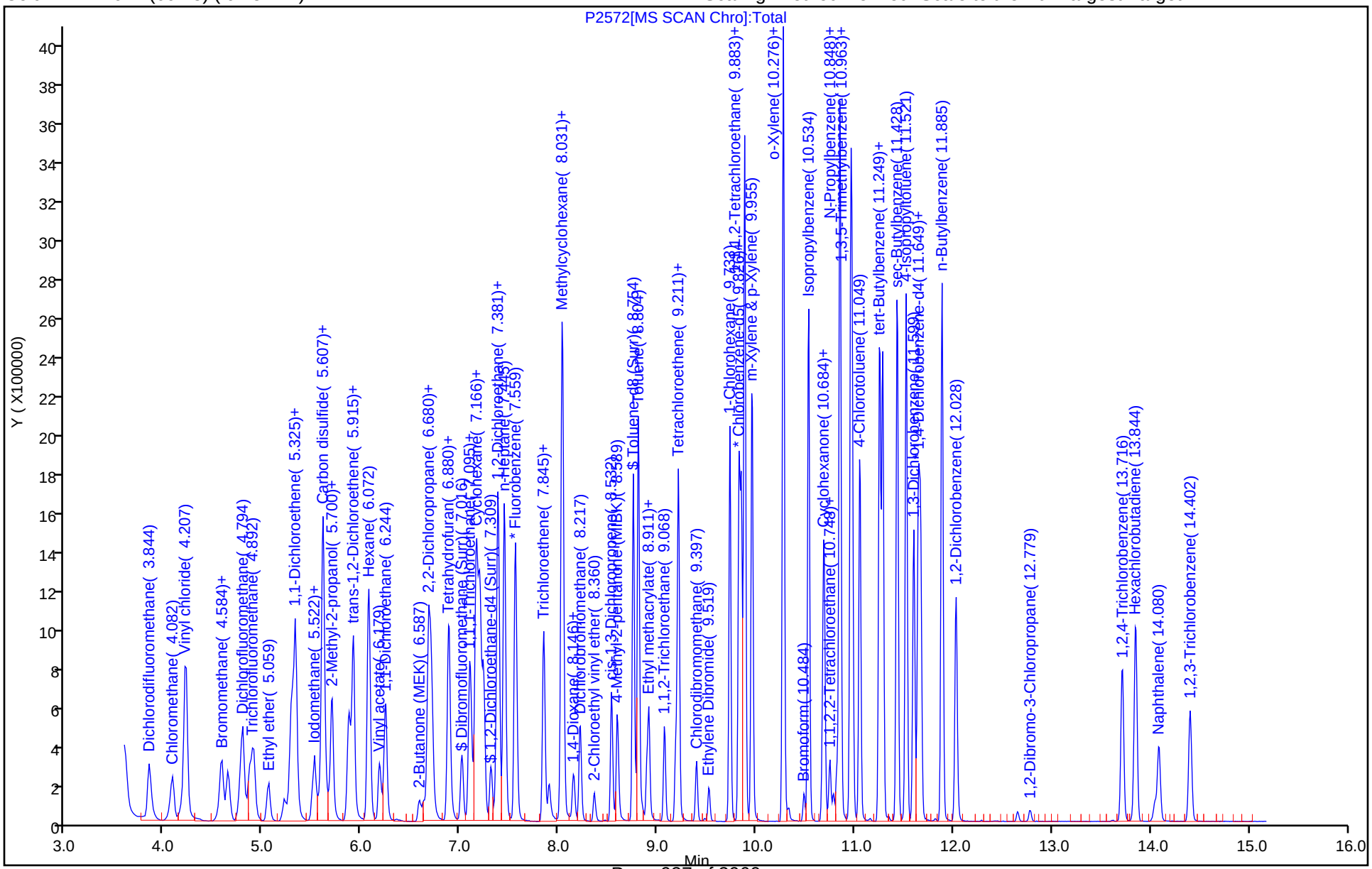
Report Date: 15-Nov-2018 14:56:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2572.D

Injection Date:	12-Nov-2018 20:29:30	Instrument ID:	VMS_P	Operator ID:	seifertj
Lims ID:	CCVC			Worklist Smp#:	38
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

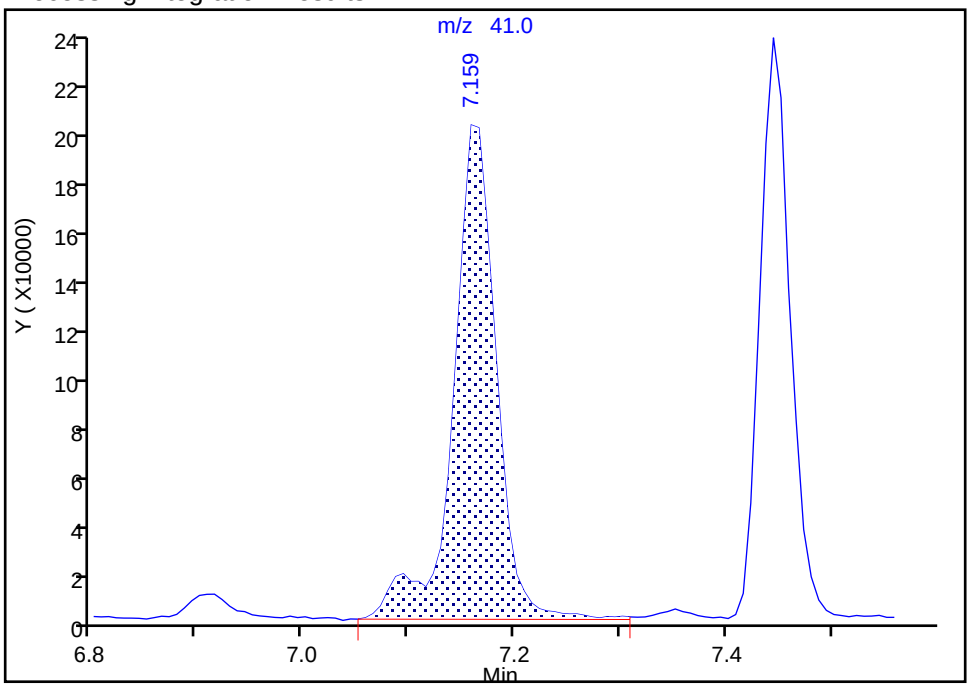
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2572.D
Injection Date: 12-Nov-2018 20:29:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: seifertj ALS Bottle#: 40 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

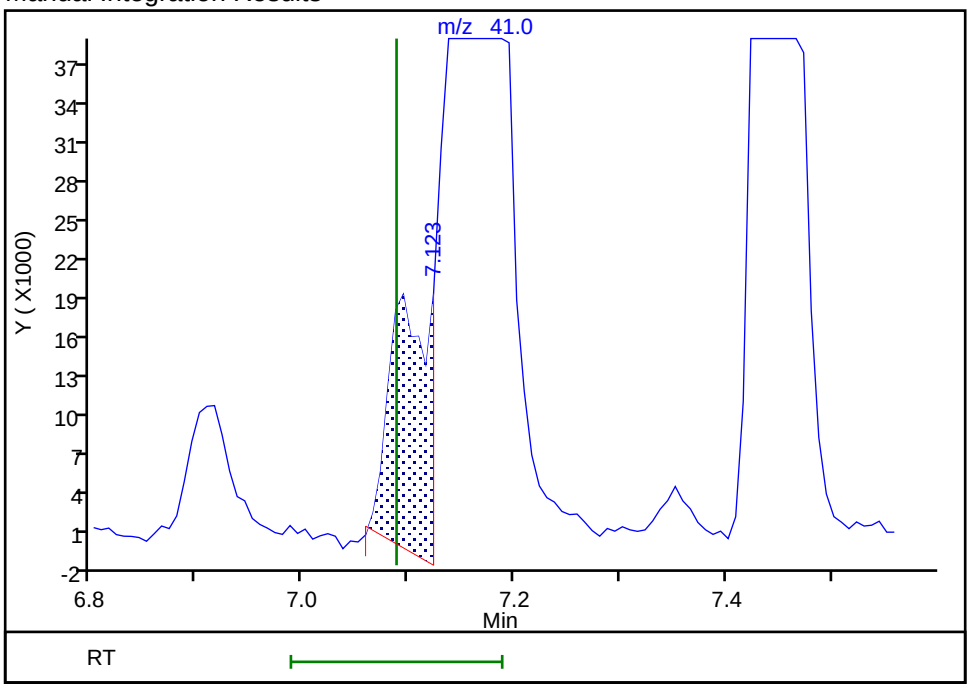
Processing Integration Results

RT: 7.16
Area: 571618
Amount: 1775.6851
Amount Units: ug/l



Manual Integration Results

RT: 7.12
Area: 51716
Amount: 205.9148
Amount Units: ug/l



Reviewer: seifertj, 13-Nov-2018 17:27:23
Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

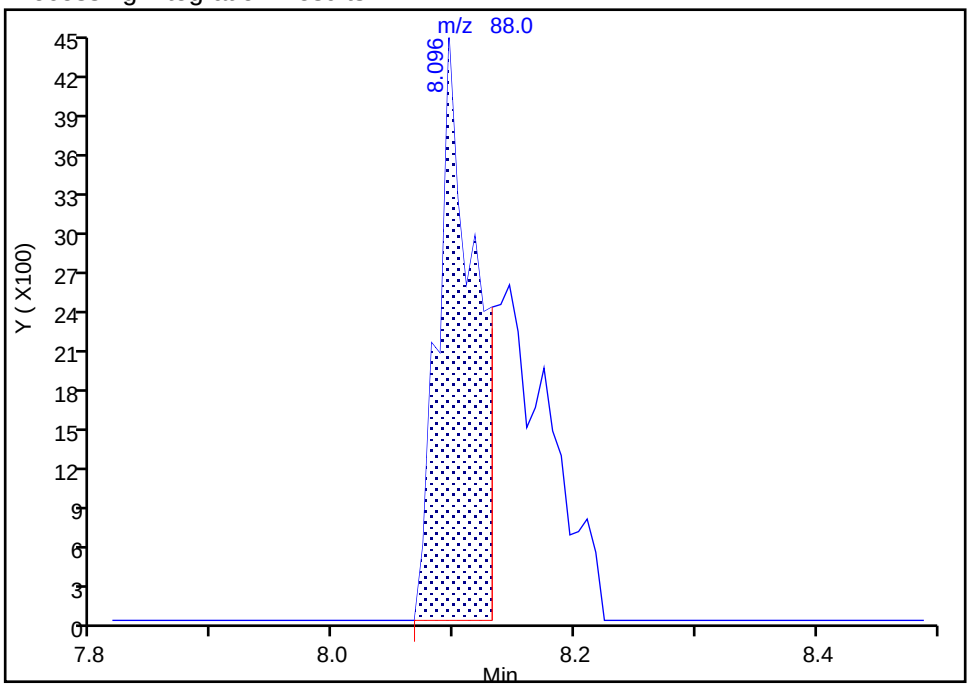
Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2572.D
Injection Date: 12-Nov-2018 20:29:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: seifertj ALS Bottle#: 40 Worklist Smp#: 38
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

84 1,4-Dioxane, CAS: 123-91-1

Signal: 1

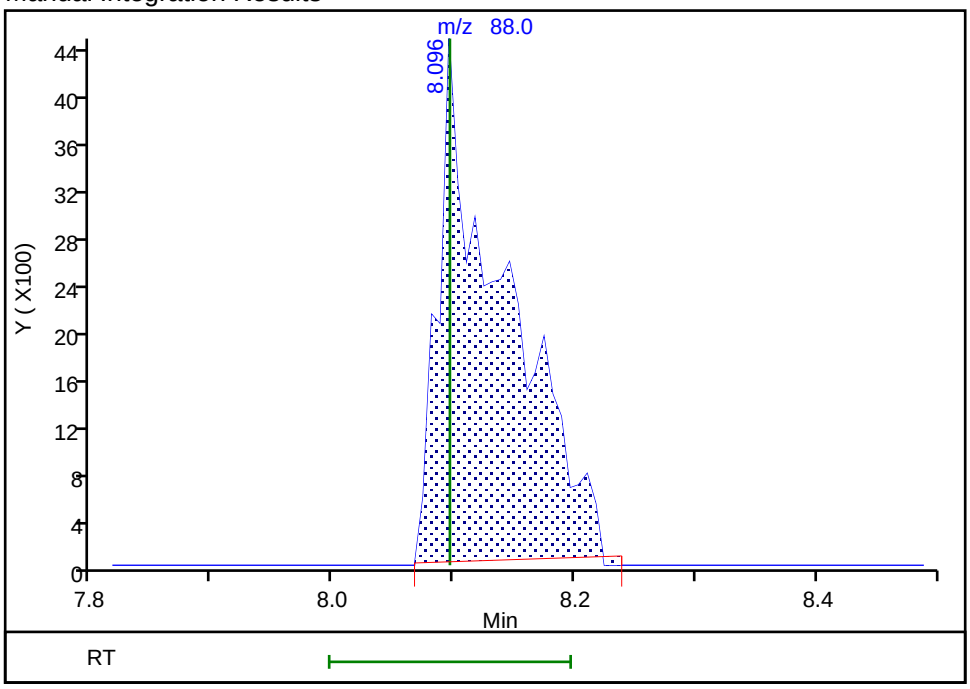
Processing Integration Results

RT: 8.10
Area: 9619
Amount: 122.4484
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 16554
Amount: 194.8378
Amount Units: ug/l



Reviewer: seifertj, 15-Nov-2018 14:56:41
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	16-Aug-2018 19:34:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	18-Aug-2018 00:46:22	Calib Date:	17-Aug-2018 03:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9175.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: seifertj		Date:	18-Aug-2018 00:46:22		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.915	4.915	0.000	0	32953	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

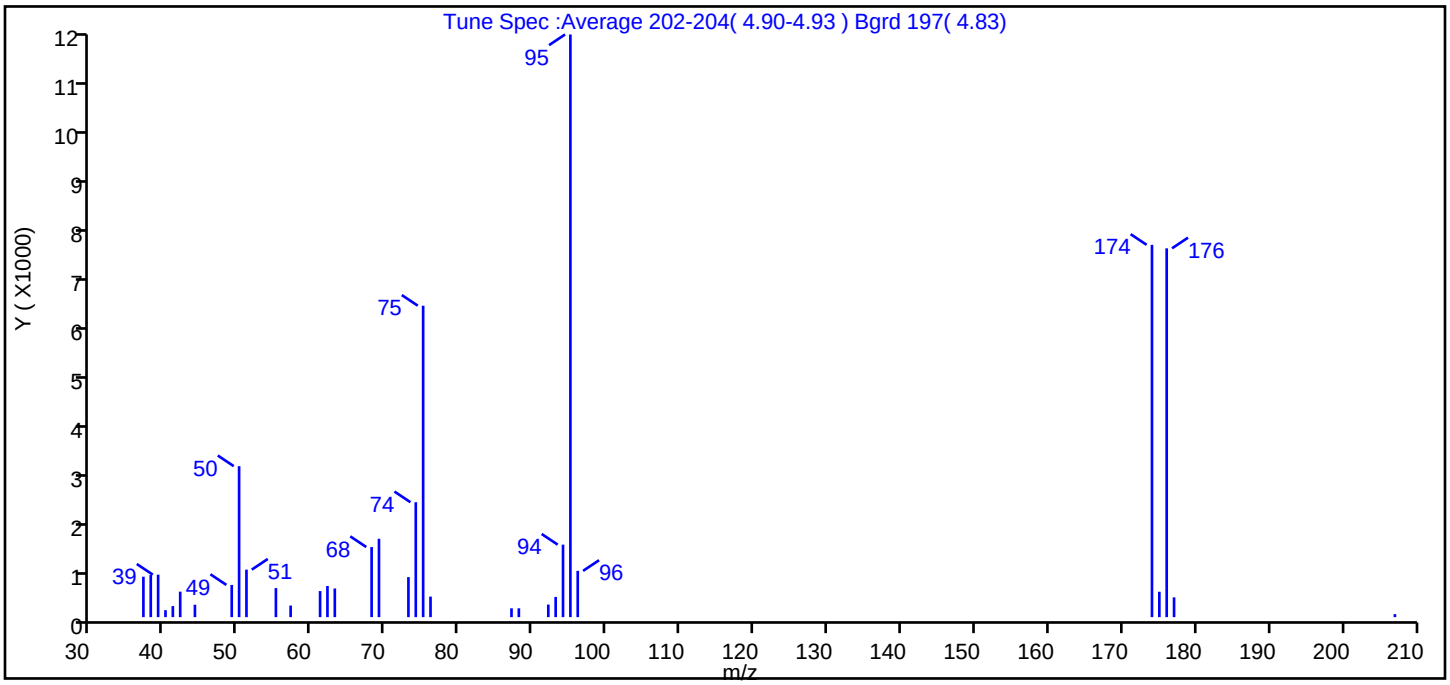
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D
Injection Date: 16-Aug-2018 19:34:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.9
75	30 to 60% of m/z 95	53.4
96	5 to 9% of m/z 95	7.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	63.9
175	5 to 9% of m/z 174	4.4 (6.8)
176	Greater than 95% but less than 101% of m/z 174	63.3 (99.1)
177	5 to 9% of m/z 176	3.4 (5.4)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 16-Aug-2018 19:34:30
Spectrum: Tune Spec :Average 202-204(4.90-4.93) Bgrd 197(4.83)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 33

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	811	51.00	953	74.00	2305	96.00	928
38.00	845	55.00	583	75.00	6246	174.00	7467
39.00	852	57.00	232	76.00	412	175.00	509
40.00	140	61.00	523	87.00	177	176.00	7397
41.00	222	62.00	625	88.00	177	177.00	397
42.00	511	63.00	575	92.00	252	207.00	60
44.00	249	68.00	1406	93.00	405		
49.00	646	69.00	1572	94.00	1454		
50.00	3028	73.00	803	95.00	11686		

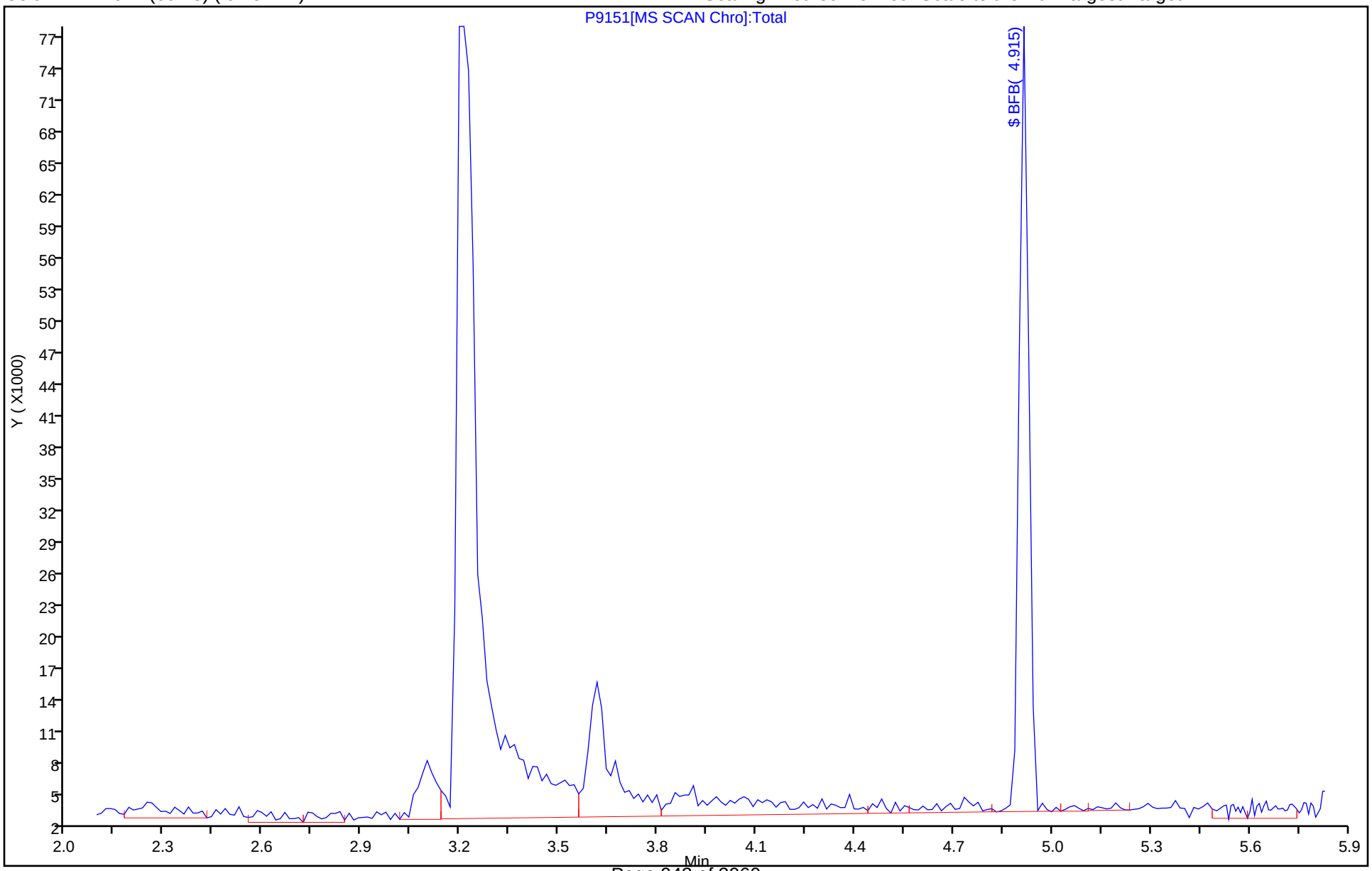
Report Date: 18-Aug-2018 00:46:24 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b\P9151.D

Injection Date:	16-Aug-2018 19:34:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	22-Oct-2018 21:54:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	newcomer	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	23-Oct-2018 12:08:26	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0320				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.914	4.914	0.000	0	128126	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

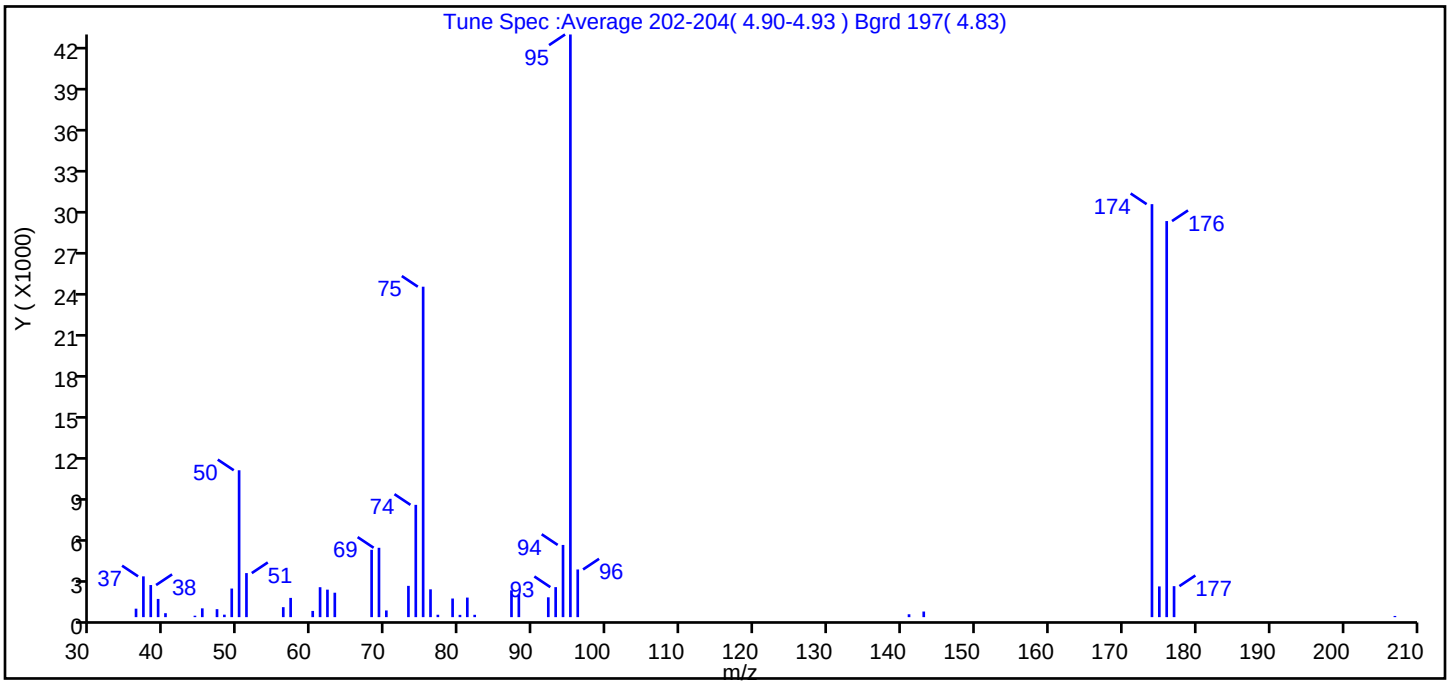
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D
Injection Date: 22-Oct-2018 21:54:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.2
75	30 to 60% of m/z 95	56.7
96	5 to 9% of m/z 95	8.2
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.9
175	5 to 9% of m/z 174	5.3 (7.4)
176	Greater than 95% but less than 101% of m/z 174	68.0 (95.9)
177	5 to 9% of m/z 176	5.3 (7.8)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 22-Oct-2018 21:54:30
Spectrum: Tune Spec :Average 202-204(4.90-4.93) Bgrd 197(4.83)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 44

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	625	51.00	3248	74.00	8281	93.00	2213
37.00	3008	56.00	736	75.00	24368	94.00	5325
38.00	2367	57.00	1420	76.00	2051	95.00	42968
39.00	1343	60.00	458	77.00	177	96.00	3516
40.00	291	61.00	2208	79.00	1374	141.00	212
44.00	106	62.00	2029	80.00	168	143.00	414
45.00	649	63.00	1802	81.00	1443	174.00	30456
47.00	589	68.00	4965	82.00	173	175.00	2266
48.00	183	69.00	5115	87.00	1975	176.00	29208
49.00	2109	70.00	493	88.00	1677	177.00	2286
50.00	10831	73.00	2307	92.00	1464	207.00	88

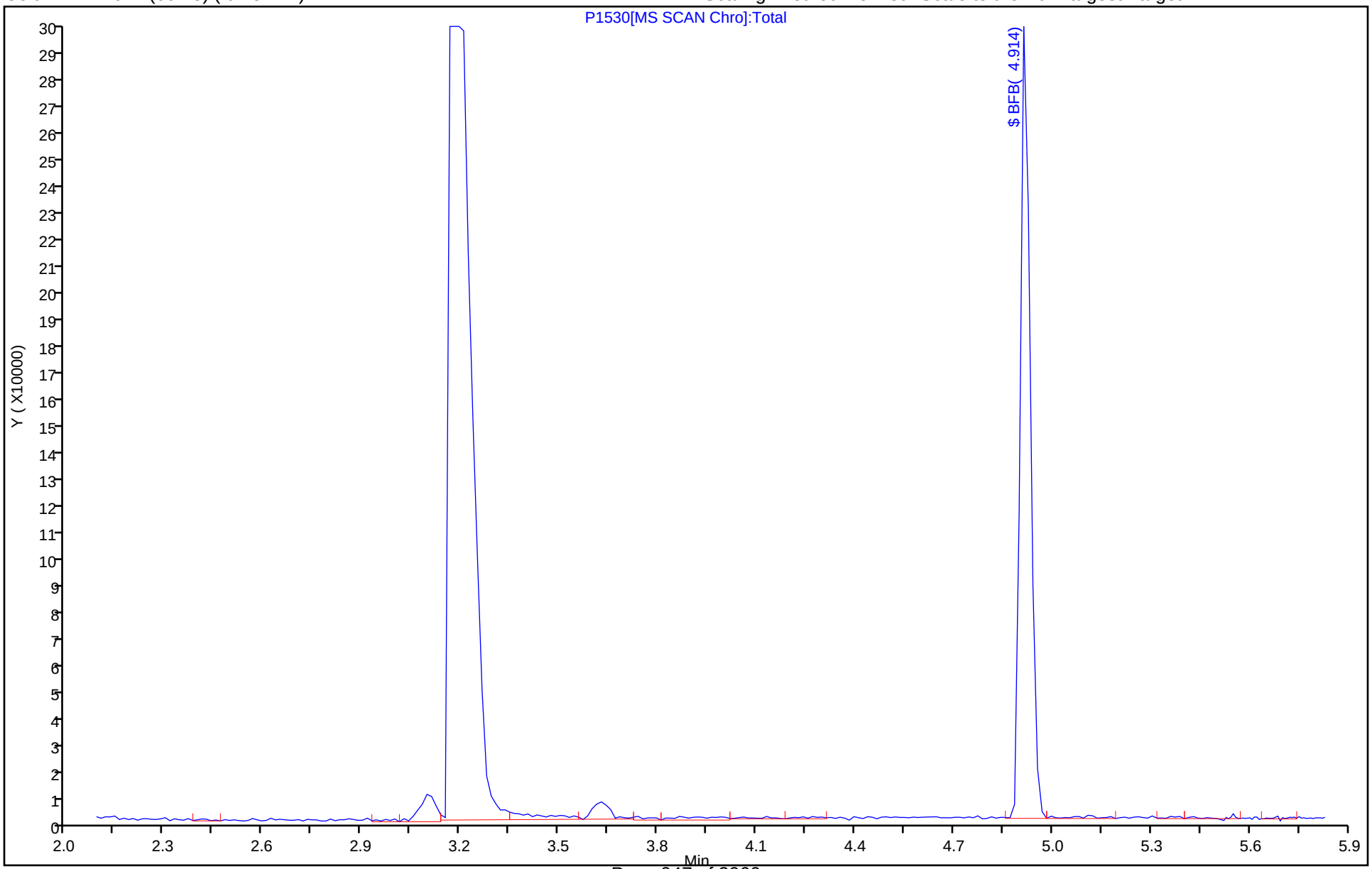
Report Date: 23-Oct-2018 12:08:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1530.D

Injection Date:	22-Oct-2018 21:54:30	Instrument ID:	VMS_P	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2436.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	09-Nov-2018 08:31:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Nov-2018 13:21:50	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.914	4.914	0.000	0	172386	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

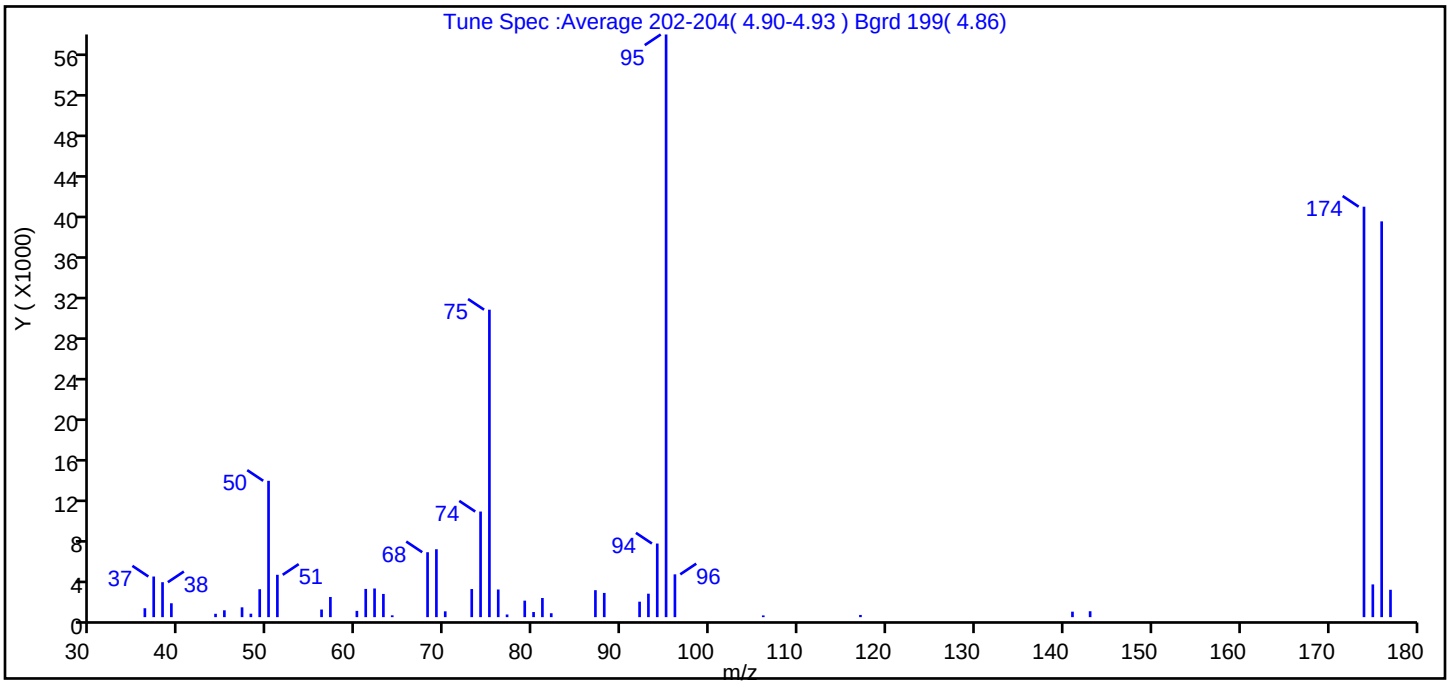
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2436.D
Injection Date: 09-Nov-2018 08:31:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.4
75	30 to 60% of m/z 95	52.8
96	5 to 9% of m/z 95	7.3
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	70.4
175	5 to 9% of m/z 174	5.6 (8.0)
176	Greater than 95% but less than 101% of m/z 174	67.9 (96.4)
177	5 to 9% of m/z 176	4.7 (6.9)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2436.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 09-Nov-2018 08:31:30
Spectrum: Tune Spec :Average 202-204(4.90-4.93) Bgrd 199(4.86)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 45

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	880	57.00	1992	76.00	2731	96.00	4229
37.00	4014	60.00	618	77.00	262	106.00	170
38.00	3453	61.00	2787	79.00	1631	117.00	217
39.00	1372	62.00	2832	80.00	506	141.00	542
44.00	332	63.00	2293	81.00	1891	143.00	583
45.00	677	64.00	179	82.00	386	174.00	40552
47.00	970	68.00	6415	87.00	2663	175.00	3235
48.00	342	69.00	6710	88.00	2392	176.00	39104
49.00	2759	70.00	574	92.00	1528	177.00	2704
50.00	13470	73.00	2778	93.00	2317		
51.00	4184	74.00	10434	94.00	7273		
56.00	753	75.00	30376	95.00	57568		

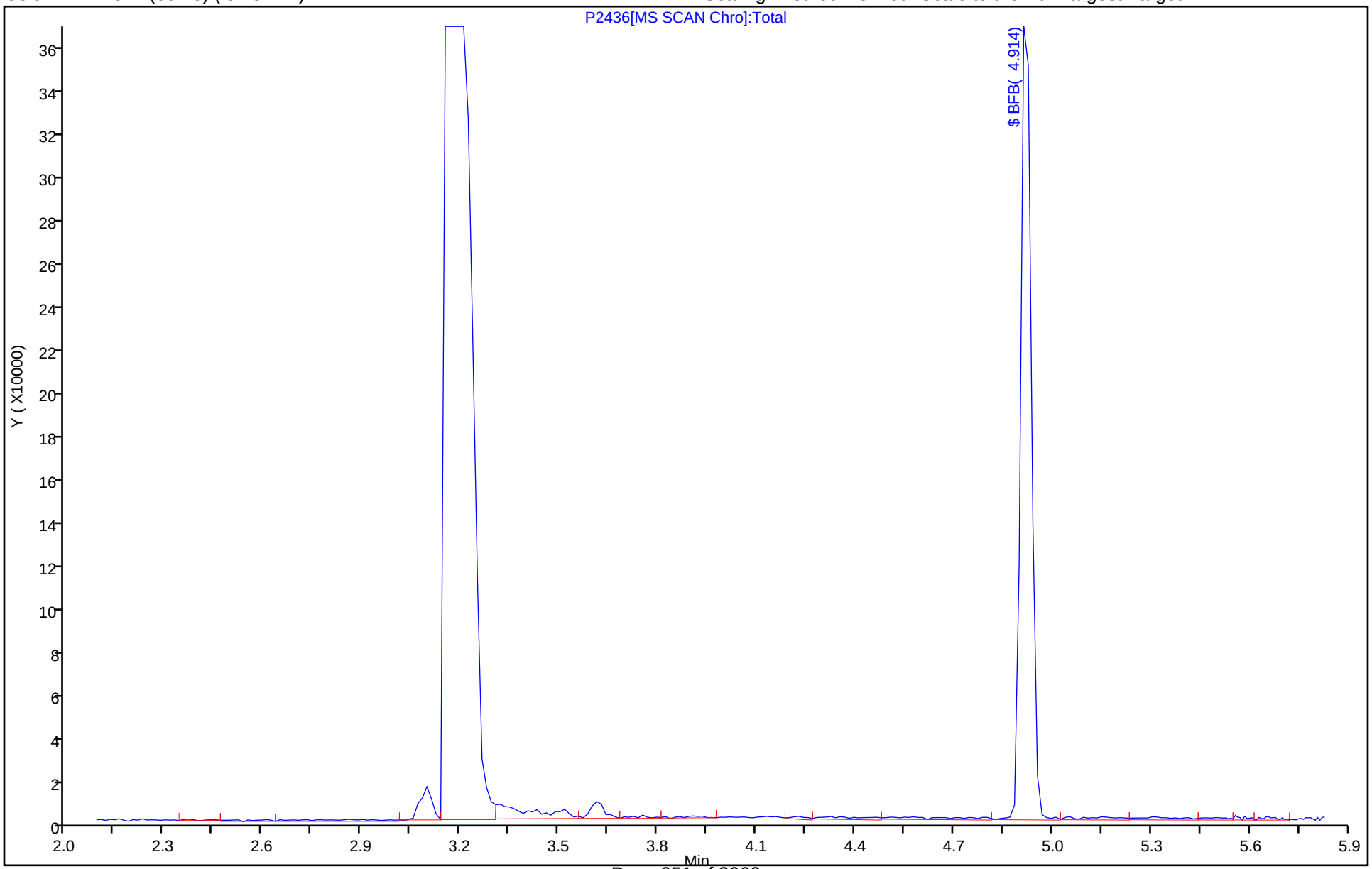
Report Date: 12-Nov-2018 13:21:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2436.D

Injection Date:	09-Nov-2018 08:31:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2541.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	12-Nov-2018 10:19:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	seifertj	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	13-Nov-2018 17:30:46	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0306				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	4.930	4.930	0.000	0	125651	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

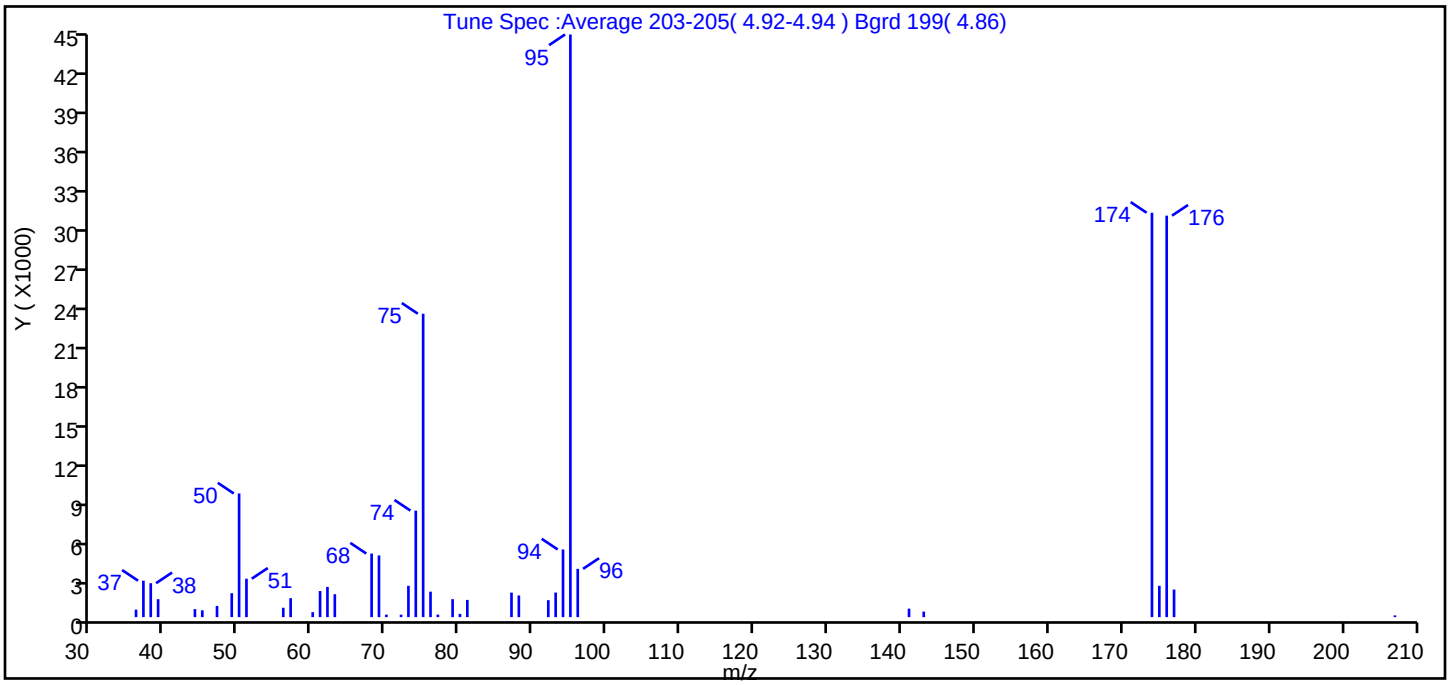
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2541.D
Injection Date: 12-Nov-2018 10:19:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: seifertj ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	52.1
96	5 to 9% of m/z 95	8.3
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	69.4
175	5 to 9% of m/z 174	5.4 (7.8)
176	Greater than 95% but less than 101% of m/z 174	68.9 (99.3)
177	5 to 9% of m/z 176	4.7 (6.9)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2541.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 12-Nov-2018 10:19:30
Spectrum: Tune Spec :Average 203-205(4.92-4.94) Bgrd 199(4.86)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 42

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	579	57.00	1462	75.00	23368	95.00	44872
37.00	2807	60.00	384	76.00	1963	96.00	3720
38.00	2615	61.00	2010	77.00	197	141.00	654
39.00	1383	62.00	2327	79.00	1386	143.00	428
44.00	621	63.00	1768	80.00	252	174.00	31144
45.00	526	68.00	4897	81.00	1328	175.00	2415
47.00	864	69.00	4752	87.00	1887	176.00	30920
49.00	1844	70.00	191	88.00	1671	177.00	2126
50.00	9523	72.00	190	92.00	1308	207.00	134
51.00	2961	73.00	2414	93.00	1893		
56.00	723	74.00	8202	94.00	5213		

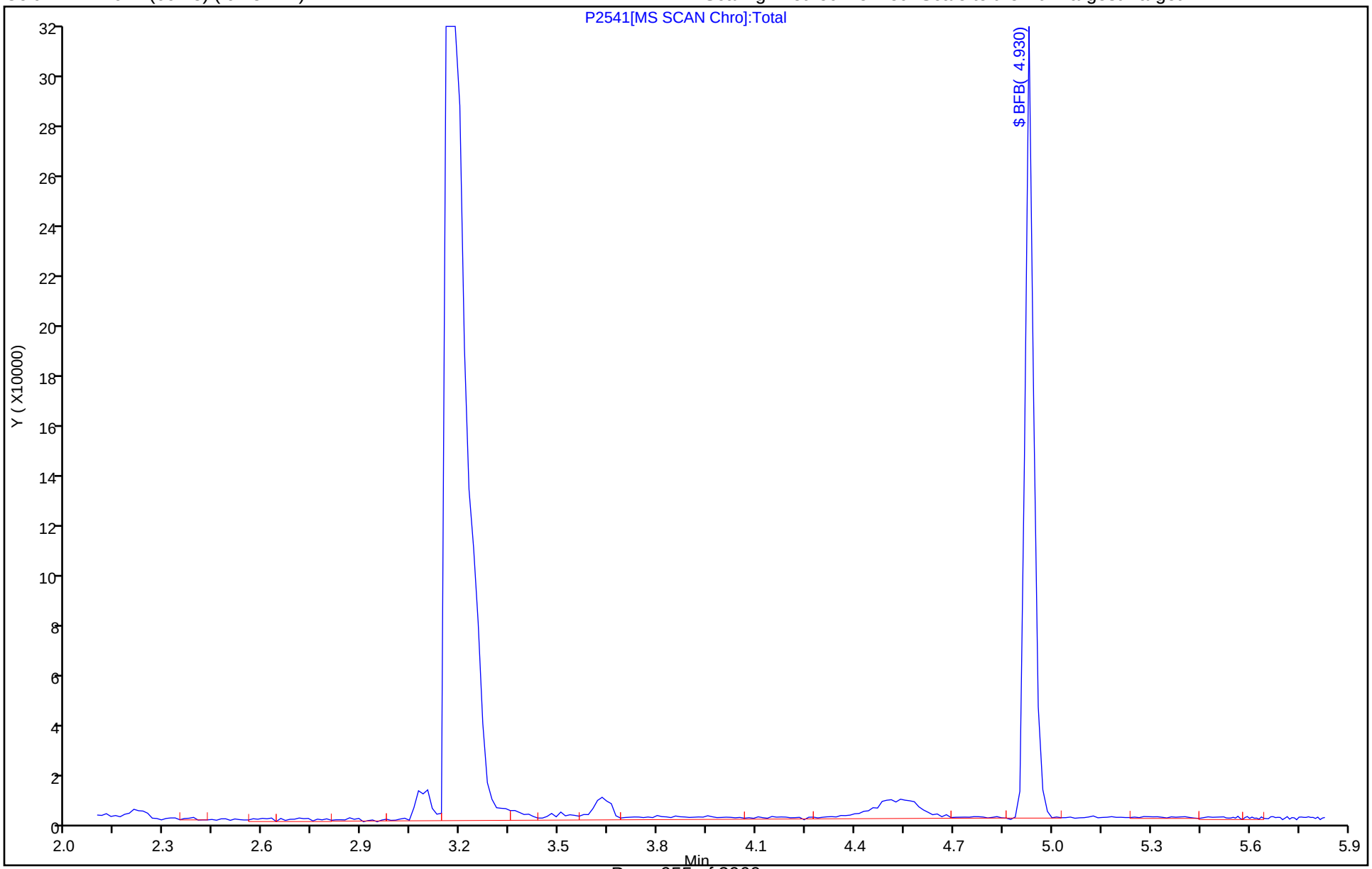
Report Date: 13-Nov-2018 17:30:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2541.D

Injection Date:	12-Nov-2018 10:19:30	Instrument ID:	VMS_P	Operator ID:	seifertj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436980/4

Matrix: Water | Lab File ID: P2439.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 09:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436980/4

Matrix: Water | Lab File ID: P2439.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 09:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		81-118
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	103		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2439.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 09-Nov-2018 09:40:30 ALS Bottle#: 12 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: SEIFERTJ Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 13:22:00 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: seifertj Date: 12-Nov-2018 13:02:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.607	5.601	0.006	96	147136	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.560	-0.001	98	1473347	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.827	-0.001	90	285639	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.649	11.650	-0.001	97	404752	12.5	12.5	
* 149 1,4-Dioxane-d8	96		0.000					ND	
$ 5 Dibromofluoromethane (Surr	111	7.023	7.017	0.006	92	293748	10.0	10.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	96	267729	10.0	9.74	
$ 7 Toluene-d8 (Surr)	98	8.753	8.754	-0.001	95	1245492	10.0	10.3	
$ 8 4-Bromofluorobenzene (Surr	95	10.691	10.692	-0.001	84	370259	10.0	10.2	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		4.914					ND	
22 Chlorotrifluoroethene	116		3.818					ND	
23 Dichlorodifluoromethane	85		3.846					ND	
24 1,2-Dichloro-1,1,2,2-tetra	85		4.027					ND	
26 Chloromethane	50		4.083					ND	
27 Vinyl chloride	62		4.209					ND	
25 2-Chloro-1,1,1-Trifluoroet	118		4.307					ND	
28 Ethylene oxide	43		4.529					ND	
29 Bromomethane	94		4.586					ND	
30 Chloroethane	64		4.642					ND	
31 Dichlorofluoromethane	67		4.796					ND	
32 Trichlorofluoromethane	101		4.893					ND	
33 Ethanol	45		4.962					ND	
35 Ethyl ether	59		5.061					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.089					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.131					ND	
38 Propene oxide	58		5.158					ND	
39 Acrolein	56		5.215					ND	
40 1,1,2-Trichloro-1,2,2-trif	151		5.284					ND	
41 Acetone	43		5.312					ND	U
43 1,1-Dichloroethene	96		5.326					ND	
42 Isopropyl alcohol	45		5.353					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 Iodomethane	142		5.522					ND	
45 Methyl acetate	43		5.558					ND	
46 Acetonitrile	41		5.600					ND	
47 3-Chloro-1-propene	41		5.601					ND	
48 Carbon disulfide	76		5.608					ND	
49 2-Methyl-2-propanol	59		5.658					ND	
50 Methylene Chloride	84	5.707	5.701	0.006	94	9998		0.2695	
52 Acrylonitrile	53		5.873					ND	
51 Methyl tert-butyl ether	73		5.873					ND	
53 trans-1,2-Dichloroethene	96		5.916					ND	
54 Hexane	57		6.073					ND	
55 Vinyl acetate	43		6.180					ND	
56 Isopropyl ether	87		6.187					ND	
57 1,1-Dichloroethane	63		6.237					ND	
58 2-Chloro-1,3-butadiene	53		6.308					ND	
59 Tert-butyl ethyl ether	59		6.465					ND	
60 Ethyl acetate	43		6.608					ND	U
61 2-Butanone (MEK)	43		6.631					ND	
62 sec-Butyl Alcohol	45		6.674					ND	U
63 cis-1,2-Dichloroethene	96		6.674					ND	
64 2,2-Dichloropropane	77		6.702					ND	
65 Propionitrile	54		6.716					ND	
66 Methacrylonitrile	41		6.816					ND	
67 Chlorobromomethane	128		6.881					ND	
68 Chloroform	83		6.888					ND	
69 Tetrahydrofuran	42		6.910					ND	
70 Isobutyl alcohol	41		7.095					ND	
71 1,1,1-Trichloroethane	97		7.095					ND	
72 Cyclohexane	56		7.167					ND	
73 1,1-Dichloropropene	75		7.196					ND	
74 Carbon tetrachloride	117		7.238					ND	
75 Tert-amyl methyl ether	73		7.366					ND	
76 1,2-Dichloroethane	62		7.374					ND	
77 Benzene	78		7.389					ND	
14 n-Heptane	43		7.446					ND	
78 n-Butanol	56		7.602					ND	U
79 Trichloroethene	95		7.846					ND	
80 2-Pentanone	43		7.903					ND	
81 Methyl methacrylate	100		7.988					ND	
82 Methylcyclohexane	55		8.032					ND	
83 1,2-Dichloropropane	63		8.039					ND	
84 1,4-Dioxane	88		8.096					ND	
85 Dibromomethane	93		8.146					ND	
86 Dichlorobromomethane	83		8.218					ND	
87 2-Chloroethyl vinyl ether	63		8.361					ND	
88 2-Nitropropane	41		8.374					ND	
89 cis-1,3-Dichloropropene	75		8.533					ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590					ND	
91 Toluene	91		8.804					ND	
92 Ethyl methacrylate	69		8.890					ND	
93 trans-1,3-Dichloropropene	75		8.912					ND	
94 1,1,2-Trichloroethane	97		9.069					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 2-Hexanone	43		9.183					ND	
96 1,3-Dichloropropane	76		9.205					ND	
97 Tetrachloroethene	164		9.219					ND	
98 Chlorodibromomethane	129		9.398					ND	
99 Tetrahydrothiophene	60		9.440					ND	
100 Ethylene Dibromide	107		9.526					ND	
101 1-Chlorohexane	91		9.734					ND	
102 Chlorobenzene	112		9.855					ND	
103 Ethylbenzene	106		9.884					ND	
104 1,1,1,2-Tetrachloroethane	131		9.891					ND	
105 m-Xylene & p-Xylene	106		9.963					ND	
107 o-Xylene	106		10.277					ND	
106 Styrene	104		10.277					ND	
108 Bromoform	173		10.492					ND	
109 Isopropylbenzene	105		10.535					ND	
110 cis-1,4-Dichloro-2-butene	53		10.577					ND	
111 Cyclohexanone	55		10.678					ND	U
112 1,1,2,2-Tetrachloroethane	83		10.749					ND	
113 trans-1,4-Dichloro-2-buten	53		10.785					ND	
114 1,2,3-Trichloropropane	110		10.821					ND	
115 N-Propylbenzene	120		10.849					ND	
116 Bromobenzene	156		10.856					ND	
117 1,3,5-Trimethylbenzene	105		10.964					ND	
118 2-Chlorotoluene	126		10.978					ND	
119 4-Chlorotoluene	126		11.057					ND	
120 tert-Butylbenzene	119		11.257					ND	
121 1,2,4-Trimethylbenzene	105		11.285					ND	
122 sec-Butylbenzene	134		11.436					ND	
123 4-Isopropyltoluene	119		11.521					ND	
124 1,3-Dichlorobenzene	146		11.600					ND	
125 1,2,3-Trimethylbenzene	105		11.664					ND	
126 1,4-Dichlorobenzene	146		11.672					ND	
127 n-Butylbenzene	91		11.886					ND	
128 1,2-Dichlorobenzene	146		12.029					ND	
129 1,2-Dibromo-3-Chloropropan	157		12.787					ND	
16 1,3,5-Trichlorobenzene	180		12.979					ND	
130 1,2,4-Trichlorobenzene	180		13.716					ND	
131 Hexachlorobutadiene	225		13.852					ND	
132 Naphthalene	128		14.088					ND	
133 1,2,3-Trichlorobenzene	180		14.410					ND	
17 3-Ethylpentane	1		0.000					ND	
10 n-Nonyl Aldehyde	1		0.000					ND	
34 Propene oxide TIC	58		0.000					ND	
11 2,3-Dimethylpentane	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
20 2-Methylhexane	1		0.000					ND	
143 Pentachloroethane	167		0.000					ND	
13 2,2-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
9 2,4-Dimethylpentane	1		0.000					ND	
19 3-Methylhexane	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 140 1,2-Dichloroethene, Total	96		2.000				ND		
S 138 1,2-Dichloroethene, Total	1		0.000				ND		
S 139 Xylenes, Total	106		0.000				ND		
S 152 TAH	1				0			0	7
S 137 1,3-Dichloropropene, Total	1		0.000				ND		
S 134 Trihalomethanes, Total	1		0.000				ND		
S 135 Xylenes, Total (URS)	1		0.000				ND		
S 136 Total BTEX	1		0.000				ND		

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

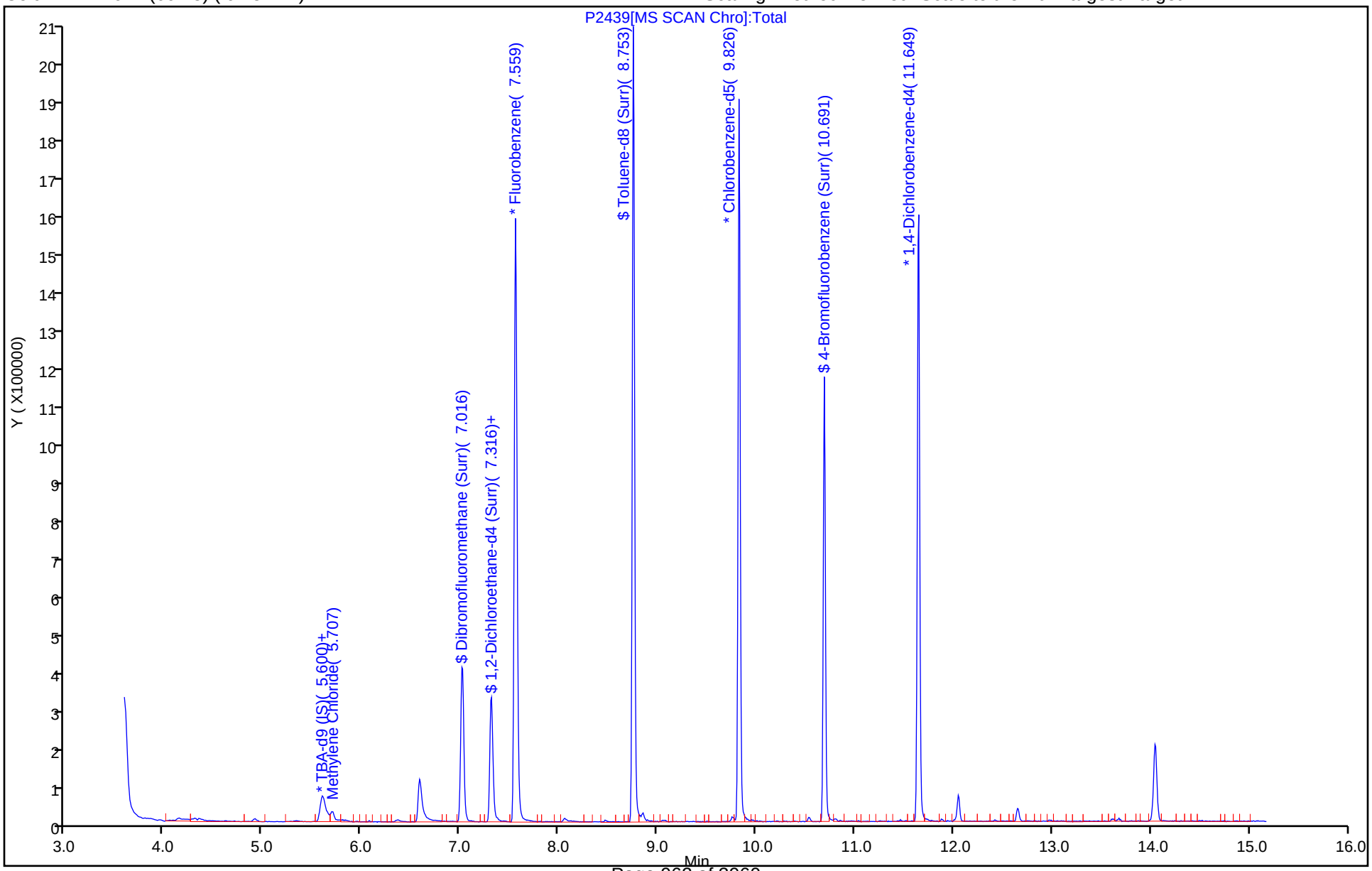
Report Date: 12-Nov-2018 13:22:04 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2439.D

Injection Date:	09-Nov-2018 09:40:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2439.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	09-Nov-2018 09:40:30	ALS Bottle#:	12	Worklist Smp#:	4
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Nov-2018 13:22:00	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

First Level Reviewer: seifertj Date: 12-Nov-2018 13:02:48

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.3	102.54
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.74	97.36
$ 7 Toluene-d8 (Surr)	10.0	10.3	103.05
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.2	102.43

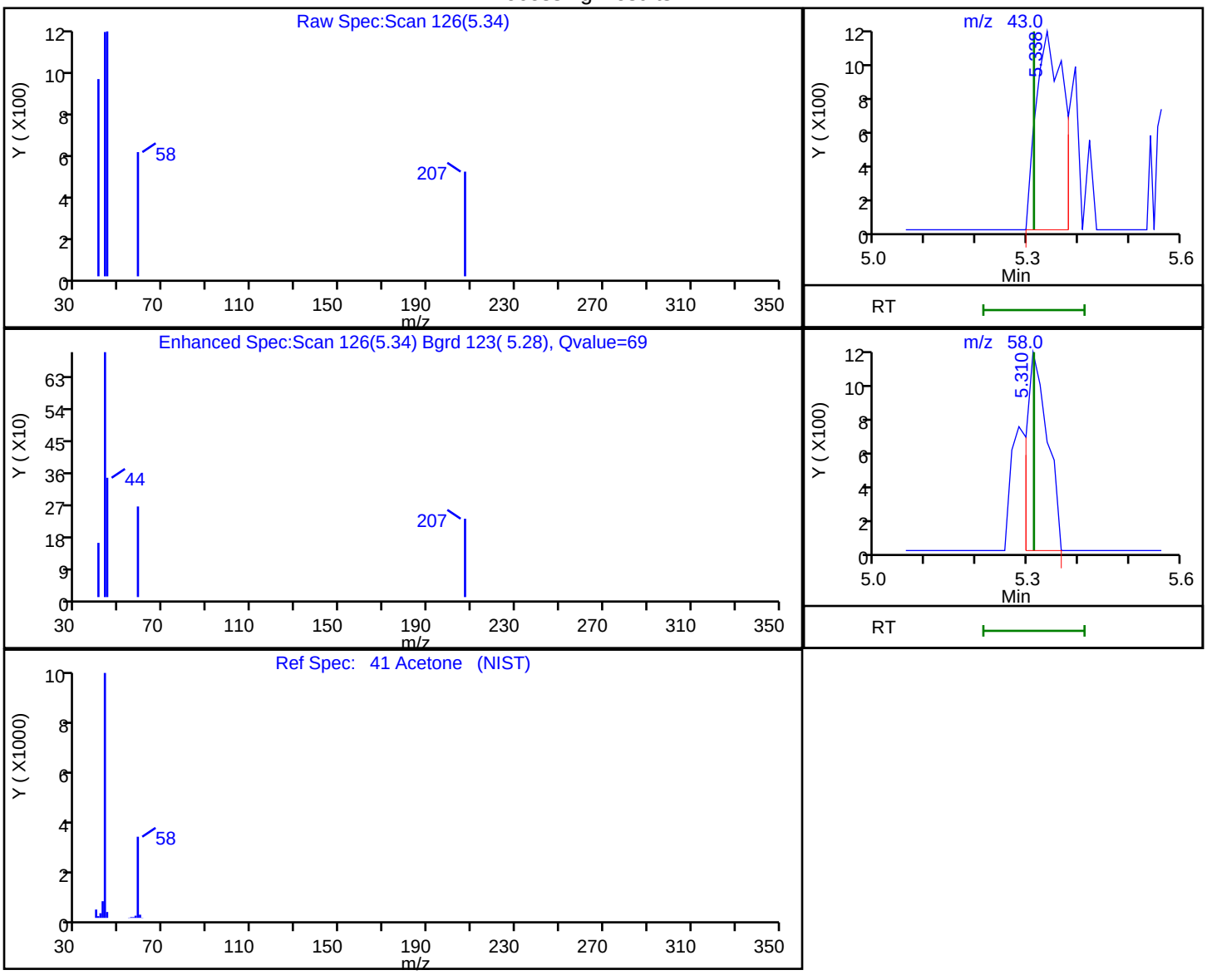
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2439.D				
Injection Date:	09-Nov-2018 09:40:30	Instrument ID:	VMS_P		
Lims ID:	MB				
Client ID:					
Operator ID:	SEIFERTJ	ALS Bottle#:	12	Worklist Smp#:	4
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

41 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
5.34	43.00	4451	1.062712
5.31	58.00	3156	

Reviewer: seifertj, 12-Nov-2018 13:02:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-437213/6

Matrix: Water | Lab File ID: P2546.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/12/2018 11:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437213 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.80	U M	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-437213/6

Matrix: Water Lab File ID: P2546.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/12/2018 11:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 437213 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		81-118
460-00-4	4-Bromofluorobenzene (Surr)	99		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2546.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 12-Nov-2018 11:58:30 ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: seifertj Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 17:30:56 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0306

First Level Reviewer: seifertj Date: 13-Nov-2018 17:18:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.593	5.593	0.000	96	202108	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.559	0.000	98	1807528	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.826	0.000	89	360439	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.642	0.000	97	510441	12.5	12.5	
* 149 1,4-Dioxane-d8	96		0.000					ND	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.017	-0.001	92	349690	10.0	9.95	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	315974	10.0	9.37	
$ 7 Toluene-d8 (Surr)	98	8.753	8.754	-0.001	95	1525204	10.0	10.0	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.692	-0.008	84	450895	10.0	9.89	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		4.930					ND	
22 Chlorotrifluoroethene	116		3.818					ND	
23 Dichlorodifluoromethane	85		3.845					ND	
24 1,2-Dichloro-1,1,2,2-tetra	85		4.027					ND	
26 Chloromethane	50		4.096					ND	
27 Vinyl chloride	62		4.222					ND	
25 2-Chloro-1,1,1-Trifluoroet	118		4.307					ND	
28 Ethylene oxide	43		4.531					ND	
29 Bromomethane	94		4.585					ND	
30 Chloroethane	64		4.641					ND	
31 Dichlorofluoromethane	67		4.795					ND	
32 Trichlorofluoromethane	101		4.906					ND	
35 Ethyl ether	59		5.060					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.089					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.131					ND	
33 Ethanol	45		5.146					ND	
38 Propene oxide	58		5.160					ND	
39 Acrolein	56		5.214					ND	
40 1,1,2-Trichloro-1,2,2-trif	151		5.297					ND	
41 Acetone	43		5.325					ND	
42 Isopropyl alcohol	45		5.327					ND	
43 1,1-Dichloroethene	96		5.339					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 Iodomethane	142		5.522					ND	
45 Methyl acetate	43		5.558					ND	
47 3-Chloro-1-propene	41		5.601					ND	
48 Carbon disulfide	76		5.615					ND	
46 Acetonitrile	41		5.657					ND	
49 2-Methyl-2-propanol	59		5.658					ND	
50 Methylene Chloride	84		5.701					ND	U
51 Methyl tert-butyl ether	73		5.873					ND	
52 Acrylonitrile	53		5.873					ND	
53 trans-1,2-Dichloroethene	96		5.916					ND	
54 Hexane	57		6.073					ND	
56 Isopropyl ether	87		6.179					ND	
55 Vinyl acetate	43		6.180					ND	
57 1,1-Dichloroethane	63		6.245					ND	
58 2-Chloro-1,3-butadiene	53		6.308					ND	
59 Tert-butyl ethyl ether	59		6.458					ND	
60 Ethyl acetate	43		6.608					ND	
61 2-Butanone (MEK)	43		6.631					ND	
62 sec-Butyl Alcohol	45		6.674					ND	U
63 cis-1,2-Dichloroethene	96		6.681					ND	
64 2,2-Dichloropropane	77		6.702					ND	
65 Propionitrile	54		6.709					ND	
66 Methacrylonitrile	41		6.816					ND	
67 Chlorobromomethane	128		6.881					ND	
68 Chloroform	83		6.888					ND	
69 Tetrahydrofuran	42		6.909					ND	
70 Isobutyl alcohol	41		7.088					ND	
71 1,1,1-Trichloroethane	97		7.103					ND	
72 Cyclohexane	56		7.167					ND	
73 1,1-Dichloropropene	75		7.195					ND	
74 Carbon tetrachloride	117		7.231					ND	
75 Tert-amyl methyl ether	73		7.359					ND	
76 1,2-Dichloroethane	62		7.367					ND	
77 Benzene	78		7.381					ND	
14 n-Heptane	43		7.446					ND	
78 n-Butanol	56		7.609					ND	U
79 Trichloroethene	95		7.846					ND	
80 2-Pentanone	43		7.896					ND	
81 Methyl methacrylate	100		7.981					ND	
82 Methylcyclohexane	55		8.032					ND	
83 1,2-Dichloropropane	63		8.039					ND	
84 1,4-Dioxane	88		8.096					ND	
85 Dibromomethane	93		8.146					ND	
86 Dichlorobromomethane	83		8.211					ND	
87 2-Chloroethyl vinyl ether	63		8.354					ND	
88 2-Nitropropane	41		8.367					ND	
89 cis-1,3-Dichloropropene	75		8.533					ND	
90 4-Methyl-2-pentanone (MIBK	43		8.590					ND	
91 Toluene	91		8.804					ND	
92 Ethyl methacrylate	69		8.890					ND	
93 trans-1,3-Dichloropropene	75		8.912					ND	
94 1,1,2-Trichloroethane	97		9.069					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 2-Hexanone	43		9.176					ND	
96 1,3-Dichloropropane	76		9.205					ND	
97 Tetrachloroethene	164		9.212					ND	
98 Chlorodibromomethane	129		9.391					ND	
99 Tetrahydrothiophene	60		9.433					ND	
100 Ethylene Dibromide	107		9.519					ND	
101 1-Chlorohexane	91		9.734					ND	
102 Chlorobenzene	112		9.848					ND	
104 1,1,1,2-Tetrachloroethane	131		9.884					ND	
103 Ethylbenzene	106		9.884					ND	
105 m-Xylene & p-Xylene	106		9.955					ND	
107 o-Xylene	106		10.270					ND	
106 Styrene	104		10.277					ND	
108 Bromoform	173		10.485					ND	
109 Isopropylbenzene	105		10.527					ND	
110 cis-1,4-Dichloro-2-butene	53		10.570					ND	
111 Cyclohexanone	55		10.678					ND	U
112 1,1,2,2-Tetrachloroethane	83		10.742					ND	
113 trans-1,4-Dichloro-2-buten	53		10.778					ND	
114 1,2,3-Trichloropropane	110		10.813					ND	
115 N-Propylbenzene	120		10.849					ND	
116 Bromobenzene	156		10.849					ND	
117 1,3,5-Trimethylbenzene	105		10.956					ND	
118 2-Chlorotoluene	126		10.971					ND	
119 4-Chlorotoluene	126		11.049					ND	
120 tert-Butylbenzene	119		11.250					ND	
121 1,2,4-Trimethylbenzene	105		11.278					ND	
122 sec-Butylbenzene	134		11.428					ND	
123 4-Isopropyltoluene	119		11.521					ND	
124 1,3-Dichlorobenzene	146		11.593					ND	
125 1,2,3-Trimethylbenzene	105		11.664					ND	
126 1,4-Dichlorobenzene	146		11.664					ND	
127 n-Butylbenzene	91		11.879					ND	
128 1,2-Dichlorobenzene	146		12.022					ND	
129 1,2-Dibromo-3-Chloropropan	157		12.773					ND	
16 1,3,5-Trichlorobenzene	180		12.972					ND	
130 1,2,4-Trichlorobenzene	180		13.709					ND	
131 Hexachlorobutadiene	225		13.845					ND	
132 Naphthalene	128		14.081					ND	
133 1,2,3-Trichlorobenzene	180		14.396					ND	U
17 3-Ethylpentane	1		0.000					ND	
11 2,3-Dimethylpentane	1		0.000					ND	
34 Propene oxide TIC	58		0.000					ND	
10 n-Nonyl Aldehyde	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
9 2,4-Dimethylpentane	1		0.000					ND	
19 3-Methylhexane	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
143 Pentachloroethane	167		0.000					ND	
20 2-Methylhexane	1		0.000					ND	
13 2,2-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 140 1,2-Dichloroethene, Total	96		2.000				ND		
S 134 Trihalomethanes, Total	1		0.000				ND		
S 135 Xylenes, Total (URS)	1		0.000				ND		
S 136 Total BTEX	1		0.000				ND		
S 137 1,3-Dichloropropene, Total	1		0.000				ND		
S 138 1,2-Dichloroethene, Total	1		0.000				ND		
S 139 Xylenes, Total	106		0.000				ND		
S 152 TAH	1				0			0	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

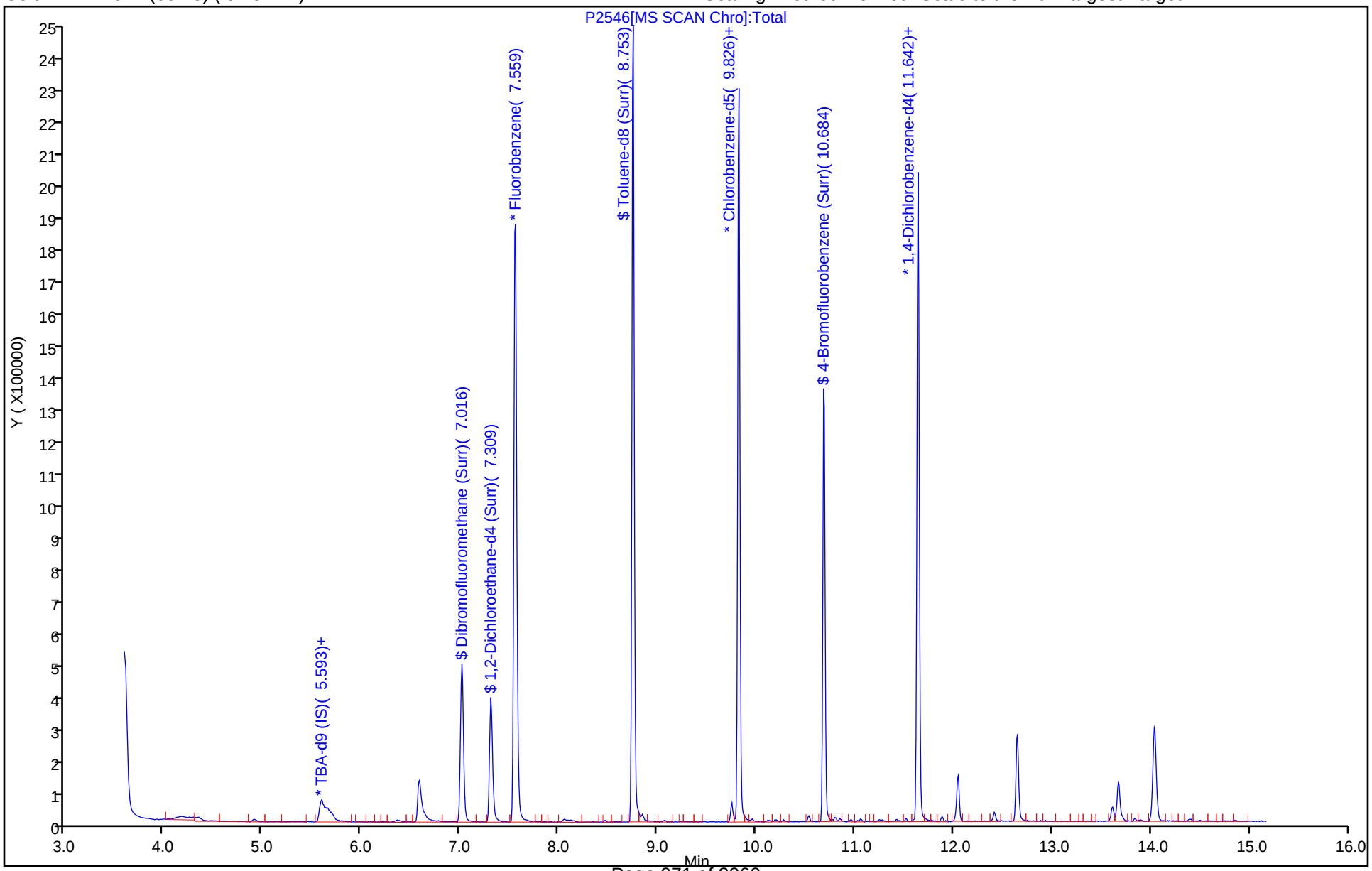
Report Date: 13-Nov-2018 17:31:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2546.D

Injection Date:	12-Nov-2018 11:58:30	Instrument ID:	VMS_P	Operator ID:	seifertj
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2546.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	12-Nov-2018 11:58:30	ALS Bottle#:	14	Worklist Smp#:	6
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB				
Operator ID:	seifertj	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	13-Nov-2018 17:30:56	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0306				

First Level Reviewer: seifertj Date: 13-Nov-2018 17:18:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.95	99.50
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.37	93.66
$ 7 Toluene-d8 (Surr)	10.0	10.0	100.01
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.89	98.91

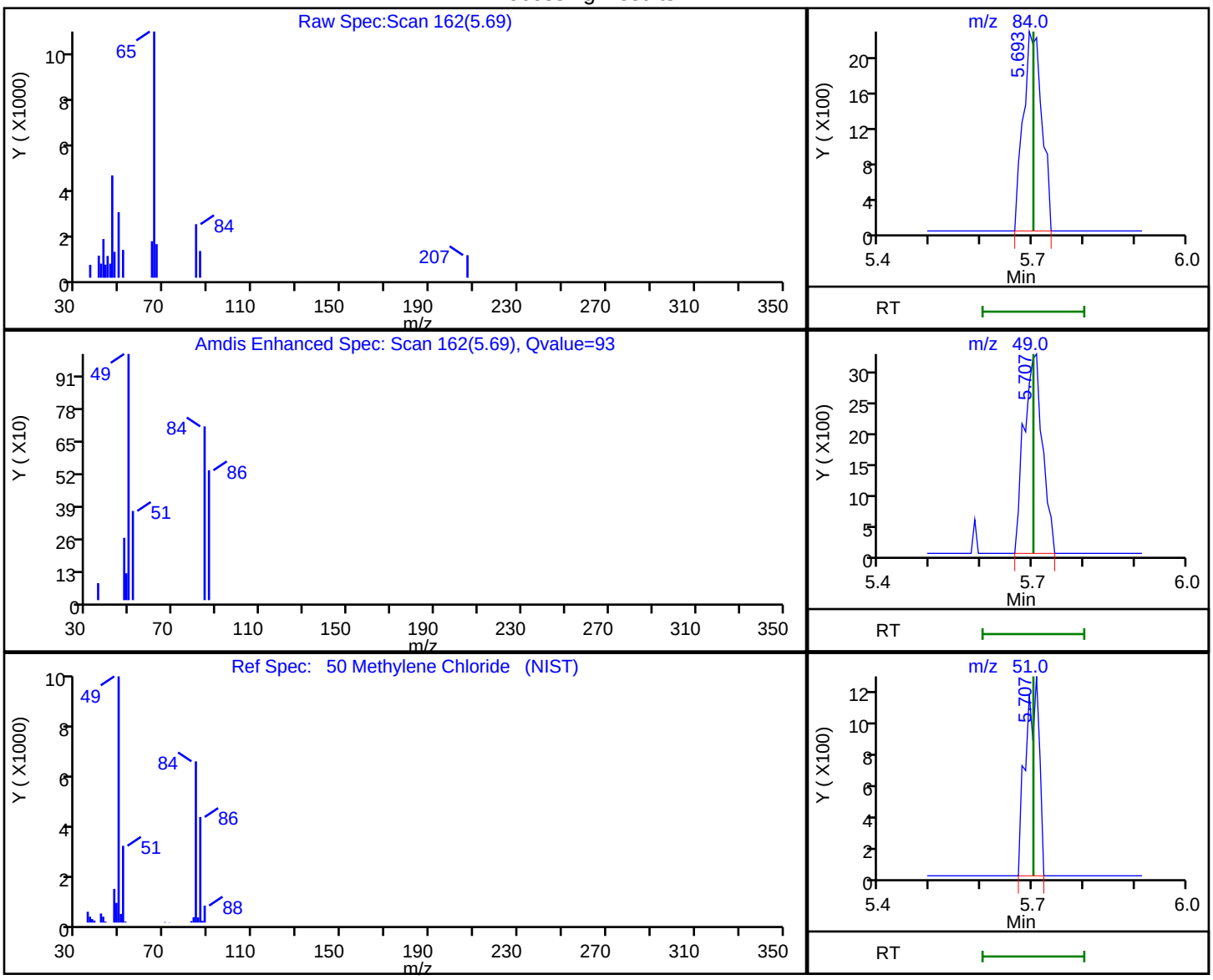
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2546.D
Injection Date: 12-Nov-2018 11:58:30 Instrument ID: VMS_P
Lims ID: MB
Client ID:
Operator ID: seifertj ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

50 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
5.69	84.00	5625	0.123570
5.71	49.00	8072	
5.71	51.00	2320	

Reviewer: seifertj, 13-Nov-2018 17:18:21
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436980/5

Matrix: Water | Lab File ID: P2440.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 09:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	4.59		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.33		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	5.36		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	4.98		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	4.73		1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	5.14		1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	4.59		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	9.86		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	5.14		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	17.2		6.0	4.0	2.0
591-78-6	2-Hexanone	19.4		5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	21.0		5.0	3.2	0.98
67-64-1	Acetone	19.5		10	6.4	1.9
71-43-2	Benzene	4.88		1.0	0.40	0.16
108-86-1	Bromobenzene	4.93		1.0	0.40	0.17
74-97-5	Bromochloromethane	5.12		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.69		1.0	0.40	0.17
75-25-2	Bromoform	4.58		1.0	0.40	0.19
74-83-9	Bromomethane	4.89		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.74		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	4.42		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.80		1.0	0.40	0.17
75-00-3	Chloroethane	4.88		2.0	1.6	0.41
67-66-3	Chloroform	4.81		1.0	0.40	0.16
74-87-3	Chloromethane	4.19		2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	5.17		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.73		1.0	0.40	0.17
100-41-4	Ethylbenzene	4.65		1.0	0.40	0.16
75-09-2	Methylene Chloride	4.71	J	5.0	0.80	0.32
100-42-5	Styrene	4.81		1.0	0.40	0.17
127-18-4	Tetrachloroethene	4.63		1.0	0.40	0.20
108-88-3	Toluene	4.94		1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	4.65		1.0	0.40	0.19
79-01-6	Trichloroethene	4.65		1.0	0.40	0.16
75-01-4	Vinyl chloride	4.47		1.5	0.20	0.10
1330-20-7	Xylenes, Total	9.56		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436980/5

Matrix: Water Lab File ID: P2440.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/09/2018 09:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 436980 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2440.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 09-Nov-2018 09:59:30 ALS Bottle#: 13 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: SEIFERTJ Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 12-Nov-2018 13:22:00 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: seifertj Date: 12-Nov-2018 13:04:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.601	-0.007	51	162282	250.0	250.0	
* 1 Fluorobenzene	96	7.553	7.560	-0.007	98	1420306	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.827	0.000	89	283113	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.650	-0.007	97	425613	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.017	0.000	92	281152	10.0	10.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	97	261201	10.0	9.85	
$ 7 Toluene-d8 (Surr)	98	8.754	8.754	0.000	95	1194223	10.0	9.97	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.692	-0.007	85	364611	10.0	9.59	
23 Dichlorodifluoromethane	85	3.845	3.846	-0.001	100	231700	5.00	3.62	
26 Chloromethane	50	4.083	4.083	0.000	98	176603	5.00	4.19	
27 Vinyl chloride	62	4.222	4.209	0.013	96	192233	5.00	4.47	
29 Bromomethane	94	4.585	4.586	-0.001	91	181471	5.00	4.89	
30 Chloroethane	64	4.641	4.642	-0.001	99	171805	5.00	4.88	
31 Dichlorofluoromethane	67	4.795	4.796	-0.001	98	453292	5.00	5.07	
32 Trichlorofluoromethane	101	4.907	4.893	0.014	100	353096	5.00	4.36	
35 Ethyl ether	59	5.060	5.061	-0.001	94	96276	5.00	5.53	
39 Acrolein	56	5.214	5.215	-0.001	98	95017	50.0	50.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.284	0.014	95	160592	5.00	4.70	
41 Acetone	43	5.326	5.312	0.014	31	78619	20.0	19.5	
43 1,1-Dichloroethene	96	5.326	5.326	0.000	95	196432	5.00	4.73	
44 Iodomethane	142	5.522	5.522	0.000	99	279175	5.00	4.84	
45 Methyl acetate	43	5.551	5.558	-0.007	97	87021	10.0	9.47	
47 3-Chloro-1-propene	41	5.601	5.601	0.000	81	366422	5.00	4.94	
48 Carbon disulfide	76	5.615	5.608	0.007	99	799773	5.00	4.74	
49 2-Methyl-2-propanol	59	5.658	5.658	0.000	92	45543	50.0	57.9	
50 Methylene Chloride	84	5.694	5.701	-0.007	98	168471	5.00	4.71	
52 Acrylonitrile	53	5.873	5.873	0.000	75	178910	50.0	51.7	
51 Methyl tert-butyl ether	73	5.866	5.873	-0.007	97	227718	5.00	5.05	
53 trans-1,2-Dichloroethene	96	5.916	5.916	0.000	95	202038	5.00	4.95	
54 Hexane	57	6.073	6.073	0.000	96	337662	5.00	4.44	
55 Vinyl acetate	43	6.180	6.180	0.000	97	322443	10.0	10.1	
57 1,1-Dichloroethane	63	6.245	6.237	0.008	97	356395	5.00	4.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.638	6.631	0.007	99	98901	20.0	17.2	
63 cis-1,2-Dichloroethene	96	6.674	6.674	0.000	87	189844	5.00	4.91	
64 2,2-Dichloropropane	77	6.702	6.702	0.000	91	277234	5.00	4.57	
67 Chlorobromomethane	128	6.881	6.881	0.000	91	59263	5.00	5.12	
68 Chloroform	83	6.881	6.888	-0.007	97	303400	5.00	4.81	
69 Tetrahydrofuran	42	6.910	6.910	0.000	92	29643	10.0	9.72	
70 Isobutyl alcohol	41	7.103	7.095	0.008	98	19503	125.0	101.2	M
71 1,1,1-Trichloroethane	97	7.095	7.095	0.000	98	295522	5.00	4.59	
72 Cyclohexane	56	7.160	7.167	-0.007	96	409263	5.00	4.64	
73 1,1-Dichloropropene	75	7.196	7.196	0.000	97	278047	5.00	4.62	
74 Carbon tetrachloride	117	7.231	7.238	-0.007	97	239043	5.00	4.42	
76 1,2-Dichloroethane	62	7.367	7.374	-0.007	97	155076	5.00	4.59	
77 Benzene	78	7.381	7.389	-0.008	98	736254	5.00	4.88	
14 n-Heptane	43	7.446	7.446	0.000	96	393989	5.00	4.62	
79 Trichloroethene	95	7.846	7.846	0.000	95	183269	5.00	4.65	
82 Methylcyclohexane	55	8.032	8.032	0.000	95	321578	5.00	4.48	
83 1,2-Dichloropropane	63	8.039	8.039	0.000	92	169616	5.00	5.14	
84 1,4-Dioxane	88	8.104	8.096	0.008	27	7315	100.0	92.3	M
85 Dibromomethane	93	8.147	8.146	0.001	91	55469	5.00	4.88	
86 Dichlorobromomethane	83	8.211	8.218	-0.007	98	167519	5.00	4.69	
87 2-Chloroethyl vinyl ether	63	8.361	8.361	0.000	92	30715	5.00	4.10	
89 cis-1,3-Dichloropropene	75	8.533	8.533	0.000	92	192729	5.00	5.17	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.590	0.000	99	234187	20.0	21.0	
91 Toluene	91	8.804	8.804	0.000	97	761408	5.00	4.94	
92 Ethyl methacrylate	69	8.890	8.890	0.000	93	78893	5.00	4.82	
93 trans-1,3-Dichloropropene	75	8.912	8.912	0.000	99	131744	5.00	4.65	
94 1,1,2-Trichloroethane	97	9.069	9.069	0.000	94	79558	5.00	5.36	
95 2-Hexanone	43	9.183	9.183	0.000	97	142705	20.0	19.4	
96 1,3-Dichloropropane	76	9.205	9.205	0.000	98	141259	5.00	4.96	
97 Tetrachloroethene	164	9.212	9.219	-0.007	94	134044	5.00	4.63	
98 Chlorodibromomethane	129	9.391	9.398	-0.007	91	79473	5.00	4.73	
100 Ethylene Dibromide	107	9.519	9.526	-0.007	96	63982	5.00	5.14	
102 Chlorobenzene	112	9.848	9.855	-0.007	94	400573	5.00	4.80	
103 Ethylbenzene	106	9.884	9.884	0.000	97	255269	5.00	4.65	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.891	-0.007	93	124123	5.00	4.85	
105 m-Xylene & p-Xylene	106	9.956	9.963	-0.007	99	304862	5.00	4.74	
107 o-Xylene	106	10.270	10.277	-0.007	90	287182	5.00	4.82	
106 Styrene	104	10.277	10.277	0.000	84	398667	5.00	4.81	
108 Bromoform	173	10.485	10.492	-0.007	93	32960	5.00	4.58	
109 Isopropylbenzene	105	10.528	10.535	-0.007	97	832574	5.00	4.75	
111 Cyclohexanone	55	10.678	10.678	0.000	95	101129	200.0	223.3	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.749	-0.007	94	82942	5.00	5.33	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.785	-0.007	67	17160	5.00	4.47	
114 1,2,3-Trichloropropane	110	10.814	10.821	-0.007	89	21884	5.00	5.31	
115 N-Propylbenzene	120	10.849	10.849	0.000	99	237896	5.00	4.88	
116 Bromobenzene	156	10.856	10.856	0.000	98	147419	5.00	4.93	
117 1,3,5-Trimethylbenzene	105	10.957	10.964	-0.007	95	669137	5.00	4.70	
118 2-Chlorotoluene	126	10.971	10.978	-0.007	94	182772	5.00	4.76	
119 4-Chlorotoluene	126	11.050	11.057	-0.007	99	180782	5.00	4.87	
120 tert-Butylbenzene	119	11.250	11.257	-0.007	93	657135	5.00	4.73	
121 1,2,4-Trimethylbenzene	105	11.285	11.285	0.000	96	674680	5.00	4.73	
122 sec-Butylbenzene	134	11.428	11.436	-0.008	95	185984	5.00	4.82	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.521	11.521	0.000	97	759247	5.00	4.69	
124 1,3-Dichlorobenzene	146	11.600	11.600	0.000	96	320606	5.00	4.79	
126 1,4-Dichlorobenzene	146	11.664	11.672	-0.008	93	318730	5.00	4.80	
127 n-Butylbenzene	91	11.886	11.886	0.000	99	824116	5.00	4.68	
128 1,2-Dichlorobenzene	146	12.029	12.029	0.000	94	259931	5.00	4.83	
129 1,2-Dibromo-3-Chloropropan	157	12.780	12.787	-0.007	72	9296	5.00	5.27	
130 1,2,4-Trichlorobenzene	180	13.709	13.716	-0.007	94	170846	5.00	4.88	
131 Hexachlorobutadiene	225	13.845	13.852	-0.007	93	120258	5.00	4.44	
132 Naphthalene	128	14.081	14.088	-0.007	98	235364	5.00	5.19	
133 1,2,3-Trichlorobenzene	180	14.396	14.410	-0.014	93	131393	5.00	5.00	
S 140 1,2-Dichloroethene, Total	96				0		10.0	9.86	
S 138 1,2-Dichloroethene, Total	1				0		10.0	9.86	
S 139 Xylenes, Total	106				0		10.0	9.56	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.82	
S 134 Trihalomethanes, Total	1				0		20.0	18.8	
S 135 Xylenes, Total (URS)	1				0		10.0	9.56	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

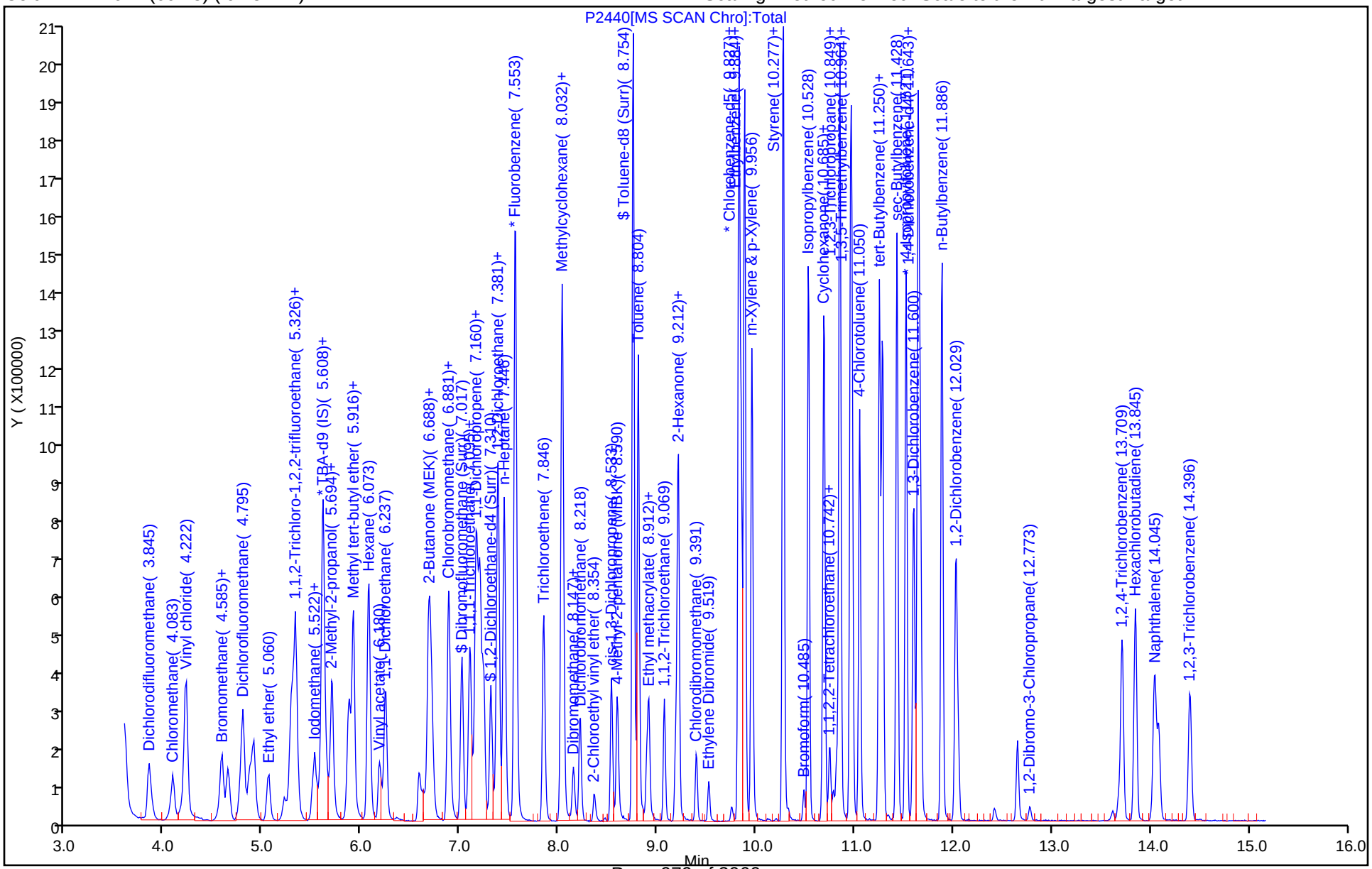
Report Date: 12-Nov-2018 13:22:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2440.D

Injection Date:	09-Nov-2018 09:59:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	LCS			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2440.D				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	09-Nov-2018 09:59:30	ALS Bottle#:	13	Worklist Smp#:	5
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	LCS				
Operator ID:	SEIFERTJ	Instrument ID:	VMS_P		
Method:	\\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	12-Nov-2018 13:22:00	Calib Date:	23-Oct-2018 00:32:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0328				

First Level Reviewer: seifertj Date: 12-Nov-2018 13:04:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.2	101.81
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.85	98.53
$ 7 Toluene-d8 (Surr)	10.0	9.97	99.69
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.59	95.92

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437213/7

Matrix: Water | Lab File ID: P2547.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/12/2018 12:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437213 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	4.93		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.32		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	5.47		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	5.22		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	5.17		1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	5.28		1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	4.95		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	10.5		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	5.55		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	17.3		6.0	4.0	2.0
591-78-6	2-Hexanone	19.8		5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	21.8		5.0	3.2	0.98
67-64-1	Acetone	19.1		10	6.4	1.9
71-43-2	Benzene	5.25		1.0	0.40	0.16
108-86-1	Bromobenzene	5.06		1.0	0.40	0.17
74-97-5	Bromochloromethane	5.37		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.12		1.0	0.40	0.17
75-25-2	Bromoform	4.58		1.0	0.40	0.19
74-83-9	Bromomethane	5.13		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.18		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	4.78		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.11		1.0	0.40	0.17
75-00-3	Chloroethane	5.07		2.0	1.6	0.41
67-66-3	Chloroform	5.07		1.0	0.40	0.16
74-87-3	Chloromethane	4.84		2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	5.41		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.94		1.0	0.40	0.17
100-41-4	Ethylbenzene	5.04		1.0	0.40	0.16
75-09-2	Methylene Chloride	5.01		5.0	0.80	0.32
100-42-5	Styrene	5.09		1.0	0.40	0.17
127-18-4	Tetrachloroethene	4.95		1.0	0.40	0.20
108-88-3	Toluene	5.30		1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	4.79		1.0	0.40	0.19
79-01-6	Trichloroethene	5.01		1.0	0.40	0.16
75-01-4	Vinyl chloride	4.90		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.2		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437213/7

Matrix: Water | Lab File ID: P2547.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/12/2018 12:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437213 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	101		80-119
2037-26-5	Toluene-d8 (Surr)	100		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2547.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 12-Nov-2018 12:17:30 ALS Bottle#: 15 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: seifertj Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 17:30:56 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0306

First Level Reviewer: seifertj Date: 12-Nov-2018 12:49:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.594	5.593	0.001	55	185477	250.0	250.0	
* 1 Fluorobenzene	96	7.560	7.559	0.001	98	1776991	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.827	9.826	0.001	89	357656	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.643	11.642	0.001	97	531738	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.017	7.017	0.000	91	349993	10.0	10.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.310	7.310	0.000	98	322668	10.0	9.73	
$ 7 Toluene-d8 (Surr)	98	8.755	8.754	0.001	95	1509691	10.0	9.98	
$ 8 4-Bromofluorobenzene (Surr	95	10.685	10.692	-0.007	84	458734	10.0	9.66	
23 Dichlorodifluoromethane	85	3.845	3.845	0.000	100	292278	5.00	3.65	
26 Chloromethane	50	4.097	4.096	0.001	99	255308	5.00	4.84	
27 Vinyl chloride	62	4.222	4.222	0.000	98	263400	5.00	4.90	
29 Bromomethane	94	4.585	4.585	0.000	91	238606	5.00	5.13	
30 Chloroethane	64	4.641	4.641	0.000	99	223317	5.00	5.07	
31 Dichlorofluoromethane	67	4.795	4.795	0.000	98	593040	5.00	5.30	
32 Trichlorofluoromethane	101	4.907	4.906	0.001	99	477014	5.00	4.71	
35 Ethyl ether	59	5.060	5.060	0.000	95	124580	5.00	5.72	
39 Acrolein	56	5.214	5.214	0.000	100	118151	50.0	49.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.297	0.001	95	218167	5.00	5.10	
41 Acetone	43	5.326	5.325	0.001	28	96507	20.0	19.1	
43 1,1-Dichloroethene	96	5.340	5.339	0.001	97	268613	5.00	5.17	
44 Iodomethane	142	5.523	5.522	0.001	100	387209	5.00	5.37	
45 Methyl acetate	43	5.551	5.558	-0.007	97	114455	10.0	9.96	
47 3-Chloro-1-propene	41	5.601	5.601	0.000	82	498890	5.00	5.38	
48 Carbon disulfide	76	5.616	5.615	0.001	99	1093927	5.00	5.18	
49 2-Methyl-2-propanol	59	5.659	5.658	0.000	93	26578	50.0	31.4	
50 Methylene Chloride	84	5.701	5.701	0.000	98	224204	5.00	5.01	
51 Methyl tert-butyl ether	73	5.873	5.873	0.000	98	293487	5.00	5.21	
52 Acrylonitrile	53	5.880	5.873	0.007	75	233988	50.0	53.9	
53 trans-1,2-Dichloroethene	96	5.916	5.916	0.000	96	269288	5.00	5.27	
54 Hexane	57	6.073	6.073	0.000	96	459099	5.00	4.78	
55 Vinyl acetate	43	6.180	6.180	0.000	97	408426	10.0	10.2	
57 1,1-Dichloroethane	63	6.245	6.245	0.000	96	467644	5.00	5.22	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.631	6.631	0.000	99	124924	20.0	17.3	
63 cis-1,2-Dichloroethene	96	6.681	6.681	0.000	87	252781	5.00	5.23	
64 2,2-Dichloropropane	77	6.702	6.702	0.000	90	366451	5.00	4.83	
67 Chlorobromomethane	128	6.881	6.881	0.000	92	77785	5.00	5.37	
68 Chloroform	83	6.888	6.888	0.000	95	399952	5.00	5.07	
69 Tetrahydrofuran	42	6.917	6.909	0.008	89	41785	10.0	11.0	
70 Isobutyl alcohol	41	7.096	7.088	0.008	98	42566	125.0	148.0	M
71 1,1,1-Trichloroethane	97	7.103	7.103	0.000	98	397069	5.00	4.93	
72 Cyclohexane	56	7.160	7.167	-0.007	96	552320	5.00	5.00	
73 1,1-Dichloropropene	75	7.196	7.195	0.001	96	376988	5.00	5.00	
74 Carbon tetrachloride	117	7.232	7.231	0.001	96	323346	5.00	4.78	
76 1,2-Dichloroethane	62	7.367	7.367	0.000	97	209324	5.00	4.95	
77 Benzene	78	7.382	7.381	0.001	98	991732	5.00	5.25	
14 n-Heptane	43	7.446	7.446	0.000	96	536831	5.00	5.03	
79 Trichloroethene	95	7.846	7.846	0.000	96	247042	5.00	5.01	
82 Methylcyclohexane	55	8.032	8.032	0.000	95	433508	5.00	4.83	
83 1,2-Dichloropropane	63	8.040	8.039	0.001	94	229172	5.00	5.55	
84 1,4-Dioxane	88	8.104	8.096	0.008	85	7039	100.0	76.1	
85 Dibromomethane	93	8.147	8.146	0.001	93	70998	5.00	4.99	
86 Dichlorobromomethane	83	8.211	8.211	0.000	98	228781	5.00	5.12	
87 2-Chloroethyl vinyl ether	63	8.361	8.354	0.007	92	42870	5.00	4.52	
89 cis-1,3-Dichloropropene	75	8.533	8.533	0.000	92	255185	5.00	5.41	
90 4-Methyl-2-pentanone (MIBK	43	8.590	8.590	0.000	98	303658	20.0	21.8	
91 Toluene	91	8.805	8.804	0.001	97	1020695	5.00	5.30	
92 Ethyl methacrylate	69	8.890	8.890	0.000	93	103259	5.00	4.98	
93 trans-1,3-Dichloropropene	75	8.912	8.912	0.000	98	170147	5.00	4.79	
94 1,1,2-Trichloroethane	97	9.069	9.069	0.000	94	101520	5.00	5.47	
95 2-Hexanone	43	9.184	9.176	0.008	99	183786	20.0	19.8	
96 1,3-Dichloropropane	76	9.205	9.205	0.000	99	185361	5.00	5.15	
97 Tetrachloroethene	164	9.212	9.212	0.000	94	181097	5.00	4.95	
98 Chlorodibromomethane	129	9.391	9.391	0.000	91	105014	5.00	4.94	
100 Ethylene Dibromide	107	9.520	9.519	0.001	100	83169	5.00	5.28	
102 Chlorobenzene	112	9.848	9.848	0.000	96	538411	5.00	5.11	
104 1,1,1,2-Tetrachloroethane	131	9.884	9.884	0.000	96	163795	5.00	5.07	
103 Ethylbenzene	106	9.884	9.884	0.000	97	349693	5.00	5.04	
105 m-Xylene & p-Xylene	106	9.956	9.955	0.001	99	411405	5.00	5.06	
107 o-Xylene	106	10.270	10.270	0.000	97	389281	5.00	5.18	
106 Styrene	104	10.277	10.277	0.000	88	533562	5.00	5.09	
108 Bromoform	173	10.485	10.485	0.000	93	41698	5.00	4.58	
109 Isopropylbenzene	105	10.528	10.527	0.001	97	1096322	5.00	5.00	
111 Cyclohexanone	55	10.678	10.678	0.000	96	182313	200.0	314.8	
112 1,1,2,2-Tetrachloroethane	83	10.742	10.742	0.000	94	103383	5.00	5.32	
113 trans-1,4-Dichloro-2-buten	53	10.778	10.778	0.000	79	23856	5.00	4.98	
114 1,2,3-Trichloropropane	110	10.814	10.813	0.001	85	27015	5.00	5.24	
115 N-Propylbenzene	120	10.850	10.849	0.001	99	306576	5.00	5.03	
116 Bromobenzene	156	10.857	10.849	0.008	98	189333	5.00	5.06	
117 1,3,5-Trimethylbenzene	105	10.957	10.956	0.001	95	885874	5.00	4.98	
118 2-Chlorotoluene	126	10.971	10.971	0.000	95	236536	5.00	4.93	
119 4-Chlorotoluene	126	11.050	11.049	0.001	99	240512	5.00	5.19	
120 tert-Butylbenzene	119	11.250	11.250	0.000	93	866846	5.00	4.99	
121 1,2,4-Trimethylbenzene	105	11.279	11.278	0.000	99	880493	5.00	4.94	
122 sec-Butylbenzene	134	11.429	11.428	0.001	95	240914	5.00	5.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.522	11.521	0.001	97	1002437	5.00	4.96	
124 1,3-Dichlorobenzene	146	11.593	11.593	0.000	97	412300	5.00	4.93	
126 1,4-Dichlorobenzene	146	11.665	11.664	0.001	93	414737	5.00	4.99	
127 n-Butylbenzene	91	11.879	11.879	0.000	99	1075968	5.00	4.89	
128 1,2-Dichlorobenzene	146	12.022	12.022	0.000	95	337025	5.00	5.01	
129 1,2-Dibromo-3-Chloropropan	157	12.773	12.773	0.000	75	12167	5.00	5.49	
130 1,2,4-Trichlorobenzene	180	13.710	13.709	0.001	93	226238	5.00	5.17	
131 Hexachlorobutadiene	225	13.845	13.845	0.000	93	156308	5.00	4.62	
132 Naphthalene	128	14.081	14.081	0.000	97	310782	5.00	5.48	
133 1,2,3-Trichlorobenzene	180	14.403	14.396	0.007	95	170862	5.00	5.21	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.5	
S 134 Trihalomethanes, Total	1				0		20.0	19.7	
S 135 Xylenes, Total (URS)	1				0		10.0	10.2	
S 137 1,3-Dichloropropene, Total	1				0		10.0	10.2	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.5	
S 139 Xylenes, Total	106				0		10.0	10.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

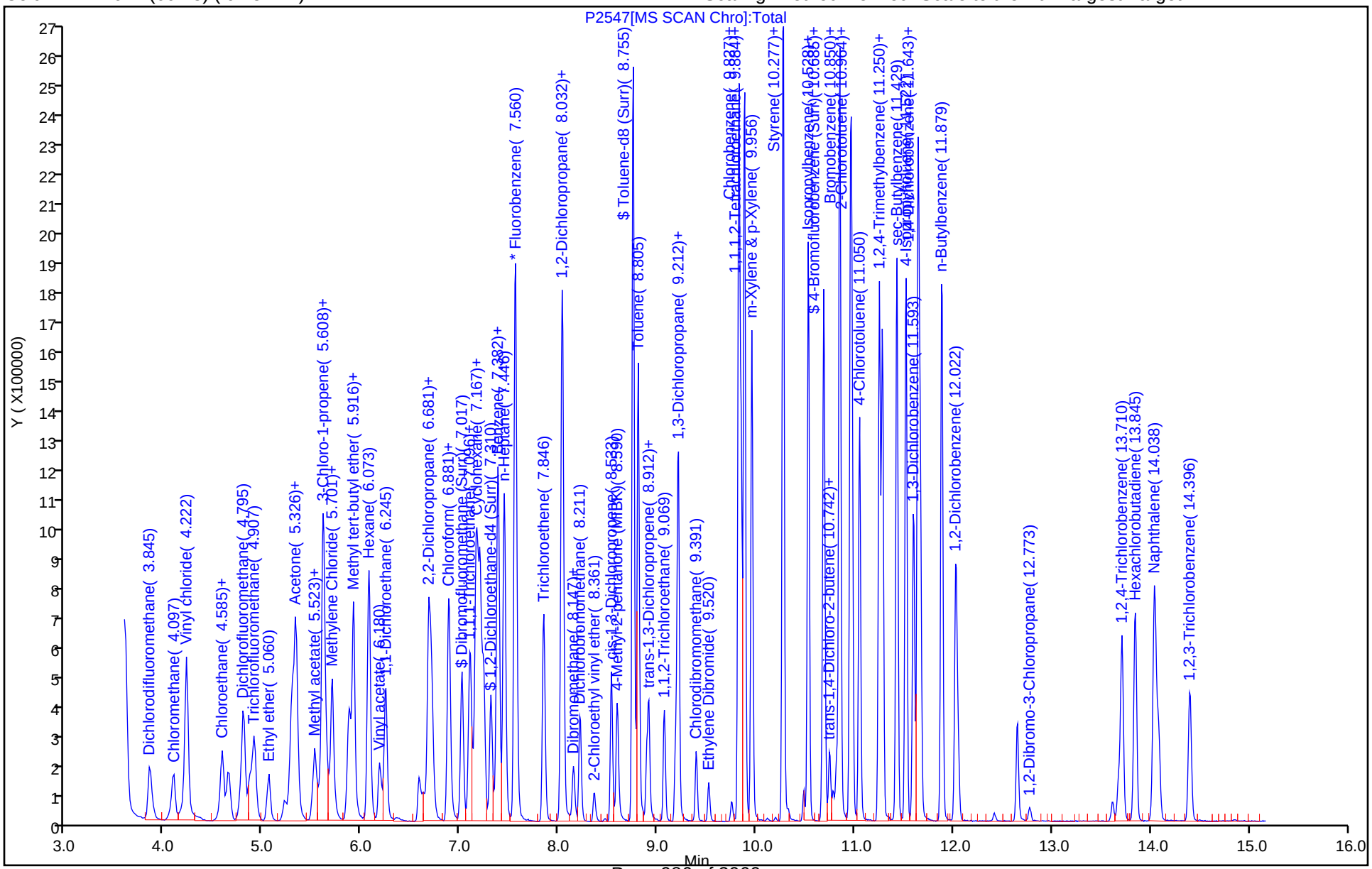
Report Date: 13-Nov-2018 17:31:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2547.D

Injection Date:	12-Nov-2018 12:17:30	Instrument ID:	VMS_P	Operator ID:	seifertj
Lims ID:	LCS			Worklist Smp#:	7
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\P2547.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 12-Nov-2018 12:17:30 ALS Bottle#: 15 Worklist Smp#: 7
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: seifertj Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-Nov-2018 17:30:56 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0306

First Level Reviewer: seifertj Date: 12-Nov-2018 12:49:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.1	101.30
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.73	97.29
$ 7 Toluene-d8 (Surr)	10.0	9.98	99.76
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.66	96.59

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-436980/6

Matrix: Water | Lab File ID: P2441.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 10:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	4.69		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	5.54		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	5.44		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	5.01		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	4.86		1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	5.47		1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	4.85		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	10.0		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	5.46		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	18.2		6.0	4.0	2.0
591-78-6	2-Hexanone	21.0		5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	22.1		5.0	3.2	0.98
67-64-1	Acetone	18.9		10	6.4	1.9
71-43-2	Benzene	5.03		1.0	0.40	0.16
108-86-1	Bromobenzene	5.07		1.0	0.40	0.17
74-97-5	Bromochloromethane	5.30		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.01		1.0	0.40	0.17
75-25-2	Bromoform	4.56		1.0	0.40	0.19
74-83-9	Bromomethane	4.98		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.84		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	4.54		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.06		1.0	0.40	0.17
75-00-3	Chloroethane	4.98		2.0	1.6	0.41
67-66-3	Chloroform	4.92		1.0	0.40	0.16
74-87-3	Chloromethane	4.47		2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	5.34		1.0	0.40	0.16
124-48-1	Dibromochloromethane	5.00		1.0	0.40	0.17
100-41-4	Ethylbenzene	4.98		1.0	0.40	0.16
75-09-2	Methylene Chloride	4.92	J	5.0	0.80	0.32
100-42-5	Styrene	5.19		1.0	0.40	0.17
127-18-4	Tetrachloroethene	4.93		1.0	0.40	0.20
108-88-3	Toluene	5.02		1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	4.85		1.0	0.40	0.19
79-01-6	Trichloroethene	4.83		1.0	0.40	0.16
75-01-4	Vinyl chloride	4.73		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.3		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-436980/6

Matrix: Water | Lab File ID: P2441.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/09/2018 10:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 436980 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	94		85-114
1868-53-7	Dibromofluoromethane (Surr)	99		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2441.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 09-Nov-2018 10:18:30 ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: SEIFERTJ Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 14:46:02 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

First Level Reviewer: seifertj Date: 12-Nov-2018 13:04:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.607	5.601	0.006	86	170280	250.0	250.0	
* 1 Fluorobenzene	96	7.559	7.560	-0.001	98	1480977	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.826	9.827	-0.001	89	290571	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.642	11.650	-0.008	97	442555	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	7.016	7.017	-0.001	92	285353	10.0	9.91	
$ 6 1,2-Dichloroethane-d4 (Sur	65	7.309	7.310	-0.001	98	272943	10.0	9.87	
$ 7 Toluene-d8 (Surr)	98	8.754	8.754	0.000	95	1215013	10.0	9.88	
$ 8 4-Bromofluorobenzene (Surr	95	10.684	10.692	-0.008	84	372520	10.0	9.42	
23 Dichlorodifluoromethane	85	3.845	3.846	-0.001	100	236044	5.00	3.54	
26 Chloromethane	50	4.097	4.083	0.014	98	196485	5.00	4.47	
27 Vinyl chloride	62	4.223	4.209	0.014	95	212123	5.00	4.73	
29 Bromomethane	94	4.586	4.586	0.000	92	192903	5.00	4.98	
30 Chloroethane	64	4.656	4.642	0.014	99	182766	5.00	4.98	
31 Dichlorofluoromethane	67	4.795	4.796	-0.001	98	483403	5.00	5.18	
32 Trichlorofluoromethane	101	4.907	4.893	0.014	100	382191	5.00	4.53	
35 Ethyl ether	59	5.061	5.061	0.000	94	99471	5.00	5.48	
39 Acrolein	56	5.228	5.215	0.013	99	105019	50.0	52.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.298	5.284	0.014	96	168722	5.00	4.74	
41 Acetone	43	5.326	5.312	0.014	31	79763	20.0	18.9	
43 1,1-Dichloroethene	96	5.340	5.326	0.014	96	210531	5.00	4.86	
44 Iodomethane	142	5.522	5.522	0.000	99	297600	5.00	4.95	
45 Methyl acetate	43	5.557	5.558	-0.001	97	93733	10.0	9.78	
47 3-Chloro-1-propene	41	5.607	5.601	0.006	81	395613	5.00	5.12	
48 Carbon disulfide	76	5.615	5.608	0.007	99	851749	5.00	4.84	
49 2-Methyl-2-propanol	59	5.665	5.658	0.007	93	35623	50.0	44.1	
50 Methylene Chloride	84	5.700	5.701	-0.001	97	183660	5.00	4.92	
52 Acrylonitrile	53	5.879	5.873	0.006	79	195634	50.0	54.0	
51 Methyl tert-butyl ether	73	5.872	5.873	-0.001	97	240141	5.00	5.11	
53 trans-1,2-Dichloroethene	96	5.915	5.916	-0.001	95	211062	5.00	4.96	
54 Hexane	57	6.072	6.073	-0.001	96	362906	5.00	4.65	
55 Vinyl acetate	43	6.187	6.180	0.007	97	345810	10.0	10.3	
57 1,1-Dichloroethane	63	6.244	6.237	0.007	97	373709	5.00	5.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.630	6.631	-0.001	99	109409	20.0	18.2	
63 cis-1,2-Dichloroethene	96	6.680	6.674	0.006	88	203394	5.00	5.05	
64 2,2-Dichloropropane	77	6.709	6.702	0.007	91	301959	5.00	4.77	
67 Chlorobromomethane	128	6.880	6.881	-0.001	59	63957	5.00	5.30	
68 Chloroform	83	6.887	6.888	-0.001	95	323103	5.00	4.92	
69 Tetrahydrofuran	42	6.909	6.910	-0.001	52	35468	10.0	11.2	
70 Isobutyl alcohol	41	7.102	7.095	0.007	97	31018	125.0	127.8	
71 1,1,1-Trichloroethane	97	7.102	7.095	0.007	98	314795	5.00	4.69	
72 Cyclohexane	56	7.166	7.167	-0.001	95	435502	5.00	4.73	
73 1,1-Dichloropropene	75	7.202	7.196	0.006	97	298669	5.00	4.76	
74 Carbon tetrachloride	117	7.238	7.238	0.000	97	256350	5.00	4.54	
76 1,2-Dichloroethane	62	7.366	7.374	-0.008	97	170870	5.00	4.85	
77 Benzene	78	7.381	7.389	-0.008	98	791266	5.00	5.03	
14 n-Heptane	43	7.445	7.446	-0.001	97	423985	5.00	4.77	
79 Trichloroethene	95	7.845	7.846	-0.001	94	198708	5.00	4.83	
82 Methylcyclohexane	55	8.031	8.032	-0.001	95	347913	5.00	4.65	
83 1,2-Dichloropropane	63	8.039	8.039	0.000	95	188057	5.00	5.46	
84 1,4-Dioxane	88	8.096	8.096	0.000	92	7824	100.0	94.1	M
85 Dibromomethane	93	8.146	8.146	0.000	89	61587	5.00	5.20	
86 Dichlorobromomethane	83	8.217	8.218	-0.001	98	186639	5.00	5.01	
87 2-Chloroethyl vinyl ether	63	8.360	8.361	-0.001	91	33470	5.00	4.27	
89 cis-1,3-Dichloropropene	75	8.532	8.533	-0.001	91	204314	5.00	5.34	
90 4-Methyl-2-pentanone (MIBK	43	8.589	8.590	-0.001	99	256853	20.0	22.1	
91 Toluene	91	8.804	8.804	0.000	97	806504	5.00	5.02	
92 Ethyl methacrylate	69	8.889	8.890	-0.001	94	83863	5.00	4.98	
93 trans-1,3-Dichloropropene	75	8.911	8.912	-0.001	99	143735	5.00	4.85	
94 1,1,2-Trichloroethane	97	9.068	9.069	-0.001	93	84075	5.00	5.44	
95 2-Hexanone	43	9.183	9.183	0.000	99	159050	20.0	21.0	
96 1,3-Dichloropropane	76	9.204	9.205	-0.001	98	153399	5.00	5.25	
97 Tetrachloroethene	164	9.211	9.219	-0.008	92	146640	5.00	4.93	
98 Chlorodibromomethane	129	9.397	9.398	-0.001	91	86365	5.00	5.00	
100 Ethylene Dibromide	107	9.519	9.526	-0.007	97	69985	5.00	5.47	
102 Chlorobenzene	112	9.847	9.855	-0.008	94	433353	5.00	5.06	
103 Ethylbenzene	106	9.883	9.884	-0.001	98	280796	5.00	4.98	
104 1,1,1,2-Tetrachloroethane	131	9.883	9.891	-0.008	95	132276	5.00	5.04	
105 m-Xylene & p-Xylene	106	9.955	9.963	-0.008	99	338875	5.00	5.13	
107 o-Xylene	106	10.277	10.277	-0.001	88	315432	5.00	5.16	
106 Styrene	104	10.277	10.277	-0.001	85	441200	5.00	5.19	
108 Bromoform	173	10.484	10.492	-0.008	92	33697	5.00	4.56	
109 Isopropylbenzene	105	10.527	10.535	-0.008	97	896366	5.00	4.91	
111 Cyclohexanone	55	10.677	10.678	-0.001	96	106072	200.0	228.0	
112 1,1,2,2-Tetrachloroethane	83	10.741	10.749	-0.008	96	89596	5.00	5.54	
113 trans-1,4-Dichloro-2-buten	53	10.784	10.785	-0.001	69	19318	5.00	4.84	
114 1,2,3-Trichloropropane	110	10.820	10.821	-0.001	85	21798	5.00	5.08	
115 N-Propylbenzene	120	10.849	10.849	-0.001	99	248241	5.00	4.89	
116 Bromobenzene	156	10.856	10.856	0.000	97	157669	5.00	5.07	
117 1,3,5-Trimethylbenzene	105	10.956	10.964	-0.008	94	721127	5.00	4.87	
118 2-Chlorotoluene	126	10.970	10.978	-0.008	94	194783	5.00	4.88	
119 4-Chlorotoluene	126	11.049	11.057	-0.008	99	195125	5.00	5.06	
120 tert-Butylbenzene	119	11.249	11.257	-0.008	93	716253	5.00	4.96	
121 1,2,4-Trimethylbenzene	105	11.278	11.285	-0.007	96	722003	5.00	4.87	
122 sec-Butylbenzene	134	11.428	11.436	-0.008	95	199584	5.00	4.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.521	11.521	0.000	96	827264	5.00	4.92	
124 1,3-Dichlorobenzene	146	11.599	11.600	-0.001	96	344160	5.00	4.94	
126 1,4-Dichlorobenzene	146	11.664	11.672	-0.008	93	334730	5.00	4.84	
127 n-Butylbenzene	91	11.885	11.886	-0.001	99	885004	5.00	4.84	
128 1,2-Dichlorobenzene	146	12.021	12.029	-0.008	95	282010	5.00	5.04	
129 1,2-Dibromo-3-Chloropropan	157	12.772	12.787	-0.015	70	9394	5.00	5.13	
130 1,2,4-Trichlorobenzene	180	13.709	13.716	-0.007	94	184222	5.00	5.06	
131 Hexachlorobutadiene	225	13.844	13.852	-0.008	94	131869	5.00	4.68	
132 Naphthalene	128	14.080	14.088	-0.008	97	249758	5.00	5.29	
133 1,2,3-Trichlorobenzene	180	14.395	14.410	-0.015	94	146813	5.00	5.38	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.0	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.0	
S 139 Xylenes, Total	106				0		10.0	10.3	
S 137 1,3-Dichloropropene, Total	1				0		10.0	10.2	
S 134 Trihalomethanes, Total	1				0		20.0	19.5	
S 135 Xylenes, Total (URS)	1				0		10.0	10.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00010	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

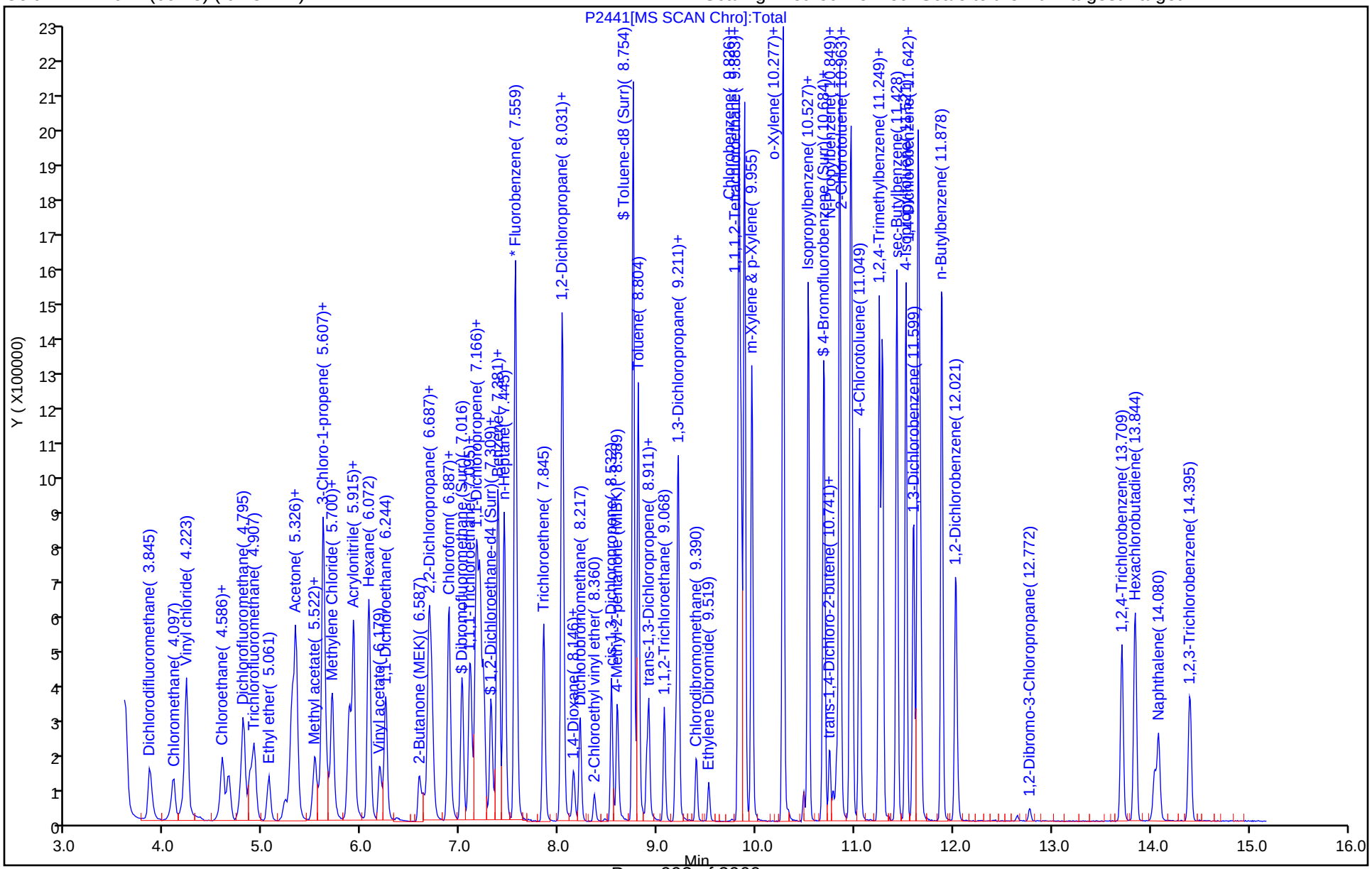
Report Date: 14-Nov-2018 14:46:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2441.D

Injection Date:	09-Nov-2018 10:18:30	Instrument ID:	VMS_P	Operator ID:	SEIFERTJ
Lims ID:	LCSD			Worklist Smp#:	6
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSP_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\P2441.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 09-Nov-2018 10:18:30 ALS Bottle#: 14 Worklist Smp#: 6
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: SEIFERTJ Instrument ID: VMS_P

Method: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Nov-2018 14:46:02 Calib Date: 23-Oct-2018 00:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b\P1538.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0309

First Level Reviewer: seifertj Date: 12-Nov-2018 13:04:59

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.91	99.10
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.87	98.74
$ 7 Toluene-d8 (Surr)	10.0	9.88	98.82
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.42	94.25

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Start Date: 08/16/2018 19:34

Analysis Batch Number: 426490 End Date: 08/17/2018 03:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-426490/1		08/16/2018 19:34	1	P9151.D	DB-624 (60.25) 0.25(mm)
STD003 280-426490/10 IC		08/16/2018 20:06	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 20:06	1		DB-624 (60.25) 0.25(mm)
STD010 280-426490/11 IC		08/16/2018 20:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 20:25	1		DB-624 (60.25) 0.25(mm)
STD020 280-426490/12 IC		08/16/2018 20:43	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 20:43	1		DB-624 (60.25) 0.25(mm)
STD050 280-426490/13 IC		08/16/2018 21:02	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:02	1		DB-624 (60.25) 0.25(mm)
ICIS 280-426490/14		08/16/2018 21:20	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:20	1		DB-624 (60.25) 0.25(mm)
STD30 280-426490/15 IC		08/16/2018 21:38	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:38	1		DB-624 (60.25) 0.25(mm)
STD60 280-426490/16 IC		08/16/2018 21:57	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 21:57	1		DB-624 (60.25) 0.25(mm)
ICV 280-426490/17		08/16/2018 22:15	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 22:52	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 23:11	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 23:29	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/16/2018 23:48	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 00:06	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 00:24	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:01	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:20	1		DB-624 (60.25) 0.25(mm)
STD010 280-426490/18 IC		08/17/2018 01:38	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:38	1		DB-624 (60.25) 0.25(mm)
STD020 280-426490/19 IC		08/17/2018 01:56	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 01:56	1		DB-624 (60.25) 0.25(mm)
STD050 280-426490/20 IC		08/17/2018 02:15	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 02:15	1		DB-624 (60.25) 0.25(mm)
STD10 280-426490/21 IC		08/17/2018 02:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 02:33	1		DB-624 (60.25) 0.25(mm)
STD30 280-426490/22 IC		08/17/2018 02:52	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 02:52	1		DB-624 (60.25) 0.25(mm)
STD60 280-426490/23 IC		08/17/2018 03:10	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 03:10	1		DB-624 (60.25) 0.25(mm)
ICV 280-426490/24		08/17/2018 03:28	1	P9176.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		08/17/2018 03:47	4		DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Start Date: 10/22/2018 21:54

Analysis Batch Number: 434433 End Date: 10/23/2018 01:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-434433/1		10/22/2018 21:54	1	P1530.D	DB-624 (60.25) 0.25(mm)
STD005 280-434433/10 IC		10/22/2018 22:40	1	P1532.D	DB-624 (60.25) 0.25(mm)
STD01 280-434433/11 IC		10/22/2018 22:59	1	P1533.D	DB-624 (60.25) 0.25(mm)
STD02 280-434433/12 IC		10/22/2018 23:17	1	P1534.D	DB-624 (60.25) 0.25(mm)
STD05 280-434433/13 IC		10/22/2018 23:36	1	P1535.D	DB-624 (60.25) 0.25(mm)
ICIS 280-434433/14		10/22/2018 23:54	1	P1536.D	DB-624 (60.25) 0.25(mm)
STD25 280-434433/15 IC		10/23/2018 00:13	1	P1537.D	DB-624 (60.25) 0.25(mm)
STD60 280-434433/16 IC		10/23/2018 00:32	1	P1538.D	DB-624 (60.25) 0.25(mm)
ICV 280-434433/17		10/23/2018 01:12	1	P1540.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Start Date: 11/09/2018 08:31

Analysis Batch Number: 436980 End Date: 11/09/2018 19:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-436980/1		11/09/2018 08:31	1	P2436.D	DB-624 (60.25) 0.25(mm)
CCV 280-436980/2		11/09/2018 08:57	1	P2437.D	DB-624 (60.25) 0.25(mm)
CCV 280-436980/3		11/09/2018 09:17	1	P2438.D	DB-624 (60.25) 0.25(mm)
MB 280-436980/4		11/09/2018 09:40	1	P2439.D	DB-624 (60.25) 0.25(mm)
LCS 280-436980/5		11/09/2018 09:59	1	P2440.D	DB-624 (60.25) 0.25(mm)
LCSD 280-436980/6		11/09/2018 10:18	1	P2441.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 10:37	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 10:56	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 11:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 11:44	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 12:03	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 12:22	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 12:41	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 13:00	2		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 13:18	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 13:37	20		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 13:56	200		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 14:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 14:33	10		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 14:52	100		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 15:10	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 15:29	40		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 15:48	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 16:06	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 16:25	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 16:43	1		DB-624 (60.25) 0.25(mm)
280-116270-1		11/09/2018 17:02	1	P2462.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 17:21	1		DB-624 (60.25) 0.25(mm)
280-116270-9		11/09/2018 17:39	1	P2464.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 17:58	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 18:16	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 18:35	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/09/2018 18:53	1		DB-624 (60.25) 0.25(mm)
CCVC 280-436980/39		11/09/2018 19:12	1	P2469.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: VMS_P Start Date: 11/12/2018 10:19

Analysis Batch Number: 437213 End Date: 11/12/2018 20:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-437213/1		11/12/2018 10:19	1	P2541.D	DB-624 (60.25) 0.25(mm)
CCV 280-437213/2		11/12/2018 10:44	1	P2542.D	DB-624 (60.25) 0.25(mm)
CCV 280-437213/3		11/12/2018 11:02	1	P2543.D	DB-624 (60.25) 0.25(mm)
CCV 280-437213/14		11/12/2018 11:40	1	P2545.D	DB-624 (60.25) 0.25(mm)
MB 280-437213/6		11/12/2018 11:58	1	P2546.D	DB-624 (60.25) 0.25(mm)
LCS 280-437213/7		11/12/2018 12:17	1	P2547.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 12:35	4		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 12:54	100		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 13:13	1000		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 13:31	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 13:50	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 14:09	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 14:27	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 14:46	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 15:04	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 15:23	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 15:41	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 16:00	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 16:19	1		DB-624 (60.25) 0.25(mm)
280-116270-2		11/12/2018 16:37	1	P2561.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 16:56	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 17:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 17:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 17:51	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 18:10	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 18:28	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 18:47	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 19:05	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		11/12/2018 19:24	1		DB-624 (60.25) 0.25(mm)
CCVC 280-437213/38		11/12/2018 20:29	1	P2572.D	DB-624 (60.25) 0.25(mm)

Sequence Name: C:\HPCHEM\1\SEQUENCE\110918.S
Comment:
Operator: SEIFERTJ
Data Path: C:\HPCHEM\1\DATA\110918\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: 2
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)
(Circle)
Tune Time: 0831 - 1917
Lims Batch: 436980

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	P2436	BFB	BFB 0831
2	Sample	10	P2437	8260	CCV
3	Sample	11	P2438	8260	CCV
4	Sample	12	P2439	8260	MB
5	Sample	13	P2440	8260	LCS
6	Sample	14	P2441	8260	LCSD
7	Sample	15	P2442	8260	280-116261-f-2 PH<2
8	Sample	16	P2443	8260	280-116261-a-3 PH<2
9	Sample	17	P2444	8260	280-116261-e-1 PH<2
10	Sample	18	P2445	8260	280-116264-a-1 PH<2
11	Sample	19	P2446	8260	280-116264-a-1 5mL PH<2
12	Sample	20	P2447	8260	280-116264-c-2 PH<2
13	Sample	21	P2448	8260	280-116264-c-2 5mL PH<2
14	Sample	22	P2449	8260	280-116264-c-3 10mL PH<2
15	Sample	23	P2450	8260	280-116264-c-3 1mL PH<2
16	Sample	24	P2451	8260	280-116264-b-4 10mL PH<2
17	Sample	25	P2452	8260	280-116264-b-4 1mL PH<2
18	Sample	26	P2453	8260	280-116264-a-5 PH<2
19	Sample	27	P2454	8260	280-116264-a-6 2mL PH<2
20	Sample	28	P2455	8260	280-116264-a-6 0.2ML PH<2
21	Sample	29	P2456	8260	280-116264-a-7 5ML PH<2
22	Sample	30	P2457	8260	280-116264-a-7 0.5ML PH<2
23	Sample	31	P2458	8260	280-116264-b-8 PH<2
24	Sample	32	P2459	8260	280-116264-b-9 PH<2
25	Sample	33	P2460	8260	280-116264-a-10 PH<2
26	Sample	34	P2461	8260	280-116264-a-11 PH=7*
27	Sample	35	P2462	8260	280-116270-k-1 PH<2
28	Sample	36	P2463	8260	280-116270-a-2 PH<2
29	Sample	37	P2464	8260	280-116270-n-9 PH<2
30	Sample	38	P2465	8260	280-116275-d-6 PH<2
31	Sample	39	P2466	8260	280-116275-d-7 PH<2
32	Sample	40	P2467	8260	280-116275-c-8 PH<2
~~33~~	~~Sample~~	~~41~~	~~P2468~~	~~8260~~	~~280-116275-b-9 PH<2~~
34	Sample	42	P2469	8260	CCVC 1917

11/12/18

TestAmerica Laboratories
Worklist Report

Worklist Name: 110918 Worklist Number: 76011
Instrument Name: VMS_P Chrom Method: AQ_VMSP_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20181109-76011.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-568718-D_00010 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00107 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076011-001	# 1 BFB	MV-BFB_00027	BFB	voaWater	1.000	uL	1.000
280-0076011-002	# 2 CCV	MV-MegaMainA_00006	CCV	voaWater	20.00	mL	1.000
280-0076011-003	# 3 CCV	MV-Supp A_00031	CCV	voaWater	20.00	mL	1.000
280-0076011-004	# 4 MB		MB	voaWater	20.00	mL	1.000
280-0076011-005	# 5 LCS	MV-MegaMain B_00003	LCS	voaWater	20.00	mL	1.000
280-0076011-006	# 6 LCSD	MV-MegaMain B_00003	LCSD	voaWater	20.00	mL	1.000
280-0076011-007	# 7 LCS	MV-Supp B_00022	LCS	voaWater	20.00	mL	1.000
280-0076011-008	# 8 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0076011-009	# 9 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0076011-010	#10 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0076011-011	#11 Samp 11		Client	voaWater	20.00	mL	1.000
280-0076011-012	#12 280-116261-F-2		Client	voaWater	20.00	mL	1.000
280-0076011-013	#13 280-116261-A-3		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076011-014	#14 280-116261-E-1		Client	voaWater	20.00	mL	1.000
280-0076011-015	#15 280-116264-A-1		Client	voaWater	20.00	mL	1.000
280-0076011-016	#16 280-116264-A-1		Client	voaWater	20.00	mL	4.000
280-0076011-017	#17 280-116264-C-2		Client	voaWater	20.00	mL	1.000
280-0076011-018	#18 280-116264-C-2		Client	voaWater	20.00	mL	4.000
280-0076011-019	#19 280-116264-C-3		Client	voaWater	20.00	mL	2.000
280-0076011-020	#20 280-116264-C-3		Client	voaWater	20.00	mL	20.00
280-0076011-021	#21 280-116264-B-4		Client	voaWater	20.00	mL	20.00
280-0076011-022	#22 280-116264-B-4		Client	voaWater	20.00	mL	200.0
280-0076011-023	#23 280-116264-A-5		Client	voaWater	20.00	mL	1.000
280-0076011-024	#24 280-116264-A-6		Client	voaWater	20.00	mL	10.00
280-0076011-025	#25 280-116264-A-6		Client	voaWater	20.00	mL	100.0
280-0076011-026	#26 280-116264-A-7		Client	voaWater	20.00	mL	4.000
280-0076011-027	#27 280-116264-A-7		Client	voaWater	20.00	mL	40.00
280-0076011-028	#28 280-116264-B-8		Client	voaWater	20.00	mL	1.000
280-0076011-029	#29 280-116264-B-9		Client	voaWater	20.00	mL	1.000
280-0076011-030	#30 280-116264-A-10		Client	voaWater	20.00	mL	1.000
280-0076011-031	#31 280-116264-A-11		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076011-032	#32 280-116270-K-1		Client	voaWater	20.00	mL	1.000
280-0076011-033	#33 280-116270-A-2		Client	voaWater	20.00	mL	1.000
280-0076011-034	#34 280-116270-N-9		Client	voaWater	20.00	mL	1.000
280-0076011-035	#35 280-116275-D-6		Client	voaWater	20.00	mL	1.000
280-0076011-036	#36 280-116275-D-7		Client	voaWater	20.00	mL	1.000
280-0076011-037	#37 280-116275-C-8		Client	voaWater	20.00	mL	1.000
280-0076011-038	#38 280-116275-B-9		Client	voaWater	20.00	mL	1.000
280-0076011-039	#39 CCVC	MV-MegaMainA_00006	CCVC	voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\111118.S
Comment:
Operator: seifertj
Data Path: C:\HPCHEM\1\DATA\111118\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument:
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)
(Circle)
Tune Time: 10:19 - 20:29
Lims Batch: 437213

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

11/13/18

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	P2538	BFB	BFB
2	Sample	100	P2539	BFB	BFB
3	Sample	100	P2540	BFB	BFB
4	Sample	100	P2541	BFB	BFB 10:19
5	Sample	10	P2542	8260	CCV GAS
6	Sample	11	P2543	8260	CCV
7	Sample	12	P2544	8260	CCV Q5
8	Sample	13	P2545	8260	CCV Q5
9	Sample	14	P2546	8260	MB
10	Sample	15	P2547	8260	LCS
11	Sample	16	P2548	8260	280-116310-a-4 5ML PH<2 E
12	Sample	17	P2549	8260	280-116310-a-5 0.2ML PH<2 E
13	Sample	18	P2550	8260	280-116310-a-5 .02mL PH<2
14	Sample	19	P2551	8260	280-116310-b-6 PH<2
15	Sample	20	P2552	8260	280-116310-b-7 PH<2
16	Sample	21	P2553	8260	280-116310-a-8 PH<2
17	Sample	22	P2554	8260	280-116264-c-10 PH<2
18	Sample	23	P2555	8260	280-116264-b-11 PH<2 F
19	Sample	24	P2556	8260	280-116275-a-5 PH<2
20	Sample	25	P2557	8260	280-116275-b-6 PH<2
21	Sample	26	P2558	8260	280-116275-c-7 PH<2
22	Sample	27	P2559	8260	280-116275-a-8 PH<2
23	Sample	28	P2560	8260	280-116275-a-9 PH<2
24	Sample	29	P2561	8260	280-116270-b-2 PH<2
25	Sample	30	P2562	8260	280-116264-c-8 PH<2
26	Sample	31	P2563	8260	280-116341-b-1 PH<2
27	Sample	32	P2564	8260	280-116341-a-2 PH<2
28	Sample	33	P2565	8260	280-116341-A-2 MS PH<2
29	Sample	34	P2566	8260	280-116341-A-2 MSD PH<2
30	Sample	35	P2567	8260	280-116341-c-3 PH<2
31	Sample	36	P2568	8260	280-116341-b-7 PH<2
32	Sample	37	P2569	8260	280-116341-a-8 PH<2 SS
33	Sample	38	P2570	8260	~~280-116292-c-1 PH<2~~
34	Sample	39	P2571	8260	CCVC RR
35	Sample	40	P2572	8260	CCVC 20:29
36					

Report Date: 13-Nov-2018 08:09:11 Chrom Revision: 2.3 12-Oct-2018 08:24:28 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 111218
Instrument Name: VMS_P
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20181112-76078.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-568718-D_00010
Run Reagent: MV-ARCH SS A_00107

Worklist Number: 76078
Chrom Method: AQ_VMSP_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076078-001	# 1 BFB	MV-BFB_00027	BFB	voaWater	1.000	uL	1.000
280-0076078-002	# 2 CCV	MV-MegaMainA_00006	CCV	voaWater	20.00	mL	1.000
280-0076078-003	# 3 CCV	MV-Supp A_00031 MV-568718-D_00010	CCV	voaWater	20.00	mL	1.000
280-0076078-013	#13 CCV	MV-MegaMainA_00006	CCV	voaWater	20.00	mL	1.000
280-0076078-014	#14 CCV	MV-MegaMainA_00006	CCV	voaWater	20.00	mL	1.000
280-0076078-006	# 6 MB		MB	voaWater	20.00	mL	1.000
280-0076078-007	# 7 LCS	MV-MegaMain B_00003	LCS	voaWater	20.00	mL	1.000
280-0076078-008	# 8 LCSD	MV-MegaMain B_00003	LCSD	voaWater	20.00	mL	1.000
280-0076078-009	# 9 LCS	MV-Supp B_00022	LCS	voaWater	20.00	mL	1.000
280-0076078-010	#10 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0076078-011	#11 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0076078-012	#12 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0076078-015	#15 280-116310-A-4		Client	voaWater	20.00	mL	4.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076078-016	#16 280-116310-A-5		Client	voaWater	20.00	mL	100.0
280-0076078-017	#17 280-116310-A-5		Client	voaWater	20.00	mL	1000.0
280-0076078-018	#18 280-116310-B-6		Client	voaWater	20.00	mL	1.000
280-0076078-019	#19 280-116310-B-7		Client	voaWater	20.00	mL	1.000
280-0076078-020	#20 280-116310-A-8		Client	voaWater	20.00	mL	1.000
280-0076078-021	#21 280-116264-C-10		Client	voaWater	20.00	mL	1.000
280-0076078-022	#22 280-116264-B-11		Client	voaWater	20.00	mL	1.000
280-0076078-023	#23 280-116275-A-5		Client	voaWater	20.00	mL	1.000
280-0076078-024	#24 280-116275-B-6		Client	voaWater	20.00	mL	1.000
280-0076078-025	#25 280-116275-C-7		Client	voaWater	20.00	mL	1.000
280-0076078-026	#26 280-116275-A-8		Client	voaWater	20.00	mL	1.000
280-0076078-027	#27 280-116275-A-9		Client	voaWater	20.00	mL	1.000
280-0076078-028	#28 280-116270-B-2		Client	voaWater	20.00	mL	1.000
280-0076078-029	#29 280-116264-C-8		Client	voaWater	20.00	mL	1.000
280-0076078-030	#30 280-116341-B-1		Client	voaWater	20.00	mL	1.000
280-0076078-031	#31 280-116341-A-2		Client	voaWater	20.00	mL	1.000
280-0076078-032	#32 280-116341-A-2 MS	MV-MegaMain B_00003	MS	voaWater	20.00	mL	1.000
280-0076078-033	#33 280-116341-A-2 MSD	MV-MegaMain B_00003	MSD	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076078-034	#34 280-116341-C-3		Client	voaWater	20.00	mL	1.000
280-0076078-035	#35 280-116341-B-7		Client	voaWater	20.00	mL	1.000
280-0076078-036	#36 280-116341-A-8		Client	voaWater	20.00	mL	1.000
280-0076078-037	#37 280-116292-E-1		Client	voaWater	20.00	mL	1.000
280-0076078-038	#38 CCVC	MV-MegaMainA_00006	CCVC	voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\081618I.S
Comment:
Operator: SEIFERTJ
Data Path: C:\HPCHEM\1\DATA\081618I\
Pre-Seq Cmd:
Post-Seq Cmd:

Main + Supp

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Test Ame... Denver
Instrument: 1-Water
(V-MS-0010 32e/3/624 (Circle)
Purge Volume: 20mL/5mL/5g)
(Circle)
Tune Time: 1934 - 0328
426490

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	100	P9151	BFB	BFB 1934
2 Sample	10	P9152	8260	STD003
3 Sample	11	P9153	8260	STD010
4 Sample	12	P9154	8260	STD020
5 Sample	13	P9155	8260	STD050
6 Sample	14	P9156	8260	ICIS
7 Sample	15	P9157	8260	STD30
8 Sample	16	P9158	8260	STD60
9 Sample	17	P9159	8260	ICV
10 Sample	18	P9160	8260	280-112822-c-2 2mL PH<2
11 Sample	19	P9161	8260	280-112822-c-2 10mL PH<2 F
12 Sample	20	P9162	8260	280-112822-c-2 2ML PH<2
13 Sample	21	P9163	8260	280-112822-b-5 PH<2
14 Sample	22	P9164	8260	280-112822-C-6 5mL PH<2
15 Sample	23	P9165	8260	280-112822-B-7 PH<2
16 Sample	24	P9166	8260	280-112822-c-2 1mL PH<2
17 Sample	25	P9167	8260	BLK
18 Sample	26	P9168	8260	LCS
19 Sample	27	P9169	8260	MB
20 Sample	28	P9170	8260	STD010
21 Sample	29	P9171	8260	STD020
22 Sample	30	P9172	8260	STD050
23 Sample	31	P9173	8260	STD10
24 Sample	32	P9174	8260	STD30
25 Sample	33	P9175	8260	STD60
26 Sample	34	P9176	8260	ICV 0328
27 Sample	35	P9177	8260	280-112822-c-6 5mL PH<2
28 Sample	36	P9178	8260	BLK
29 Sample	37	P9179	8260	PRIMER
30 Sample	38	P9180	8260	PRIMER
31 Sample	39	P9181	8260	STD060

WL 73127

Calib: 33398 M

ICIS: 14

ICV 17

Calib: 33399 S

ICV: 24

0328

* Hexachlorobutadiene E Flag on ICV

1st QC 8/17/18

DC 8/16/18

Last Modified: Fri Aug 17 18:40:03 2018 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 081618pl Worklist Number: 73127
Instrument Name: VMS_P Chrom Method: AQ_VMSP_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20180816-73127.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-ARCH SS A_00098 Amount Added: 0.800, Units: uL
Run Reagent: MV-568718-D_00010 Amount Added: 1.000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073127-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0073127-002	# 2 CCV	MV-2cleve+AVA_00036 MV-Main A_00037 MV-Gas/Ket A_00075	CCV		voaWater	20.00	mL	1.000
280-0073127-003	# 3 CCV	MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0073127-004	# 4 LCS	MV-Main B_00022 MV-SS 2-Cleve_00046 MV-Gas/Ket B_00044	LCS		voaWater	20.00	mL	1.000
280-0073127-005	# 5 LCSD	MV-Main B_00022 MV-SS 2-Cleve_00046 MV-Gas/Ket B_00044	LCSD		voaWater	20.00	mL	1.000
280-0073127-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0073127-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0073127-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0073127-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0073127-010	#10 STD003	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	1	voaWater	20.00	mL	1.000
280-0073127-011	#11 STD010	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	2	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073127-012	#12 STD020	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	3	voaWater	20.00	mL	1.000
280-0073127-013	#13 STD050	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	4	voaWater	20.00	mL	1.000
280-0073127-014	#14 ICIS	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	ICIS	5	voaWater	20.00	mL	1.000
280-0073127-015	#15 STD30	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	6	voaWater	20.00	mL	1.000
280-0073127-016	#16 STD60	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	7	voaWater	20.00	mL	1.000
280-0073127-017	#17 ICV	MV-SS 2-Cleve_00046 MV-Main B_00022 MV-Gas/Ket B_00044 MV-568718-D_00010 MV-ARCH SS A_00102	ICV		voaWater	20.00	mL	1.000
280-0073127-018	#18 STD010	MV-Supp A_00032 MV-568718-D_00010	IC	2	voaWater	20.00	mL	1.000
280-0073127-019	#19 STD020	MV-Supp A_00032 MV-568718-D_00010	IC	3	voaWater	20.00	mL	1.000
280-0073127-020	#20 STD050	MV-Supp A_00032 MV-568718-D_00010	IC	4	voaWater	20.00	mL	1.000
280-0073127-021	#21 STD10	MV-Supp A_00032 MV-568718-D_00010	IC	5	voaWater	20.00	mL	1.000
280-0073127-022	#22 STD30	MV-Supp A_00032 MV-568718-D_00010	IC	6	voaWater	20.00	mL	1.000
280-0073127-023	#23 STD60	MV-Supp A_00032 MV-568718-D_00010	IC	7	voaWater	20.00	mL	1.000
280-0073127-024	#24 ICV	MV-Supp B_00021 MV-568718-D_00010	ICV		voaWater	20.00	mL	1.000
280-0073127-025	#25 280-112822-C-2		Client		voaWater	20.00	mL	2.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073127-026	#26 280-112822-C-2		Client		voaWater	20.00	mL	10.00
280-0073127-029	#29 280-112822-C-2		Client		voaWater	20.00	mL	20.00
280-0073127-027	#27 280-112822-B-5		Client		voaWater	20.00	mL	1.000
280-0073127-028	#28 280-112822-C-6		Client		voaWater	20.00	mL	1.000
280-0073127-030	#30 280-112822-B-7		Client		voaWater	20.00	mL	1.000
280-0073127-031	#31 primer		Client		voaWater	20.00	mL	1.000
280-0073127-032	#32 primer		Client		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\081718I.S
Comment:
Operator: SEIFERTJ
Data Path: C:\HPCHEM\1\DATA\081718I\ Main/GAS/SS/2-Clean

Test America Denver
Instrument:
DV-MS-0010 (8260/624) (Circle)
Purge Volume: (5mL/5g)
Tune Time: 2016-0608 (Circle)
Lims Batch: 426657

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	P9183	BFB	BFB 2016
2	Sample	10	P9184	8260	STD003
3	Sample	11	P9185	8260	STD010
4	Sample	12	P9186	8260	STD020
5	Sample	13	P9187	8260	STD050
6	Sample	14	P9188	8260	ICIS
7	Sample	15	P9189	8260	STD30
8	Sample	16	P9190	8260	STD60
9	Sample	17	P9191	8260	ICV
10	Sample	18	P9192	8260	LCS
11	Sample	19	P9193	8260	MB
12	Sample	20	P9194	8260	ICV RR M use only For this batch X
13	Sample	21	P9195	8260	LCSD
14	Sample	22	P9196	8260	280-113001-c-1 0.1mL PH<2 E
15	Sample	23	P9197	8260	280-113001-c-1 .01mL PH<2
16	Sample	24	P9198	8260	280-113001-b-24 PH<2
17	Sample	25	P9199	8260	280-113001-b-24 MS PH<2
18	Sample	26	P9200	8260	280-113001-b-24 MSD PH<2
19	Sample	27	P9201	8260	280-113001-c-13 PH<2
20	Sample	28	P9202	8260	280-113001-b-14 4mL PH<2 for dilute RR 1X
21	Sample	29	P9203	8260	280-113001-b-14 0.4mL PH<2
22	Sample	30	P9204	8260	280-113001-c-18 0.1mL PH<2 E
23	Sample	31	P9205	8260	280-113001-c-18 .01ML PH<2
24	Sample	32	P9206	8260	280-113001-c-22 PH<2
25	Sample	33	P9207	8260	280-113001-c-23 PH<2
26	Sample	34	P9208	8260	CCVC
27	Sample	35	P9209	8260	280-113001-b-25 PH<2
28	Sample	36	P9210	8260	280-113001-b-26 PH<2
29	Sample	37	P9211	8260	280-113001-b-5 PH<2 E
30	Sample	38	P9212	8260	280-113001-b-5 10mL PH<2 2mL QC
31	Sample	39	P9213	8260	280-112887-d-5 10X SSV
32	Sample	40	P9214	8260	CCVC 0608

WL 73169
2nd Batch 426703

Calib: ~~33404~~

ICIS: 14 ICV: ~~17~~ (17) this batch only

1st JC 8/20/18

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 081718pl Worklist Number: 73169
Instrument Name: VMS_P Chrom Method: AQ_VMSP_8260
Data Directory: \\ChromNA\Denver\ChromData\VMS_P\20180817-73169.b
QC Batching: Disabled Limit Group Batching: Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 426657
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 7 280-108595-A-1	# 7 280-108595-A-1
# 8 280-108595-A-2	# 8 280-108595-A-2
# 9 280-108595-A-3	# 9 280-108595-A-3
#10 STD003	#10 STD003
#11 STD010	#11 STD010
#12 STD020	#12 STD020
#13 STD050	#13 STD050
#14 ICIS	#14 ICIS
#15 STD30	#15 STD30
#16 STD60	#16 STD60
#17 ICV	#17 ICV
#31 ICV	#31 ICV
#18 280-113001-C-1	#18 280-113001-C-1
#19 280-113001-C-1	#19 280-113001-C-1
#20 280-113001-B-24	#20 280-113001-B-24
#21 280-113001-B-24 MS	#21 280-113001-B-24 MS
#22 280-113001-B-24 MSD	#22 280-113001-B-24 MSD
#23 280-113001-C-13	#23 280-113001-C-13
#24 280-113001-B-14	#24 280-113001-B-14
#25 280-113001-B-14	#25 280-113001-B-14
#26 280-113001-C-18	#26 280-113001-C-18
#27 280-113001-C-18	#27 280-113001-C-18
#28 280-113001-C-22	#28 280-113001-C-22
#29 280-113001-C-23	#29 280-113001-C-23
#30 280-113001-B-25	#30 280-113001-B-25
#32 280-113001-B-26	#32 280-113001-B-26
#33 280-113001-B-5	#33 280-113001-B-5
#34 280-113001-B-5	#34 280-113001-B-5
#35 280-112887-D-5	#35 280-112887-D-5
#36 CCVC	#36 CCVC
#37 CCVC	#37 CCVC
#38 priemr	#38 priemr
#39 primer	#39 primer

TestAmerica Laboratories
Worklist Report

Worklist Name: 081718pl
Worklist Number: 73169
Instrument Name: VMS_P
Chrom Method: AQ_VMSP_8260
Purge Volume: 20.00
Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20180817-73169.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-ARCH SS A_00098 Amount Added: 0.800, Units: uL
Run Reagent: MV-568718-D_00010 Amount Added: 1.000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073169-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0073169-002	# 2 CCV	MV-2cleve+AVA_00036 MV-Main A_00037 MV-Gas/Ket A_00075	CCV		voaWater	20.00	mL	1.000
280-0073169-003	# 3 CCV	MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0073169-004	# 4 LCS	MV-Main B_00022 MV-SS 2-Cleve_00046 MV-Gas/Ket B_00044	LCS		voaWater	20.00	mL	1.000
280-0073169-005	# 5 LCSD	MV-Main B_00022 MV-SS 2-Cleve_00046 MV-Gas/Ket B_00044	LCSD		voaWater	20.00	mL	1.000
280-0073169-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0073169-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0073169-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0073169-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0073169-010	#10 STD003	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	1	voaWater	20.00	mL	1.000
280-0073169-011	#11 STD010	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	2	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073169-012	#12 STD020	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	3	voaWater	20.00	mL	1.000
280-0073169-013	#13 STD050	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	4	voaWater	20.00	mL	1.000
280-0073169-014	#14 ICIS	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	ICIS	5	voaWater	20.00	mL	1.000
280-0073169-015	#15 STD30	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	6	voaWater	20.00	mL	1.000
280-0073169-016	#16 STD60	MV-Gas/Ket A_00077 MV-Main A_00037 MV-2cleve+AVA_00036 MV-568718-D_00010 MV-ARCH SS A_00102	IC	7	voaWater	20.00	mL	1.000
280-0073169-017	#17 ICV	MV-SS 2-Cleve_00046 MV-Main B_00022 MV-Gas/Ket B_00044 MV-568718-D_00010 MV-ARCH SS A_00102	ICV		voaWater	20.00	mL	1.000
280-0073169-031	#31 ICV	MV-Main B_00022 MV-568718-D_00010	ICV		voaWater	20.00	mL	1.000
280-0073169-018	#18 280-113001-C-1		Client		voaWater	20.00	mL	200.0
280-0073169-019	#19 280-113001-C-1		Client		voaWater	20.00	mL	2000.0
280-0073169-020	#20 280-113001-B-24		Client		voaWater	20.00	mL	1.000
280-0073169-021	#21 280-113001-B-24 MS	MV-Gas/Ket B_00044 MV-SS 2-Cleve_00046 MV-Main B_00022	MS		voaWater	20.00	mL	1.000
280-0073169-022	#22 280-113001-B-24 MSD	MV-Gas/Ket B_00044 MV-SS 2-Cleve_00046 MV-Main B_00022	MSD		voaWater	20.00	mL	1.000
280-0073169-023	#23 280-113001-C-13		Client		voaWater	20.00	mL	1.000
280-0073169-024	#24 280-113001-B-14		Client		voaWater	20.00	mL	5.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0073169-025	#25 280-113001-B-14		Client		voaWater	20.00	mL	50.00
280-0073169-026	#26 280-113001-C-18		Client		voaWater	20.00	mL	200.0
280-0073169-027	#27 280-113001-C-18		Client		voaWater	20.00	mL	2000.0
280-0073169-028	#28 280-113001-C-22		Client		voaWater	20.00	mL	1.000
280-0073169-029	#29 280-113001-C-23		Client		voaWater	20.00	mL	1.000
280-0073169-030	#30 280-113001-B-25		Client		voaWater	20.00	mL	1.000
280-0073169-032	#32 280-113001-B-26		Client		voaWater	20.00	mL	1.000
280-0073169-033	#33 280-113001-B-5		Client		voaWater	20.00	mL	1.000
280-0073169-034	#34 280-113001-B-5		Client		voaWater	20.00	mL	10.00
280-0073169-035	#35 280-112887-D-5		Client		voaWater	20.00	mL	10.00
280-0073169-036	#36 CCVC	MV-Main A_00037 MV-Gas/Ket A_00077 MV-2cleve+AVA_00036	CCVC		voaWater	20.00	mL	1.000
280-0073169-037	#37 CCVC	MV-Main A_00037 MV-Gas/Ket A_00077 MV-2cleve+AVA_00036	CCVC		voaWater	20.00	mL	1.000
280-0073169-038	#38 priemr		Client		voaWater	20.00	mL	1.000
280-0073169-039	#39 primer		Client		voaWater	20.00	mL	1.000

Sample Request Form: 49583

den_msvoa_totalbacklog 8/17/2018 7:32:15 PM Assigned to:Seifert, Judy L

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-113001-1	18-GW1044 PH<2	.1/.01 200X 2000X	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-5	18-GW1014 PH<2	2/20	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-9	18-GW1018 PH<2	2/20	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-9MS	18-GW1018 PH<2	20	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-9MSD	18-GW1018 PH<2	20	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-13	18-GW1022 PH<2	1x 20mL	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-14	18-GW1023 PH<2 4mL	5/50X	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-18	18-GW1039 PH<2	0.1/.01 200X/2000X	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-22	18-PP10 PH<2	1x 20	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-23	18-PP11 PH<2	1x 20	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge PH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									

Sample Request Form: 49583

den_msvoa_totalbacklog 8/17/2018 7:32:15 PM Assigned to:Seifert, Judy L

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-113001-24	18-PP12 pH<2	40	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge pH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-24MS	18-PP12 pH<2	40	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge pH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-24MSD	18-PP12 pH<2	40	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge pH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-25	18-PP13 pH<2	40	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge pH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									
280-113001-26	18-PP14 pH<2	40	8260B_DOD5	8260B_DOD5	08/20 23:59	08/24/18	PJM	OH	MS-Strge pH<2	Level 1 radioactive
M	Q5.1_SeeFluorB&W QAS_LCSD_DIL3_RunBatchQC on Smpl from this job for ALL analytical batches.									

Sequence Name: C:\HPCHEM\1\SEQUENCE\102218pm.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\102218pm\
Pre-Seq Cmd:
Post-Seq Cmd:

Main/Surr - Water

Test America Denver
Instrument: OV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g)

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Tune Time: 21:54 - 01:12 (Circle)
Lims Batch: 434433

WL 75358

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	100	P1523	BFB	BFB
2 Sample	100	P1524	BFB	BFB
3 Sample	100	P1525	BFB	BFB
4 Sample	10	P1526	8260	Blank
5 Sample	11	P1527	8260	CCV
6 Sample	12	P1528	8260	CCV
7 Sample	100	P1529	BFB	BFB
8 Sample	100	P1530	BFB	BFB
9 Sample	10	P1531	8260	Blank
10 Sample	11	P1532	8260	STD005
11 Sample	12	P1533	8260	STD01
12 Sample	13	P1534	8260	STD02
13 Sample	14	P1535	8260	STD05
14 Sample	15	P1536	8260	ICIS
15 Sample	16	P1537	8260	STD25
16 Sample	17	P1538	8260	STD60
17 Sample	18	P1539	8260	Blank
18 Sample	19	P1540	8260	ICV
19 Sample	20	P1541	8260	Blank
20 Sample	21	P1542	8260	280-115153-E-1 DQR
21 Sample	22	P1543	8260	280-115153-E-2 DQR
22 Sample	23	P1544	8260	280-115153-E-6 DQR

restart: 21:54

Calib: 34114

ICIS: 14 ICV: 17

01:12

DNR

10/23/18

RSN 10/23/18

Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b

Worklist Name:	102218pm	Worklist Num:	75358
Instrument:	VMS_P	Method:	AQ_VMSP_8260
Analysis Type:	VOA	Creator:	Newcome, Robin S
Inj Volume:	20	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Disabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 434433
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 7 280-108595-A-1	# 7 280-108595-A-1
# 8 280-108595-A-2	# 8 280-108595-A-2
# 9 280-108595-A-3	# 9 280-108595-A-3
# 10 STD005	# 10 STD005
# 11 STD01	# 11 STD01
# 12 STD02	# 12 STD02
# 13 STD05	# 13 STD05
# 14 ICIS	# 14 ICIS
# 15 STD25	# 15 STD25
# 16 STD60	# 16 STD60
# 17 ICV	# 17 ICV
# 18 280-115153-E-1	# 18 280-115153-E-1
# 19 280-115153-E-2	# 19 280-115153-E-2
# 20 280-115153-E-6	# 20 280-115153-E-6
# 21 primer	# 21 primer
# 22 primer	# 22 primer

TestAmerica Laboratories
Worklist Report

Worklist Name: 102218pm
Instrument Name: VMS_P
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_P\20181022-75358.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_P
Run Reagent: MV-568718-D_00010
Run Reagent: MV-ARCH SS A_00107

Worklist Number: 75358
Chrom Method: AQ_VMSP_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075358-001	# 1 BFB	MV-BFB_00027	BFB		voaWater	1.000	uL	1.000
280-0075358-002	# 2 CCV	MV-568718-D_00010 MV-MegaMainA_00002	CCV		voaWater	20.00	mL	1.000
280-0075358-003	# 3 CCV	MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0075358-004	# 4 LCS	MV-MegaMain B_00002	LCS		voaWater	20.00	mL	1.000
280-0075358-005	# 5 LCSD	MV-MegaMain B_00002	LCSD		voaWater	20.00	mL	1.000
280-0075358-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0075358-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0075358-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0075358-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0075358-010	#10 STD005	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	1	voaWater	20.00	mL	1.000
280-0075358-011	#11 STD01	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	2	voaWater	20.00	mL	1.000
280-0075358-012	#12 STD02	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	3	voaWater	20.00	mL	1.000
280-0075358-013	#13 STD05	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075358-014	#14 ICIS	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	ICIS	5	voaWater	20.00	mL	1.000
280-0075358-015	#15 STD25	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	6	voaWater	20.00	mL	1.000
280-0075358-016	#16 STD60	MV-568718-D_00010 MV-MegaMainA_00002 MV-ARCH SS A_00107	IC	7	voaWater	20.00	mL	1.000
280-0075358-017	#17 ICV	MV-568718-D_00010 MV-MegaMain B_00002 MV-MainBaddon_00001 MV-ARCH SS A_00107	ICV		voaWater	20.00	mL	1.000
280-0075358-018	#18 280-115153-E-1		Client		voaWater	20.00	mL	1.000
280-0075358-019	#19 280-115153-E-2		Client		voaWater	20.00	mL	1.000
280-0075358-020	#20 280-115153-E-6		Client		voaWater	20.00	mL	1.000
280-0075358-021	#21 primer		Client		voaWater	20.00	mL	1.000
280-0075358-022	#22 primer		Client		voaWater	20.00	mL	1.000

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 426490 Batch Start Date: 08/16/18 19:34 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-BFB 00026	MV-Supp B 00021	
BFB 280-426490/1		8260B		1 uL	1 uL		1 uL		
ICV 280-426490/24		8260B		20 mL	20 mL	1 uL		5 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 434433 Batch Start Date: 10/22/18 21:54 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00107	MV-BFB 00027	MV-MainBaddon 00001
BFB 280-434433/1		8260B		1 uL	1 uL			1 uL	
STD005 280-434433/10 IC		8260B		20 mL	20 mL	1 uL	0.04 uL		
STD01 280-434433/11 IC		8260B		20 mL	20 mL	1 uL	0.08 uL		
STD02 280-434433/12 IC		8260B		20 mL	20 mL	1 uL	0.16 uL		
STD05 280-434433/13 IC		8260B		20 mL	20 mL	1 uL	0.4 uL		
ICIS 280-434433/14		8260B		20 mL	20 mL	1 uL	0.8 uL		
STD25 280-434433/15 IC		8260B		20 mL	20 mL	1 uL	2 uL		
STD60 280-434433/16 IC		8260B		20 mL	20 mL	1 uL	4 uL		
ICV 280-434433/17		8260B		20 mL	20 mL	1 uL	0.8 uL		4 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
BFB 280-434433/1		8260B							
STD005 280-434433/10 IC		8260B			0.2 uL				
STD01 280-434433/11 IC		8260B			0.4 uL				
STD02 280-434433/12 IC		8260B			0.8 uL				
STD05 280-434433/13 IC		8260B			2 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 434433 Batch Start Date: 10/22/18 21:54 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
ICIS 280-434433/14		8260B			4 uL				
STD25 280-434433/15 IC		8260B			10 uL				
STD60 280-434433/16 IC		8260B			24 uL				
ICV 280-434433/17		8260B		4 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436980 Batch Start Date: 11/09/18 08:31 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00107	MV-BFB 00027	MV-MegaMain B 00003
BFB 280-436980/1		8260B		1 uL	1 uL			1 uL	
CCV 280-436980/2		8260B		20 mL	20 mL	1 uL	0.8 uL		
CCV 280-436980/3		8260B		20 mL	20 mL	1 uL	0.8 uL		
MB 280-436980/4		8260B		20 mL	20 mL	1 uL	0.8 uL		
LCS 280-436980/5		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
LCSD 280-436980/6		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
280-116270-K-1	FWGmw-018-181001-GW	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116270-N-9	FWGmw-020-181001-GW	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
CCVC 280-436980/39		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00006	MV-Supp A 00031				
BFB 280-436980/1		8260B							
CCV 280-436980/2		8260B		4 uL					
CCV 280-436980/3		8260B			5 uL				
MB 280-436980/4		8260B							
LCS 280-436980/5		8260B							
LCSD 280-436980/6		8260B							
280-116270-K-1	FWGmw-018-181001-GW	8260B	T						
280-116270-N-9	FWGmw-020-181001-GW	8260B	T						
CCVC 280-436980/39		8260B		4 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436980 Batch Start Date: 11/09/18 08:31 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 437213 Batch Start Date: 11/12/18 10:19 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00010	MV-ARCH SS A 00107	MV-BFB 00027	MV-Gas/Ket B 00046
BFB 280-437213/1		8260B		1 uL	1 uL			1 uL	
CCV 280-437213/2		8260B		20 mL	20 mL	1 uL	0.8 uL		4 uL
CCV 280-437213/3		8260B		20 mL	20 mL	1 uL			
MB 280-437213/6		8260B		20 mL	20 mL	1 uL	0.8 uL		
LCS 280-437213/7		8260B		20 mL	20 mL	1 uL	0.8 uL		
CCV 280-437213/14		8260B		20 mL	20 mL	1 uL			
280-116270-B-2	FWGTB-181006 TB	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
CCVC 280-437213/38		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00003	MV-MegaMainA 00006	MV-Supp A 00031			
BFB 280-437213/1		8260B							
CCV 280-437213/2		8260B							
CCV 280-437213/3		8260B				5 uL			
MB 280-437213/6		8260B							
LCS 280-437213/7		8260B		2 uL					
CCV 280-437213/14		8260B			4 uL				
280-116270-B-2	FWGTB-181006 TB	8260B	T						
CCVC 280-437213/38		8260B			5 uL				

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8270D_DOD5

Semivolatile Organic Compounds (GC/MS)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rxi-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #
FWGmw-018-181001-GW	280-116270-1	86	83	88	82	85	88
FWGmw-016-181001-GW	280-116270-8	84	85	84	77	76	90
FWGmw-020-181001-GW	280-116270-9	80	82	82	77	79	97
LL3mw-244-181001-GW	280-116270-12	82	85	84	78	78	95
SCFmw-004-181001-GW	280-116270-13	86	88	85	83	85	94
LL1mw-087-181001-GW	280-116270-14	89	89	90	85	84	97
	MB 280-435687/1-A	87	90	87	82	84	95
	LCS 280-435687/2-A	89	90	92	89	95	86

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	19-119
PHL = Phenol-d5 (Surr)	10-115
NBZ = Nitrobenzene-d5 (Surr)	44-120
FBP = 2-Fluorobiphenyl	44-119
TBP = 2,4,6-Tribromophenol (Surr)	43-140
TPHL = Terphenyl-d14 (Surr)	50-134

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27532.D

Lab ID: LCS 280-435687/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,2,4-Trichlorobenzene	80.0	66.9	84	29-116	
1,2-Dichlorobenzene	80.0	68.3	85	32-111	
1,3-Dichlorobenzene	80.0	66.7	83	28-110	
1,4-Dichlorobenzene	80.0	67.3	84	29-112	
1,4-Dioxane	80.0	58.5	73	47-120	
2,4,5-Trichlorophenol	80.0	73.8	92	53-123	
2,4,6-Trichlorophenol	80.0	78.7	98	50-125	
2,4-Dichlorophenol	80.0	71.5	89	47-121	
2,4-Dimethylphenol	80.0	62.3	78	31-124	
2,4-Dinitrophenol	160	146	91	23-143	
2,4-Dinitrotoluene	80.0	76.7	96	57-128	
2,6-Dinitrotoluene	80.0	75.2	94	57-124	
2-Chloronaphthalene	80.0	70.2	88	40-116	
2-Chlorophenol	80.0	69.8	87	38-117	
2-Methylphenol	80.0	70.1	88	30-117	
2-Nitroaniline	80.0	74.3	93	55-127	
2-Nitrophenol	80.0	72.7	91	47-123	
3 & 4 Methylphenol	80.0	71.6	90	29-110	
3,3'-Dichlorobenzidine	160	139	87	27-129	
3-Nitroaniline	80.0	60.3	75	41-128	
4-Bromophenyl phenyl ether	80.0	71.9	90	55-124	
4-Chloro-3-methylphenol	80.0	71.2	89	52-119	
4-Chloroaniline	80.0	56.4	70	33-117	
4-Chlorophenyl phenyl ether	80.0	72.2	90	53-121	
4-Nitroaniline	80.0	72.4	91	70-120	
4-Nitrophenol	160	149	93	59-129	
Benzoic acid	80.0	56.1 J	70	41-120	
Benzyl alcohol	80.0	72.7	91	31-112	
bis (2-chloroisopropyl) ether	80.0	75.5	94	37-130	
Bis(2-chloroethoxy)methane	80.0	72.6	91	48-120	
Bis(2-chloroethyl)ether	80.0	77.2	96	43-118	
Bis(2-ethylhexyl) phthalate	80.0	70.7	88	55-135	
Butyl benzyl phthalate	80.0	74.1	93	53-134	
Carbazole	80.0	73.6	92	60-122	
Dibenzofuran	80.0	72.5	91	53-118	
Diethyl phthalate	80.0	72.8	91	56-125	
Dimethyl phthalate	80.0	74.1	93	45-127	
Di-n-butyl phthalate	80.0	74.2	93	59-127	
Di-n-octyl phthalate	80.0	67.6	84	51-140	
Hexachlorobenzene	80.0	73.8	92	53-125	
Hexachlorobutadiene	80.0	68.1	85	22-124	
Hexachloroethane	80.0	65.6	82	21-115	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27532.D

Lab ID: LCS 280-435687/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isophorone	80.0	70.5	88	42-124	
Nitrobenzene	80.0	72.2	90	45-121	
N-Nitrosodi-n-propylamine	80.0	69.4	87	49-119	
N-Nitrosodiphenylamine	80.0	74.9	94	51-123	
Pentachlorophenol	160	144	90	35-138	
Phenol	80.0	70.6	88	61-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: K27531.D Lab Sample ID: MB 280-435687/1-A

Matrix: Water Date Extracted: 10/31/2018 10:52

Instrument ID: SMS_K Date Analyzed: 11/13/2018 12:09

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-435687/2-A	K27532.D	11/13/2018 12:38
FWGmw-018-181001-GW	280-116270-1	K27541.D	11/13/2018 17:00
FWGmw-016-181001-GW	280-116270-8	K27542.D	11/13/2018 17:29
FWGmw-020-181001-GW	280-116270-9	K27543.D	11/13/2018 17:58
LL3mw-244-181001-GW	280-116270-12	K27544.D	11/13/2018 18:27
SCFmw-004-181001-GW	280-116270-13	K27545.D	11/13/2018 18:56
LL1mw-087-181001-GW	280-116270-14	K27546.D	11/13/2018 19:25

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: K27515.D DFTPP Injection Date: 11/12/2018

Instrument ID: SMS_K DFTPP Injection Time: 14:10

Analysis Batch No.: 437249

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	53.5	
68	Less than 2.0 % of mass 69	0.4	(1.0) 1
69	Mass 69 relative abundance	40.7	
70	Less than 2.0 % of mass 69	0.4	(1.1) 1
127	40.0 - 60.0 % of mass 198	48.5	
197	Less than 1.0 % of mass 198	0.4	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	7.2	
275	10.0 - 30.0 % of mass 198	21.2	
365	Greater than 1.0 % of mass 198	2.0	
441	Present but less than mass 443	7.8	(83.6) 3
442	Greater than 40.0 % of mass 198	51.0	
443	17.0 - 23.0 % of mass 442	9.3	(18.2) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 280-437249/4	K27517.D	11/12/2018	14:56
	STD004 280-437249/5	K27518.D	11/12/2018	15:25
	STD010 280-437249/6	K27519.D	11/12/2018	15:54
	STD020 280-437249/7	K27520.D	11/12/2018	16:23
	STD050 280-437249/8	K27521.D	11/12/2018	16:52
	STD120 280-437249/9	K27522.D	11/12/2018	17:21
	STD160 280-437249/10	K27523.D	11/12/2018	17:50
	STD200 280-437249/11	K27524.D	11/12/2018	18:19
	ICV 280-437249/12	K27525.D	11/12/2018	18:48
	ICV 280-437249/13	K27526.D	11/12/2018	19:17
	ICV 280-437249/14	K27527.D	11/12/2018	19:45

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: K27529.D DFTPP Injection Date: 11/13/2018

Instrument ID: SMS_K DFTPP Injection Time: 11:26

Analysis Batch No.: 437389

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	49.5	
68	Less than 2.0 % of mass 69	0.5	(1.2) 1
69	Mass 69 relative abundance	38.5	
70	Less than 2.0 % of mass 69	0.2	(0.6) 1
127	40.0 - 60.0 % of mass 198	48.7	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.9	
275	10.0 - 30.0 % of mass 198	20.7	
365	Greater than 1.0 % of mass 198	1.9	
441	Present but less than mass 443	8.2	(72.1) 3
442	Greater than 40.0 % of mass 198	57.2	
443	17.0 - 23.0 % of mass 442	11.3	(19.8) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-437389/3	K27530.D	11/13/2018	11:40
	MB 280-435687/1-A	K27531.D	11/13/2018	12:09
	LCS 280-435687/2-A	K27532.D	11/13/2018	12:38
FWGmw-018-181001-GW	280-116270-1	K27541.D	11/13/2018	17:00
FWGmw-016-181001-GW	280-116270-8	K27542.D	11/13/2018	17:29
FWGmw-020-181001-GW	280-116270-9	K27543.D	11/13/2018	17:58
LL3mw-244-181001-GW	280-116270-12	K27544.D	11/13/2018	18:27
SCFmw-004-181001-GW	280-116270-13	K27545.D	11/13/2018	18:56
LL1mw-087-181001-GW	280-116270-14	K27546.D	11/13/2018	19:25
	CCVC 280-437389/51	K27553.D	11/13/2018	22:48

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: ICIS 280-437249/4 Date Analyzed: 11/12/2018 14:56

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): K27517.D Heated Purge: (Y/N) N

Calibration ID: 34294

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		166997	4.39	665671	5.61	304707	7.35
UPPER LIMIT		333994	4.89	1331342	6.11	609414	7.85
LOWER LIMIT		83499	3.89	332836	5.11	152354	6.85
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437249/12		151819	4.39	599282	5.61	289647	7.35
ICV 280-437249/13		146718	4.39	596980	5.61	303592	7.34
ICV 280-437249/14		156641	4.39	625209	5.61	319777	7.34
CCV 280-437389/3		172345	4.39	676572	5.61	314700	7.35
MB 280-435687/1-A		159026	4.39	651469	5.61	328598	7.34
LCS 280-435687/2-A		166817	4.39	665629	5.61	310229	7.34
280-116270-1	FWGmw-018-181001-GW	147457	4.39	601230	5.61	307427	7.34
280-116270-8	FWGmw-016-181001-GW	141432	4.39	579255	5.61	300430	7.34
280-116270-9	FWGmw-020-181001-GW	146769	4.39	588797	5.61	304870	7.34
280-116270-12	LL3mw-244-181001-GW	154493	4.39	633446	5.61	329259	7.34
280-116270-13	SCFmw-004-181001-GW	163023	4.39	661515	5.61	338648	7.34
280-116270-14	LL1mw-087-181001-GW	158345	4.39	635168	5.61	321443	7.34
CCVC 280-437389/51		166734	4.39	648439	5.61	316571	7.34

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: ICIS 280-437249/4 Date Analyzed: 11/12/2018 14:56

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): K27517.D Heated Purge: (Y/N) N

Calibration ID: 34294

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		453315	8.82	327432	12.59	278577	16.30
UPPER LIMIT		906630	9.32	654864	13.09	557154	16.80
LOWER LIMIT		226658	8.32	163716	12.09	139289	15.80
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437249/12		435099	8.82	321061	12.58	278701	16.30
ICV 280-437249/13		481837	8.82	316595	12.58	246216	16.30
ICV 280-437249/14		503254	8.82	305863	12.58	225829	16.30
CCV 280-437389/3		465028	8.82	344680	12.59	287747	16.30
MB 280-435687/1-A		525607	8.82	335728	12.58	253792	16.30
LCS 280-435687/2-A		471586	8.82	336927	12.58	280288	16.30
280-116270-1	FWGmw-018-181001-GW	509734	8.82	329890	12.58	248912	16.30
280-116270-8	FWGmw-016-181001-GW	483368	8.82	315801	12.58	239964	16.30
280-116270-9	FWGmw-020-181001-GW	504093	8.82	311215	12.58	226026	16.30
280-116270-12	LL3mw-244-181001-GW	533549	8.82	327711	12.58	244157	16.30
280-116270-13	SCFmw-004-181001-GW	538677	8.82	347862	12.58	267101	16.30
280-116270-14	LL1mw-087-181001-GW	526887	8.82	324572	12.58	238277	16.30
CCVC 280-437389/51		484103	8.82	352054	12.58	292305	16.30

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: K27541.D

Analysis Method: 8270D | Date Collected: 10/26/2018 09:30

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 934.5(mL) | Date Analyzed: 11/13/2018 17:00

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.30
95-50-1	1,2-Dichlorobenzene	0.54	U	11	0.54	0.25
541-73-1	1,3-Dichlorobenzene	1.1	U	11	1.1	0.32
106-46-7	1,4-Dichlorobenzene	1.1	U	11	1.1	0.34
123-91-1	1,4-Dioxane	4.7	U	19	4.7	1.8
95-95-4	2,4,5-Trichlorophenol	1.1	U	21	1.1	0.48
88-06-2	2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31
120-83-2	2,4-Dichlorophenol	2.1	U	11	2.1	0.68
105-67-9	2,4-Dimethylphenol	2.1	U	11	2.1	0.62
51-28-5	2,4-Dinitrophenol	32	U	86	32	11
121-14-2	2,4-Dinitrotoluene	4.7	U	21	4.7	1.8
606-20-2	2,6-Dinitrotoluene	4.7	U	21	4.7	2.0
91-58-7	2-Chloronaphthalene	1.1	U	11	1.1	0.28
95-57-8	2-Chlorophenol	4.7	U	11	4.7	2.1
95-48-7	2-Methylphenol	2.1	U	11	2.1	1.0
88-74-4	2-Nitroaniline	4.7	U	54	4.7	1.9
88-75-5	2-Nitrophenol	1.1	U	21	1.1	0.42
15831-10-4	3 & 4 Methylphenol	0.54	U	21	0.54	0.27
91-94-1	3,3'-Dichlorobenzidine	4.7	U	54	4.7	2.1
99-09-2	3-Nitroaniline	4.7	U	54	4.7	2.1
534-52-1	4,6-Dinitro-2-methylphenol	9.4	U	86	9.4	4.3
101-55-3	4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.46
59-50-7	4-Chloro-3-methylphenol	5.4	U	21	5.4	2.6
106-47-8	4-Chloroaniline	4.7	U	27	4.7	2.3
7005-72-3	4-Chlorophenyl phenyl ether	4.7	U	11	4.7	1.8
100-01-6	4-Nitroaniline	4.7	U	54	4.7	2.1
100-02-7	4-Nitrophenol	4.3	U	54	4.3	1.3
65-85-0	Benzoic acid	32	U	86	32	11
100-51-6	Benzyl alcohol	0.54	U	27	0.54	0.25
108-60-1	bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.30
111-91-1	Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0
111-44-4	Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.44
117-81-7	Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.60
85-68-7	Butyl benzyl phthalate	2.1	U	21	2.1	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: K27541.D

Analysis Method: 8270D | Date Collected: 10/26/2018 09:30

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 934.5(mL) | Date Analyzed: 11/13/2018 17:00

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.1	U	11	1.1	0.46
132-64-9	Dibenzofuran	1.1	U	11	1.1	0.31
84-66-2	Diethyl phthalate	1.1	U	21	1.1	0.41
131-11-3	Dimethyl phthalate	0.54	U	21	0.54	0.22
84-74-2	Di-n-butyl phthalate	4.7	U	21	4.7	1.2
117-84-0	Di-n-octyl phthalate	1.1	U	21	1.1	0.37
118-74-1	Hexachlorobenzene	2.1	U	11	2.1	0.71
87-68-3	Hexachlorobutadiene	11	U	32	11	3.5
77-47-4	Hexachlorocyclopentadiene	32	U	54	32	11
67-72-1	Hexachloroethane	4.7	U	11	4.7	2.2
78-59-1	Isophorone	0.54	U	11	0.54	0.22
98-95-3	Nitrobenzene	2.1	U	21	2.1	0.87
621-64-7	N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37
86-30-6	N-Nitrosodiphenylamine	1.1	U	11	1.1	0.47
87-86-5	Pentachlorophenol	64	U	86	64	21
108-95-2	Phenol	4.7	U	11	4.7	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	85		43-140
321-60-8	2-Fluorobiphenyl	82		44-119
367-12-4	2-Fluorophenol (Surr)	86		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	88		44-120
4165-62-2	Phenol-d5 (Surr)	83		10-115
1718-51-0	Terphenyl-d14 (Surr)	88		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27541.D
Lims ID: 280-116270-C-1-A
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 17:00:30 ALS Bottle#: 13 Worklist Smp#: 39
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-C-1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:50:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	147457	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	601230	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	307427	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	509734	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	329890	40.0	
* 6 Perylene-d12	264	16.298	16.303	-0.005	97	248912	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	468869	86.1	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	518170	83.2	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	469627	87.9	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	886394	82.3	
$ 12 2,4,6-Tribromophenol	330	8.125	8.130	-0.005	90	88243	85.5	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	100	728429	88.5	
19 1,4-Dioxane	88		1.785				ND	
32 Phenol	94		4.041				ND	
36 Bis(2-chloroethyl)ether	93		4.117				ND	
39 2-Chlorophenol	128		4.194				ND	
40 1,3-Dichlorobenzene	146		4.335				ND	
42 1,4-Dichlorobenzene	146		4.405				ND	
43 Benzyl alcohol	108		4.505				ND	
44 1,2-Dichlorobenzene	146		4.552				ND	
45 2-Methylphenol	108		4.611				ND	
46 2,2'-oxybis[1-chloropropan	45		4.634				ND	
49 3 & 4 Methylphenol	108		4.752				ND	
52 N-Nitrosodi-n-propylamine	70		4.752				ND	
58 Hexachloroethane	117		4.875				ND	
59 Nitrobenzene	77		4.922				ND	
63 Isophorone	82		5.151				ND	
64 2-Nitrophenol	139		5.234				ND	
65 2,4-Dimethylphenol	107		5.269				ND	
68 Benzoic acid	105		5.381				ND	
69 Bis(2-chloroethoxy)methane	93		5.351				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
74 2,4-Dichlorophenol	162		5.469				ND	
76 1,2,4-Trichlorobenzene	180		5.557				ND	
80 4-Chloroaniline	127		5.674				ND	
83 Hexachlorobutadiene	225		5.762				ND	
89 4-Chloro-3-methylphenol	107		6.150				ND	
97 Hexachlorocyclopentadiene	237		6.479				ND	
100 2,4,6-Trichlorophenol	196		6.591				ND	
102 2,4,5-Trichlorophenol	196		6.626				ND	
106 2-Chloronaphthalene	162		6.791				ND	
108 2-Nitroaniline	65		6.885				ND	
111 Dimethyl phthalate	163		7.061				ND	
113 2,6-Dinitrotoluene	165		7.120				ND	
115 3-Nitroaniline	138		7.290				ND	
118 2,4-Dinitrophenol	184		7.390				ND	
119 4-Nitrophenol	109		7.461				ND	
122 2,4-Dinitrotoluene	165		7.519				ND	
123 Dibenzofuran	168		7.549				ND	
130 Diethyl phthalate	149		7.766				ND	
134 4-Chlorophenyl phenyl ethe	204		7.884				ND	
138 4-Nitroaniline	138		7.895				ND	
139 4,6-Dinitro-2-methylphenol	198		7.931				ND	
141 N-Nitrosodiphenylamine	169		7.995				ND	
156 4-Bromophenyl phenyl ether	248		8.371				ND	
157 Hexachlorobenzene	284		8.454				ND	
163 Pentachlorophenol	266		8.642				ND	
170 Carbazole	167		9.047				ND	
173 Di-n-butyl phthalate	149		9.388				ND	
190 Butyl benzyl phthalate	149		11.474				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.754				ND	
197 3,3'-Dichlorobenzidine	252		12.531				ND	
201 Di-n-octyl phthalate	149		14.464				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

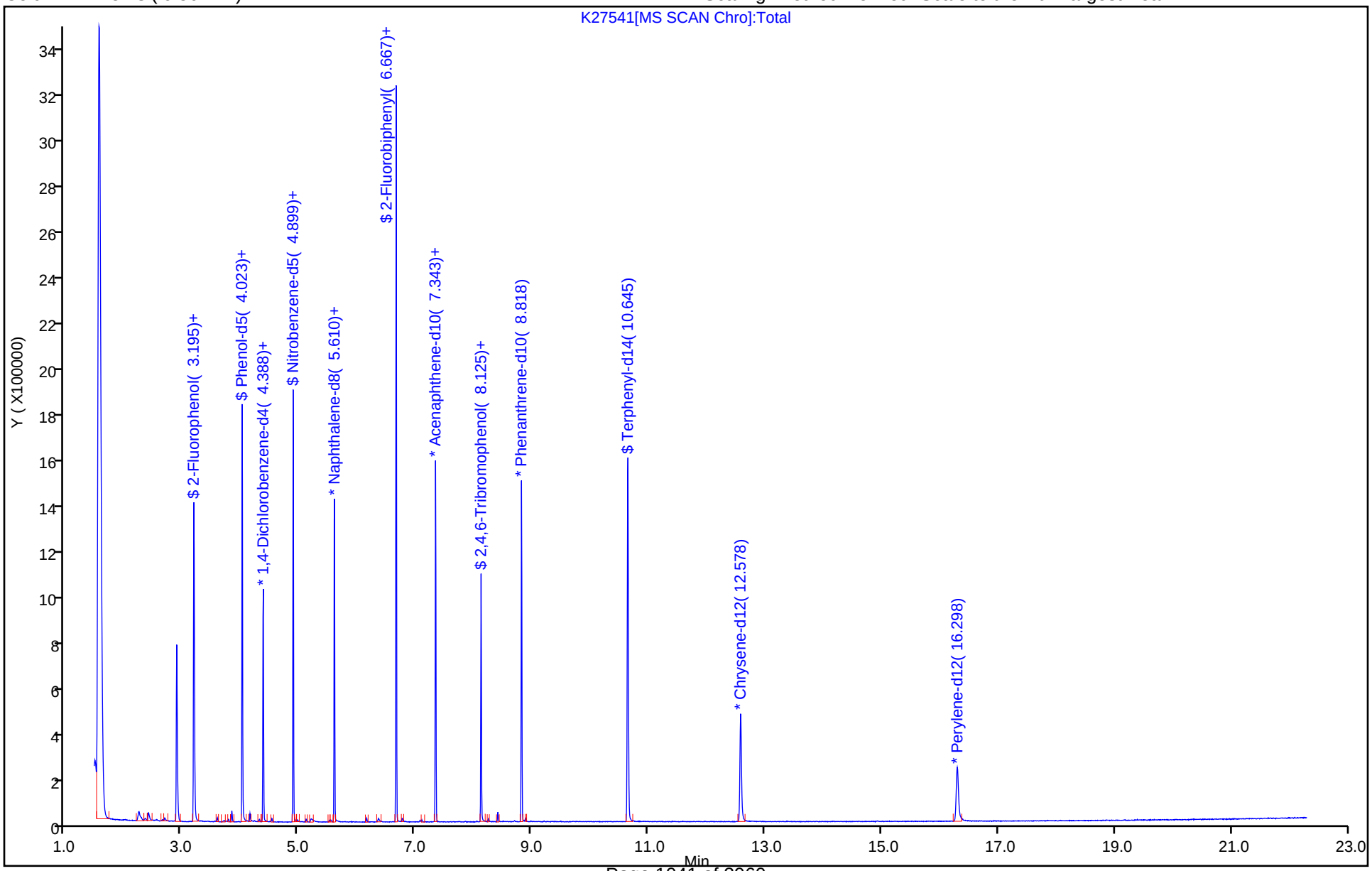
Report Date: 14-Nov-2018 09:58:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27541.D

Injection Date:	13-Nov-2018 17:00:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116270-C-1-A	Lab Sample ID:	280-116270-1	Worklist Smp#:	39
Client ID:	FWGmw-018-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27541.D
Lims ID: 280-116270-C-1-A
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 17:00:30 ALS Bottle#: 13 Worklist Smp#: 39
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-C-1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:50:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	86.1	86.12
$ 8 Phenol-d5	100.0	83.2	83.20
$ 9 Nitrobenzene-d5	100.0	87.9	87.89
$ 11 2-Fluorobiphenyl	100.0	82.3	82.30
$ 12 2,4,6-Tribromophenol	100.0	85.5	85.49
$ 13 Terphenyl-d14	100.0	88.5	88.48

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-016-181001-GW | Lab Sample ID: 280-116270-8

Matrix: Water | Lab File ID: K27542.D

Analysis Method: 8270D | Date Collected: 10/25/2018 15:40

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 901.6(mL) | Date Analyzed: 11/13/2018 17:29

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
117-81-7	Bis(2-ethylhexyl) phthalate	2.2	U	11	2.2	0.62
85-68-7	Butyl benzyl phthalate	2.2	U	22	2.2	1.1
84-66-2	Diethyl phthalate	1.1	U	22	1.1	0.42
131-11-3	Dimethyl phthalate	0.55	U	22	0.55	0.23
84-74-2	Di-n-butyl phthalate	4.9	U	22	4.9	1.3
117-84-0	Di-n-octyl phthalate	1.1	U	22	1.1	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	76		43-140
321-60-8	2-Fluorobiphenyl	77		44-119
367-12-4	2-Fluorophenol (Surr)	84		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	84		44-120
4165-62-2	Phenol-d5 (Surr)	85		10-115
1718-51-0	Terphenyl-d14 (Surr)	90		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27542.D
Lims ID: 280-116270-A-8-A
Client ID: FWGmw-016-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 17:29:30 ALS Bottle#: 14 Worklist Smp#: 40
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-A-8-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	141432	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	579255	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	93	300430	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	483368	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	315801	40.0	
* 6 Perylene-d12	264	16.298	16.303	-0.005	98	239964	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	440384	84.3	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	505057	84.6	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	434017	84.3	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	815282	77.5	
$ 12 2,4,6-Tribromophenol	330	8.125	8.130	-0.005	89	76378	75.7	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	99	711729	90.3	
111 Dimethyl phthalate	163		7.061				ND	
130 Diethyl phthalate	149		7.766				ND	
173 Di-n-butyl phthalate	149		9.388				ND	
190 Butyl benzyl phthalate	149		11.474				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.754				ND	
201 Di-n-octyl phthalate	149		14.464				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

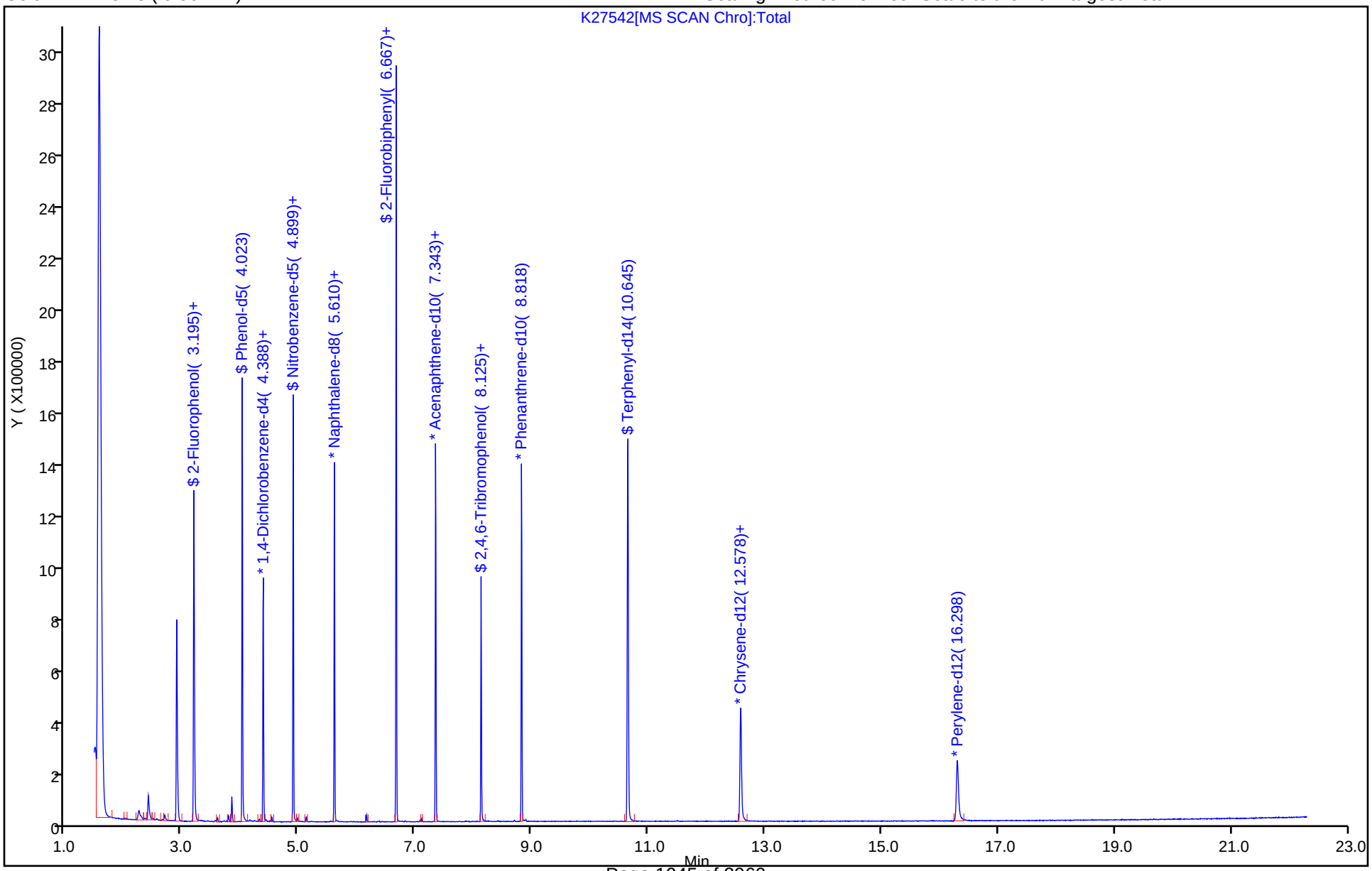
Report Date: 14-Nov-2018 09:58:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27542.D

Injection Date:	13-Nov-2018 17:29:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116270-A-8-A	Lab Sample ID:	280-116270-8	Worklist Smp#:	40
Client ID:	FWGmw-016-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27542.D
Lims ID: 280-116270-A-8-A
Client ID: FWGmw-016-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 17:29:30 ALS Bottle#: 14 Worklist Smp#: 40
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-A-8-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	84.3	84.34
$ 8 Phenol-d5	100.0	84.6	84.55
$ 9 Nitrobenzene-d5	100.0	84.3	84.31
$ 11 2-Fluorobiphenyl	100.0	77.5	77.46
$ 12 2,4,6-Tribromophenol	100.0	75.7	75.72
$ 13 Terphenyl-d14	100.0	90.3	90.31

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-020-181001-GW | Lab Sample ID: 280-116270-9

Matrix: Water | Lab File ID: K27543.D

Analysis Method: 8270D | Date Collected: 10/26/2018 10:00

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 999.9(mL) | Date Analyzed: 11/13/2018 17:58

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	0.50	U	10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	1.0	U	10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	1.0	U	10	1.0	0.32
123-91-1	1,4-Dioxane	4.4	U	18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29
120-83-2	2,4-Dichlorophenol	2.0	U	10	2.0	0.64
105-67-9	2,4-Dimethylphenol	2.0	U	10	2.0	0.58
51-28-5	2,4-Dinitrophenol	30	U	80	30	10
121-14-2	2,4-Dinitrotoluene	4.4	U	20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	4.4	U	20	4.4	1.9
91-58-7	2-Chloronaphthalene	1.0	U	10	1.0	0.26
95-57-8	2-Chlorophenol	4.4	U	10	4.4	2.0
95-48-7	2-Methylphenol	2.0	U	10	2.0	0.98
88-74-4	2-Nitroaniline	4.4	U	50	4.4	1.7
88-75-5	2-Nitrophenol	1.0	U	20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	0.50	U	20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0
99-09-2	3-Nitroaniline	4.4	U	50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4
106-47-8	4-Chloroaniline	4.4	U	25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7
100-01-6	4-Nitroaniline	4.4	U	50	4.4	2.0
100-02-7	4-Nitrophenol	4.0	U	50	4.0	1.2
65-85-0	Benzoic acid	30	U	80	30	10
100-51-6	Benzyl alcohol	0.50	U	25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56
85-68-7	Butyl benzyl phthalate	2.0	U	20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-020-181001-GW | Lab Sample ID: 280-116270-9

Matrix: Water | Lab File ID: K27543.D

Analysis Method: 8270D | Date Collected: 10/26/2018 10:00

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 999.9(mL) | Date Analyzed: 11/13/2018 17:58

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.0	U	10	1.0	0.43
132-64-9	Dibenzofuran	1.0	U	10	1.0	0.29
84-66-2	Diethyl phthalate	1.0	U	20	1.0	0.38
131-11-3	Dimethyl phthalate	0.50	U	20	0.50	0.21
84-74-2	Di-n-butyl phthalate	4.4	U	20	4.4	1.2
117-84-0	Di-n-octyl phthalate	1.0	U	20	1.0	0.35
118-74-1	Hexachlorobenzene	2.0	U	10	2.0	0.66
87-68-3	Hexachlorobutadiene	10	U	30	10	3.3
77-47-4	Hexachlorocyclopentadiene	30	U	50	30	10
67-72-1	Hexachloroethane	4.4	U	10	4.4	2.1
78-59-1	Isophorone	0.50	U	10	0.50	0.21
98-95-3	Nitrobenzene	2.0	U	20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44
87-86-5	Pentachlorophenol	60	U	80	60	20
108-95-2	Phenol	4.4	U	10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	79		43-140
321-60-8	2-Fluorobiphenyl	77		44-119
367-12-4	2-Fluorophenol (Surr)	80		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	82		44-120
4165-62-2	Phenol-d5 (Surr)	82		10-115
1718-51-0	Terphenyl-d14 (Surr)	97		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27543.D
Lims ID: 280-116270-B-9-A
Client ID: FWGmw-020-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 17:58:30 ALS Bottle#: 15 Worklist Smp#: 41
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-B-9-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	146769	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	588797	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	93	304870	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	504093	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	311215	40.0	
* 6 Perylene-d12	264	16.303	16.303	0.000	97	226026	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	435751	80.4	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	510792	82.4	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	429980	82.2	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	817720	76.6	
$ 12 2,4,6-Tribromophenol	330	8.124	8.130	-0.006	89	80627	78.8	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	99	749783	96.5	
19 1,4-Dioxane	88		1.785				ND	
32 Phenol	94		4.041				ND	
36 Bis(2-chloroethyl)ether	93		4.117				ND	
39 2-Chlorophenol	128		4.194				ND	
40 1,3-Dichlorobenzene	146		4.335				ND	
42 1,4-Dichlorobenzene	146		4.405				ND	
43 Benzyl alcohol	108		4.505				ND	
44 1,2-Dichlorobenzene	146		4.552				ND	
45 2-Methylphenol	108		4.611				ND	
46 2,2'-oxybis[1-chloropropan	45		4.634				ND	
49 3 & 4 Methylphenol	108		4.752				ND	
52 N-Nitrosodi-n-propylamine	70		4.752				ND	
58 Hexachloroethane	117		4.875				ND	
59 Nitrobenzene	77		4.922				ND	
63 Isophorone	82		5.151				ND	
64 2-Nitrophenol	139		5.234				ND	
65 2,4-Dimethylphenol	107		5.269				ND	
68 Benzoic acid	105		5.381				ND	
69 Bis(2-chloroethoxy)methane	93		5.351				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
74 2,4-Dichlorophenol	162		5.469				ND	
76 1,2,4-Trichlorobenzene	180		5.557				ND	
80 4-Chloroaniline	127		5.674				ND	
83 Hexachlorobutadiene	225		5.762				ND	
89 4-Chloro-3-methylphenol	107		6.150				ND	
97 Hexachlorocyclopentadiene	237		6.479				ND	
100 2,4,6-Trichlorophenol	196		6.591				ND	
102 2,4,5-Trichlorophenol	196		6.626				ND	
106 2-Chloronaphthalene	162		6.791				ND	
108 2-Nitroaniline	65		6.885				ND	
111 Dimethyl phthalate	163		7.061				ND	
113 2,6-Dinitrotoluene	165		7.120				ND	
115 3-Nitroaniline	138		7.290				ND	
118 2,4-Dinitrophenol	184		7.390				ND	
119 4-Nitrophenol	109		7.461				ND	
122 2,4-Dinitrotoluene	165		7.519				ND	
123 Dibenzofuran	168		7.549				ND	
130 Diethyl phthalate	149		7.766				ND	
134 4-Chlorophenyl phenyl ethe	204		7.884				ND	
138 4-Nitroaniline	138		7.895				ND	
139 4,6-Dinitro-2-methylphenol	198		7.931				ND	
141 N-Nitrosodiphenylamine	169		7.995				ND	
156 4-Bromophenyl phenyl ether	248		8.371				ND	
157 Hexachlorobenzene	284		8.454				ND	
163 Pentachlorophenol	266		8.642				ND	
170 Carbazole	167		9.047				ND	
173 Di-n-butyl phthalate	149		9.388				ND	
190 Butyl benzyl phthalate	149		11.474				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.754				ND	
197 3,3'-Dichlorobenzidine	252		12.531				ND	
201 Di-n-octyl phthalate	149		14.464				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

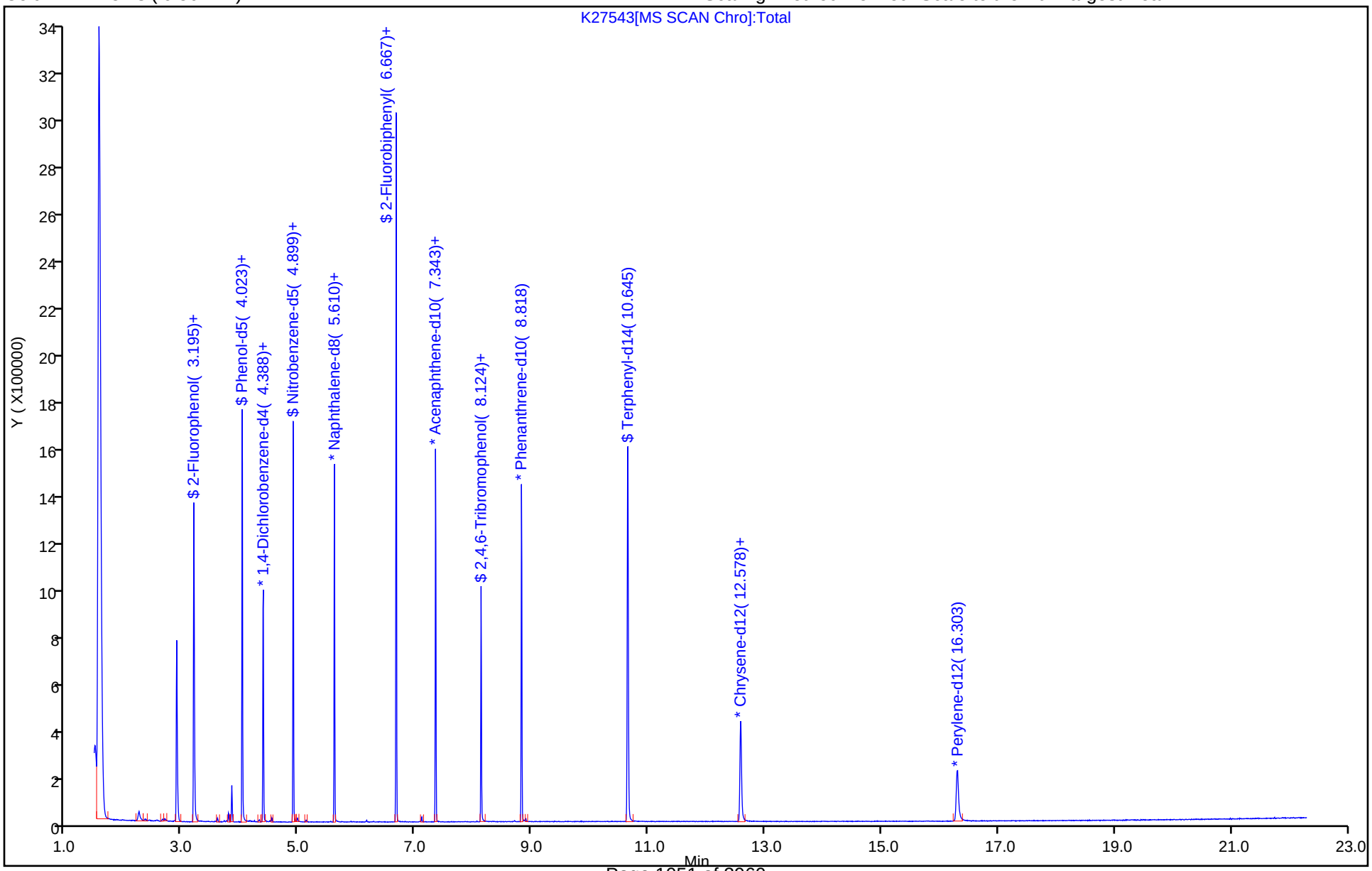
Report Date: 14-Nov-2018 09:58:04 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27543.D

Injection Date:	13-Nov-2018 17:58:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116270-B-9-A	Lab Sample ID:	280-116270-9	Worklist Smp#:	41
Client ID:	FWGmw-020-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27543.D
Lims ID: 280-116270-B-9-A
Client ID: FWGmw-020-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 17:58:30 ALS Bottle#: 15 Worklist Smp#: 41
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-B-9-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:26

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	80.4	80.42
$ 8 Phenol-d5	100.0	82.4	82.40
$ 9 Nitrobenzene-d5	100.0	82.2	82.17
$ 11 2-Fluorobiphenyl	100.0	76.6	76.56
$ 12 2,4,6-Tribromophenol	100.0	78.8	78.77
$ 13 Terphenyl-d14	100.0	96.5	96.54

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-244-181001-GW | Lab Sample ID: 280-116270-12

Matrix: Water | Lab File ID: K27544.D

Analysis Method: 8270D | Date Collected: 10/26/2018 08:50

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 997.8(mL) | Date Analyzed: 11/13/2018 18:27

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
117-81-7	Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56
85-68-7	Butyl benzyl phthalate	2.0	U	20	2.0	1.0
84-66-2	Diethyl phthalate	1.0	U	20	1.0	0.38
131-11-3	Dimethyl phthalate	0.50	U	20	0.50	0.21
84-74-2	Di-n-butyl phthalate	4.4	U	20	4.4	1.2
117-84-0	Di-n-octyl phthalate	1.0	U	20	1.0	0.35

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	78		43-140
321-60-8	2-Fluorobiphenyl	78		44-119
367-12-4	2-Fluorophenol (Surr)	82		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	84		44-120
4165-62-2	Phenol-d5 (Surr)	85		10-115
1718-51-0	Terphenyl-d14 (Surr)	95		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27544.D
Lims ID: 280-116270-C-12-A
Client ID: LL3mw-244-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 18:27:30 ALS Bottle#: 16 Worklist Smp#: 42
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-C-12-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	154493	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	633446	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	329259	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	533549	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	327711	40.0	
* 6 Perylene-d12	264	16.298	16.303	-0.005	98	244157	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	465358	81.6	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	556778	85.3	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	474574	84.3	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	904670	78.4	
$ 12 2,4,6-Tribromophenol	330	8.125	8.130	-0.005	90	85903	77.7	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	99	773417	94.6	
111 Dimethyl phthalate	163		7.061				ND	
130 Diethyl phthalate	149		7.766				ND	
173 Di-n-butyl phthalate	149		9.388				ND	
190 Butyl benzyl phthalate	149		11.474				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.754				ND	
201 Di-n-octyl phthalate	149		14.464				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

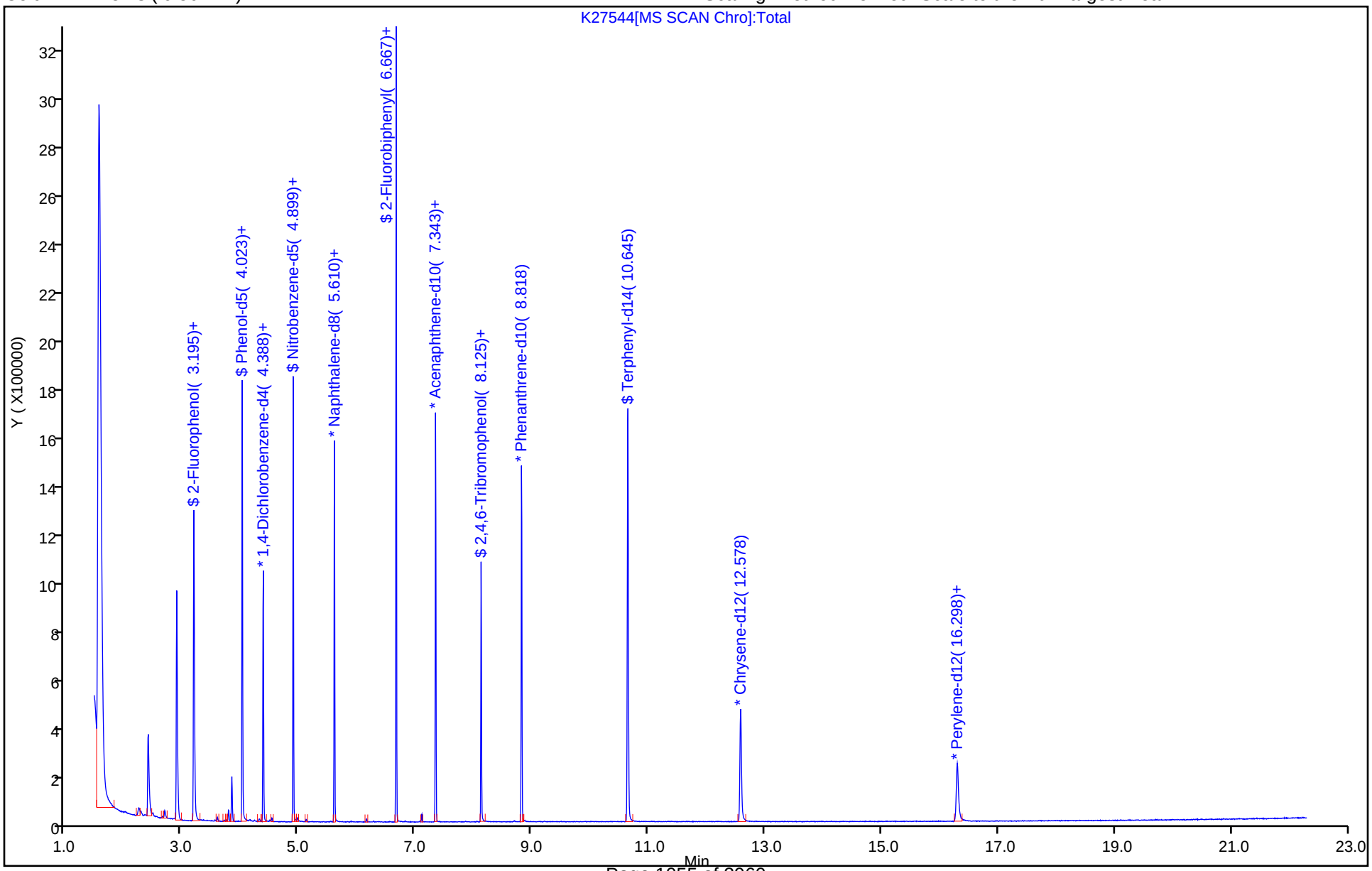
Report Date: 14-Nov-2018 09:58:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27544.D

Injection Date:	13-Nov-2018 18:27:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116270-C-12-A	Lab Sample ID:	280-116270-12	Worklist Smp#:	42
Client ID:	LL3mw-244-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27544.D
Lims ID: 280-116270-C-12-A
Client ID: LL3mw-244-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 18:27:30 ALS Bottle#: 16 Worklist Smp#: 42
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-C-12-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	81.6	81.59
$ 8 Phenol-d5	100.0	85.3	85.33
$ 9 Nitrobenzene-d5	100.0	84.3	84.30
$ 11 2-Fluorobiphenyl	100.0	78.4	78.43
$ 12 2,4,6-Tribromophenol	100.0	77.7	77.71
$ 13 Terphenyl-d14	100.0	94.6	94.57

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: SCFmw-004-181001-GW | Lab Sample ID: 280-116270-13

Matrix: Water | Lab File ID: K27545.D

Analysis Method: 8270D | Date Collected: 10/26/2018 13:35

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 1004(mL) | Date Analyzed: 11/13/2018 18:56

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
117-81-7	Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56
85-68-7	Butyl benzyl phthalate	2.0	U	20	2.0	1.0
84-66-2	Diethyl phthalate	1.0	U	20	1.0	0.38
131-11-3	Dimethyl phthalate	0.50	U	20	0.50	0.21
84-74-2	Di-n-butyl phthalate	4.4	U	20	4.4	1.2
117-84-0	Di-n-octyl phthalate	1.0	U	20	1.0	0.35

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	85		43-140
321-60-8	2-Fluorobiphenyl	83		44-119
367-12-4	2-Fluorophenol (Surr)	86		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	85		44-120
4165-62-2	Phenol-d5 (Surr)	88		10-115
1718-51-0	Terphenyl-d14 (Surr)	94		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27545.D
Lims ID: 280-116270-C-13-A
Client ID: SCFmw-004-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 18:56:30 ALS Bottle#: 17 Worklist Smp#: 43
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-C-13-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	163023	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	661515	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	338648	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	99	538677	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	347862	40.0	
* 6 Perylene-d12	264	16.298	16.303	-0.005	98	267101	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	519507	86.3	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	606359	88.1	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	500113	85.1	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	990547	83.5	
$ 12 2,4,6-Tribromophenol	330	8.125	8.130	-0.005	89	96880	85.2	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	99	816236	94.0	
111 Dimethyl phthalate	163		7.061				ND	
130 Diethyl phthalate	149		7.766				ND	
173 Di-n-butyl phthalate	149		9.388				ND	
190 Butyl benzyl phthalate	149		11.474				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.754				ND	
201 Di-n-octyl phthalate	149		14.464				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

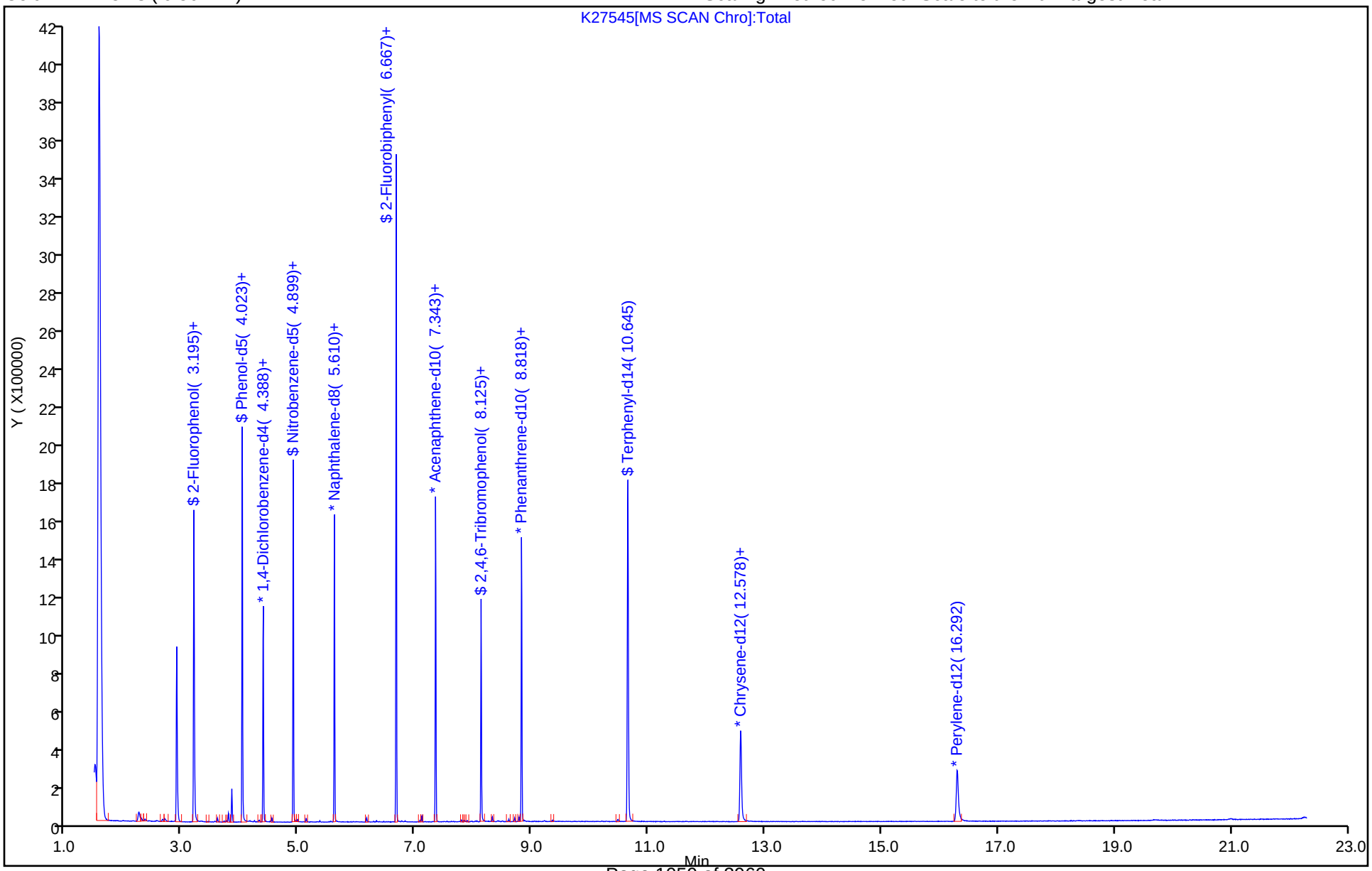
Report Date: 14-Nov-2018 09:58:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27545.D

Injection Date:	13-Nov-2018 18:56:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116270-C-13-A	Lab Sample ID:	280-116270-13	Worklist Smp#:	43
Client ID:	SCFmw-004-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27545.D
Lims ID: 280-116270-C-13-A
Client ID: SCFmw-004-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 18:56:30 ALS Bottle#: 17 Worklist Smp#: 43
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-C-13-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:51:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	86.3	86.31
$ 8 Phenol-d5	100.0	88.1	88.07
$ 9 Nitrobenzene-d5	100.0	85.1	85.07
$ 11 2-Fluorobiphenyl	100.0	83.5	83.49
$ 12 2,4,6-Tribromophenol	100.0	85.2	85.21
$ 13 Terphenyl-d14	100.0	94.0	94.02

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL1mw-087-181001-GW | Lab Sample ID: 280-116270-14

Matrix: Water | Lab File ID: K27546.D

Analysis Method: 8270D | Date Collected: 10/26/2018 13:30

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 906.3(mL) | Date Analyzed: 11/13/2018 19:25

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
117-81-7	Bis(2-ethylhexyl) phthalate	2.2	U	11	2.2	0.62
85-68-7	Butyl benzyl phthalate	2.2	U	22	2.2	1.1
84-66-2	Diethyl phthalate	1.1	U	22	1.1	0.42
131-11-3	Dimethyl phthalate	0.55	U	22	0.55	0.23
84-74-2	Di-n-butyl phthalate	4.9	U	22	4.9	1.3
117-84-0	Di-n-octyl phthalate	1.1	U	22	1.1	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	84		43-140
321-60-8	2-Fluorobiphenyl	85		44-119
367-12-4	2-Fluorophenol (Surr)	89		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	90		44-120
4165-62-2	Phenol-d5 (Surr)	89		10-115
1718-51-0	Terphenyl-d14 (Surr)	97		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27546.D
Lims ID: 280-116270-B-14-A
Client ID: LL1mw-087-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 19:25:30 ALS Bottle#: 18 Worklist Smp#: 44
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-B-14-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:52:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	158345	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	635168	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	97	321443	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	526887	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	324572	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	238277	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	519948	88.9	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	596087	89.1	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	507477	89.9	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	953419	84.7	
$ 12 2,4,6-Tribromophenol	330	8.125	8.130	-0.005	89	91182	84.5	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	99	783844	96.8	
111 Dimethyl phthalate	163		7.061				ND	
130 Diethyl phthalate	149		7.766				ND	
173 Di-n-butyl phthalate	149		9.388				ND	
190 Butyl benzyl phthalate	149		11.474				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.754				ND	
201 Di-n-octyl phthalate	149		14.464				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

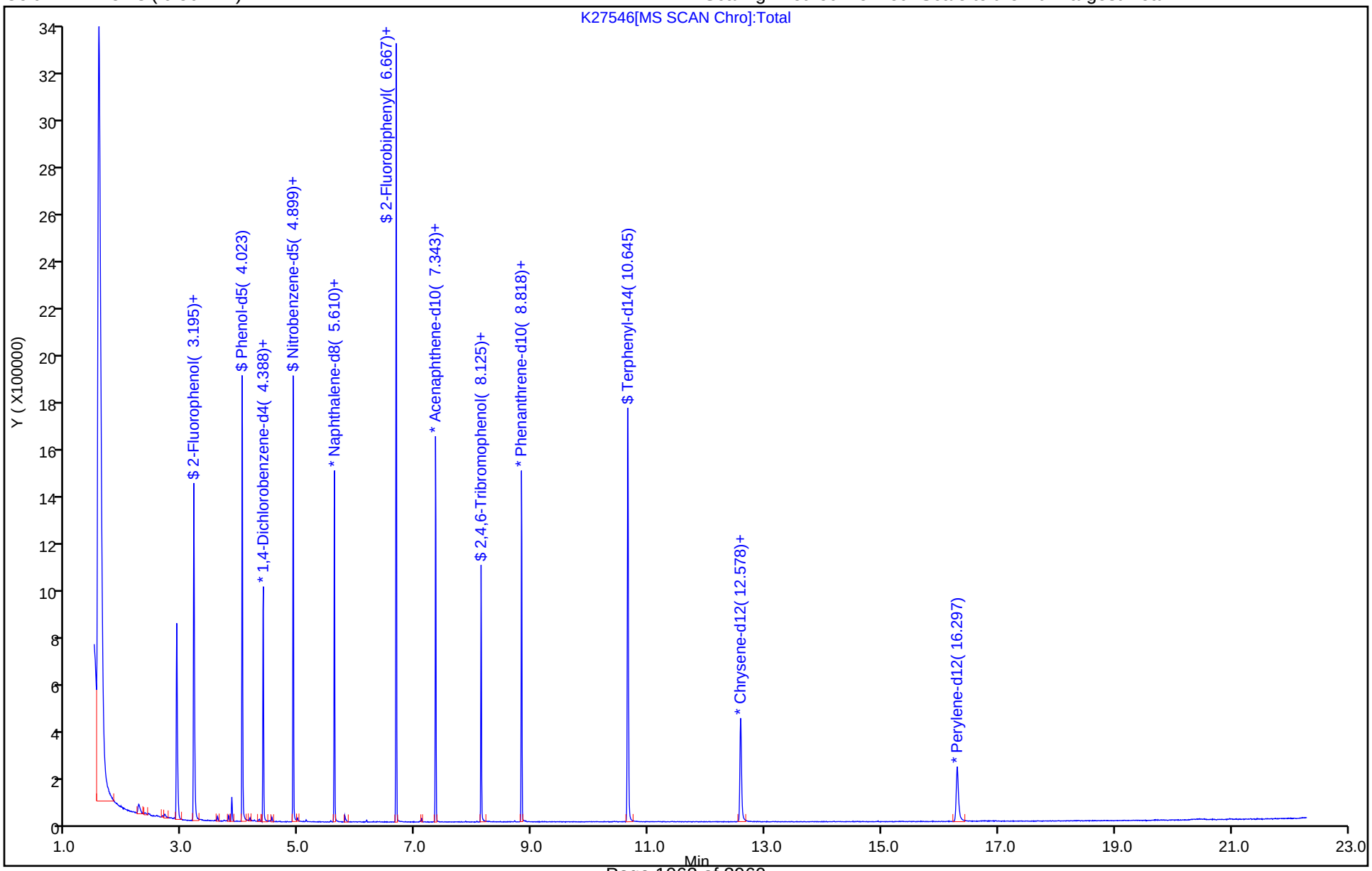
Report Date: 14-Nov-2018 09:58:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27546.D

Injection Date:	13-Nov-2018 19:25:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116270-B-14-A	Lab Sample ID:	280-116270-14	Worklist Smp#:	44
Client ID:	LL1mw-087-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27546.D
Lims ID: 280-116270-B-14-A
Client ID: LL1mw-087-181001-GW
Sample Type: Client
Inject. Date: 13-Nov-2018 19:25:30 ALS Bottle#: 18 Worklist Smp#: 44
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116270-B-14-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:52:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	88.9	88.94
$ 8 Phenol-d5	100.0	89.1	89.13
$ 9 Nitrobenzene-d5	100.0	89.9	89.90
$ 11 2-Fluorobiphenyl	100.0	84.7	84.67
$ 12 2,4,6-Tribromophenol	100.0	84.5	84.49
$ 13 Terphenyl-d14	100.0	96.8	96.77

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-437249/5	K27518.D
Level 2	STD010 280-437249/6	K27519.D
Level 3	STD020 280-437249/7	K27520.D
Level 4	STD050 280-437249/8	K27521.D
Level 5	ICIS 280-437249/4	K27517.D
Level 6	STD120 280-437249/9	K27522.D
Level 7	STD160 280-437249/10	K27523.D
Level 8	STD200 280-437249/11	K27524.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.6982 0.6548	0.6442 0.6410	0.6603 0.6311	0.6495	0.6546	Ave		0.6542				3.1		15.0			
N-Nitrosodimethylamine	1.0281 0.9801	0.9310 0.9696	0.9584 0.9449	0.9815	0.9801	Ave		0.9717				3.0		15.0			
Pyridine	1.7429 1.5659	1.6011 1.5267	1.5838 1.4781	1.5829	1.5896	Ave		1.5839				4.8		15.0			
Phenol	1.9450 1.6951	1.7924 1.6247	1.8510 1.5785	1.8083	1.7876	Ave		1.7603				6.9		15.0			
Aniline	1.9823 2.0753	2.0250 2.0560	2.1863 2.0194	2.2144	2.1679	Ave		2.0908				4.2		15.0			
Bis(2-chloroethyl)ether	1.5593 1.2374	1.4727 1.1718	1.4472 1.0712	1.3886	1.3089	Ave		1.3321				12.4		15.0			
2-Chlorophenol	1.5542 1.4345	1.4716 1.3974	1.5335 1.3454	1.5094	1.5046	Ave		1.4688				4.9		15.0			
1,3-Dichlorobenzene	1.7789 1.5596	1.6856 1.5072	1.6960 1.4407	1.6334	1.6043	Ave		1.6132				6.8		15.0			
1,4-Dichlorobenzene	1.7746 1.5598	1.6721 1.5189	1.6991 1.4259	1.6559	1.6154	Ave		1.6152				6.8		15.0			
Benzyl alcohol	0.9963 0.9180	0.9348 0.9119	0.9833 0.8854	0.9812	0.9839	Ave		0.9494				4.4		15.0			
1,2-Dichlorobenzene	1.6950 1.4782	1.5763 1.4507	1.6114 1.3786	1.5603	1.5379	Ave		1.5361				6.4		15.0			
2-Methylphenol	1.4823 1.2891	1.4098 1.2368	1.3856 1.2015	1.3809	1.3593	Ave		1.3432				7.0		15.0			
bis (2-chloroisopropyl) ether	2.9339 2.1047	2.7857 1.9738	2.7262 1.7896	2.4943	2.3099	Qua	2.7185	2.6074	-0.004149						1.0000		0.9900
3 & 4 Methylphenol	1.4699 1.1275	1.4099 1.0750	1.3849 0.9918	1.3619	1.2569	Ave		1.2597				14.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
N-Nitrosodi-n-propylamine	1.0282 0.7974	1.0068 0.7689	1.0040 0.7264	0.9347	0.8610	Ave		0.8909			0.0500	13.3		15.0			
Acetophenone	2.2089 1.5746	2.0284 1.4798	1.9919 1.3746	1.8711	1.7380	Qua	2.2791	1.9135	-0.002777						1.0000		0.9900
Hexachloroethane	0.6869 0.5944	0.6023 0.5659	0.6107 0.5348	0.6268	0.6093	Ave		0.6039				7.4		15.0			
Nitrobenzene	0.3662 0.3414	0.3714 0.3447	0.3685 0.3299	0.3620	0.3646	Ave		0.3561				4.3		15.0			
Isophorone	0.6853 0.5942	0.6598 0.6004	0.6446 0.5687	0.6432	0.6280	Ave		0.6280				6.1		15.0			
2-Nitrophenol	0.1610 0.1857	0.1808 0.1890	0.1815 0.1820	0.1975	0.1941	Ave		0.1839				6.0		15.0			
2,4-Dimethylphenol	0.3626 0.3193	0.3670 0.3163	0.3519 0.3015	0.3509	0.3380	Ave		0.3384				7.0		15.0			
Bis(2-chloroethoxy)methane	0.4202 0.3652	0.4205 0.3641	0.4159 0.3466	0.4063	0.3870	Ave		0.3907				7.5		15.0			
Benzoic acid	+++++ 0.2333	0.1609 0.2407	0.1871 0.2467	0.2148	0.2469	Lin2	-1.815	0.2448							0.9980		0.9900
2,4-Dichlorophenol	0.2825 0.2690	0.2846 0.2663	0.2908 0.2493	0.2889	0.2847	Ave		0.2770				5.1		15.0			
1,2,4-Trichlorobenzene	0.3458 0.2928	0.3343 0.2868	0.3270 0.2741	0.3172	0.3061	Ave		0.3105				8.0		15.0			
Naphthalene	1.1136 0.8933	1.0558 0.8747	1.0278 0.8148	0.9857	0.9549	Ave		0.9651				10.4		15.0			
4-Chloroaniline	0.3934 0.3810	0.3865 0.3814	0.4132 0.3636	0.4175	0.4150	Ave		0.3939				5.0		15.0			
2,6-Dichlorophenol	0.2928 0.2537	0.2841 0.2555	0.2764 0.2427	0.2769	0.2701	Ave		0.2691				6.3		15.0			
Hexachlorobutadiene	0.1854 0.1562	0.1812 0.1590	0.1720 0.1482	0.1711	0.1675	Ave		0.1676				7.5		15.0			
Caprolactam	0.1456 0.1578	0.1528 0.1629	0.1535 0.1711	0.1595	0.1526	Ave		0.1570				4.9		15.0			
4-Chloro-3-methylphenol	0.2810 0.2577	0.2844 0.2594	0.2765 0.2518	0.2746	0.2673	Ave		0.2691				4.4		15.0			
2-Methylnaphthalene	0.7763 0.6193	0.7605 0.6130	0.7103 0.5748	0.7005	0.6575	Ave		0.6765				10.7		15.0			
1-Methylnaphthalene	0.7144 0.5880	0.6940 0.5761	0.6675 0.5379	0.6539	0.6192	Ave		0.6314				9.7		15.0			
Hexachlorocyclopentadiene	0.2971 0.3527	0.3207 0.3473	0.3526 0.3224	0.3736	0.3850	Ave		0.3439			0.0500	8.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,2,4,5-Tetrachlorobenzene	0.3285 0.2442	0.3080 0.2425	0.2959 0.2270	0.2786	0.2622	Ave		0.2734				13.0		15.0			
2,4,6-Trichlorophenol	0.3507 0.3410	0.3697 0.3355	0.3791 0.3118	0.3684	0.3673	Ave		0.3529				6.4		15.0			
2,4,5-Trichlorophenol	0.4080 0.3909	0.3983 0.3900	0.4054 0.3788	0.4090	0.4117	Ave		0.3990				2.9		15.0			
1,1'-Biphenyl	1.8071 1.4978	1.6898 1.4649	1.6789 1.3522	1.6566	1.6359	Ave		1.5979				9.2		15.0			
2-Chloronaphthalene	1.3170 1.1412	1.3294 1.1141	1.2606 1.0465	1.2430	1.2385	Ave		1.2113				8.3		15.0			
2-Nitroaniline	0.3096 0.3522	0.3256 0.3534	0.3387 0.3482	0.3534	0.3570	Ave		0.3423				4.9		15.0			
Dimethyl phthalate	1.2898 1.1397	1.2658 1.1184	1.2233 1.0965	1.2050	1.1964	Ave		1.1919				5.8		15.0			
1,3-Dinitrobenzene	0.1449 0.2096	0.1702 0.2184	0.1900 0.2292	0.2082	0.2112	Ave		0.1977				14.1		15.0			
2,6-Dinitrotoluene	0.2784 0.2998	0.2980 0.2974	0.3029 0.3053	0.3098	0.3074	Ave		0.2999				3.3		15.0			
Acenaphthylene	1.9442 1.7244	1.8861 1.6861	1.8867 1.6060	1.8618	1.8254	Ave		1.8026				6.5		15.0			
3-Nitroaniline	0.2847 0.3179	0.2966 0.3291	0.3048 0.3389	0.3207	0.3228	Ave		0.3144				5.7		15.0			
Acenaphthene	1.3368 1.1158	1.3135 1.0740	1.2360 1.0235	1.2093	1.1872	Ave		1.1870				9.3		15.0			
2,4-Dinitrophenol	+++++ 0.1404	0.0596 0.1555	0.0888 0.1642	0.1210	0.1326	Qua	-1.265	0.1197	0.0001199		0.0500				1.0000		0.9900
4-Nitrophenol	0.1233 0.1415	0.1305 0.1471	0.1371 0.1597	0.1476	0.1437	Ave		0.1413			0.0500	7.9		15.0			
2,4-Dinitrotoluene	0.3173 0.3679	0.3460 0.3741	0.3585 0.3951	0.3736	0.3695	Ave		0.3627				6.4		15.0			
Dibenzofuran	1.8445 1.5491	1.7969 1.5137	1.7300 1.4503	1.6652	1.6234	Ave		1.6466				8.4		15.0			
2,3,4,6-Tetrachlorophenol	0.2745 0.2960	0.2730 0.2944	0.2942 0.2968	0.3141	0.3015	Ave		0.2931				4.6		15.0			
Diethyl phthalate	1.2731 1.0827	1.2041 1.0793	1.1785 1.0899	1.1662	1.1136	Ave		1.1484				6.0		15.0			
4-Chlorophenyl phenyl ether	0.7004 0.5309	0.6576 0.5220	0.6117 0.5003	0.5933	0.5619	Ave		0.5848				11.9		15.0			
Fluorene	1.4942 1.1179	1.4137 1.0929	1.3289 1.0543	1.2681	1.1896	Ave		1.2449				12.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
4-Nitroaniline	0.2461 0.2834	0.2700 0.2936	0.2753 0.3282	0.3007	0.2745	Ave		0.2840				8.5		15.0			
4,6-Dinitro-2-methylphenol	+++++ 0.1170	0.0710 0.1184	0.0855 0.1194	0.1069	0.1155	Lin2	-1.065	0.1202							0.9980		0.9900
Diphenylamine	1.1611 1.0094	1.1405 1.0112	1.0895 1.0173	1.0713	1.0443	Ave		1.0681				5.5		15.0			
N-Nitrosodiphenylamine	0.6125 0.5659	0.6095 0.5425	0.5927 0.5045	0.5846	0.5966	Ave		0.5761				6.4		15.0			
1,2-Diphenylhydrazine	1.2919 1.1723	1.2597 1.1481	1.2706 1.1320	1.2422	1.2243	Ave		1.2176				4.9		15.0			
Azobenzene	1.3060 1.1852	1.2735 1.1607	1.2845 1.1444	1.2558	1.2377	Ave		1.2310				4.9		15.0			
4-Bromophenyl phenyl ether	0.2374 0.2105	0.2241 0.1989	0.2160 0.1881	0.2187	0.2207	Ave		0.2143				7.1		15.0			
Hexachlorobenzene	0.2283 0.1958	0.2173 0.1865	0.2130 0.1753	0.2029	0.2021	Ave		0.2026				8.4		15.0			
Atrazine	0.1794 0.1832	0.1826 0.1807	0.1874 0.1745	0.1880	0.1926	Ave		0.1836				3.1		15.0			
Pentachlorophenol	+++++ 0.1104	0.0834 0.1125	0.0872 0.1080	0.1069	0.1140	Lin2	-0.662	0.1128							0.9970		0.9900
Phenanthrene	1.1857 1.0201	1.1671 0.9789	1.1305 0.9170	1.0963	1.0799	Ave		1.0720				8.7		15.0			
Anthracene	1.1380 1.0413	1.1303 1.0078	1.1182 0.9512	1.1200	1.1020	Ave		1.0761				6.3		15.0			
Carbazole	0.9422 0.9195	0.9684 0.8985	0.9732 0.8741	0.9588	0.9379	Ave		0.9341				3.7		15.0			
Alachlor	0.1184 0.1275	0.1243 0.1305	0.1257 0.1267	0.1329	0.1306	Ave		0.1271				3.6		15.0			
Di-n-butyl phthalate	1.0058 1.0510	1.0381 1.0394	1.0787 1.0142	1.0917	1.0878	Ave		1.0509				3.1		15.0			
Fluoranthene	0.9917 0.9935	1.0404 1.0223	1.0359 0.9951	1.0327	1.0293	Ave		1.0176				2.0		15.0			
Pyrene	1.6358 1.3689	1.5032 1.3053	1.5027 1.2325	1.4187	1.4538	Ave		1.4276				8.9		15.0			
Famphur	0.2697 0.4038	0.3159 0.3879	0.3475 0.3500	0.3971	0.4268	Ave		0.3623				14.3		15.0			
Butyl benzyl phthalate	0.4235 0.5786	0.4567 0.5903	0.5082 0.5801	0.5558	0.5918	Ave		0.5356				12.2		15.0			
3,3'-Dichlorobenzidine	0.2636 0.3599	0.2743 0.3664	0.2932 0.3498	0.3721	0.3736	Lin2	-0.454	0.3573							0.9930		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Benzo[a]anthracene	1.1474 1.2162	1.1517 1.2055	1.1744 1.1846	1.2026	1.2422	Ave		1.1906				2.7		15.0			
Chrysene	1.2522 1.2121	1.1871 1.2123	1.2615 1.1647	1.2286	1.2336	Ave		1.2190				2.6		15.0			
Bis(2-ethylhexyl) phthalate	0.4124 0.7364	0.4743 0.7642	0.5457 0.7718	0.6690	0.7594	Lin1	-2.229	0.7676							0.9980		0.9900
Di-n-octyl phthalate	+++++ 1.1409	0.5378 1.2355	0.6635 1.2982	0.9254	1.1520	Qua	-7.012	1.0621	0.0013495						0.9990		0.9900
Benzo[b]fluoranthene	1.0043 1.1926	1.1071 1.2062	1.1013 1.1438	1.1676	1.2281	Ave		1.1439				6.3		15.0			
Benzo[k]fluoranthene	1.1401 1.3728	1.2918 1.3397	1.3179 1.2672	1.3633	1.4263	Ave		1.3149				6.6		15.0			
Benzo[a]pyrene	0.8687 1.2607	0.9968 1.2243	1.0632 1.1965	1.1880	1.3042	Ave		1.1378				13.0		15.0			
Indeno[1,2,3-cd]pyrene	0.4663 0.8300	0.5526 0.8955	0.6166 0.9263	0.7314	0.8351	Lin1	-2.818	0.8910							0.9950		0.9900
Dibenz(a,h)anthracene	0.6668 1.0153	0.7791 1.0433	0.8122 1.0173	0.9559	1.0410	Lin2	-1.533	1.0030							0.9950		0.9900
Benzo[g,h,i]perylene	0.8951 1.1281	0.9260 1.1303	0.9710 1.0845	1.0837	1.1534	Ave		1.0465				9.6		15.0			
2-Fluorophenol (Surr)	1.5038 1.4993	1.4201 1.4785	1.4766 1.4032	1.5112	1.5219	Ave		1.4768				2.9		15.0			
Phenol-d5 (Surr)	1.7987 1.6314	1.7283 1.5736	1.7716 1.5343	1.7594	1.7175	Ave		1.6894				5.8		15.0			
Nitrobenzene-d5 (Surr)	0.3573 0.3479	0.3593 0.3492	0.3594 0.3380	0.3682	0.3645	Ave		0.3555				2.8		15.0			
2-Fluorobiphenyl	1.5527 1.3243	1.5179 1.2986	1.4821 1.2052	1.4164	1.4132	Ave		1.4013				8.5		15.0			
2,4,6-Tribromophenol (Surr)	0.1171 0.1361	0.1301 0.1392	0.1328 0.1438	0.1385	0.1368	Ave		0.1343				6.0		15.0			
Terphenyl-d14 (Surr)	1.1257 0.9574	1.0695 0.9168	1.0435 0.8730	0.9990	1.0012	Ave		0.9983				8.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-437249/5	K27518.D
Level 2	STD010 280-437249/6	K27519.D
Level 3	STD020 280-437249/7	K27520.D
Level 4	STD050 280-437249/8	K27521.D
Level 5	ICIS 280-437249/4	K27517.D
Level 6	STD120 280-437249/9	K27522.D
Level 7	STD160 280-437249/10	K27523.D
Level 8	STD200 280-437249/11	K27524.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane	DCBd 4	Ave	11399 291003	25950 366901	52907 479962	131239	218647	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodimethylamine	DCBd 4	Ave	16786 435543	37499 555023	76796 718609	198337	327345	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyridine	DCBd 4	Ave	56915 1391751	128987 1747731	253814 2248258	639736	1061866	8.00 240	20.0 320	40.0 400	100	160
Phenol	DCBd 4	Ave	31756 753322	72199 929978	148322 1200519	365423	597047	4.00 120	10.0 160	20.0 200	50.0	80.0
Aniline	DCBd 4	Ave	32366 922267	81566 1176857	175185 1535864	447487	724082	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethyl)ether	DCBd 4	Ave	25459 549928	59319 670714	115967 814682	280605	437163	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chlorophenol	DCBd 4	Ave	25376 637497	59275 799888	122879 1023223	305007	502544	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dichlorobenzene	DCBd 4	Ave	29045 693090	67895 862705	135903 1095747	330067	535816	4.00 120	10.0 160	20.0 200	50.0	80.0
1,4-Dichlorobenzene	DCBd 4	Ave	28975 693185	67353 869430	136149 1084450	334619	539536	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzyl alcohol	DCBd 4	Ave	16267 407977	37654 521996	78795 673404	198281	328615	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Dichlorobenzene	DCBd 4	Ave	27675 656940	63495 830376	129118 1048468	315295	513653	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylphenol	DCBd 4	Ave	24202 572885	56786 707944	111029 913772	279041	454005	4.00 120	10.0 160	20.0 200	50.0	80.0
bis (2-chloroisopropyl) ether	DCBd 4	Qua	47902 935342	112210 1129823	218454 1361070	504032	771480	4.00 120	10.0 160	20.0 200	50.0	80.0
3 & 4 Methylphenol	DCBd 4	Ave	24000 501084	56789 615314	110970 754301	275215	419791	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodi-n-propylamine	DCBd 4	Ave	16787 354366	40552 440112	80454 552463	188873	287578	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Acetophenone	DCBd 4	Qua	36065 699770	81703 847040	159609 1045464	378102	580484	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachloroethane	DCBd 4	Ave	11216 264156	24262 323939	48933 406771	126661	203487	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene	NPT	Ave	24196 607287	59190 769048	120151 992197	294116	485411	4.00 120	10.0 160	20.0 200	50.0	80.0
Isophorone	NPT	Ave	45280 1056965	105139 1339577	210192 1710575	522490	836027	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitrophenol	NPT	Ave	10635 330343	28817 421572	59166 547384	160413	258457	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dimethylphenol	NPT	Ave	23959 567982	58478 705645	114731 906957	285083	449937	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethoxy)methane	NPT	Ave	27766 649652	67005 812311	135621 1042598	330079	515205	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzoic acid	NPT	Lin2	+++++ 829953	51263 1074213	122013 1484036	349055	657531	+++++ 240	20.0 320	40.0 400	100	160
2,4-Dichlorophenol	NPT	Ave	18665 478443	45348 594218	94817 750002	234732	379056	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4-Trichlorobenzene	NPT	Ave	22849 520813	53277 639841	106615 824470	257693	407488	4.00 120	10.0 160	20.0 200	50.0	80.0
Naphthalene	NPT	Ave	73579 1589119	168243 1951562	335110 2450895	800761	1271334	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloroaniline	NPT	Ave	25992 677743	61593 850849	134743 1093730	339141	552447	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dichlorophenol	NPT	Ave	19349 451360	45279 570129	90137 730028	224979	359653	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobutadiene	NPT	Ave	12250 277806	28876 354708	56083 445704	138975	223029	4.00 120	10.0 160	20.0 200	50.0	80.0
Caprolactam	NPT	Ave	9623 280749	24356 363432	50055 514718	129577	203191	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloro-3-methylphenol	NPT	Ave	18565 458386	45311 578839	90149 757388	223076	355896	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylnaphthalene	NPT	Ave	51291 1101727	121187 1367650	231609 1728912	569115	875336	4.00 120	10.0 160	20.0 200	50.0	80.0
1-Methylnaphthalene	NPT	Ave	47202 1045992	110589 1285338	217651 1617870	531192	824364	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorocyclopentadiene	ANT	Ave	9915 293527	25385 366563	55220 466223	144719	234637	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4,5-Tetrachlorobenzene	NPT	Ave	21704 434374	49084 541081	96477 682759	226363	349072	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Trichlorophenol	ANT	Ave	11704 283804	29264 354021	59367 450850	142723	223851	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2,4,5-Trichlorophenol	ANT	Ave	13614 325374	31522 411551	63495 547675	158437	250869	4.00 120	10.0 160	20.0 200	50.0	80.0
1,1'-Biphenyl	ANT	Ave	60304 1246665	133746 1545973	262928 1955223	641700	996919	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chloronaphthalene	ANT	Ave	43949 949825	105223 1175719	197412 1513212	481509	754762	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitroaniline	ANT	Ave	10330 293186	25774 372972	53038 503416	136888	217560	4.00 120	10.0 160	20.0 200	50.0	80.0
Dimethyl phthalate	ANT	Ave	43042 948611	100186 1180346	191578 1585470	466760	729076	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dinitrobenzene	ANT	Ave	4835 174453	13475 230442	29759 331405	80637	128712	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dinitrotoluene	ANT	Ave	9290 249565	23587 313855	47430 441414	120015	187364	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthylene	ANT	Ave	64879 1435231	149283 1779448	295459 2322219	721183	1112423	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Nitroaniline	ANT	Ave	9500 264605	23478 347285	47735 489984	124236	196724	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthene	ANT	Ave	44610 928673	103960 1133494	193569 1479940	468435	723467	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dinitrophenol	ANT	Qua	+++++ 233753	9433 328211	27820 474816	93710	161590	+++++ 240	20.0 320	40.0 400	100	160
4-Nitrophenol	ANT	Ave	8227 235624	20658 310541	42951 461891	114326	175204	8.00 240	20.0 320	40.0 400	100	160
2,4-Dinitrotoluene	ANT	Ave	10589 306237	27384 394810	56145 571234	144725	225149	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenzofuran	ANT	Ave	61549 1289352	142224 1597450	270931 2097032	645043	989293	4.00 120	10.0 160	20.0 200	50.0	80.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	9161 246394	21606 310696	46070 429114	121660	183767	4.00 120	10.0 160	20.0 200	50.0	80.0
Diethyl phthalate	ANT	Ave	42484 901148	95303 1138989	184562 1575961	451744	678621	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chlorophenyl phenyl ether	ANT	Ave	23371 441882	52047 550852	95792 723386	229841	342443	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluorene	ANT	Ave	49860 930427	111895 1153370	208104 1524433	491217	724942	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Nitroaniline	ANT	Ave	8213 235862	21367 309819	43117 474545	116495	167262	4.00 120	10.0 160	20.0 200	50.0	80.0
4,6-Dinitro-2-methylphenol	PHN	Lin2	+++++ 295376	17868 396005	41831 591876	128991	209416	+++++ 240	20.0 320	40.0 400	100	160
Diphenylamine	ANT	Ave	32933 714108	76728 907132	145028 1250342	352738	540938	3.40 102	8.50 136	17.0 170	42.5	68.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
N-Nitrosodiphenylamine	PHN	Ave	32933 714108	76728 907132	145028 1250342	352738	540938	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Diphenylhydrazine	ANT	Ave	43582 986445	100799 1224965	201165 1654760	486464	754289	4.04 121	10.1 162	20.2 202	50.5	80.9
Azobenzene	ANT	Ave	43582 986445	100799 1224965	201165 1654760	486464	754289	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Bromophenyl phenyl ether	PHN	Ave	12763 265613	28209 332486	52862 466191	131956	200057	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobenzene	PHN	Ave	12274 247092	27362 311825	52110 434405	122431	183210	4.00 120	10.0 160	20.0 200	50.0	80.0
Atrazine	PHN	Ave	9645 231230	22988 302087	45846 432420	113470	174637	4.00 120	10.0 160	20.0 200	50.0	80.0
Pentachlorophenol	PHN	Lin2	+++++ 278575	20989 376339	42663 535552	129030	206661	+++++ 240	20.0 320	40.0 400	100	160
Phenanthrene	PHN	Ave	63752 1287205	146936 1636790	276647 2272594	661531	979081	4.00 120	10.0 160	20.0 200	50.0	80.0
Anthracene	PHN	Ave	61186 1313990	142295 1685118	273627 2357335	675825	999113	4.00 120	10.0 160	20.0 200	50.0	80.0
Carbazole	PHN	Ave	50657 1160202	121915 1502282	238147 2166475	578565	850349	4.00 120	10.0 160	20.0 200	50.0	80.0
Alachlor	PHN	Ave	6366 160858	15651 218134	30752 314032	80219	118388	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-butyl phthalate	PHN	Ave	54079 1326203	130696 1737983	263974 2513679	658740	986220	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluoranthene	PHN	Ave	53321 1253693	130983 1709394	253483 2466324	623130	933186	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyrene	CRY	Ave	56554 1290294	129402 1737190	257256 2571063	633882	952061	4.00 120	10.0 160	20.0 200	50.0	80.0
Famphur	CRY	Ave	9324 380659	27194 516322	59495 730022	177444	279473	4.00 120	10.0 160	20.0 200	50.0	80.0
Butyl benzyl phthalate	CRY	Ave	14640 545371	39311 785657	86998 1210104	248334	387517	4.00 120	10.0 160	20.0 200	50.0	80.0
3,3'-Dichlorobenzidine	CRY	Lin2	9114 339266	23615 487610	50201 729742	166265	244677	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]anthracene	CRY	Ave	39666 1146414	99144 1604483	201060 2471111	537361	813469	4.00 120	10.0 160	20.0 200	50.0	80.0
Chrysene	CRY	Ave	43290 1142542	102188 1613485	215972 2429624	548948	807869	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-ethylhexyl) phthalate	CRY	Lin1	14258 694101	40829 1017034	93418 1609994	298912	497333	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-octyl phthalate	CRY	Qua	+++++ 1075381	46296 1644331	113590 2708127	413485	754412	+++++ 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzo[b]fluoranthene	PRY	Ave	27834 977871	74045 1453264	153020 2252939	433901	684262	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[k]fluoranthene	PRY	Ave	31597 1125661	86398 1614080	183109 2495851	506646	794687	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]pyrene	PRY	Ave	24075 1033688	66671 1475040	147726 2356683	441504	726633	4.00 120	10.0 160	20.0 200	50.0	80.0
Indeno[1,2,3-cd]pyrene	CRY	Lin1	16120 782312	47569 1191852	105557 1932250	326812	546867	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenz(a,h)anthracene	PRY	Lin2	18481 832493	52106 1256976	112845 2003800	355242	579997	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[g,h,i]perylene	PRY	Ave	24806 924989	61936 1361804	134918 2136038	402717	642639	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorophenol (Surr)	DCBd 4	Ave	24553 666289	57200 846273	118322 1067154	305386	508299	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol-d5 (Surr)	DCBd 4	Ave	29368 725010	69617 900726	141956 1166876	355542	573643	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene-d5 (Surr)	NPT	Ave	23606 618838	57259 779145	117194 1016832	299123	485311	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorobiphenyl	ANT	Ave	51812 1102284	120139 1370430	232109 1742590	548658	861199	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	3906 113316	10296 146853	20800 207911	53654	83382	4.00 120	10.0 160	20.0 200	50.0	80.0
Terphenyl-d14 (Surr)	CRY	Ave	38916 902409	92069 1220242	178652 1820996	446379	655619	4.00 120	10.0 160	20.0 200	50.0	80.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27517.D
Lims ID: ICIS HSL
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 12-Nov-2018 14:56:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICIS HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:11 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:25:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	95	166997	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	99	665671	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	96	304707	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	453315	40.0	40.0	
* 5 Chrysene-d12	240	12.590	12.590	0.000	99	327432	40.0	40.0	
* 6 Perylene-d12	264	16.303	16.303	0.000	98	278577	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	508299	80.0	82.4	
$ 8 Phenol-d5	99	4.029	4.029	0.000	99	573643	80.0	81.3	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	95	485311	80.0	82.0	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	861199	80.0	80.7	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	92	83382	80.0	81.5	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	655619	80.0	80.2	
19 1,4-Dioxane	88	1.785	1.785	0.000	96	218647	80.0	80.1	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	87	327345	80.0	80.7	
21 Pyridine	79	2.067	2.067	0.000	83	1061866	160.0	160.6	
32 Phenol	94	4.041	4.041	0.000	98	597047	80.0	81.2	
34 Aniline	93	4.070	4.070	0.000	97	724082	80.0	83.0	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	94	494375	80.0	80.6	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	95	437163	80.0	78.6	
38 n-Decane	43	4.235	4.235	0.000	94	654317	80.0	79.4	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	502544	80.0	82.0	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	535816	80.0	79.6	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	539536	80.0	80.0	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	328615	80.0	82.9	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	513653	80.0	80.1	
45 2-Methylphenol	108	4.611	4.611	0.000	96	454005	80.0	81.0	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	95	771480	80.0	80.0	
47 Indene	116	4.634	4.634	0.000	91	1401929	160.0	158.2	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	66	419791	80.0	79.8	
50 3-Methylphenol	108	4.752	4.752	0.000	74	419791	80.0	79.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	77	419791	80.0	79.8	
52 N-Nitrosodi-n-propylamine	70	4.758	4.758	0.000	80	287578	80.0	77.3	
54 Acetophenone	105	4.758	4.758	0.000	80	580484	80.0	81.0	
58 Hexachloroethane	117	4.875	4.875	0.000	95	203487	80.0	80.7	
59 Nitrobenzene	77	4.922	4.922	0.000	93	485411	80.0	81.9	
63 Isophorone	82	5.152	5.152	0.000	98	836027	80.0	80.0	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	258457	80.0	84.4	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	95	449937	80.0	79.9	
68 Benzoic acid	105	5.381	5.381	0.000	89	657531	160.0	168.8	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	515205	80.0	79.2	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	84	459119	80.0	81.4	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	379056	80.0	82.2	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	95	407488	80.0	78.9	
79 Naphthalene	128	5.633	5.633	0.000	98	1271334	80.0	79.2	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	552447	80.0	84.3	
81 2,6-Dichlorophenol	162	5.692	5.692	0.000	97	359653	80.0	80.3	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	223029	80.0	80.0	
86 Caprolactam	55	5.998	5.998	0.000	75	203191	80.0	77.8	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	96	355896	80.0	79.5	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	875336	80.0	77.7	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	95	824364	80.0	78.5	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	95	234637	80.0	89.6	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	349072	80.0	76.7	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	91	223851	80.0	83.3	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	389384	80.0	81.9	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	250869	80.0	82.5	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	94	996919	80.0	81.9	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	95	754762	80.0	81.8	
108 2-Nitroaniline	65	6.885	6.885	0.000	87	217560	80.0	83.4	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	729076	80.0	80.3	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	128712	80.0	85.5	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	187364	80.0	82.0	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1112423	80.0	81.0	
115 3-Nitroaniline	138	7.290	7.290	0.000	96	196724	80.0	82.1	
117 Acenaphthene	153	7.378	7.378	0.000	94	723467	80.0	80.0	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	84	161590	160.0	161.7	
119 4-Nitrophenol	109	7.461	7.461	0.000	92	175204	160.0	162.7	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	225149	80.0	81.5	
123 Dibenzofuran	168	7.549	7.549	0.000	97	989293	80.0	78.9	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	183767	80.0	82.3	
127 Hexadecane	57	7.790	7.790	0.000	91	658930	80.0	82.6	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	678621	80.0	77.6	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	90	342443	80.0	76.9	
135 Fluorene	166	7.890	7.890	0.000	95	724942	80.0	76.4	
138 4-Nitroaniline	138	7.895	7.895	0.000	89	167262	80.0	77.3	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	84	209416	160.0	162.6	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	540938	80.0	82.9	
142 Diphenylamine	169	7.995	7.995	0.000	95	540938	68.0	66.5	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	754289	80.9	81.3	
144 Azobenzene	77	8.042	8.042	0.000	98	754289	80.0	80.4	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	92	83393	80.0	81.4	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	67	200057	80.0	82.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.454	8.454	0.000	93	183210	80.0	79.8	
159 Atrazine	200	8.524	8.524	0.000	91	174637	80.0	84.0	
161 n-Octadecane	85	8.706	8.706	0.000	93	219752	80.0	86.4	
163 Pentachlorophenol	266	8.642	8.642	0.000	92	206661	160.0	167.6	
168 Phenanthrene	178	8.847	8.847	0.000	97	979081	80.0	80.6	
169 Anthracene	178	8.894	8.894	0.000	97	999113	80.0	81.9	
170 Carbazole	167	9.047	9.047	0.000	96	850349	80.0	80.3	
171 Alachlor	188	9.188	9.188	0.000	93	118388	80.0	82.2	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	986220	80.0	82.8	
179 Fluoranthene	202	10.122	10.122	0.000	98	933186	80.0	80.9	
182 Pyrene	202	10.428	10.428	0.000	97	952061	80.0	81.5	
188 Famphur	218	11.356	11.356	0.000	84	279473	80.0	94.2	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	98	387517	80.0	88.4	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	98	497333	80.0	82.1	
197 3,3'-Dichlorobenzidine	252	12.537	12.537	0.000	74	244677	80.0	84.9	
198 Benzo[a]anthracene	228	12.566	12.566	0.000	99	813469	80.0	83.5	
199 Chrysene	228	12.649	12.649	0.000	97	807869	80.0	81.0	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	754412	80.0	84.3	
203 Benzo[b]fluoranthene	252	15.269	15.269	0.000	97	684262	80.0	85.9	
204 Benzo[k]fluoranthene	252	15.340	15.340	0.000	99	794687	80.0	86.8	
206 Benzo[e]pyrene	252	16.004	16.004	0.000	97	683646	80.0	86.1	
207 Benzo[a]pyrene	252	16.145	16.145	0.000	77	726633	80.0	91.7	
213 Dibenz(a,h)anthracene	278	19.417	19.417	0.000	95	579997	80.0	84.6	
214 Indeno[1,2,3-cd]pyrene	276	19.312	19.312	0.000	98	546867	80.0	78.1	
215 Benzo[g,h,i]perylene	276	20.028	20.028	0.000	97	642639	80.0	88.2	

Reagents:

MS-HSLA080_00039 Amount Added: 200.00 Units: uL

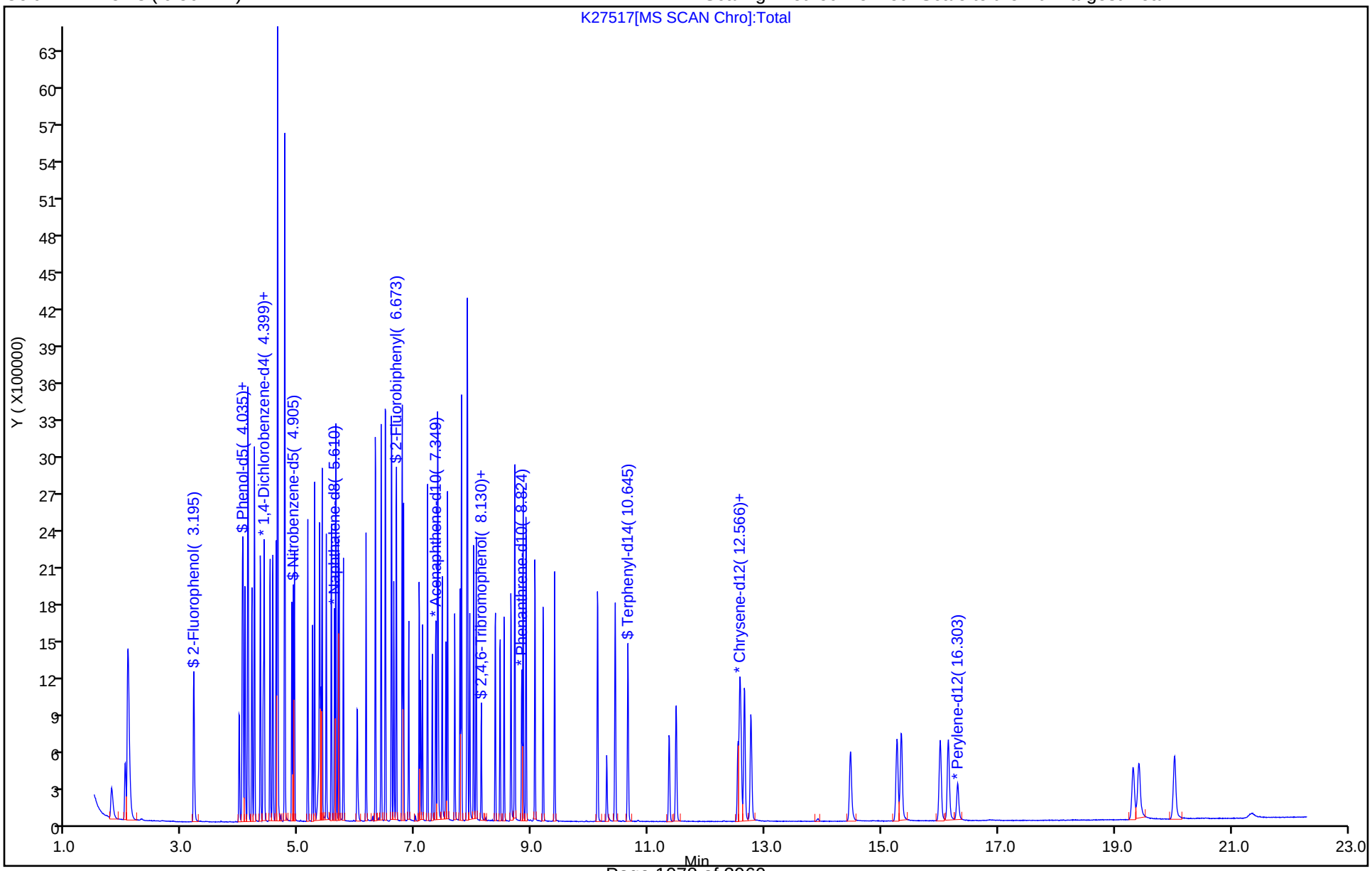
Report Date: 13-Nov-2018 11:59:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27517.D

Injection Date:	12-Nov-2018 14:56:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICIS HSL			Worklist Smp#:	4
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27518.D
Lims ID: STD004 HSL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Nov-2018 15:25:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD004 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:14 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:27:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	163273	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	99	660716	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	333698	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	537662	40.0	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	345718	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	97	277140	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	24553	4.00	4.07	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	94	29368	4.00	4.26	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	23606	4.00	4.02	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	51812	4.00	4.43	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	90	3906	4.00	3.49	
$ 13 Terphenyl-d14	244	10.639	10.645	-0.006	98	38916	4.00	4.51	
19 1,4-Dioxane	88	1.791	1.785	0.006	96	11399	4.00	4.27	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	89	16786	4.00	4.23	
21 Pyridine	79	2.073	2.067	0.006	84	56915	8.00	8.80	
32 Phenol	94	4.035	4.041	-0.006	98	31756	4.00	4.42	
34 Aniline	93	4.070	4.070	0.000	97	32366	4.00	3.79	
35 Alpha Methyl Styrene	118	4.123	4.129	-0.006	92	26027	4.00	4.34	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	95	25459	4.00	4.68	
38 n-Decane	43	4.235	4.235	0.000	95	35234	4.00	4.37	
39 2-Chlorophenol	128	4.194	4.194	0.000	97	25376	4.00	4.23	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	29045	4.00	4.41	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	93	28975	4.00	4.39	
43 Benzyl alcohol	108	4.499	4.505	-0.006	93	16267	4.00	4.20	
44 1,2-Dichlorobenzene	146	4.546	4.552	-0.006	97	27675	4.00	4.41	
45 2-Methylphenol	108	4.605	4.611	-0.006	94	24202	4.00	4.41	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	89	47902	4.00	3.48	
47 Indene	116	4.634	4.634	0.000	93	88636	8.00	6.86	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	72	24000	4.00	4.67	
50 3-Methylphenol	108	4.752	4.752	0.000	91	24000	4.00	4.67	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	86	24000	4.00	4.67	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	96	16787	4.00	4.62	
54 Acetophenone	105	4.752	4.758	-0.006	95	36065	4.00	3.44	
58 Hexachloroethane	117	4.875	4.875	0.000	96	11216	4.00	4.55	
59 Nitrobenzene	77	4.916	4.922	-0.006	97	24196	4.00	4.11	
63 Isophorone	82	5.146	5.152	-0.006	99	45280	4.00	4.36	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	10635	4.00	3.50	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	93	23959	4.00	4.29	
68 Benzoic acid	105	5.304	5.381	-0.077	90	18466	8.00	12.0	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	96	27766	4.00	4.30	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	82	24537	4.00	4.38	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	18665	4.00	4.08	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	93	22849	4.00	4.45	
79 Naphthalene	128	5.627	5.633	-0.006	97	73579	4.00	4.62	
80 4-Chloroaniline	127	5.669	5.674	-0.005	95	25992	4.00	3.99	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	19349	4.00	4.35	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	12250	4.00	4.43	
86 Caprolactam	55	5.968	5.998	-0.030	76	9623	4.00	3.71	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	96	18565	4.00	4.18	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	51291	4.00	4.59	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	94	47202	4.00	4.53	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	72	9915	4.00	3.46	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	96	21704	4.00	4.81	
100 2,4,6-Trichlorophenol	196	6.585	6.591	-0.006	75	11704	4.00	3.97	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	92	22587	4.00	4.34	
102 2,4,5-Trichlorophenol	196	6.620	6.626	-0.006	94	13614	4.00	4.09	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	94	60304	4.00	4.52	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	43949	4.00	4.35	
108 2-Nitroaniline	65	6.879	6.885	-0.006	87	10330	4.00	3.62	
111 Dimethyl phthalate	163	7.055	7.061	-0.006	99	43042	4.00	4.33	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	88	4835	4.00	2.93	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	94	9290	4.00	3.71	
114 Acenaphthylene	152	7.202	7.208	-0.006	99	64879	4.00	4.31	
115 3-Nitroaniline	138	7.284	7.290	-0.006	93	9500	4.00	3.62	
117 Acenaphthene	153	7.378	7.378	0.000	94	44610	4.00	4.50	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	75	2610	8.00	13.0	
119 4-Nitrophenol	109	7.449	7.461	-0.012	95	8227	8.00	6.98	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	94	10589	4.00	3.50	
123 Dibenzofuran	168	7.549	7.549	0.000	97	61549	4.00	4.48	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	9161	4.00	3.75	
127 Hexadecane	57	7.784	7.790	-0.006	90	36793	4.00	4.21	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	42484	4.00	4.43	
134 4-Chlorophenyl phenyl ethe	204	7.878	7.884	-0.006	93	23371	4.00	4.79	
135 Fluorene	166	7.890	7.890	0.000	96	49860	4.00	4.80	
138 4-Nitroaniline	138	7.890	7.895	-0.005	68	8213	4.00	3.47	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.931	-0.006	84	5571	8.00	12.3	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	32933	4.00	4.25	
142 Diphenylamine	169	7.995	7.995	0.000	94	32933	3.40	3.70	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	41	43582	4.04	4.29	
144 Azobenzene	77	8.036	8.042	-0.006	98	43582	4.00	4.24	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	90	3906	4.00	3.48	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	68	12763	4.00	4.43	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	93	12274	4.00	4.51	
159 Atrazine	200	8.518	8.524	-0.006	91	9645	4.00	3.91	
161 n-Octadecane	85	8.700	8.706	-0.006	92	12453	4.00	4.13	
163 Pentachlorophenol	266	8.636	8.642	-0.006	91	7730	8.00	11.0	
168 Phenanthrene	178	8.841	8.847	-0.006	98	63752	4.00	4.42	
169 Anthracene	178	8.894	8.894	0.000	97	61186	4.00	4.23	
170 Carbazole	167	9.047	9.047	0.000	95	50657	4.00	4.03	
171 Alachlor	188	9.188	9.188	0.000	93	6366	4.00	3.73	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	54079	4.00	3.83	
179 Fluoranthene	202	10.122	10.122	0.000	97	53321	4.00	3.90	
182 Pyrene	202	10.422	10.428	-0.006	98	56554	4.00	4.58	
188 Famphur	218	11.350	11.356	-0.006	86	9324	4.00	2.98	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	98	14640	4.00	3.16	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	97	14258	4.00	5.05	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	69	9114	4.00	4.22	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	98	39666	4.00	3.85	
199 Chrysene	228	12.637	12.649	-0.012	97	43290	4.00	4.11	
201 Di-n-octyl phthalate	149	14.453	14.464	-0.011	97	15764	4.00	8.23	
203 Benzo[b]fluoranthene	252	15.252	15.269	-0.017	98	27834	4.00	3.51	
204 Benzo[k]fluoranthene	252	15.328	15.340	-0.012	98	31597	4.00	3.47	
206 Benzo[e]pyrene	252	15.992	16.004	-0.012	97	30663	4.00	3.88	
207 Benzo[a]pyrene	252	16.133	16.145	-0.012	83	24075	4.00	3.05	
213 Dibenz(a,h)anthracene	278	19.400	19.417	-0.017	92	18481	4.00	4.19	
214 Indeno[1,2,3-cd]pyrene	276	19.300	19.312	-0.012	98	16120	4.00	5.26	
215 Benzo[g,h,i]perylene	276	20.011	20.028	-0.017	97	24806	4.00	3.42	
S 217 Total Cresols	108				0			9.08	
S 218 Methyl Phenols,Total	108				0			9.08	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA004_00039 Amount Added: 200.00 Units: uL

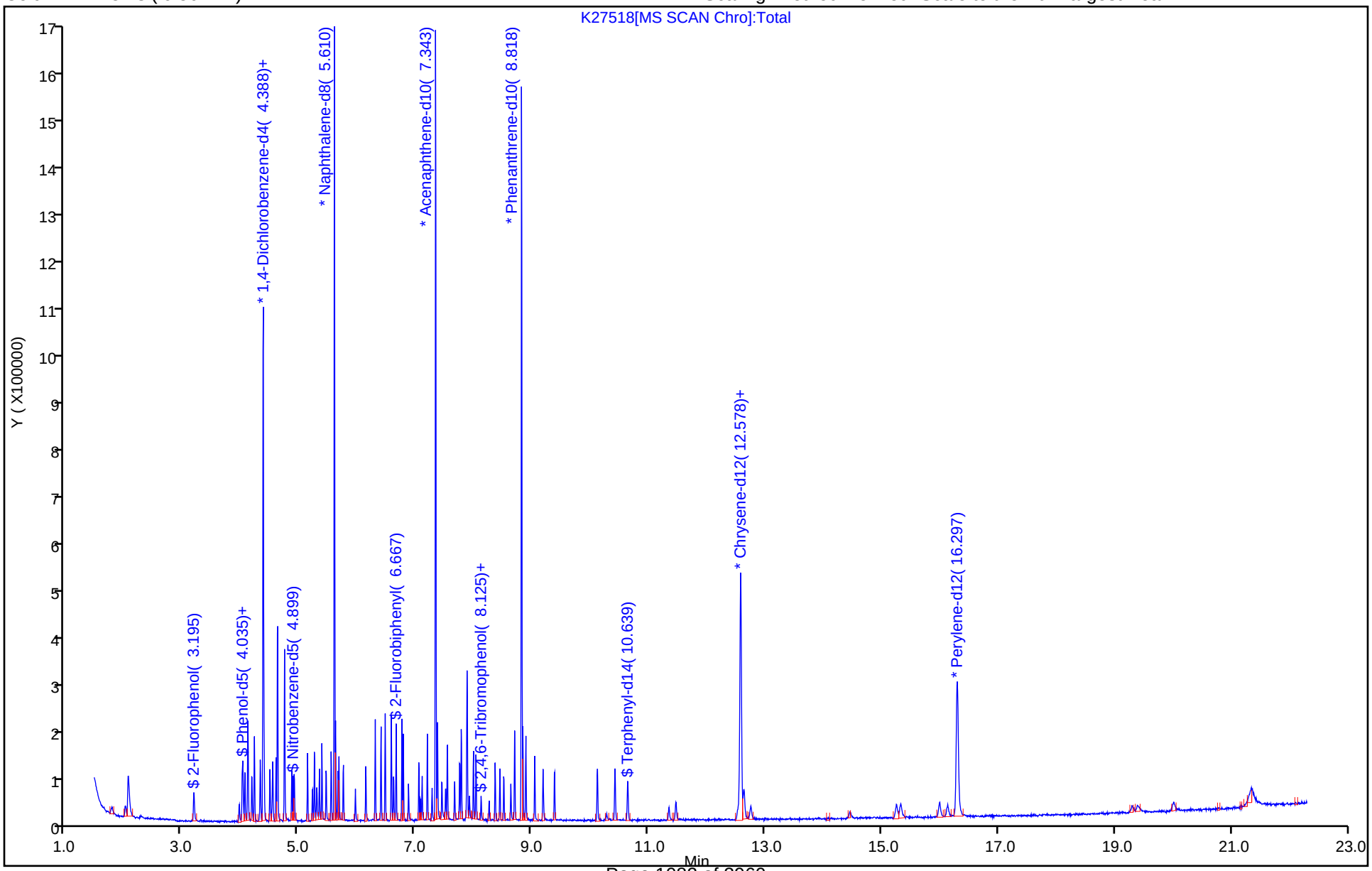
Report Date: 13-Nov-2018 11:59:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27518.D

Injection Date:	12-Nov-2018 15:25:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD004 HSL			Worklist Smp#:	5
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

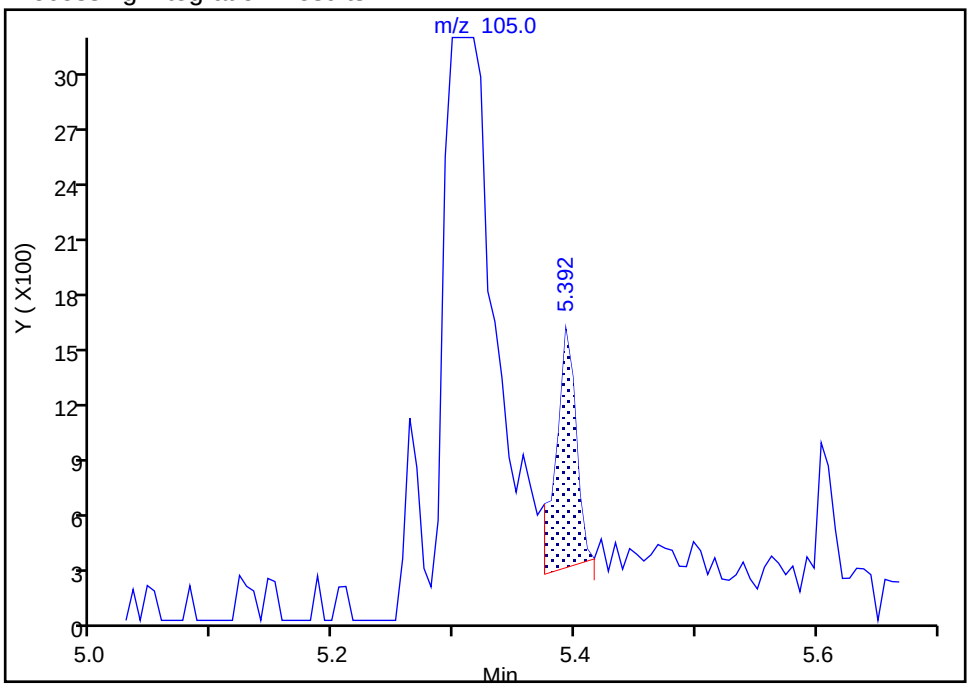
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27518.D
Injection Date: 12-Nov-2018 15:25:30 Instrument ID: SMS_K
Lims ID: STD004 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

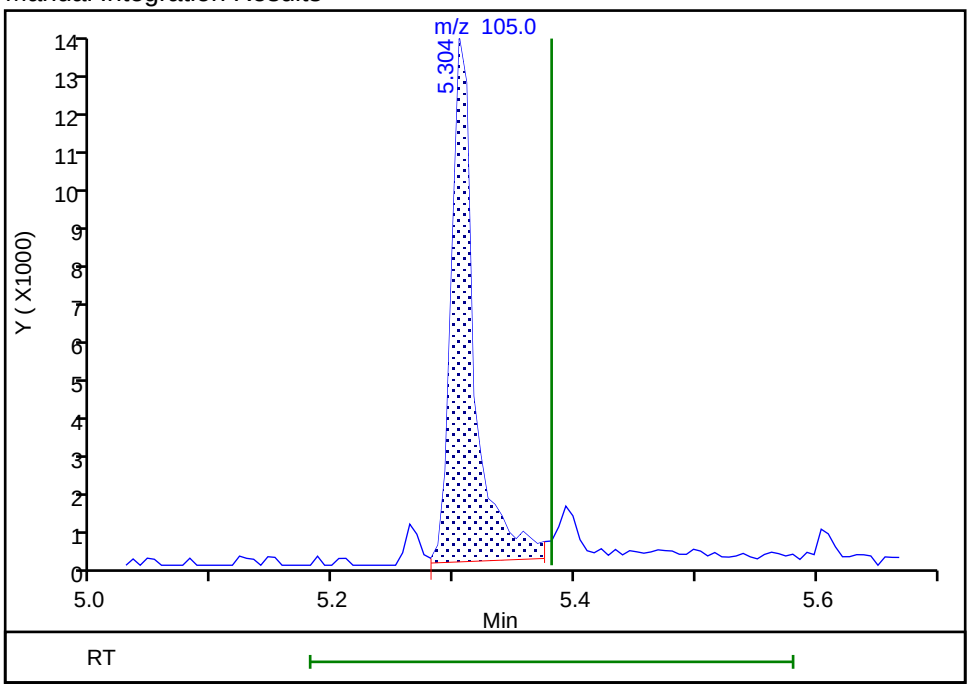
Processing Integration Results

RT: 5.39
Area: 1484
Amount: 10.586077
Amount Units: ug/ml



Manual Integration Results

RT: 5.30
Area: 18466
Amount: 11.980123
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:26:41
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27519.D
Lims ID: STD010 HSL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Nov-2018 15:54:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD010 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:17 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:28:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	161120	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	637396	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	93	316601	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	503585	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	344337	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	97	267529	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	57200	10.0	9.62	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	69617	10.0	10.2	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	57259	10.0	10.1	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	120139	10.0	10.8	
$ 12 2,4,6-Tribromophenol	330	8.124	8.130	-0.006	88	10296	10.0	9.69	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	92069	10.0	10.7	
19 1,4-Dioxane	88	1.791	1.785	0.006	97	25950	10.0	9.85	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	89	37499	10.0	9.58	
21 Pyridine	79	2.073	2.067	0.006	85	128987	20.0	20.2	
32 Phenol	94	4.035	4.041	-0.006	97	72199	10.0	10.2	
34 Aniline	93	4.070	4.070	0.000	97	81566	10.0	9.68	
35 Alpha Methyl Styrene	118	4.123	4.129	-0.006	92	62540	10.0	10.6	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	93	59319	10.0	11.1	
38 n-Decane	43	4.235	4.235	0.000	94	83264	10.0	10.5	
39 2-Chlorophenol	128	4.188	4.194	-0.006	98	59275	10.0	10.0	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	67895	10.0	10.4	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	95	67353	10.0	10.4	
43 Benzyl alcohol	108	4.499	4.505	-0.006	93	37654	10.0	9.85	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	96	63495	10.0	10.3	
45 2-Methylphenol	108	4.605	4.611	-0.006	95	56786	10.0	10.5	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	66	112210	10.0	9.79	
47 Indene	116	4.634	4.634	0.000	92	206592	20.0	19.6	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	79	56789	10.0	11.2	
50 3-Methylphenol	108	4.752	4.752	0.000	87	56789	10.0	11.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	95	56789	10.0	11.2	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	95	40552	10.0	11.3	
54 Acetophenone	105	4.752	4.758	-0.006	96	81703	10.0	9.54	
58 Hexachloroethane	117	4.875	4.875	0.000	93	24262	10.0	9.97	
59 Nitrobenzene	77	4.916	4.922	-0.006	94	59190	10.0	10.4	
63 Isophorone	82	5.146	5.152	-0.006	98	105139	10.0	10.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	28817	10.0	9.83	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	95	58478	10.0	10.8	
68 Benzoic acid	105	5.316	5.381	-0.065	91	51263	20.0	20.6	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	67005	10.0	10.8	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	84	58060	10.0	10.7	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	45348	10.0	10.3	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	94	53277	10.0	10.8	
79 Naphthalene	128	5.627	5.633	-0.006	97	168243	10.0	10.9	
80 4-Chloroaniline	127	5.668	5.674	-0.006	96	61593	10.0	9.81	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	45279	10.0	10.6	
83 Hexachlorobutadiene	225	5.763	5.763	-0.001	96	28876	10.0	10.8	
86 Caprolactam	55	5.968	5.998	-0.030	75	24356	10.0	9.74	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	97	45311	10.0	10.6	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	121187	10.0	11.2	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	110589	10.0	11.0	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	96	25385	10.0	9.32	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	97	49084	10.0	11.3	
100 2,4,6-Trichlorophenol	196	6.585	6.591	-0.006	78	29264	10.0	10.5	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	91	52465	10.0	10.6	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	31522	10.0	9.98	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	95	133746	10.0	10.6	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	95	105223	10.0	11.0	
108 2-Nitroaniline	65	6.879	6.885	-0.006	85	25774	10.0	9.51	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	100186	10.0	10.6	
112 1,3-Dinitrobenzene	168	7.085	7.085	-0.001	88	13475	10.0	8.61	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	95	23587	10.0	9.94	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	149283	10.0	10.5	
115 3-Nitroaniline	138	7.284	7.290	-0.006	96	23478	10.0	9.43	
117 Acenaphthene	153	7.378	7.378	0.000	94	103960	10.0	11.1	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	83	9433	20.0	20.1	
119 4-Nitrophenol	109	7.449	7.461	-0.012	94	20658	20.0	18.5	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	94	27384	10.0	9.54	
123 Dibenzofuran	168	7.549	7.549	0.000	97	142224	10.0	10.9	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	21606	10.0	9.31	
127 Hexadecane	57	7.784	7.790	-0.006	91	89440	10.0	10.8	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	95303	10.0	10.5	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	94	52047	10.0	11.2	
135 Fluorene	166	7.889	7.890	-0.001	96	111895	10.0	11.4	
138 4-Nitroaniline	138	7.889	7.895	-0.006	82	21367	10.0	9.51	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.931	-0.006	81	17868	20.0	20.7	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	76728	10.0	10.6	
142 Diphenylamine	169	7.995	7.995	0.000	95	76728	8.50	9.08	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	41	100799	10.1	10.5	
144 Azobenzene	77	8.036	8.042	-0.006	98	100799	10.0	10.3	
147 2,4,6 - Tribromophenol	330	8.124	8.130	-0.006	88	10242	10.0	9.62	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	68	28209	10.0	10.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	94	27362	10.0	10.7	
159 Atrazine	200	8.518	8.524	-0.006	90	22988	10.0	9.95	
161 n-Octadecane	85	8.700	8.706	-0.006	92	29488	10.0	10.4	
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	20989	20.0	20.7	
168 Phenanthrene	178	8.841	8.847	-0.006	97	146936	10.0	10.9	
169 Anthracene	178	8.894	8.894	0.000	97	142295	10.0	10.5	
170 Carbazole	167	9.047	9.047	0.000	95	121915	10.0	10.4	
171 Alachlor	188	9.188	9.188	0.000	92	15651	10.0	9.78	
173 Di-n-butyl phthalate	149	9.382	9.388	-0.006	99	130696	10.0	9.88	
179 Fluoranthene	202	10.122	10.122	0.000	97	130983	10.0	10.2	
182 Pyrene	202	10.422	10.428	-0.006	97	129402	10.0	10.5	
188 Famphur	218	11.350	11.356	-0.006	86	27194	10.0	8.72	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	98	39311	10.0	8.53	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	40829	10.0	9.08	
197 3,3'-Dichlorobenzidine	252	12.525	12.537	-0.012	74	23615	10.0	8.95	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	98	99144	10.0	9.67	
199 Chrysene	228	12.637	12.649	-0.012	98	102188	10.0	9.74	
201 Di-n-octyl phthalate	149	14.452	14.464	-0.012	99	46296	10.0	11.5	
203 Benzo[b]fluoranthene	252	15.252	15.269	-0.017	97	74045	10.0	9.68	
204 Benzo[k]fluoranthene	252	15.322	15.340	-0.018	99	86398	10.0	9.82	
206 Benzo[e]pyrene	252	15.992	16.004	-0.012	97	73491	10.0	9.64	
207 Benzo[a]pyrene	252	16.133	16.145	-0.012	77	66671	10.0	8.76	
213 Dibenz(a,h)anthracene	278	19.400	19.417	-0.017	95	52106	10.0	9.30	
214 Indeno[1,2,3-cd]pyrene	276	19.300	19.312	-0.012	98	47569	10.0	9.37	
215 Benzo[g,h,i]perylene	276	20.011	20.028	-0.017	98	61936	10.0	8.85	
S 217 Total Cresols	108				0			21.7	
S 218 Methyl Phenols,Total	108				0			21.7	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA010_00039 Amount Added: 200.00 Units: uL

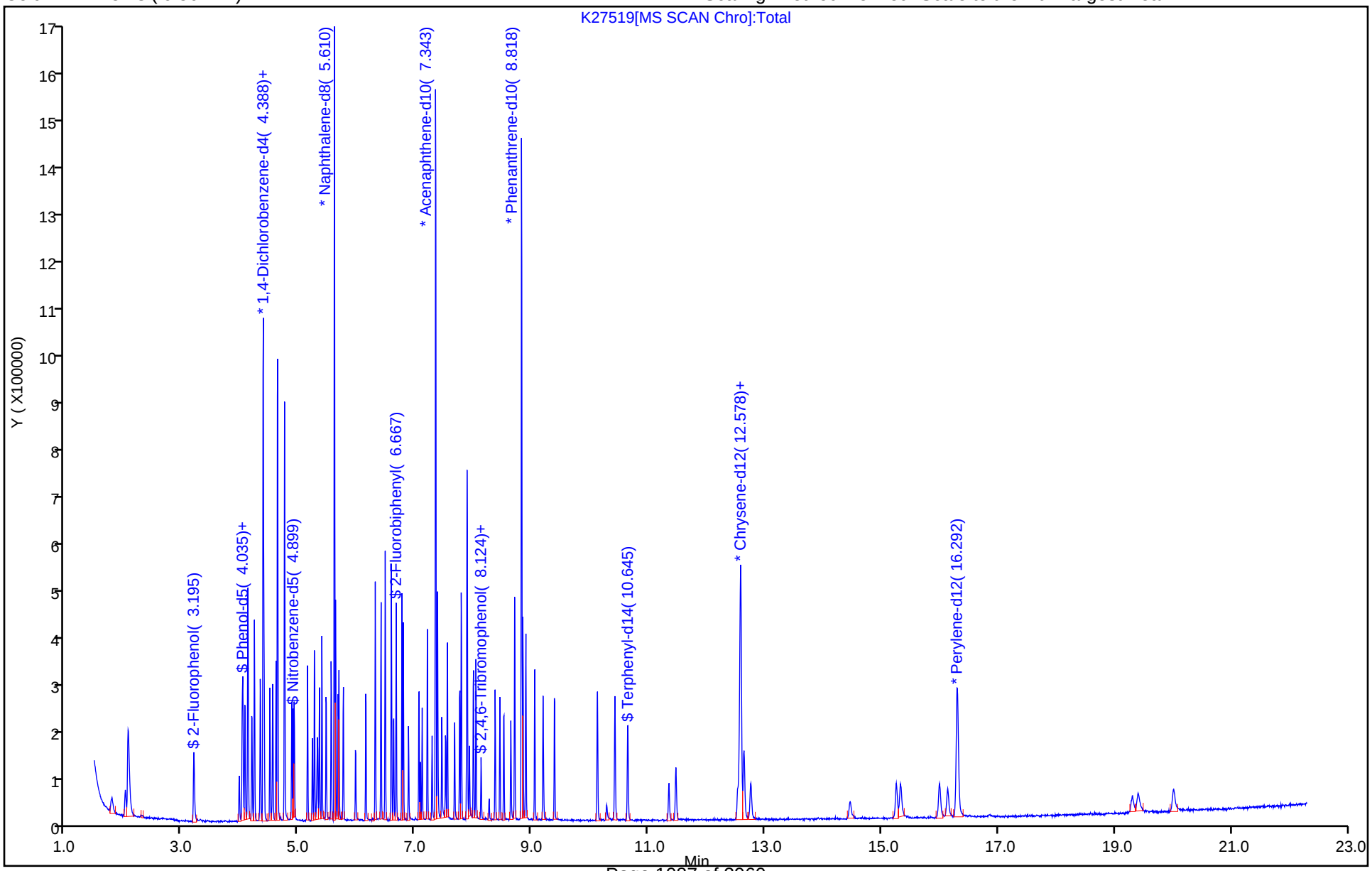
Report Date: 13-Nov-2018 11:59:18 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27519.D

Injection Date:	12-Nov-2018 15:54:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD010 HSL			Worklist Smp#:	6
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

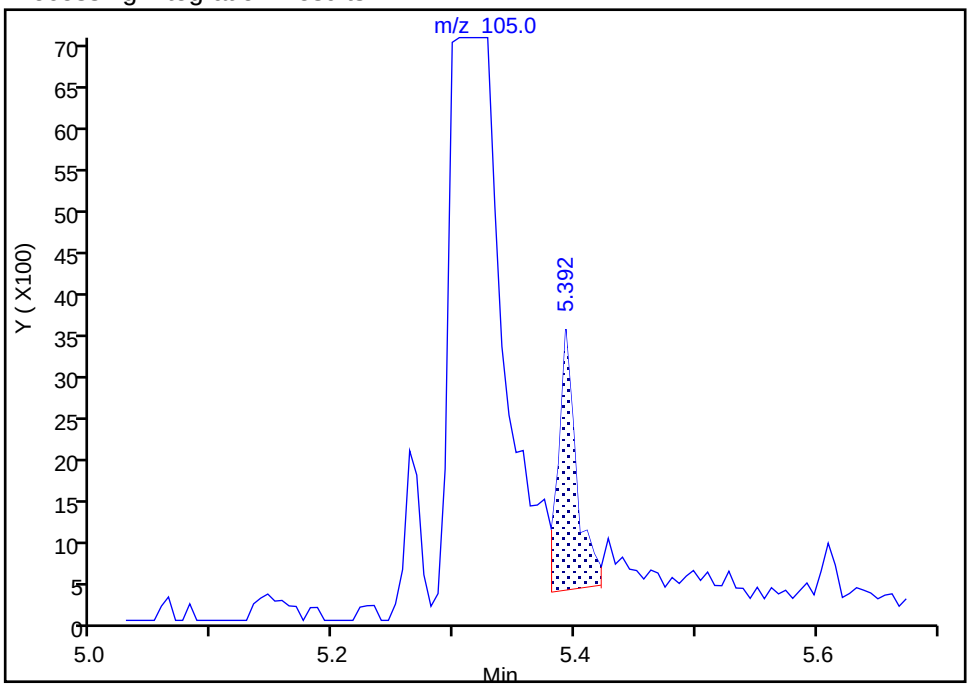
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27519.D
Injection Date: 12-Nov-2018 15:54:30 Instrument ID: SMS_K
Lims ID: STD010 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

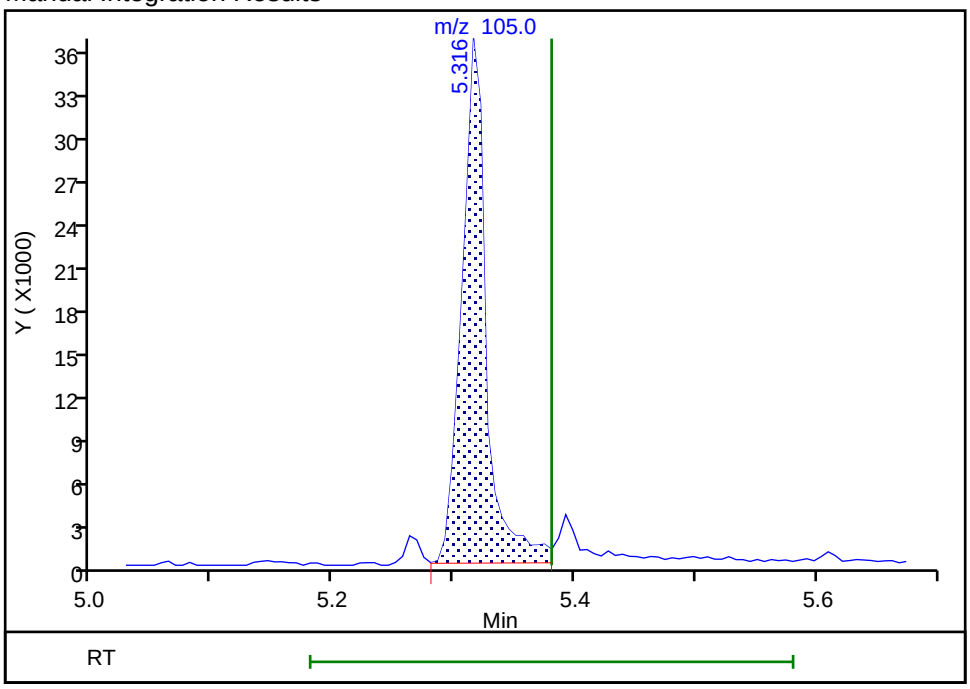
Processing Integration Results

RT: 5.39
Area: 3340
Amount: 6.091943
Amount Units: ug/ml



Manual Integration Results

RT: 5.32
Area: 51263
Amount: 20.553675
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:28:15
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27520.D
Lims ID: STD020 HSL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Nov-2018 16:23:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD020 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:20 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:29:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	160260	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	652114	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	313209	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	489409	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	342396	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	277882	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	118322	20.0	20.0	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	141956	20.0	21.0	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	117194	20.0	20.2	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	232109	20.0	21.2	
$ 12 2,4,6-Tribromophenol	330	8.124	8.130	-0.006	89	20800	20.0	19.8	
$ 13 Terphenyl-d14	244	10.639	10.645	-0.006	98	178652	20.0	20.9	
19 1,4-Dioxane	88	1.791	1.785	0.006	97	52907	20.0	20.2	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	89	76796	20.0	19.7	
21 Pyridine	79	2.067	2.067	0.000	85	253814	40.0	40.0	
32 Phenol	94	4.035	4.041	-0.006	98	148322	20.0	21.0	
34 Aniline	93	4.070	4.070	0.000	97	175185	20.0	20.9	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	126344	20.0	21.5	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	96	115967	20.0	21.7	
38 n-Decane	43	4.235	4.235	0.000	94	166185	20.0	21.0	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	122879	20.0	20.9	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	135903	20.0	21.0	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	94	136149	20.0	21.0	
43 Benzyl alcohol	108	4.499	4.505	-0.006	94	78795	20.0	20.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	129118	20.0	21.0	
45 2-Methylphenol	108	4.605	4.611	-0.006	97	111029	20.0	20.6	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	92	218454	20.0	20.5	
47 Indene	116	4.634	4.634	0.000	91	397201	40.0	40.7	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	78	110970	20.0	22.0	
50 3-Methylphenol	108	4.752	4.752	0.000	88	110970	20.0	22.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	94	110970	20.0	22.0	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	91	80454	20.0	22.5	
54 Acetophenone	105	4.752	4.758	-0.006	95	159609	20.0	20.2	
58 Hexachloroethane	117	4.875	4.875	0.000	93	48933	20.0	20.2	
59 Nitrobenzene	77	4.916	4.922	-0.006	94	120151	20.0	20.7	
63 Isophorone	82	5.146	5.152	-0.006	98	210192	20.0	20.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	59166	20.0	19.7	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	95	114731	20.0	20.8	
68 Benzoic acid	105	5.334	5.381	-0.047	90	122013	40.0	38.0	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	98	135621	20.0	21.3	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	84	118841	20.0	21.5	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	94817	20.0	21.0	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	94	106615	20.0	21.1	
79 Naphthalene	128	5.627	5.633	-0.006	98	335110	20.0	21.3	
80 4-Chloroaniline	127	5.668	5.674	-0.006	96	134743	20.0	21.0	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	90137	20.0	20.5	
83 Hexachlorobutadiene	225	5.762	5.763	-0.001	96	56083	20.0	20.5	
86 Caprolactam	55	5.974	5.998	-0.024	75	50055	20.0	19.6	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	96	90149	20.0	20.6	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	231609	20.0	21.0	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	217651	20.0	21.1	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	76	55220	20.0	20.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	97	96477	20.0	21.6	
100 2,4,6-Trichlorophenol	196	6.585	6.591	-0.006	94	59367	20.0	21.5	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	96	106971	20.0	21.9	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	63495	20.0	20.3	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	94	262928	20.0	21.0	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	197412	20.0	20.8	
108 2-Nitroaniline	65	6.879	6.885	-0.006	86	53038	20.0	19.8	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	191578	20.0	20.5	
112 1,3-Dinitrobenzene	168	7.084	7.085	-0.001	88	29759	20.0	19.2	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	95	47430	20.0	20.2	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	295459	20.0	20.9	
115 3-Nitroaniline	138	7.284	7.290	-0.006	94	47735	20.0	19.4	
117 Acenaphthene	153	7.378	7.378	0.000	93	193569	20.0	20.8	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	86	27820	40.0	38.8	
119 4-Nitrophenol	109	7.449	7.461	-0.012	96	42951	40.0	38.8	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	56145	20.0	19.8	
123 Dibenzofuran	168	7.549	7.549	0.000	97	270931	20.0	21.0	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	72	46070	20.0	20.1	
127 Hexadecane	57	7.784	7.790	-0.006	91	174776	20.0	21.3	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	184562	20.0	20.5	
134 4-Chlorophenyl phenyl ethe	204	7.878	7.884	-0.006	94	95792	20.0	20.9	
135 Fluorene	166	7.889	7.890	-0.001	96	208104	20.0	21.3	
138 4-Nitroaniline	138	7.889	7.895	-0.006	57	43117	20.0	19.4	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.931	-0.006	82	41831	40.0	37.3	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	77	145028	20.0	20.6	
142 Diphenylamine	169	7.995	7.995	0.000	95	145028	17.0	17.3	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	41	201165	20.2	21.1	
144 Azobenzene	77	8.036	8.042	-0.006	98	201165	20.0	20.9	
147 2,4,6 - Tribromophenol	330	8.124	8.130	-0.006	89	20800	20.0	19.8	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	69	52862	20.0	20.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	93	52110	20.0	21.0	
159 Atrazine	200	8.518	8.524	-0.006	91	45846	20.0	20.4	
161 n-Octadecane	85	8.700	8.706	-0.006	92	57732	20.0	21.0	
163 Pentachlorophenol	266	8.636	8.642	-0.006	90	42663	40.0	36.8	
168 Phenanthrene	178	8.841	8.847	-0.006	97	276647	20.0	21.1	
169 Anthracene	178	8.894	8.894	0.000	97	273627	20.0	20.8	
170 Carbazole	167	9.047	9.047	0.000	95	238147	20.0	20.8	
171 Alachlor	188	9.188	9.188	0.000	92	30752	20.0	19.8	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	263974	20.0	20.5	
179 Fluoranthene	202	10.122	10.122	0.000	98	253483	20.0	20.4	
182 Pyrene	202	10.422	10.428	-0.006	97	257256	20.0	21.1	
188 Famphur	218	11.350	11.356	-0.006	85	59495	20.0	19.2	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	97	86998	20.0	19.0	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	93418	20.0	17.1	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	73	50201	20.0	17.7	
198 Benzo[a]anthracene	228	12.561	12.566	-0.006	98	201060	20.0	19.7	
199 Chrysene	228	12.637	12.649	-0.012	97	215972	20.0	20.7	
201 Di-n-octyl phthalate	149	14.458	14.464	-0.006	99	113590	20.0	18.7	
203 Benzo[b]fluoranthene	252	15.252	15.269	-0.017	97	153020	20.0	19.3	
204 Benzo[k]fluoranthene	252	15.328	15.340	-0.012	99	183109	20.0	20.0	
206 Benzo[e]pyrene	252	15.992	16.004	-0.012	97	153199	20.0	19.3	
207 Benzo[a]pyrene	252	16.139	16.145	-0.006	83	147726	20.0	18.7	
213 Dibenz(a,h)anthracene	278	19.406	19.417	-0.011	94	112845	20.0	17.7	
214 Indeno[1,2,3-cd]pyrene	276	19.300	19.312	-0.012	98	105557	20.0	17.0	
215 Benzo[g,h,i]perylene	276	20.017	20.028	-0.011	98	134918	20.0	18.6	
S 217 Total Cresols	108				0			42.6	
S 218 Methyl Phenols,Total	108				0			42.6	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA020_00039 Amount Added: 200.00 Units: uL

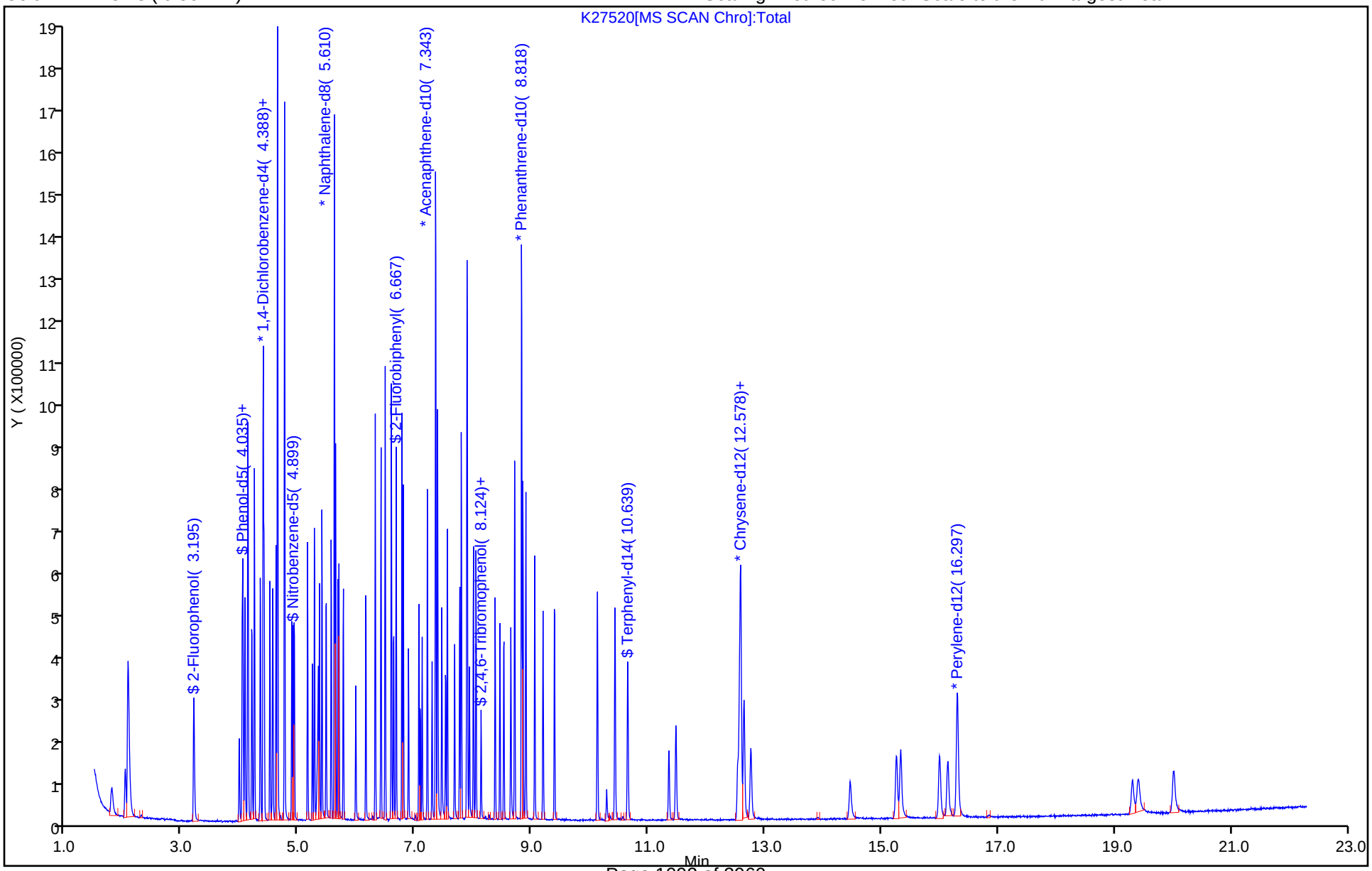
Report Date: 13-Nov-2018 11:59:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27520.D

Injection Date:	12-Nov-2018 16:23:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD020 HSL			Worklist Smp#:	7
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

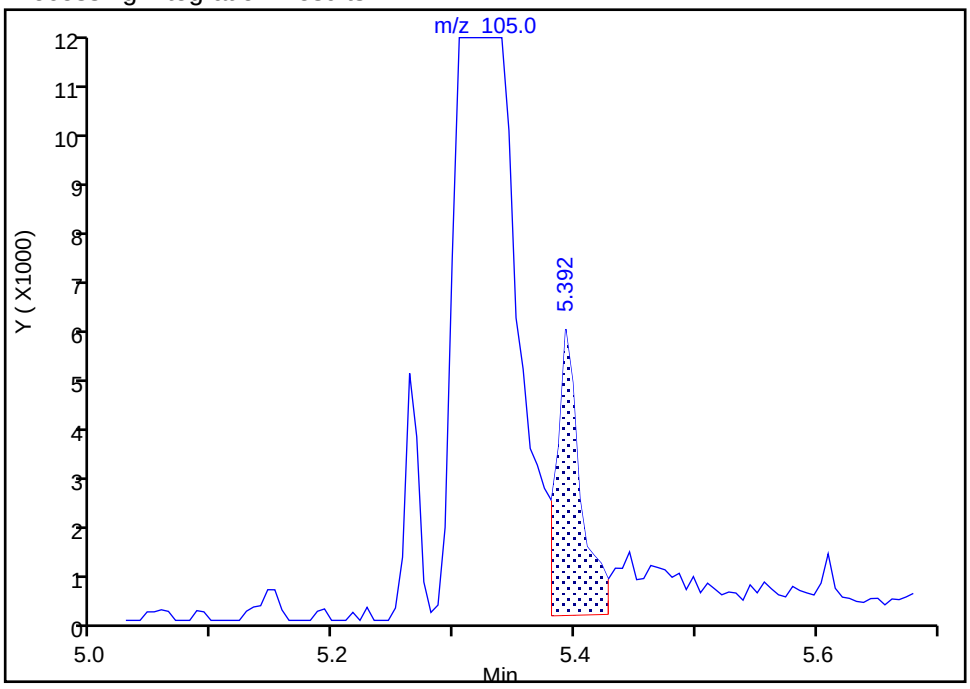
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27520.D
Injection Date: 12-Nov-2018 16:23:30 Instrument ID: SMS_K
Lims ID: STD020 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

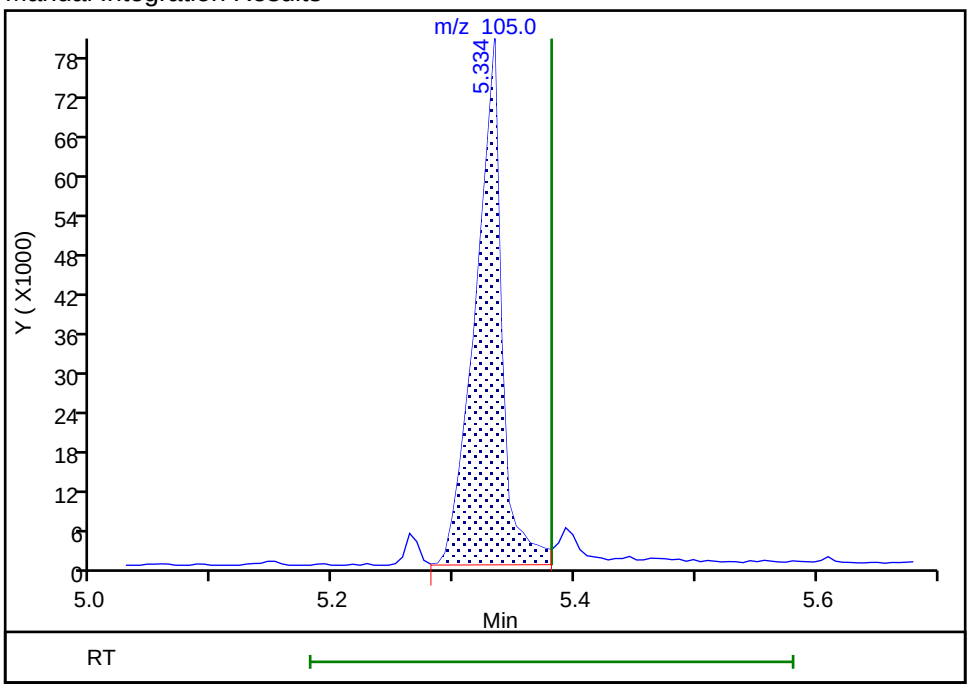
Processing Integration Results

RT: 5.39
Area: 7922
Amount: 5.786665
Amount Units: ug/ml



Manual Integration Results

RT: 5.33
Area: 122013
Amount: 37.982393
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:29:08
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27521.D
Lims ID: STD050 HSL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Nov-2018 16:52:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD050 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:23 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:31:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	161661	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	649913	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	95	309891	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	97	482728	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	357454	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	297301	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	305386	50.0	51.2	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	96	355542	50.0	52.1	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	299123	50.0	51.8	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	548658	50.0	50.5	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	94	53654	50.0	51.6	
$ 13 Terphenyl-d14	244	10.639	10.645	-0.006	98	446379	50.0	50.0	
19 1,4-Dioxane	88	1.785	1.785	0.000	96	131239	50.0	49.6	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	88	198337	50.0	50.5	
21 Pyridine	79	2.067	2.067	0.000	84	639736	100.0	99.9	
32 Phenol	94	4.041	4.041	0.000	98	365423	50.0	51.4	
34 Aniline	93	4.070	4.070	0.000	97	447487	50.0	53.0	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	311084	50.0	52.4	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	92	280605	50.0	52.1	
38 n-Decane	43	4.235	4.235	0.000	94	410700	50.0	51.5	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	305007	50.0	51.4	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	330067	50.0	50.6	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	94	334619	50.0	51.3	
43 Benzyl alcohol	108	4.499	4.505	-0.006	94	198281	50.0	51.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	96	315295	50.0	50.8	
45 2-Methylphenol	108	4.605	4.611	-0.006	96	279041	50.0	51.4	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	64	504032	50.0	50.9	
47 Indene	116	4.634	4.634	0.000	92	934303	100.0	103.2	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	78	275215	50.0	54.1	
50 3-Methylphenol	108	4.752	4.752	0.000	89	275215	50.0	54.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	92	275215	50.0	54.1	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	88	188873	50.0	52.5	
54 Acetophenone	105	4.758	4.758	0.000	92	378102	50.0	51.6	
58 Hexachloroethane	117	4.875	4.875	0.000	96	126661	50.0	51.9	
59 Nitrobenzene	77	4.922	4.922	0.000	93	294116	50.0	50.8	
63 Isophorone	82	5.151	5.152	-0.001	98	522490	50.0	51.2	
64 2-Nitrophenol	139	5.234	5.234	0.000	93	160413	50.0	53.7	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	95	285083	50.0	51.8	
68 Benzoic acid	105	5.363	5.381	-0.018	90	349055	100.0	95.2	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	330079	50.0	52.0	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	84	288027	50.0	52.3	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	234732	50.0	52.2	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	94	257693	50.0	51.1	
79 Naphthalene	128	5.627	5.633	-0.006	98	800761	50.0	51.1	
80 4-Chloroaniline	127	5.669	5.674	-0.005	96	339141	50.0	53.0	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	224979	50.0	51.5	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	138975	50.0	51.0	
86 Caprolactam	55	5.986	5.998	-0.012	75	129577	50.0	50.8	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	97	223076	50.0	51.0	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	96	569115	50.0	51.8	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	531192	50.0	51.8	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	97	144719	50.0	54.3	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	97	226363	50.0	51.0	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	142723	50.0	52.2	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	248080	50.0	51.3	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	158437	50.0	51.3	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	95	641700	50.0	51.8	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	481509	50.0	51.3	
108 2-Nitroaniline	65	6.879	6.885	-0.006	87	136888	50.0	51.6	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	466760	50.0	50.5	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	80637	50.0	52.6	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	95	120015	50.0	51.7	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	721183	50.0	51.6	
115 3-Nitroaniline	138	7.284	7.290	-0.006	96	124236	50.0	51.0	
117 Acenaphthene	153	7.378	7.378	0.000	93	468435	50.0	50.9	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	85	93710	100.0	101.4	
119 4-Nitrophenol	109	7.455	7.461	-0.006	93	114326	100.0	104.4	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	144725	50.0	51.5	
123 Dibenzofuran	168	7.549	7.549	0.000	97	645043	50.0	50.6	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	72	121660	50.0	53.6	
127 Hexadecane	57	7.784	7.790	-0.006	91	425883	50.0	52.5	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	451744	50.0	50.8	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	92	229841	50.0	50.7	
135 Fluorene	166	7.889	7.890	-0.001	95	491217	50.0	50.9	
138 4-Nitroaniline	138	7.889	7.895	-0.006	87	116495	50.0	53.0	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	88	128991	100.0	97.8	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	352738	50.0	50.7	
142 Diphenylamine	169	7.995	7.995	0.000	95	352738	42.5	42.6	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	43	486464	50.5	51.6	
144 Azobenzene	77	8.036	8.042	-0.006	98	486464	50.0	51.0	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	94	53654	50.0	51.5	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	69	131956	50.0	51.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	93	122431	50.0	50.1	
159 Atrazine	200	8.518	8.524	-0.006	91	113470	50.0	51.2	
161 n-Octadecane	85	8.700	8.706	-0.006	92	140191	50.0	51.8	
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	129030	100.0	100.7	
168 Phenanthrene	178	8.847	8.847	0.000	97	661531	50.0	51.1	
169 Anthracene	178	8.894	8.894	0.000	97	675825	50.0	52.0	
170 Carbazole	167	9.047	9.047	0.000	95	578565	50.0	51.3	
171 Alachlor	188	9.188	9.188	0.000	93	80219	50.0	52.3	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	658740	50.0	51.9	
179 Fluoranthene	202	10.122	10.122	0.000	98	623130	50.0	50.7	
182 Pyrene	202	10.422	10.428	-0.006	97	633882	50.0	49.7	
188 Famphur	218	11.350	11.356	-0.006	85	177444	50.0	54.8	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	97	248334	50.0	51.9	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	298912	50.0	46.5	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	73	166265	50.0	53.3	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	99	537361	50.0	50.5	
199 Chrysene	228	12.637	12.649	-0.012	97	548948	50.0	50.4	
201 Di-n-octyl phthalate	149	14.458	14.464	-0.006	99	413485	50.0	47.3	
203 Benzo[b]fluoranthene	252	15.257	15.269	-0.012	98	433901	50.0	51.0	
204 Benzo[k]fluoranthene	252	15.328	15.340	-0.012	99	506646	50.0	51.8	
206 Benzo[e]pyrene	252	15.998	16.004	-0.006	97	434768	50.0	51.3	
207 Benzo[a]pyrene	252	16.133	16.145	-0.012	77	441504	50.0	52.2	
213 Dibenz(a,h)anthracene	278	19.406	19.417	-0.011	94	355242	50.0	49.2	
214 Indeno[1,2,3-cd]pyrene	276	19.306	19.312	-0.006	98	326812	50.0	44.2	
215 Benzo[g,h,i]perylene	276	20.017	20.028	-0.011	98	402717	50.0	51.8	
S 217 Total Cresols	108				0			105.5	
S 218 Methyl Phenols,Total	108				0			105.5	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA050_00040 Amount Added: 200.00 Units: uL

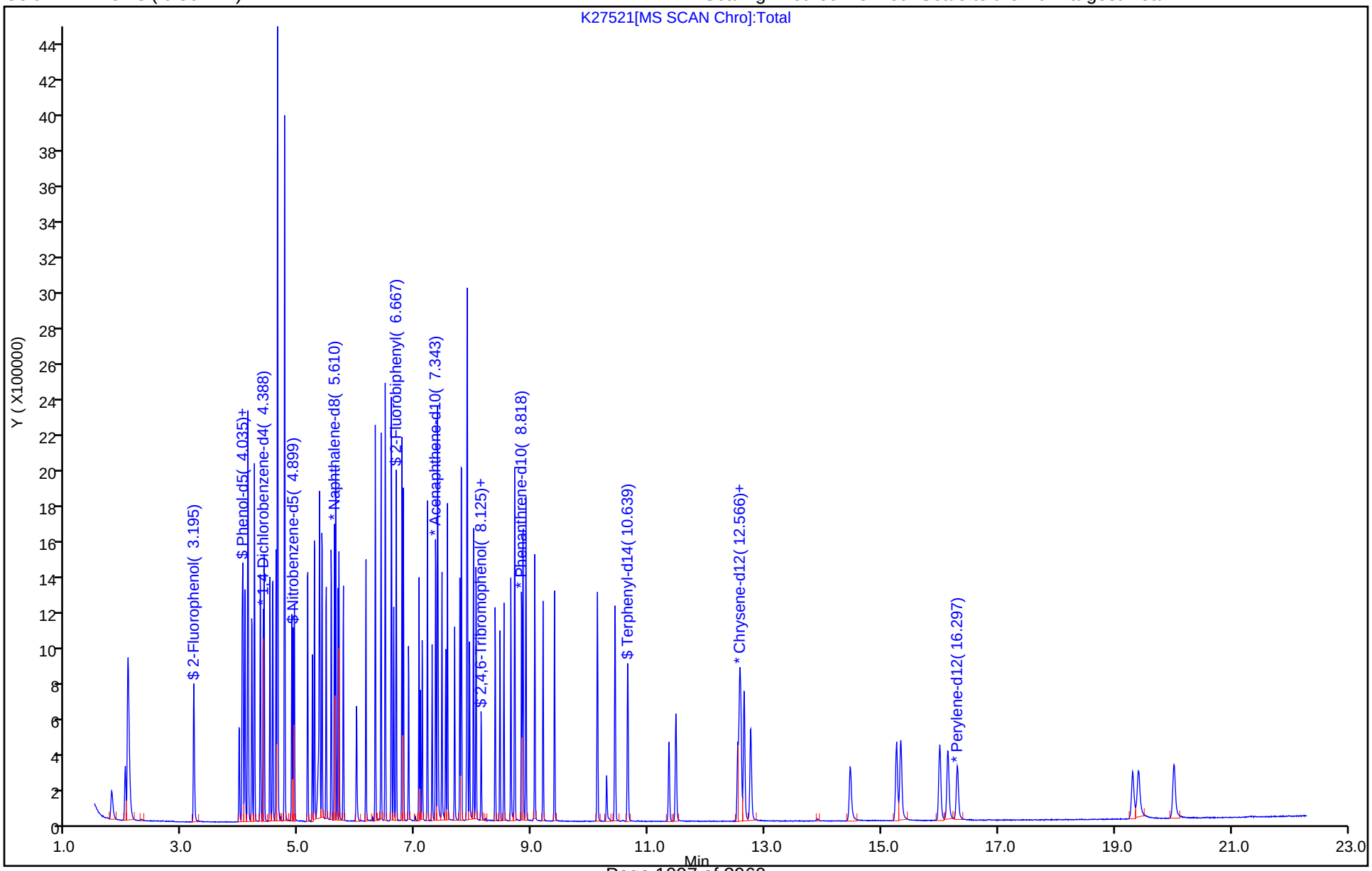
Report Date: 13-Nov-2018 11:59:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27521.D

Injection Date:	12-Nov-2018 16:52:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD050 HSL			Worklist Smp#:	8
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

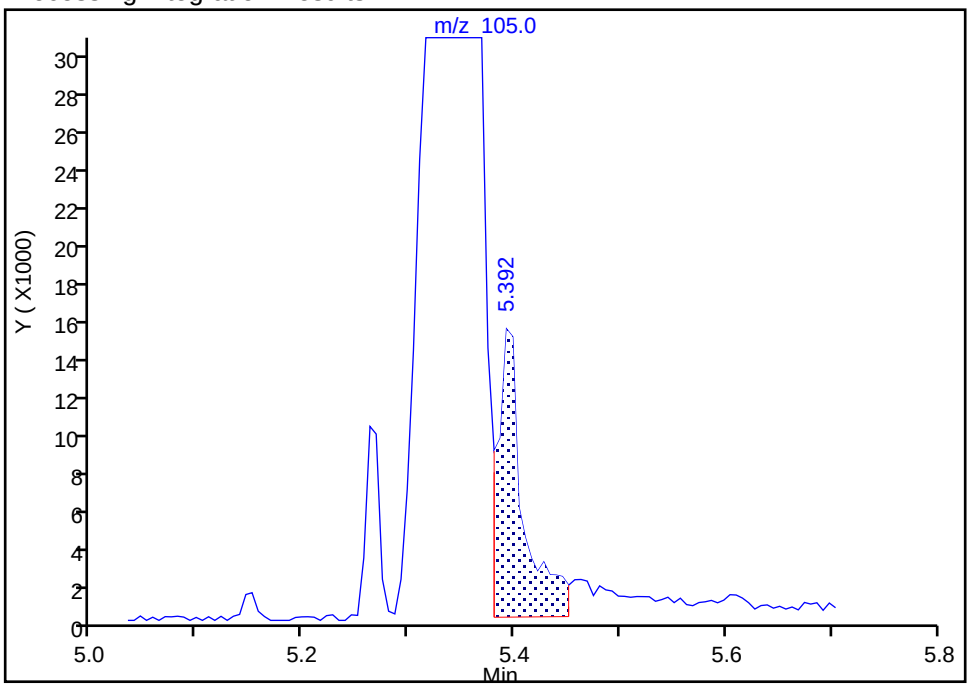
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27521.D
Injection Date: 12-Nov-2018 16:52:30 Instrument ID: SMS_K
Lims ID: STD050 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

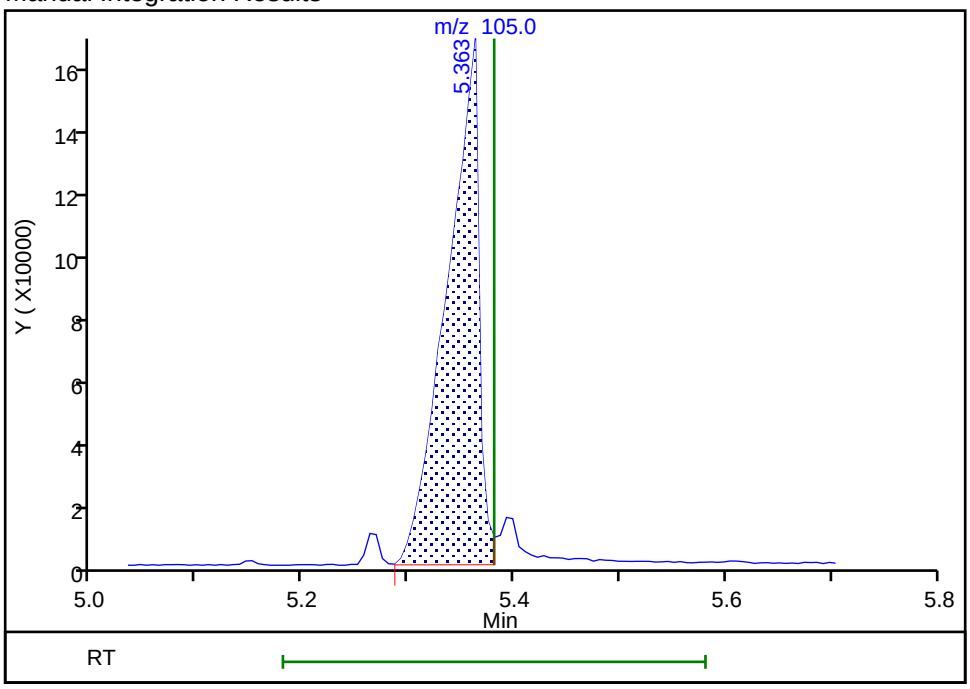
Processing Integration Results

RT: 5.39
Area: 25870
Amount: 10.863962
Amount Units: ug/ml



Manual Integration Results

RT: 5.36
Area: 349055
Amount: 95.160279
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:30:21
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27522.D
Lims ID: STD120 HSL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Nov-2018 17:21:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD120 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:26 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:31:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	148135	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	99	592974	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	96	277443	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	420612	40.0	40.0	
* 5 Chrysene-d12	240	12.590	12.590	0.000	99	314199	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	273317	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	666289	120.0	121.8	
$ 8 Phenol-d5	99	4.029	4.029	0.000	98	725010	120.0	115.9	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	92	618838	120.0	117.4	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	1102284	120.0	113.4	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	93	113316	120.0	121.7	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	902409	120.0	115.1	
19 1,4-Dioxane	88	1.785	1.785	0.000	96	291003	120.0	120.1	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	87	435543	120.0	121.0	
21 Pyridine	79	2.067	2.067	0.000	84	1391751	240.0	237.3	
32 Phenol	94	4.041	4.041	0.000	98	753322	120.0	115.6	
34 Aniline	93	4.076	4.070	0.006	97	922267	120.0	119.1	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	94	629995	120.0	115.8	
36 Bis(2-chloroethyl)ether	93	4.123	4.117	0.006	97	549928	120.0	111.5	
38 n-Decane	43	4.235	4.235	0.000	94	857875	120.0	117.4	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	637497	120.0	117.2	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	693090	120.0	116.0	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	693185	120.0	115.9	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	407977	120.0	116.0	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	656940	120.0	115.5	
45 2-Methylphenol	108	4.611	4.611	0.000	95	572885	120.0	115.2	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	92	935342	120.0	118.0	
47 Indene	116	4.634	4.634	0.000	91	1734609	240.0	238.0	
49 3 & 4 Methylphenol	108	4.758	4.752	0.006	66	501084	120.0	107.4	
50 3-Methylphenol	108	4.758	4.752	0.006	71	501084	120.0	107.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.758	4.752	0.006	68	501084	120.0	107.4	
52 N-Nitrosodi-n-propylamine	70	4.758	4.758	0.000	79	354366	120.0	107.4	
54 Acetophenone	105	4.758	4.758	0.000	79	699770	120.0	117.6	
58 Hexachloroethane	117	4.875	4.875	0.000	95	264156	120.0	118.1	
59 Nitrobenzene	77	4.922	4.922	0.000	93	607287	120.0	115.0	
63 Isophorone	82	5.152	5.152	0.000	98	1056965	120.0	113.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	93	330343	120.0	121.2	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	94	567982	120.0	113.2	
68 Benzoic acid	105	5.392	5.381	0.011	85	829953	240.0	236.1	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	649652	120.0	112.2	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	90	556813	120.0	110.8	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	478443	120.0	116.5	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	520813	120.0	113.1	
79 Naphthalene	128	5.633	5.633	0.000	98	1589119	120.0	111.1	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	677743	120.0	116.1	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	451360	120.0	113.2	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	97	277806	120.0	111.8	
86 Caprolactam	55	6.009	5.998	0.011	74	280749	120.0	120.6	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	96	458386	120.0	114.9	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	1101727	120.0	109.9	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	1045992	120.0	111.8	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	95	293527	120.0	123.0	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	434374	120.0	107.2	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	283804	120.0	115.9	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	485871	120.0	112.2	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	325374	120.0	117.6	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	94	1246665	120.0	112.5	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	95	949825	120.0	113.1	
108 2-Nitroaniline	65	6.885	6.885	0.000	87	293186	120.0	123.5	
111 Dimethyl phthalate	163	7.067	7.061	0.006	99	948611	120.0	114.7	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	174453	120.0	127.2	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	249565	120.0	120.0	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1435231	120.0	114.8	
115 3-Nitroaniline	138	7.290	7.290	0.000	95	264605	120.0	121.3	
117 Acenaphthene	153	7.378	7.378	0.000	93	928673	120.0	112.8	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	83	233753	240.0	236.3	
119 4-Nitrophenol	109	7.461	7.461	0.000	92	235624	240.0	240.4	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	306237	120.0	121.7	
123 Dibenzofuran	168	7.549	7.549	0.000	97	1289352	120.0	112.9	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	246394	120.0	121.2	
127 Hexadecane	57	7.790	7.790	0.000	92	819804	120.0	112.9	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	901148	120.0	113.1	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	94	441882	120.0	108.9	
135 Fluorene	166	7.890	7.890	0.000	95	930427	120.0	107.8	
138 4-Nitroaniline	138	7.895	7.895	0.000	87	235862	120.0	119.7	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	84	295376	240.0	242.6	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	714108	120.0	117.9	
142 Diphenylamine	169	7.995	7.995	0.000	95	714108	102.0	96.4	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	986445	121.3	116.8	
144 Azobenzene	77	8.042	8.042	0.000	97	986445	120.0	115.5	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	93	115024	120.0	123.3	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	68	265613	120.0	117.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.454	8.454	0.000	94	247092	120.0	116.0	
159 Atrazine	200	8.524	8.524	0.000	91	231230	120.0	119.8	
161 n-Octadecane	85	8.700	8.706	-0.006	92	286472	120.0	121.4	
163 Pentachlorophenol	266	8.642	8.642	0.000	92	278575	240.0	240.8	
168 Phenanthrene	178	8.847	8.847	0.000	97	1287205	120.0	114.2	
169 Anthracene	178	8.894	8.894	0.000	97	1313990	120.0	116.1	
170 Carbazole	167	9.047	9.047	0.000	95	1160202	120.0	118.1	
171 Alachlor	188	9.188	9.188	0.000	93	160858	120.0	120.4	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	1326203	120.0	120.0	
179 Fluoranthene	202	10.122	10.122	0.000	98	1253693	120.0	117.2	
182 Pyrene	202	10.428	10.428	0.000	97	1290294	120.0	115.1	
188 Famphur	218	11.356	11.356	0.000	84	380659	120.0	133.7	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	97	545371	120.0	129.6	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	97	694101	120.0	118.0	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	73	339266	120.0	122.2	
198 Benzo[a]anthracene	228	12.566	12.566	0.000	99	1146414	120.0	122.6	
199 Chrysene	228	12.643	12.649	-0.006	97	1142542	120.0	119.3	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	1075381	120.0	117.9	
203 Benzo[b]fluoranthene	252	15.263	15.269	-0.006	97	977871	120.0	125.1	
204 Benzo[k]fluoranthene	252	15.340	15.340	0.000	99	1125661	120.0	125.3	
206 Benzo[e]pyrene	252	16.004	16.004	0.000	97	951997	120.0	122.2	
207 Benzo[a]pyrene	252	16.145	16.145	0.000	77	1033688	120.0	133.0	
213 Dibenz(a,h)anthracene	278	19.417	19.417	0.000	93	832493	120.0	123.0	
214 Indeno[1,2,3-cd]pyrene	276	19.318	19.312	0.006	98	782312	120.0	114.9	
215 Benzo[g,h,i]perylene	276	20.034	20.028	0.006	98	924989	120.0	129.4	
S 217 Total Cresols	108				0			222.6	
S 218 Methyl Phenols,Total	108				0			222.6	

Reagents:

MS-HSLA120_00039 Amount Added: 200.00 Units: uL

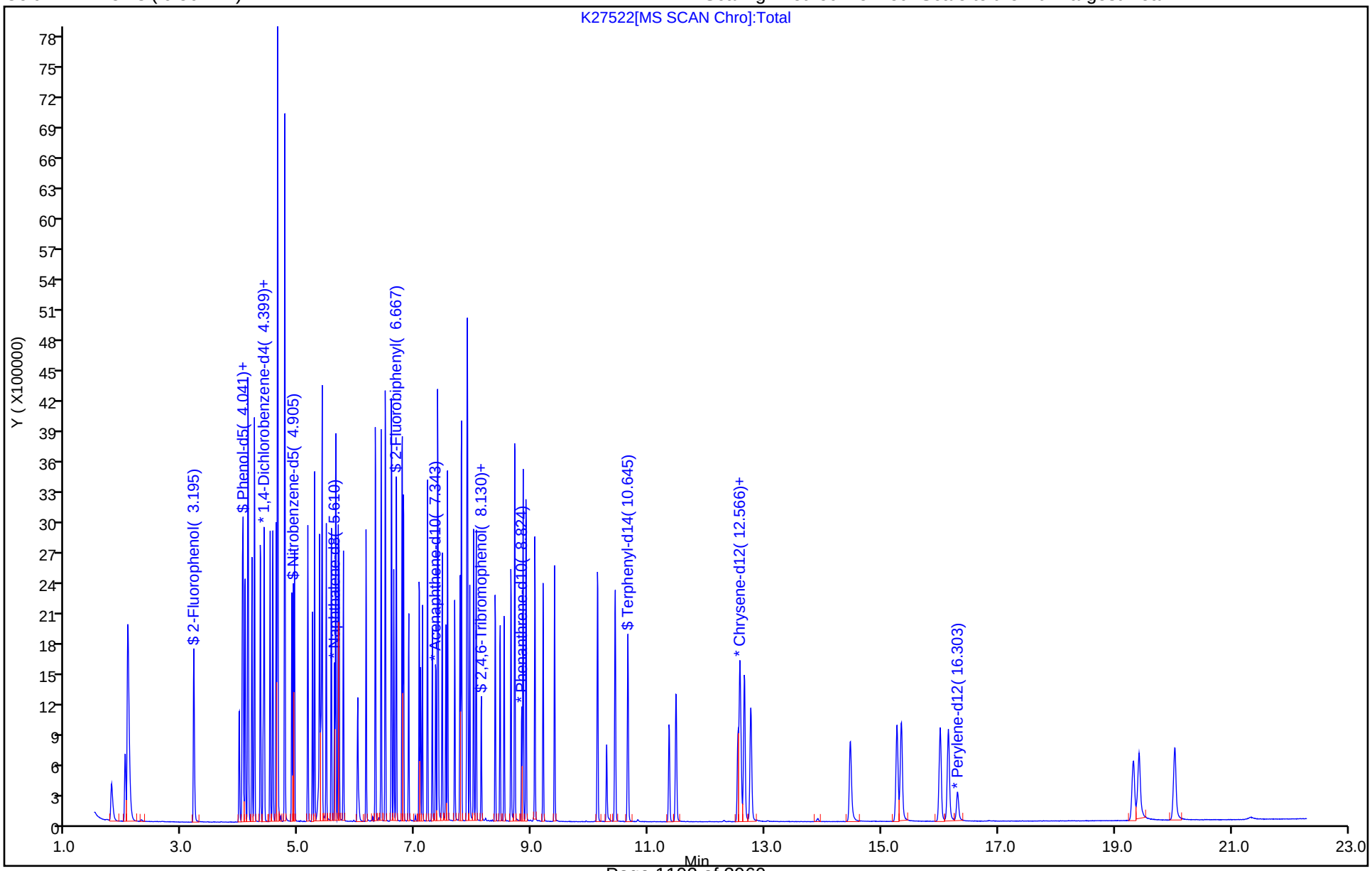
Report Date: 13-Nov-2018 11:59:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27522.D

Injection Date:	12-Nov-2018 17:21:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD120 HSL			Worklist Smp#:	9
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27523.D
Lims ID: STD160 HSL
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 12-Nov-2018 17:50:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD160 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:29 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:32:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	95	143099	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	557775	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	93	263837	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	418007	40.0	40.0	
* 5 Chrysene-d12	240	12.590	12.590	0.000	99	332730	40.0	40.0	
* 6 Perylene-d12	264	16.303	16.303	0.000	97	301196	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	846273	160.0	160.2	
$ 8 Phenol-d5	99	4.029	4.029	0.000	97	900726	160.0	149.0	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	94	779145	160.0	157.2	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	1370430	160.0	148.3	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	93	146853	160.0	165.8	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	1220242	160.0	147.0	
19 1,4-Dioxane	88	1.785	1.785	0.000	97	366901	160.0	156.8	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	87	555023	160.0	159.7	
21 Pyridine	79	2.067	2.067	0.000	84	1747731	320.0	308.4	
32 Phenol	94	4.041	4.041	0.000	98	929978	160.0	147.7	
34 Aniline	93	4.076	4.070	0.006	96	1176857	160.0	157.3	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	770633	160.0	146.7	
36 Bis(2-chloroethyl)ether	93	4.123	4.117	0.006	92	670714	160.0	140.7	
38 n-Decane	43	4.235	4.235	0.000	94	1058317	160.0	149.9	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	799888	160.0	152.2	
40 1,3-Dichlorobenzene	146	4.341	4.335	0.006	98	862705	160.0	149.5	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	869430	160.0	150.5	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	521996	160.0	153.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	830376	160.0	151.1	
45 2-Methylphenol	108	4.611	4.611	0.000	95	707944	160.0	147.3	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	63	1129823	160.0	161.7	
47 Indene	116	4.634	4.634	0.000	92	2083219	320.0	321.2	
49 3 & 4 Methylphenol	108	4.758	4.752	0.006	67	615314	160.0	136.5	
50 3-Methylphenol	108	4.758	4.752	0.006	74	615314	160.0	136.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.758	4.752	0.006	71	615314	160.0	136.5	
52 N-Nitrosodi-n-propylamine	70	4.758	4.758	0.000	79	440112	160.0	138.1	
54 Acetophenone	105	4.758	4.758	0.000	76	847040	160.0	159.4	
58 Hexachloroethane	117	4.875	4.875	0.000	95	323939	160.0	149.9	
59 Nitrobenzene	77	4.922	4.922	0.000	94	769048	160.0	154.9	
63 Isophorone	82	5.151	5.152	-0.001	98	1339577	160.0	153.0	
64 2-Nitrophenol	139	5.234	5.234	0.000	93	421572	160.0	164.4	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	94	705645	160.0	149.5	
68 Benzoic acid	105	5.410	5.381	0.029	93	1074213	320.0	322.1	
69 Bis(2-chloroethoxy)methane	93	5.357	5.351	0.006	98	812311	160.0	149.1	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	91	685333	160.0	145.0	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	594218	160.0	153.8	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	95	639841	160.0	147.8	
79 Naphthalene	128	5.633	5.633	0.000	98	1951562	160.0	145.0	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	850849	160.0	154.9	
81 2,6-Dichlorophenol	162	5.692	5.692	0.000	96	570129	160.0	152.0	
83 Hexachlorobutadiene	225	5.762	5.763	-0.001	96	354708	160.0	151.8	
86 Caprolactam	55	6.015	5.998	0.017	74	363432	160.0	166.0	
89 4-Chloro-3-methylphenol	107	6.156	6.150	0.006	96	578839	160.0	154.3	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	94	1367650	160.0	145.0	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	95	1285338	160.0	146.0	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	95	366563	160.0	161.6	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	541081	160.0	141.9	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	354021	160.0	152.1	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	606382	160.0	147.3	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	411551	160.0	156.4	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	95	1545973	160.0	146.7	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	95	1175719	160.0	147.2	
108 2-Nitroaniline	65	6.885	6.885	0.000	86	372972	160.0	165.2	
111 Dimethyl phthalate	163	7.067	7.061	0.006	99	1180346	160.0	150.1	
112 1,3-Dinitrobenzene	168	7.090	7.085	0.005	90	230442	160.0	176.7	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	313855	160.0	158.7	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1779448	160.0	149.7	
115 3-Nitroaniline	138	7.290	7.290	0.000	95	347285	160.0	167.4	
117 Acenaphthene	153	7.378	7.378	0.000	94	1133494	160.0	144.8	
118 2,4-Dinitrophenol	184	7.396	7.390	0.006	83	328211	320.0	322.3	
119 4-Nitrophenol	109	7.461	7.461	0.000	95	310541	320.0	333.1	
122 2,4-Dinitrotoluene	165	7.525	7.519	0.006	95	394810	160.0	165.0	
123 Dibenzofuran	168	7.549	7.549	0.000	97	1597450	160.0	147.1	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	310696	160.0	160.7	
127 Hexadecane	57	7.790	7.790	0.000	91	1023746	160.0	148.2	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	1138989	160.0	150.4	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	93	550852	160.0	142.8	
135 Fluorene	166	7.889	7.890	-0.001	95	1153370	160.0	140.5	
138 4-Nitroaniline	138	7.901	7.895	0.006	87	309819	160.0	165.4	
139 4,6-Dinitro-2-methylphenol	198	7.936	7.931	0.005	87	396005	320.0	324.2	
141 N-Nitrosodiphenylamine	169	8.001	7.995	0.006	63	907132	160.0	150.7	
142 Diphenylamine	169	8.001	7.995	0.006	95	907132	136.0	128.8	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	1224965	161.8	152.5	
144 Azobenzene	77	8.042	8.042	0.000	97	1224965	160.0	150.9	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	93	146853	160.0	165.6	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	67	332486	160.0	148.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.453	8.454	-0.001	94	311825	160.0	147.3	
159 Atrazine	200	8.524	8.524	0.000	91	302087	160.0	157.5	
161 n-Octadecane	85	8.706	8.706	0.000	92	352348	160.0	150.2	
163 Pentachlorophenol	266	8.642	8.642	0.000	93	376339	320.0	325.3	
168 Phenanthrene	178	8.847	8.847	0.000	97	1636790	160.0	146.1	
169 Anthracene	178	8.900	8.894	0.006	97	1685118	160.0	149.8	
170 Carbazole	167	9.053	9.047	0.006	96	1502282	160.0	153.9	
171 Alachlor	188	9.188	9.188	0.000	94	218134	160.0	164.3	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	1737983	160.0	158.3	
179 Fluoranthene	202	10.128	10.122	0.006	98	1709394	160.0	160.7	
182 Pyrene	202	10.428	10.428	0.000	97	1737190	160.0	146.3	
188 Famphur	218	11.356	11.356	0.000	84	516322	160.0	171.3	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	97	785657	160.0	176.3	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	1017034	160.0	162.2	
197 3,3'-Dichlorobenzidine	252	12.537	12.537	0.000	75	487610	160.0	165.3	
198 Benzo[a]anthracene	228	12.572	12.566	0.006	98	1604483	160.0	162.0	
199 Chrysene	228	12.649	12.649	0.000	97	1613485	160.0	159.1	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	1644331	160.0	160.1	
203 Benzo[b]fluoranthene	252	15.269	15.269	0.000	97	1453264	160.0	168.7	
204 Benzo[k]fluoranthene	252	15.346	15.340	0.006	99	1614080	160.0	163.0	
206 Benzo[e]pyrene	252	16.015	16.004	0.011	97	1399392	160.0	163.0	
207 Benzo[a]pyrene	252	16.151	16.145	0.006	78	1475040	160.0	172.2	
213 Dibenz(a,h)anthracene	278	19.423	19.417	0.006	93	1256976	160.0	168.0	
214 Indeno[1,2,3-cd]pyrene	276	19.329	19.312	0.017	98	1191852	160.0	164.0	
215 Benzo[g,h,i]perylene	276	20.040	20.028	0.012	98	1361804	160.0	172.8	
S 217 Total Cresols	108				0			283.9	
S 218 Methyl Phenols,Total	108				0			283.9	

Reagents:

MS-HSLA160_00039 Amount Added: 200.00 Units: uL

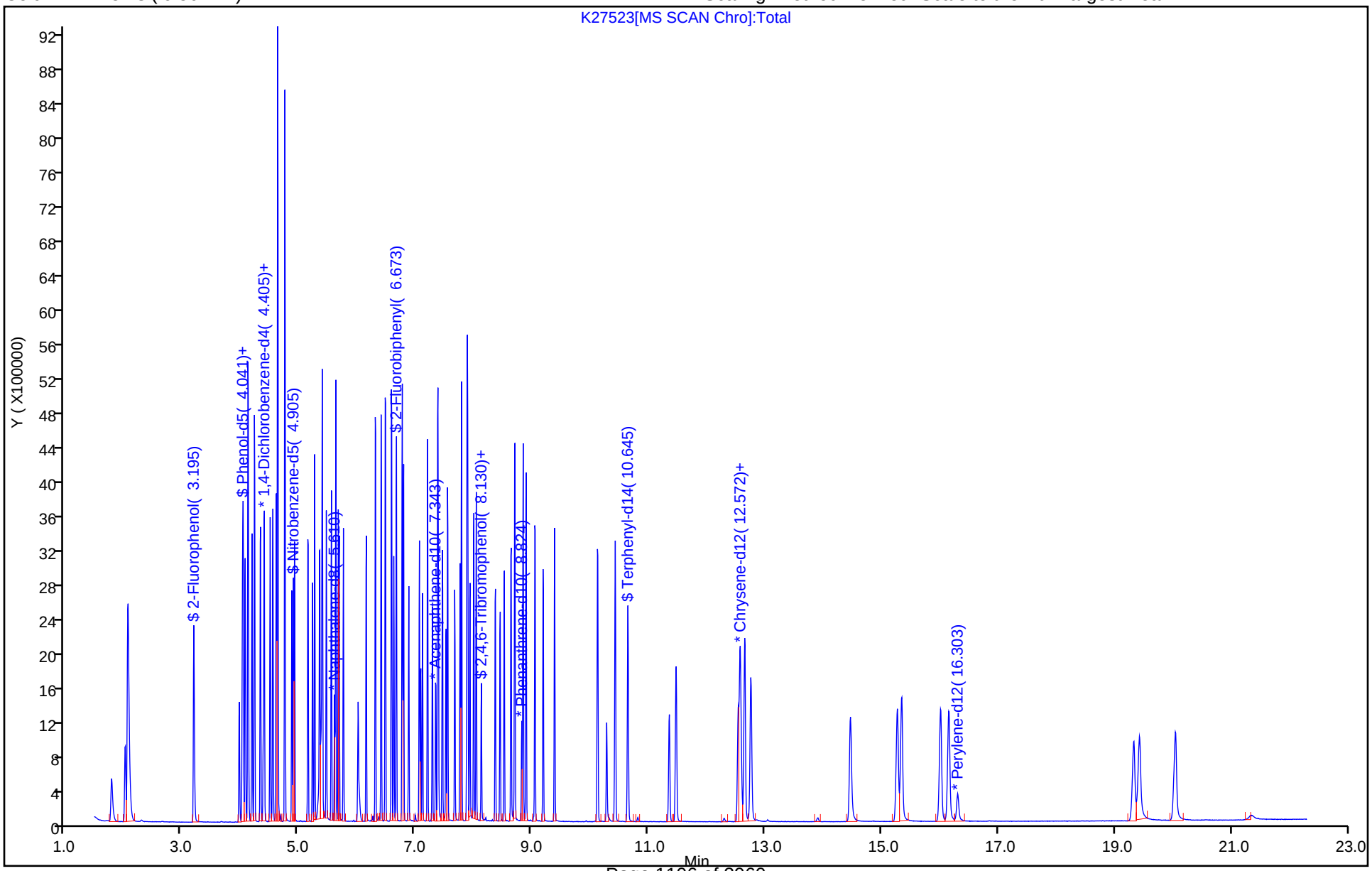
Report Date: 13-Nov-2018 11:59:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27523.D

Injection Date:	12-Nov-2018 17:50:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD160 HSL			Worklist Smp#:	10
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D
Lims ID: STD200 HSL
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 12-Nov-2018 18:19:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD200 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:32 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:40:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	152108	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	601602	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	95	289185	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	98	495678	40.0	40.0	
* 5 Chrysene-d12	240	12.596	12.590	0.006	99	417203	40.0	40.0	
* 6 Perylene-d12	264	16.309	16.303	0.006	98	393928	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	1067154	200.0	190.0	
$ 8 Phenol-d5	99	4.029	4.029	0.000	97	1166876	200.0	181.6	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	93	1016832	200.0	190.2	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	1742590	200.0	172.0	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	91	207911	200.0	214.1	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	1820996	200.0	174.9	
19 1,4-Dioxane	88	1.785	1.785	0.000	97	479962	200.0	192.9	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	88	718609	200.0	194.5	
21 Pyridine	79	2.067	2.067	0.000	84	2248258	400.0	373.3	
32 Phenol	94	4.047	4.041	0.006	98	1200519	200.0	179.3	
34 Aniline	93	4.076	4.070	0.006	97	1535864	200.0	193.2	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	944092	200.0	169.1	
36 Bis(2-chloroethyl)ether	93	4.123	4.117	0.006	96	814682	200.0	160.8	
38 n-Decane	43	4.235	4.235	0.000	94	1304124	200.0	173.8	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	1023223	200.0	183.2	
40 1,3-Dichlorobenzene	146	4.341	4.335	0.006	98	1095747	200.0	178.6	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	1084450	200.0	176.6	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	673404	200.0	186.5	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	1048468	200.0	179.5	
45 2-Methylphenol	108	4.611	4.611	0.000	96	913772	200.0	178.9	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	93	1361070	200.0	199.7	
47 Indene	116	4.634	4.634	0.000	91	2539426	400.0	400.3	
49 3 & 4 Methylphenol	108	4.758	4.752	0.006	67	754301	200.0	157.5	
50 3-Methylphenol	108	4.758	4.752	0.006	74	754301	200.0	157.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.758	4.752	0.006	72	754301	200.0	157.5	
52 N-Nitrosodi-n-propylamine	70	4.764	4.758	0.006	76	552463	200.0	163.1	
54 Acetophenone	105	4.764	4.758	0.006	81	1045464	200.0	201.3	
58 Hexachloroethane	117	4.875	4.875	0.000	95	406771	200.0	177.1	
59 Nitrobenzene	77	4.928	4.922	0.006	92	992197	200.0	185.3	
63 Isophorone	82	5.157	5.152	0.005	98	1710575	200.0	181.1	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	547384	200.0	197.9	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	95	906957	200.0	178.2	
68 Benzoic acid	105	5.428	5.381	0.047	89	1484036	400.0	410.4	
69 Bis(2-chloroethoxy)methane	93	5.357	5.351	0.006	97	1042598	200.0	177.4	
71 3,5-Dimethylphenol	107	5.404	5.398	0.006	89	880339	200.0	172.6	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	750002	200.0	180.0	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	824470	200.0	176.5	
79 Naphthalene	128	5.633	5.633	0.000	98	2450895	200.0	168.9	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	1093730	200.0	184.6	
81 2,6-Dichlorophenol	162	5.692	5.692	0.000	97	730028	200.0	180.4	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	445704	200.0	176.9	
86 Caprolactam	55	6.027	5.998	0.029	75	514718	200.0	218.0	
89 4-Chloro-3-methylphenol	107	6.156	6.150	0.006	96	757388	200.0	187.1	
93 2-Methylnaphthalene	142	6.315	6.309	0.006	95	1728912	200.0	169.9	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	95	1617870	200.0	170.4	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	96	466223	200.0	187.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	682759	200.0	166.1	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	450850	200.0	176.7	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	770040	200.0	170.7	
102 2,4,5-Trichlorophenol	196	6.632	6.626	0.006	94	547675	200.0	189.9	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	94	1955223	200.0	169.3	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	96	1513212	200.0	172.8	
108 2-Nitroaniline	65	6.885	6.885	0.000	89	503416	200.0	203.4	
111 Dimethyl phthalate	163	7.067	7.061	0.006	98	1585470	200.0	184.0	
112 1,3-Dinitrobenzene	168	7.090	7.085	0.005	89	331405	200.0	231.9	
113 2,6-Dinitrotoluene	165	7.126	7.120	0.006	95	441414	200.0	203.6	
114 Acenaphthylene	152	7.208	7.208	0.000	98	2322219	200.0	178.2	
115 3-Nitroaniline	138	7.296	7.290	0.006	97	489984	200.0	215.5	
117 Acenaphthene	153	7.384	7.378	0.006	93	1479940	200.0	172.5	
118 2,4-Dinitrophenol	184	7.396	7.390	0.006	84	474816	400.0	399.5	
119 4-Nitrophenol	109	7.466	7.461	0.005	95	461891	400.0	452.1	
122 2,4-Dinitrotoluene	165	7.525	7.519	0.006	95	571234	200.0	217.8	
123 Dibenzofuran	168	7.555	7.549	0.006	97	2097032	200.0	176.2	
125 2,3,4,6-Tetrachlorophenol	232	7.678	7.672	0.006	73	429114	200.0	202.5	
127 Hexadecane	57	7.790	7.790	0.000	91	1289330	200.0	170.3	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	1575961	200.0	189.8	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	93	723386	200.0	171.1	
135 Fluorene	166	7.895	7.890	0.005	95	1524433	200.0	169.4	
138 4-Nitroaniline	138	7.907	7.895	0.012	87	474545	200.0	231.1	
139 4,6-Dinitro-2-methylphenol	198	7.942	7.931	0.011	88	591876	400.0	406.3	
141 N-Nitrosodiphenylamine	169	8.001	7.995	0.006	62	1250342	200.0	175.1	
142 Diphenylamine	169	8.001	7.995	0.006	95	1250342	170.0	161.9	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	1654760	202.2	188.0	
144 Azobenzene	77	8.042	8.042	0.000	97	1654760	200.0	185.9	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	91	207911	200.0	213.9	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	67	466191	200.0	175.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.454	8.454	0.000	94	434405	200.0	173.0	
159 Atrazine	200	8.530	8.524	0.006	92	432420	200.0	190.1	
161 n-Octadecane	85	8.706	8.706	0.000	92	449936	200.0	161.8	
163 Pentachlorophenol	266	8.642	8.642	0.000	93	535552	400.0	389.2	
168 Phenanthrene	178	8.847	8.847	0.000	98	2272594	200.0	171.1	
169 Anthracene	178	8.900	8.894	0.006	97	2357335	200.0	176.8	
170 Carbazole	167	9.053	9.047	0.006	96	2166475	200.0	187.2	
171 Alachlor	188	9.194	9.188	0.006	96	314032	200.0	199.4	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	2513679	200.0	193.0	
179 Fluoranthene	202	10.128	10.122	0.006	98	2466324	200.0	195.6	
182 Pyrene	202	10.434	10.428	0.006	97	2571063	200.0	172.7	
188 Famphur	218	11.356	11.356	0.000	84	730022	200.0	193.2	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	97	1210104	200.0	216.6	
195 Bis(2-ethylhexyl) phthalat	149	12.760	12.755	0.006	97	1609994	200.0	204.0	
197 3,3'-Dichlorobenzidine	252	12.543	12.537	0.006	76	729742	200.0	197.1	
198 Benzo[a]anthracene	228	12.572	12.566	0.006	99	2471111	200.0	199.0	
199 Chrysene	228	12.655	12.649	0.006	97	2429624	200.0	191.1	
201 Di-n-octyl phthalate	149	14.470	14.464	0.006	99	2708127	200.0	200.2	
203 Benzo[b]fluoranthene	252	15.281	15.269	0.012	98	2252939	200.0	200.0	
204 Benzo[k]fluoranthene	252	15.357	15.340	0.017	99	2495851	200.0	192.7	
206 Benzo[e]pyrene	252	16.021	16.004	0.017	97	2154952	200.0	191.9	
207 Benzo[a]pyrene	252	16.162	16.145	0.017	78	2356683	200.0	210.3	
213 Dibenz(a,h)anthracene	278	19.441	19.417	0.024	93	2003800	200.0	204.4	
214 Indeno[1,2,3-cd]pyrene	276	19.341	19.312	0.029	98	1932250	200.0	211.1	
215 Benzo[g,h,i]perylene	276	20.058	20.028	0.030	97	2136038	200.0	207.3	
S 217 Total Cresols	108				0			336.4	
S 218 Methyl Phenols,Total	108				0			336.4	

Reagents:

MS-HSLA200_00039 Amount Added: 200.00 Units: uL

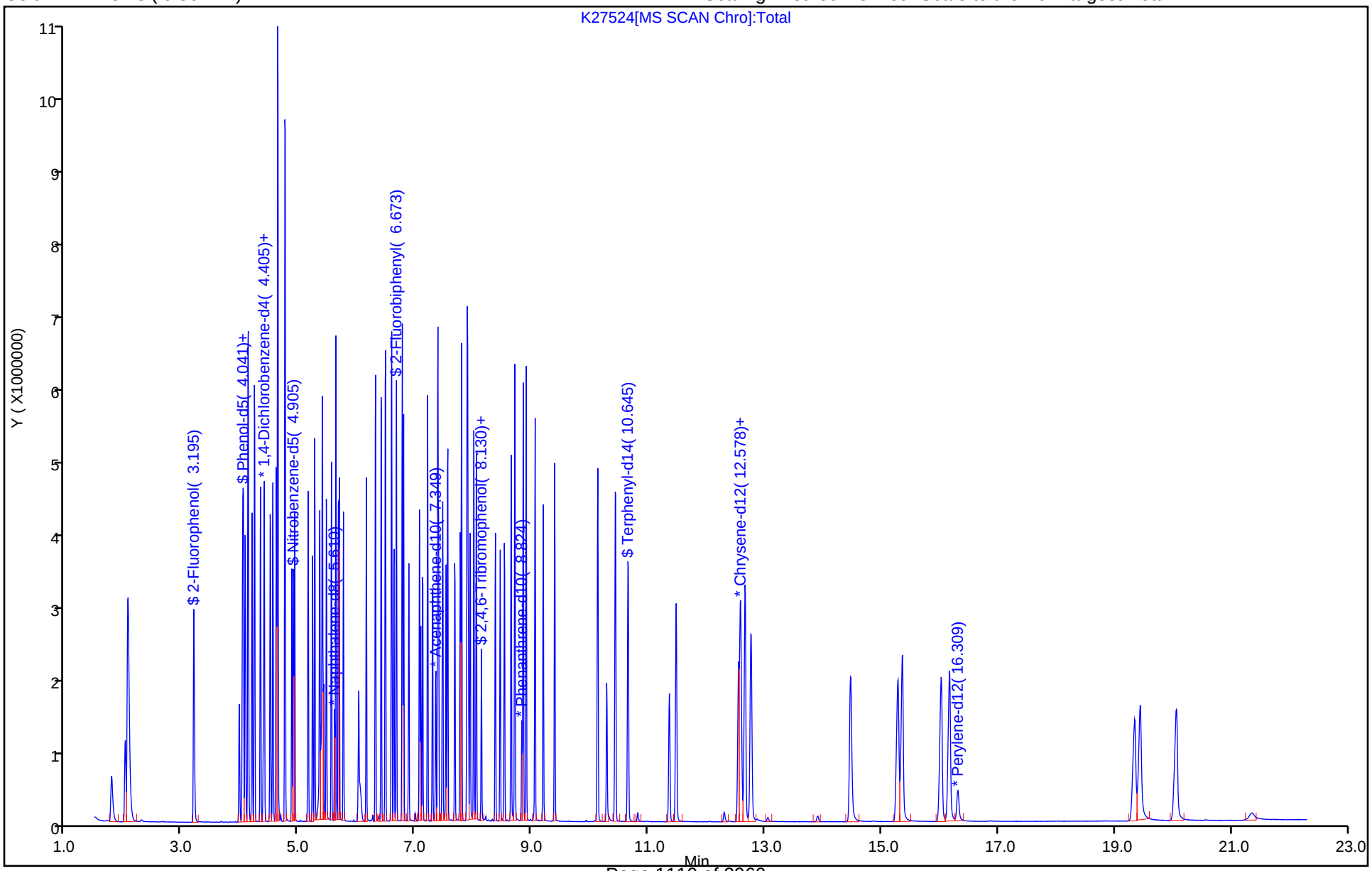
Report Date: 13-Nov-2018 11:59:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Injection Date:	12-Nov-2018 18:19:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD200 HSL			Worklist Smp#:	11
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-437249/12 Calibration Date: 11/12/2018 18:48

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27525.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6542	0.6394		97700	100000	-2.3	20.0
N-Nitrosodimethylamine	Ave	0.9717	0.9543		98200	100000	-1.8	20.0
Pyridine	Ave	1.584	1.655		209000	200000	4.5	20.0
Phenol	Ave	1.760	1.725	0.8000	98000	100000	-2.0	20.0
Aniline	Ave	2.091	2.116		101000	100000	1.2	20.0
Bis(2-chloroethyl)ether	Ave	1.332	1.264	0.7000	94900	100000	-5.1	20.0
2-Chlorophenol	Ave	1.469	1.431	0.8000	97400	100000	-2.6	20.0
1,3-Dichlorobenzene	Ave	1.613	1.564		97000	100000	-3.0	20.0
1,4-Dichlorobenzene	Ave	1.615	1.587		98300	100000	-1.7	20.0
Benzyl alcohol	Ave	0.9494	0.9301		98000	100000	-2.0	20.0
1,2-Dichlorobenzene	Ave	1.536	1.500		97700	100000	-2.3	20.0
2-Methylphenol	Ave	1.343	1.302	0.7000	97000	100000	-3.0	20.0
bis (2-chloroisopropyl) ether	Qua		2.069	0.0100	91700	100000	-8.3	20.0
3 & 4 Methylphenol	Ave	1.260	1.186		94200	100000	-5.8	20.0
N-Nitrosodi-n-propylamine	Ave	0.8909	0.8193	0.5000	92000	100000	-8.0	20.0
Acetophenone	Qua		1.611	0.0100	96500	100000	-3.5	20.0
Hexachloroethane	Ave	0.6039	0.5813	0.3000	96300	100000	-3.7	20.0
Nitrobenzene	Ave	0.3561	0.3480		97700	100000	-2.3	20.0
Isophorone	Ave	0.6280	0.6072	0.4000	96700	100000	-3.3	20.0
2-Nitrophenol	Ave	0.1839	0.1875	0.1000	102000	100000	1.9	20.0
2,4-Dimethylphenol	Ave	0.3384	0.3247	0.2000	96000	100000	-4.0	20.0
Bis(2-chloroethoxy)methane	Ave	0.3907	0.3781	0.3000	96800	100000	-3.2	20.0
Benzoic acid	Lin2		0.2535		214000	200000	7.2	20.0
2,4-Dichlorophenol	Ave	0.2770	0.2751	0.2000	99300	100000	-0.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3105	0.3019		97200	100000	-2.8	20.0
Naphthalene	Ave	0.9651	0.9212	0.7000	95500	100000	-4.5	20.0
4-Chloroaniline	Ave	0.3939	0.4058	0.0100	103000	100000	3.0	20.0
2,6-Dichlorophenol	Ave	0.2691	0.2654		98600	100000	-1.4	20.0
Hexachlorobutadiene	Ave	0.1676	0.1684	0.0100	100000	100000	0.5	20.0
4-Chloro-3-methylphenol	Ave	0.2691	0.2664	0.2000	99000	100000	-1.0	20.0
2-Methylnaphthalene	Ave	0.6765	0.6394	0.4000	94500	100000	-5.5	20.0
1-Methylnaphthalene	Ave	0.6314	0.6129		97100	100000	-2.9	20.0
Hexachlorocyclopentadiene	Ave	0.3439	0.3525	0.0500	102000	100000	2.5	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2734	0.2551	0.0100	93300	100000	-6.7	20.0
2,4,6-Trichlorophenol	Ave	0.3529	0.3505	0.2000	99300	100000	-0.7	20.0
2,4,5-Trichlorophenol	Ave	0.3990	0.4067	0.2000	102000	100000	1.9	20.0
1,1'-Biphenyl	Ave	1.598	1.517		94900	100000	-5.1	20.0
2-Chloronaphthalene	Ave	1.211	1.140	0.8000	94100	100000	-5.9	20.0
2-Nitroaniline	Ave	0.3423	0.3467	0.0100	101000	100000	1.3	20.0
Dimethyl phthalate	Ave	1.192	1.136	0.0100	95400	100000	-4.6	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-437249/12 Calibration Date: 11/12/2018 18:48

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27525.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3-Dinitrobenzene	Ave	0.1977	0.2081		105000	100000	5.3	20.0
2,6-Dinitrotoluene	Ave	0.2999	0.2967	0.2000	98900	100000	-1.1	20.0
Acenaphthylene	Ave	1.803	1.733	0.9000	96100	100000	-3.9	20.0
3-Nitroaniline	Ave	0.3144	0.3167	0.0100	101000	100000	0.7	20.0
Acenaphthene	Ave	1.187	1.103	0.9000	92900	100000	-7.1	20.0
2,4-Dinitrophenol	Qua		0.1439	0.0100	208000	200000	3.9	20.0
4-Nitrophenol	Ave	0.1413	0.1421	0.0100	201000	200000	0.5	20.0
2,4-Dinitrotoluene	Ave	0.3627	0.3637	0.2000	100000	100000	0.3	20.0
Dibenzofuran	Ave	1.647	1.527	0.8000	92800	100000	-7.2	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2931	0.2978	0.0100	102000	100000	1.6	20.0
Diethyl phthalate	Ave	1.148	1.077	0.0100	93800	100000	-6.2	20.0
4-Chlorophenyl phenyl ether	Ave	0.5848	0.5255	0.4000	89900	100000	-10.1	20.0
Fluorene	Ave	1.245	1.135	0.9000	91100	100000	-8.9	20.0
4-Nitroaniline	Ave	0.2840	0.2670	0.0100	94000	100000	-6.0	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1317	0.0100	228000	200000	14.0	20.0
Diphenylamine	Ave	1.068	1.020		81200	85000	-4.5	20.0
N-Nitrosodiphenylamine	Ave	0.5761	0.5771	0.0100	100000	100000	0.2	20.0
1,2-Diphenylhydrazine	Ave	1.218	1.156		96000	101000	-5.1	20.0
Azobenzene	Ave	1.231	1.169		94900	100000	-5.1	20.0
4-Bromophenyl phenyl ether	Ave	0.2143	0.2064	0.1000	96300	100000	-3.7	20.0
Hexachlorobenzene	Ave	0.2026	0.1997	0.1000	98500	100000	-1.5	20.0
Pentachlorophenol	Lin2		0.1200	0.0500	219000	200000	9.3	20.0
Phenanthrene	Ave	1.072	1.024	0.7000	95500	100000	-4.5	20.0
Anthracene	Ave	1.076	1.047	0.7000	97300	100000	-2.7	20.0
Carbazole	Ave	0.9341	0.9132	0.0100	97800	100000	-2.2	20.0
Alachlor	Ave	0.1271	0.1261		99200	100000	-0.8	20.0
Di-n-butyl phthalate	Ave	1.051	1.039	0.0100	98900	100000	-1.1	20.0
Fluoranthene	Ave	1.018	0.9755	0.6000	95900	100000	-4.1	20.0
Pyrene	Ave	1.428	1.355	0.6000	94900	100000	-5.1	20.0
Butyl benzyl phthalate	Ave	0.5356	0.5583	0.0100	104000	100000	4.2	20.0
Benzo[a]anthracene	Ave	1.191	1.167	0.8000	98100	100000	-1.9	20.0
Chrysene	Ave	1.219	1.217	0.7000	99800	100000	-0.2	20.0
Bis(2-ethylhexyl) phthalate	Lin1		0.7215	0.0100	96900	100000	-3.1	20.0
Di-n-octyl phthalate	Qua		1.101	0.0100	98100	100000	-1.9	20.0
Benzo[b]fluoranthene	Ave	1.144	1.189	0.7000	104000	100000	3.9	20.0
Benzo[k]fluoranthene	Ave	1.315	1.330	0.7000	101000	100000	1.2	20.0
Benzo[a]pyrene	Ave	1.138	1.213	0.7000	107000	100000	6.6	20.0
Indeno[1,2,3-cd]pyrene	Lin1		0.7965	0.5000	92600	100000	-7.4	20.0
Dibenz(a,h)anthracene	Lin2		1.012	0.4000	102000	100000	2.5	20.0
Benzo[g,h,i]perylene	Ave	1.047	1.077	0.5000	103000	100000	2.9	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27525.D
Lims ID: ICV HSL 1
Client ID:
Sample Type: ICV
Inject. Date: 12-Nov-2018 18:48:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 1
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:32 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:41:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	151819	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	599282	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	95	289647	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	97	435099	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	321061	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	278701	40.0	40.0	
19 1,4-Dioxane	88	1.785	1.785	0.000	95	242663	100.0	97.7	
20 N-Nitrosodimethylamine	74	2.014	2.020	-0.006	86	362184	100.0	98.2	
21 Pyridine	79	2.061	2.067	-0.006	84	1255966	200.0	208.9	
32 Phenol	94	4.041	4.041	0.000	98	654598	100.0	98.0	
34 Aniline	93	4.070	4.070	0.000	97	803211	100.0	101.2	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	94	530329	100.0	95.1	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	95	479577	100.0	94.9	
38 n-Decane	43	4.235	4.235	0.000	95	733095	100.0	97.9	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	543079	100.0	97.4	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	593630	100.0	97.0	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	602371	100.0	98.3	
43 Benzyl alcohol	108	4.505	4.505	0.000	94	353007	100.0	98.0	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	569374	100.0	97.7	
45 2-Methylphenol	108	4.611	4.611	0.000	95	494280	100.0	97.0	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	93	785288	100.0	91.7	
47 Indene	116	4.634	4.634	0.000	91	1531542	200.0	197.3	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	67	450302	100.0	94.2	
50 3-Methylphenol	108	4.752	4.752	0.000	74	450302	100.0	94.2	
51 4-Methylphenol	108	4.752	4.752	0.000	78	450302	100.0	94.2	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	89	310960	100.0	92.0	
54 Acetophenone	105	4.758	4.758	0.000	83	611519	100.0	96.5	
58 Hexachloroethane	117	4.875	4.875	0.000	96	220622	100.0	96.3	
59 Nitrobenzene	77	4.922	4.922	0.000	93	521418	100.0	97.7	
63 Isophorone	82	5.152	5.152	0.000	98	909699	100.0	96.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
64 2-Nitrophenol	139	5.234	5.234	0.000	94	280942	100.0	101.9	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	94	486504	100.0	96.0	
68 Benzoic acid	105	5.387	5.381	0.006	93	759595	200.0	214.5	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	98	566444	100.0	96.8	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	90	487972	100.0	96.1	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	412113	100.0	99.3	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	452303	100.0	97.2	
79 Naphthalene	128	5.633	5.633	0.000	98	1380156	100.0	95.5	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	608006	100.0	103.0	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	97	397648	100.0	98.6	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	252291	100.0	100.5	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	97	399041	100.0	99.0	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	957885	100.0	94.5	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	918261	100.0	97.1	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	97	255239	100.0	102.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	382129	100.0	93.3	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	91	253813	100.0	99.3	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	96	424676	100.0	94.0	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	294463	100.0	101.9	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	95	1098328	100.0	94.9	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	825458	100.0	94.1	
108 2-Nitroaniline	65	6.879	6.885	-0.006	86	251023	100.0	101.3	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	822938	100.0	95.4	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	150683	100.0	105.3	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	214830	100.0	98.9	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1255001	100.0	96.1	
115 3-Nitroaniline	138	7.290	7.290	0.000	96	229311	100.0	100.7	
117 Acenaphthene	153	7.378	7.378	0.000	93	798809	100.0	92.9	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	87	208422	200.0	207.8	
119 4-Nitrophenol	109	7.455	7.461	-0.006	95	205726	200.0	201.0	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	263366	100.0	100.3	
123 Dibenzofuran	168	7.549	7.549	0.000	97	1105956	100.0	92.8	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	72	215620	100.0	101.6	
127 Hexadecane	57	7.790	7.790	0.000	91	712749	100.0	94.0	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	780098	100.0	93.8	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	95	380530	100.0	89.9	
135 Fluorene	166	7.890	7.890	0.000	95	821674	100.0	91.1	
138 4-Nitroaniline	138	7.895	7.895	0.000	88	193361	100.0	94.0	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	85	286414	200.0	227.9	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	62	627694	100.0	100.2	
142 Diphenylamine	169	7.995	7.995	0.000	96	627694	85.0	81.2	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	846210	101.1	96.0	
144 Azobenzene	77	8.042	8.042	0.000	97	846210	100.0	94.9	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	68	224546	100.0	96.3	
157 Hexachlorobenzene	284	8.454	8.454	0.000	94	217223	100.0	98.5	
161 n-Octadecane	85	8.700	8.706	-0.006	92	241614	100.0	99.0	
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	260951	200.0	218.6	
168 Phenanthrene	178	8.847	8.847	0.000	97	1113437	100.0	95.5	
169 Anthracene	178	8.894	8.894	0.000	97	1138540	100.0	97.3	
170 Carbazole	167	9.047	9.047	0.000	96	993334	100.0	97.8	
171 Alachlor	188	9.188	9.188	0.000	93	137180	100.0	99.2	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	1130458	100.0	98.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
179 Fluoranthene	202	10.122	10.122	0.000	98	1061048	100.0	95.9	
182 Pyrene	202	10.428	10.428	0.000	97	1087825	100.0	94.9	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	97	448094	100.0	104.2	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	98	579096	100.0	96.9	
198 Benzo[a]anthracene	228	12.566	12.566	0.000	98	937024	100.0	98.1	
199 Chrysene	228	12.643	12.649	-0.006	97	976880	100.0	99.8	
201 Di-n-octyl phthalate	149	14.458	14.464	-0.006	99	883991	100.0	98.1	
203 Benzo[b]fluoranthene	252	15.263	15.269	-0.006	96	828333	100.0	103.9	
204 Benzo[k]fluoranthene	252	15.334	15.340	-0.006	99	926963	100.0	101.2	
206 Benzo[e]pyrene	252	16.004	16.004	0.000	97	800736	100.0	100.8	
207 Benzo[a]pyrene	252	16.139	16.145	-0.006	78	844892	100.0	106.6	
213 Dibenz(a,h)anthracene	278	19.412	19.417	-0.005	93	705382	100.0	102.5	
214 Indeno[1,2,3-cd]pyrene	276	19.312	19.312	0.000	98	639293	100.0	92.6	
215 Benzo[g,h,i]perylene	276	20.023	20.028	-0.005	97	750074	100.0	102.9	

Reagents:

MS-HSLB1B3SSV_00052 Amount Added: 200.00 Units: uL

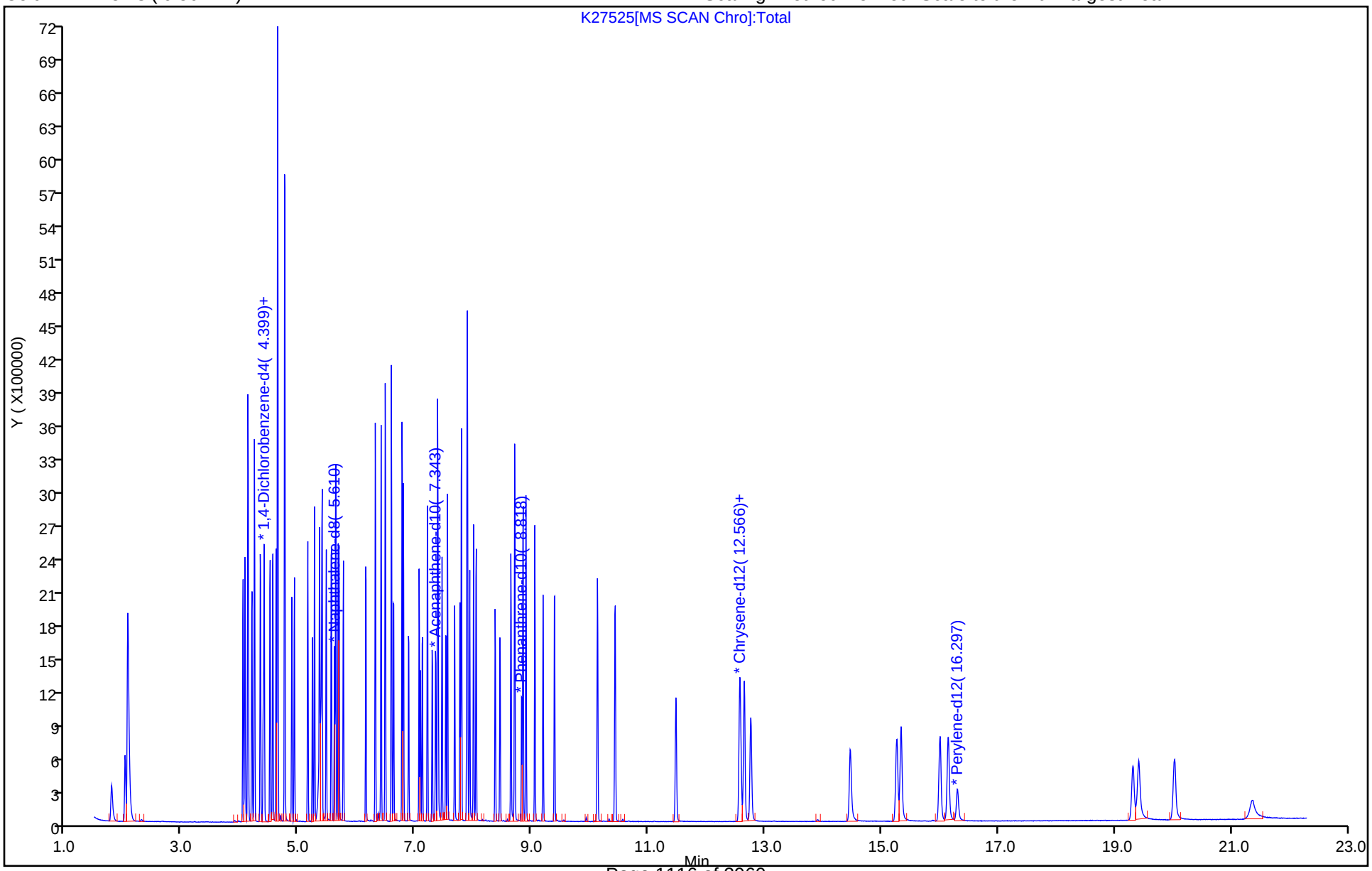
Report Date: 13-Nov-2018 11:59:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27525.D

Injection Date:	12-Nov-2018 18:48:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICV HSL 1			Worklist Smp#:	12
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-437249/13 Calibration Date: 11/12/2018 19:17

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27526.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Caprolactam	Ave	0.1570	0.1681		107000	100000	7.1	20.0
Atrazine	Ave	0.1836	0.1825		99400	100000	-0.6	20.0
3,3'-Dichlorobenzidine	Lin2		0.3993	0.0100	113000	100000	13.0	20.0

Report Date: 13-Nov-2018 11:59:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27526.D
Lims ID: ICV HSL 2
Client ID:
Sample Type: ICV
Inject. Date: 12-Nov-2018 19:17:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 2
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:32 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:41:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	146718	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	596980	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	303592	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	481837	40.0	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	316595	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	97	246216	40.0	40.0	
86 Caprolactam	55	5.980	5.998	-0.018	75	250879	100.0	107.1	a
159 Atrazine	200	8.518	8.524	-0.006	91	219799	100.0	99.4	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	74	316051	100.0	113.0	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

MS-HSLB2SSV_00047 Amount Added: 200.00 Units: uL

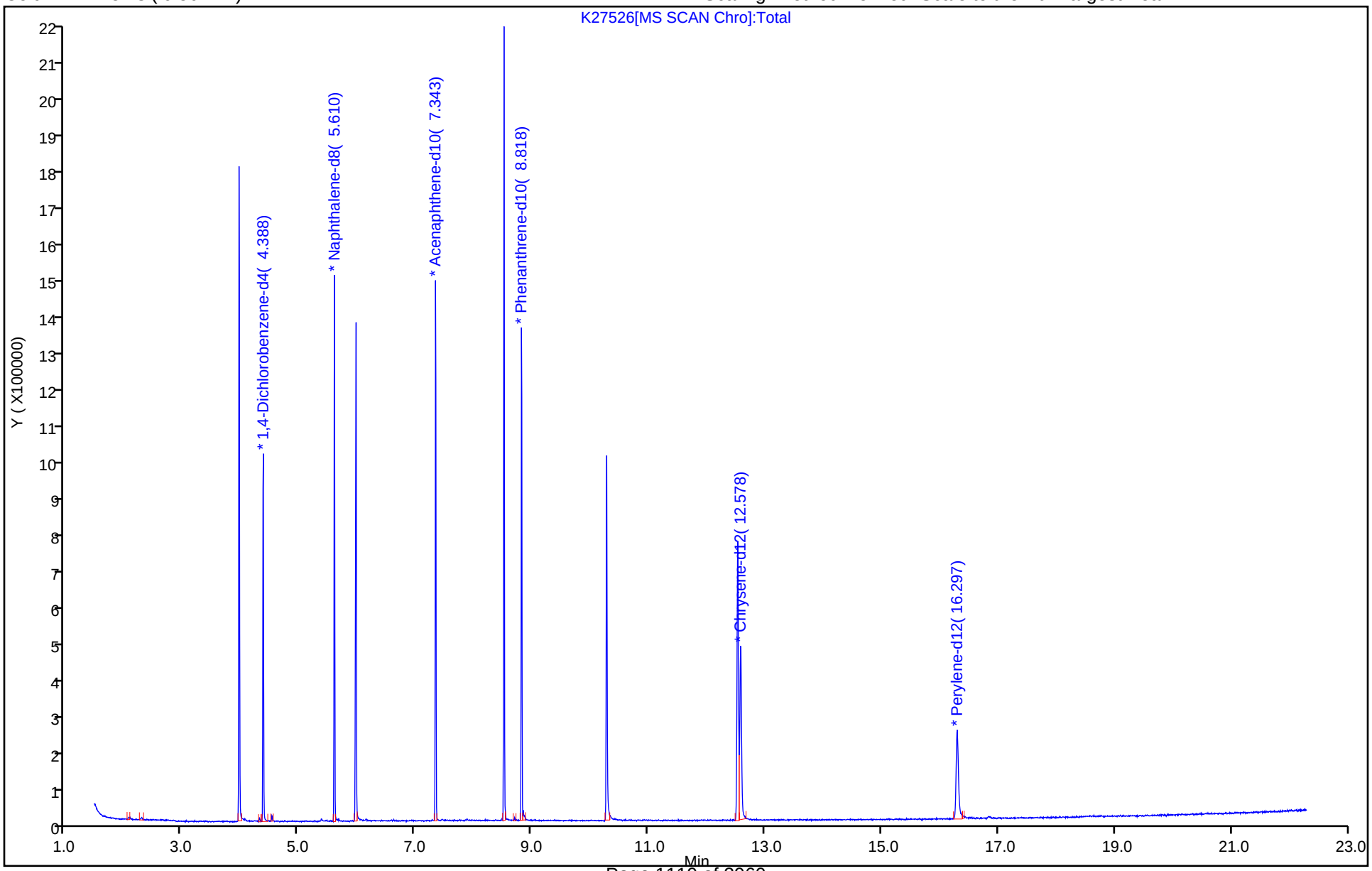
Report Date: 13-Nov-2018 11:59:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27526.D

Injection Date:	12-Nov-2018 19:17:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICV HSL 2			Worklist Smp#:	13
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

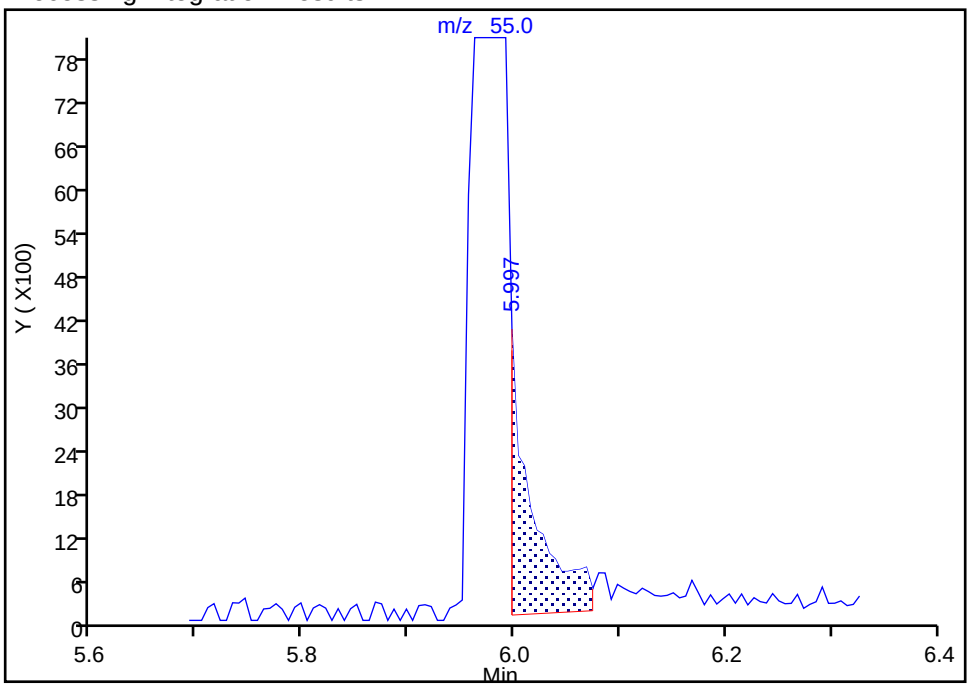
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27526.D
Injection Date: 12-Nov-2018 19:17:30 Instrument ID: SMS_K
Lims ID: ICV HSL 2
Client ID:
Operator ID: KIEKELD ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

86 Caprolactam, CAS: 105-60-2

Signal: 1

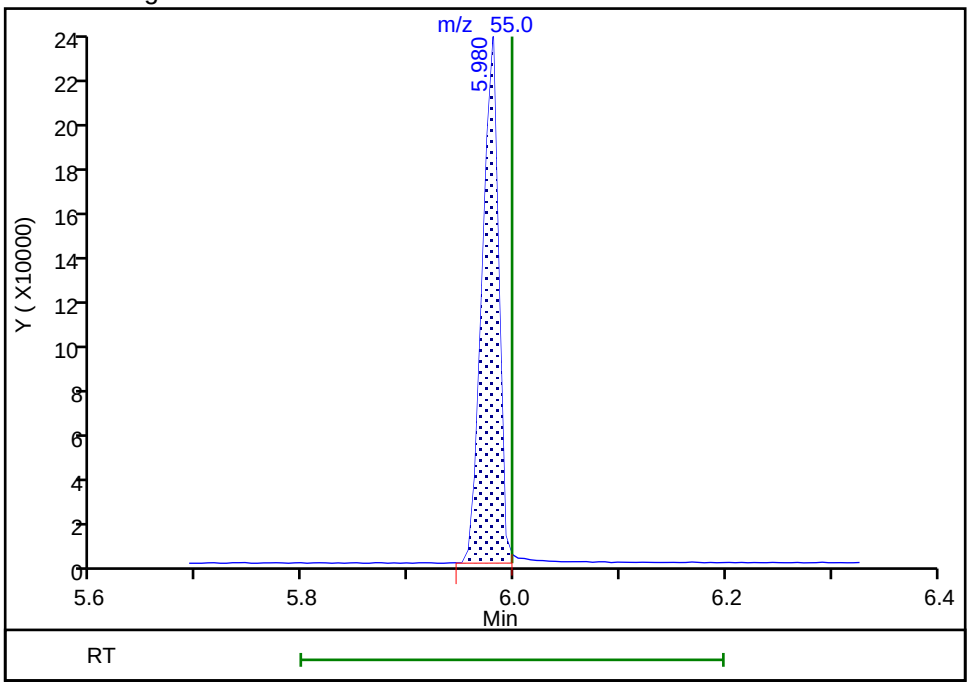
Processing Integration Results

RT: 6.00
Area: 5841
Amount: 2.492883
Amount Units: ug/ml



Manual Integration Results

RT: 5.98
Area: 250879
Amount: 107.0728
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:41:36
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437389/3 Calibration Date: 11/13/2018 11:40

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27530.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6542	0.6381		78000	80000	-2.5	20.0
N-Nitrosodimethylamine	Ave	0.9717	0.9774		80500	80000	0.6	20.0
Pyridine	Ave	1.584	1.561		158000	160000	-1.4	20.0
Phenol	Ave	1.760	1.743	0.8000	79200	80000	-1.0	20.0
Aniline	Ave	2.091	2.118		81100	80000	1.3	20.0
Bis(2-chloroethyl)ether	Ave	1.332	1.304	0.7000	78300	80000	-2.1	20.0
2-Chlorophenol	Ave	1.469	1.464	0.8000	79800	80000	-0.3	20.0
1,3-Dichlorobenzene	Ave	1.613	1.584		78600	80000	-1.8	20.0
1,4-Dichlorobenzene	Ave	1.615	1.610		79800	80000	-0.3	20.0
Benzyl alcohol	Ave	0.9494	0.9458		79700	80000	-0.4	20.0
1,2-Dichlorobenzene	Ave	1.536	1.512		78800	80000	-1.6	20.0
2-Methylphenol	Ave	1.343	1.318	0.7000	78500	80000	-1.8	20.0
bis (2-chloroisopropyl) ether	Qua		2.267	0.0100	78300	80000	-2.2	20.0
3 & 4 Methylphenol	Ave	1.260	1.226		77800	80000	-2.7	20.0
N-Nitrosodi-n-propylamine	Ave	0.8909	0.8496	0.5000	76300	80000	-4.6	20.0
Acetophenone	Qua		1.699	0.0100	78800	80000	-1.4	20.0
Hexachloroethane	Ave	0.6039	0.6085	0.3000	80600	80000	0.8	20.0
Nitrobenzene	Ave	0.3561	0.3616		81200	80000	1.5	20.0
Isophorone	Ave	0.6280	0.6166	0.4000	78500	80000	-1.8	20.0
2-Nitrophenol	Ave	0.1839	0.1933	0.1000	84100	80000	5.1	20.0
2,4-Dimethylphenol	Ave	0.3384	0.3442	0.2000	81400	80000	1.7	20.0
Bis(2-chloroethoxy)methane	Ave	0.3907	0.3849	0.3000	78800	80000	-1.5	20.0
Benzoic acid	Lin2		0.2248		154000	160000	-3.6	20.0
2,4-Dichlorophenol	Ave	0.2770	0.2819	0.2000	81400	80000	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3105	0.3102		79900	80000	-0.1	20.0
Naphthalene	Ave	0.9651	0.9565	0.7000	79300	80000	-0.9	20.0
4-Chloroaniline	Ave	0.3939	0.4064	0.0100	82500	80000	3.2	20.0
2,6-Dichlorophenol	Ave	0.2691	0.2664		79200	80000	-1.0	20.0
Hexachlorobutadiene	Ave	0.1676	0.1705	0.0100	81400	80000	1.8	20.0
Caprolactam	Ave	0.1570	0.1491		76000	80000	-5.1	20.0
4-Chloro-3-methylphenol	Ave	0.2691	0.2649	0.2000	78700	80000	-1.6	20.0
2-Methylnaphthalene	Ave	0.6765	0.6570	0.4000	77700	80000	-2.9	20.0
1-Methylnaphthalene	Ave	0.6314	0.6169		78200	80000	-2.3	20.0
Hexachlorocyclopentadiene	Ave	0.3439	0.3674	0.0500	85400	80000	6.8	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2734	0.2626	0.0100	76800	80000	-3.9	20.0
2,4,6-Trichlorophenol	Ave	0.3529	0.3646	0.2000	82600	80000	3.3	20.0
2,4,5-Trichlorophenol	Ave	0.3990	0.4074	0.2000	81700	80000	2.1	20.0
1,1'-Biphenyl	Ave	1.598	1.578		79000	80000	-1.2	20.0
2-Chloronaphthalene	Ave	1.211	1.199	0.8000	79200	80000	-1.0	20.0
2-Nitroaniline	Ave	0.3423	0.3484	0.0100	81400	80000	1.8	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437389/3 Calibration Date: 11/13/2018 11:40

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27530.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.192	1.133	0.0100	76000	80000	-5.0	20.0
1,3-Dinitrobenzene	Ave	0.1977	0.2023		81900	80000	2.3	20.0
2,6-Dinitrotoluene	Ave	0.2999	0.3008	0.2000	80300	80000	0.3	20.0
Acenaphthylene	Ave	1.803	1.790	0.9000	79500	80000	-0.7	20.0
3-Nitroaniline	Ave	0.3144	0.3215	0.0100	81800	80000	2.2	20.0
Acenaphthene	Ave	1.187	1.146	0.9000	77300	80000	-3.4	20.0
2,4-Dinitrophenol	Qua		0.1312	0.0100	160000	160000	0.2	20.0
4-Nitrophenol	Ave	0.1413	0.1461	0.0100	165000	160000	3.4	20.0
2,4-Dinitrotoluene	Ave	0.3627	0.3656	0.2000	80600	80000	0.8	20.0
Dibenzofuran	Ave	1.647	1.597	0.8000	77600	80000	-3.0	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2931	0.2974	0.0100	81200	80000	1.5	20.0
Diethyl phthalate	Ave	1.148	1.119	0.0100	78000	80000	-2.5	20.0
4-Chlorophenyl phenyl ether	Ave	0.5848	0.5555	0.4000	76000	80000	-5.0	20.0
Fluorene	Ave	1.245	1.164	0.9000	74800	80000	-6.5	20.0
4-Nitroaniline	Ave	0.2840	0.2638	0.0100	74300	80000	-7.1	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1165	0.0100	164000	160000	2.5	20.0
Diphenylamine	Ave	1.068	1.049		66800	68000	-1.8	20.0
N-Nitrosodiphenylamine	Ave	0.5761	0.6032	0.0100	83800	80000	4.7	20.0
1,2-Diphenylhydrazine	Ave	1.218	1.215		80700	80900	-0.3	20.0
Azobenzene	Ave	1.231	1.228		79800	80000	-0.3	20.0
4-Bromophenyl phenyl ether	Ave	0.2143	0.2197	0.1000	82000	80000	2.5	20.0
Hexachlorobenzene	Ave	0.2026	0.2091	0.1000	82600	80000	3.2	20.0
Atrazine	Ave	0.1836	0.1900		82800	80000	3.5	20.0
Pentachlorophenol	Lin2		0.1150	0.0500	169000	160000	5.7	20.0
Phenanthrene	Ave	1.072	1.076	0.7000	80300	80000	0.4	20.0
Anthracene	Ave	1.076	1.106	0.7000	82200	80000	2.8	20.0
Carbazole	Ave	0.9341	0.9543	0.0100	81700	80000	2.2	20.0
Alachlor	Ave	0.1271	0.1292		81400	80000	1.7	20.0
Di-n-butyl phthalate	Ave	1.051	1.081	0.0100	82300	80000	2.9	20.0
Fluoranthene	Ave	1.018	1.027	0.6000	80700	80000	0.9	20.0
Pyrene	Ave	1.428	1.465	0.6000	82100	80000	2.6	20.0
Famphur	Ave	0.3623	0.4089		90300	80000	12.8	20.0
Butyl benzyl phthalate	Ave	0.5356	0.5741	0.0100	85700	80000	7.2	20.0
3,3'-Dichlorobenzidine	Lin2		0.3624	0.0100	82400	80000	3.0	20.0
Benzo[a]anthracene	Ave	1.191	1.228	0.8000	82500	80000	3.1	20.0
Chrysene	Ave	1.219	1.254	0.7000	82300	80000	2.9	20.0
Bis(2-ethylhexyl) phthalate	Lin1		0.7044	0.0100	76300	80000	-4.6	20.0
Di-n-octyl phthalate	Qua		0.9937	0.0100	74400	80000	-7.0	20.0
Benzo[b]fluoranthene	Ave	1.144	1.230	0.7000	86100	80000	7.6	20.0
Benzo[k]fluoranthene	Ave	1.315	1.421	0.7000	86500	80000	8.1	20.0
Benzo[a]pyrene	Ave	1.138	1.263	0.7000	88800	80000	11.0	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437389/3 Calibration Date: 11/13/2018 11:40

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27530.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin1		0.7808	0.5000	73300	80000	-8.4	20.0
Dibenz(a,h)anthracene	Lin2		1.029	0.4000	83600	80000	4.5	20.0
Benzo[g,h,i]perylene	Ave	1.047	1.126	0.5000	86100	80000	7.6	20.0
2-Fluorophenol (Surr)	Ave	1.477	1.494		80900	80000	1.2	20.0
Phenol-d5 (Surr)	Ave	1.689	1.687		79900	80000	-0.1	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3555	0.3609		81200	80000	1.5	20.0
2-Fluorobiphenyl	Ave	1.401	1.395		79600	80000	-0.5	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1343	0.1368		81500	80000	1.9	20.0
Terphenyl-d14 (Surr)	Ave	0.998	0.996		79800	80000	-0.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27530.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 11:40:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCV HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 13-Nov-2018 12:10:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	172345	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	676572	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	93	314700	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	465028	40.0	40.0	
* 5 Chrysene-d12	240	12.590	12.590	0.000	99	344680	40.0	40.0	
* 6 Perylene-d12	264	16.303	16.303	0.000	98	287747	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	515007	80.0	80.9	
$ 8 Phenol-d5	99	4.029	4.029	0.000	98	581619	80.0	79.9	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	93	488309	80.0	81.2	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	877715	80.0	79.6	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	93	86096	80.0	81.5	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	686568	80.0	79.8	
19 1,4-Dioxane	88	1.785	1.785	0.000	97	219945	80.0	78.0	
20 N-Nitrosodimethylamine	74	2.014	2.014	0.000	88	336909	80.0	80.5	
21 Pyridine	79	2.067	2.067	0.000	84	1076262	160.0	157.7	
32 Phenol	94	4.041	4.041	0.000	98	600925	80.0	79.2	
34 Aniline	93	4.070	4.070	0.000	97	730192	80.0	81.1	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	94	499758	80.0	79.0	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	97	449547	80.0	78.3	
38 n-Decane	43	4.235	4.235	0.000	94	658931	80.0	77.5	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	504747	80.0	79.8	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	546114	80.0	78.6	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	555047	80.0	79.8	
43 Benzyl alcohol	108	4.505	4.505	0.000	95	326011	80.0	79.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	521219	80.0	78.8	
45 2-Methylphenol	108	4.611	4.611	0.000	94	454449	80.0	78.5	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	92	781343	80.0	78.3	
47 Indene	116	4.634	4.634	0.000	91	1449173	160.0	158.5	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	82	422529	80.0	77.8	
50 3-Methylphenol	108	4.752	4.752	0.000	87	422529	80.0	77.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	94	422529	80.0	77.8	
52 N-Nitrosodi-n-propylamine	70	4.752	4.752	0.000	88	292863	80.0	76.3	
54 Acetophenone	105	4.758	4.758	0.000	83	585475	80.0	78.8	
58 Hexachloroethane	117	4.875	4.875	0.000	95	209753	80.0	80.6	
59 Nitrobenzene	77	4.922	4.922	0.000	93	489233	80.0	81.2	
63 Isophorone	82	5.151	5.151	0.000	98	834381	80.0	78.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	261515	80.0	84.1	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	95	465725	80.0	81.4	
68 Benzoic acid	105	5.381	5.381	0.000	88	608250	160.0	154.3	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	520794	80.0	78.8	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	86	456583	80.0	79.6	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	381389	80.0	81.4	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	419681	80.0	79.9	
79 Naphthalene	128	5.633	5.633	0.000	97	1294306	80.0	79.3	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	549891	80.0	82.5	
81 2,6-Dichlorophenol	162	5.686	5.686	0.000	97	360484	80.0	79.2	
83 Hexachlorobutadiene	225	5.762	5.762	0.000	96	230741	80.0	81.4	
86 Caprolactam	55	5.998	5.998	0.000	74	201706	80.0	76.0	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	96	358401	80.0	78.7	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	94	888948	80.0	77.7	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	834697	80.0	78.2	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	96	231220	80.0	85.4	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	355335	80.0	76.8	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	229457	80.0	82.6	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	396993	80.0	80.8	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	95	256444	80.0	81.7	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	94	993414	80.0	79.0	
106 2-Chloronaphthalene	162	6.791	6.791	0.000	96	754668	80.0	79.2	
108 2-Nitroaniline	65	6.885	6.885	0.000	87	219249	80.0	81.4	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	712910	80.0	76.0	
112 1,3-Dinitrobenzene	168	7.084	7.084	0.000	86	127331	80.0	81.9	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	189343	80.0	80.3	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1126842	80.0	79.5	
115 3-Nitroaniline	138	7.290	7.290	0.000	97	202345	80.0	81.8	
117 Acenaphthene	153	7.378	7.378	0.000	94	721542	80.0	77.3	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	83	165145	160.0	160.3	
119 4-Nitrophenol	109	7.461	7.461	0.000	92	183935	160.0	165.4	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	94	230125	80.0	80.6	
123 Dibenzofuran	168	7.549	7.549	0.000	97	1005076	80.0	77.6	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	187210	80.0	81.2	
127 Hexadecane	57	7.790	7.790	0.000	91	659046	80.0	80.0	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	704486	80.0	78.0	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	93	349642	80.0	76.0	
135 Fluorene	166	7.889	7.889	0.000	95	732847	80.0	74.8	
138 4-Nitroaniline	138	7.895	7.895	0.000	86	166028	80.0	74.3	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	83	216768	160.0	164.0	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	62	561014	80.0	83.8	
142 Diphenylamine	169	7.995	7.995	0.000	95	561014	68.0	66.8	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	772796	80.9	80.7	
144 Azobenzene	77	8.042	8.042	0.000	98	772796	80.0	79.8	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	93	86096	80.0	81.4	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	68	204374	80.0	82.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.454	8.454	0.000	93	194493	80.0	82.6	
159 Atrazine	200	8.518	8.518	0.000	91	176677	80.0	82.8	
161 n-Octadecane	85	8.700	8.700	0.000	93	218045	80.0	83.6	
163 Pentachlorophenol	266	8.642	8.642	0.000	92	213982	160.0	169.1	
168 Phenanthrene	178	8.847	8.847	0.000	97	1001091	80.0	80.3	
169 Anthracene	178	8.894	8.894	0.000	97	1028467	80.0	82.2	
170 Carbazole	167	9.047	9.047	0.000	96	887530	80.0	81.7	
171 Alachlor	188	9.188	9.188	0.000	95	120195	80.0	81.4	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	1005561	80.0	82.3	
179 Fluoranthene	202	10.122	10.122	0.000	98	955122	80.0	80.7	
182 Pyrene	202	10.428	10.428	0.000	97	1009829	80.0	82.1	
188 Famphur	218	11.356	11.356	0.000	84	281849	80.0	90.3	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	97	395733	80.0	85.7	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.754	0.000	97	485589	80.0	76.3	
197 3,3'-Dichlorobenzidine	252	12.531	12.531	0.000	73	249788	80.0	82.4	
198 Benzo[a]anthracene	228	12.566	12.566	0.000	98	846442	80.0	82.5	
199 Chrysene	228	12.643	12.643	0.000	97	864551	80.0	82.3	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	685041	80.0	74.4	
203 Benzo[b]fluoranthene	252	15.257	15.257	0.000	97	708114	80.0	86.1	
204 Benzo[k]fluoranthene	252	15.334	15.334	0.000	99	817845	80.0	86.5	
206 Benzo[e]pyrene	252	16.004	16.004	0.000	97	692320	80.0	84.4	
207 Benzo[a]pyrene	252	16.139	16.139	0.000	77	726563	80.0	88.8	
213 Dibenz(a,h)anthracene	278	19.411	19.411	0.000	95	592220	80.0	83.6	
214 Indeno[1,2,3-cd]pyrene	276	19.317	19.317	0.000	98	538222	80.0	73.3	
215 Benzo[g,h,i]perylene	276	20.028	20.028	0.000	98	648240	80.0	86.1	

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

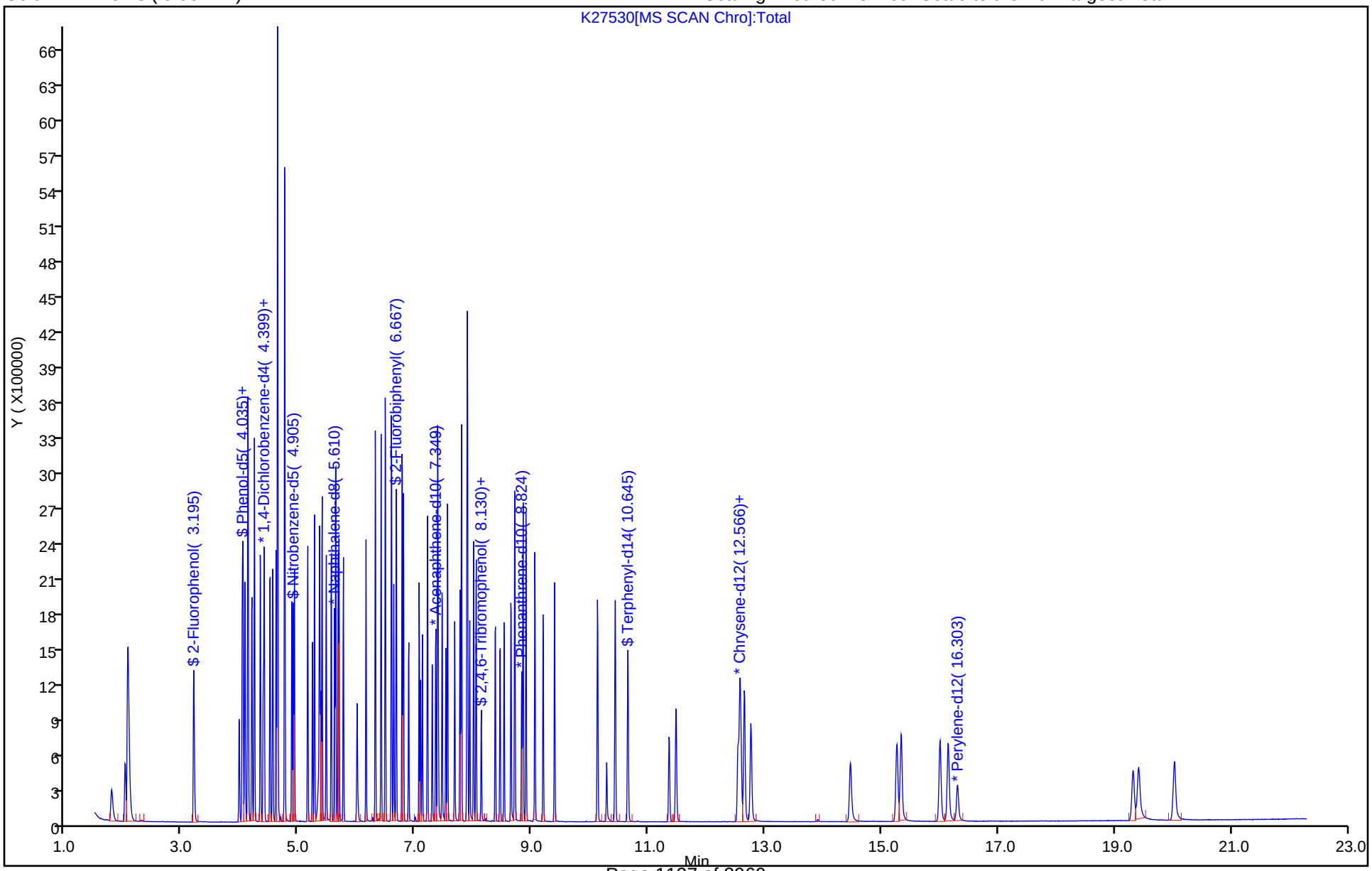
Report Date: 14-Nov-2018 09:57:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27530.D

Injection Date:	13-Nov-2018 11:40:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCV HSL			Worklist Smp#:	3
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-437389/51 Calibration Date: 11/13/2018 22:48

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27553.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6542	0.6208		75900	80000	-5.1	50.0
N-Nitrosodimethylamine	Ave	0.9717	0.9228		76000	80000	-5.0	50.0
Pyridine	Ave	1.584	1.488		150000	160000	-6.1	50.0
Phenol	Ave	1.760	1.659	0.8000	75400	80000	-5.8	50.0
Aniline	Ave	2.091	1.999		76500	80000	-4.4	50.0
Bis(2-chloroethyl)ether	Ave	1.332	1.247	0.7000	74900	80000	-6.4	50.0
2-Chlorophenol	Ave	1.469	1.405	0.8000	76500	80000	-4.3	50.0
1,3-Dichlorobenzene	Ave	1.613	1.525		75600	80000	-5.5	50.0
1,4-Dichlorobenzene	Ave	1.615	1.532		75900	80000	-5.1	50.0
Benzyl alcohol	Ave	0.9494	0.8832		74400	80000	-7.0	50.0
1,2-Dichlorobenzene	Ave	1.536	1.466		76300	80000	-4.6	50.0
2-Methylphenol	Ave	1.343	1.251	0.7000	74500	80000	-6.8	50.0
bis (2-chloroisopropyl) ether	Qua		2.150	0.0100	73500	80000	-8.1	50.0
3 & 4 Methylphenol	Ave	1.260	1.162		73800	80000	-7.8	50.0
N-Nitrosodi-n-propylamine	Ave	0.8909	0.8032	0.5000	72100	80000	-9.8	50.0
Acetophenone	Qua		1.650	0.0100	76200	80000	-4.7	50.0
Hexachloroethane	Ave	0.6039	0.5847	0.3000	77500	80000	-3.2	50.0
Nitrobenzene	Ave	0.3561	0.3490		78400	80000	-2.0	50.0
Isophorone	Ave	0.6280	0.5960	0.4000	75900	80000	-5.1	50.0
2-Nitrophenol	Ave	0.1839	0.1783	0.1000	77600	80000	-3.1	50.0
2,4-Dimethylphenol	Ave	0.3384	0.3243	0.2000	76700	80000	-4.2	50.0
Bis(2-chloroethoxy)methane	Ave	0.3907	0.3715	0.3000	76100	80000	-4.9	50.0
Benzoic acid	Lin2		0.2001		138000	160000	-13.6	50.0
2,4-Dichlorophenol	Ave	0.2770	0.2653	0.2000	76600	80000	-4.2	50.0
1,2,4-Trichlorobenzene	Ave	0.3105	0.2984		76900	80000	-3.9	50.0
Naphthalene	Ave	0.9651	0.9169	0.7000	76000	80000	-5.0	50.0
4-Chloroaniline	Ave	0.3939	0.3833	0.0100	77800	80000	-2.7	50.0
2,6-Dichlorophenol	Ave	0.2691	0.2543		75600	80000	-5.5	50.0
Hexachlorobutadiene	Ave	0.1676	0.1649	0.0100	78700	80000	-1.6	50.0
Caprolactam	Ave	0.1570	0.1474		75100	80000	-6.1	50.0
4-Chloro-3-methylphenol	Ave	0.2691	0.2548	0.2000	75800	80000	-5.3	50.0
2-Methylnaphthalene	Ave	0.6765	0.6297	0.4000	74500	80000	-6.9	50.0
1-Methylnaphthalene	Ave	0.6314	0.6018		76300	80000	-4.7	50.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2734	0.2575	0.0100	75300	80000	-5.8	50.0
Hexachlorocyclopentadiene	Ave	0.3439	0.3356	0.0500	78000	80000	-2.4	50.0
2,4,6-Trichlorophenol	Ave	0.3529	0.3275	0.2000	74200	80000	-7.2	50.0
2,4,5-Trichlorophenol	Ave	0.3990	0.3709	0.2000	74400	80000	-7.0	50.0
1,1'-Biphenyl	Ave	1.598	1.461		73200	80000	-8.5	50.0
2-Chloronaphthalene	Ave	1.211	1.112	0.8000	73400	80000	-8.2	50.0
2-Nitroaniline	Ave	0.3423	0.3267	0.0100	76400	80000	-4.5	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-437389/51 Calibration Date: 11/13/2018 22:48

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27553.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.192	1.089	0.0100	73100	80000	-8.6	50.0
1,3-Dinitrobenzene	Ave	0.1977	0.1971		79800	80000	-0.3	50.0
2,6-Dinitrotoluene	Ave	0.2999	0.2865	0.2000	76400	80000	-4.5	50.0
Acenaphthylene	Ave	1.803	1.673	0.9000	74300	80000	-7.2	50.0
3-Nitroaniline	Ave	0.3144	0.2994	0.0100	76200	80000	-4.8	50.0
Acenaphthene	Ave	1.187	1.085	0.9000	73100	80000	-8.6	50.0
2,4-Dinitrophenol	Qua		0.1167	0.0100	145000	160000	-9.1	50.0
4-Nitrophenol	Ave	0.1413	0.1318	0.0100	149000	160000	-6.7	50.0
2,4-Dinitrotoluene	Ave	0.3627	0.3465	0.2000	76400	80000	-4.5	50.0
Dibenzofuran	Ave	1.647	1.491	0.8000	72400	80000	-9.4	50.0
2,3,4,6-Tetrachlorophenol	Ave	0.2931	0.2815	0.0100	76900	80000	-3.9	50.0
Diethyl phthalate	Ave	1.148	1.038	0.0100	72300	80000	-9.7	50.0
4-Chlorophenyl phenyl ether	Ave	0.5848	0.5213	0.4000	71300	80000	-10.9	50.0
Fluorene	Ave	1.245	1.109	0.9000	71200	80000	-11.0	50.0
4-Nitroaniline	Ave	0.2840	0.2597	0.0100	73200	80000	-8.6	50.0
4,6-Dinitro-2-methylphenol	Lin2		0.1007	0.0100	143000	160000	-10.7	50.0
Diphenylamine	Ave	1.068	0.996		63400	68000	-6.8	50.0
N-Nitrosodiphenylamine	Ave	0.5761	0.5535	0.0100	76900	80000	-3.9	50.0
1,2-Diphenylhydrazine	Ave	1.218	1.149		76300	80900	-5.6	50.0
Azobenzene	Ave	1.231	1.162		75500	80000	-5.6	50.0
4-Bromophenyl phenyl ether	Ave	0.2143	0.1981	0.1000	73900	80000	-7.6	50.0
Hexachlorobenzene	Ave	0.2026	0.1904	0.1000	75200	80000	-6.0	50.0
Atrazine	Ave	0.1836	0.1694		73800	80000	-7.7	50.0
Pentachlorophenol	Lin2		0.0999	0.0500	148000	160000	-7.7	50.0
Phenanthrene	Ave	1.072	0.9692	0.7000	72300	80000	-9.6	50.0
Anthracene	Ave	1.076	1.000	0.7000	74300	80000	-7.1	50.0
Carbazole	Ave	0.9341	0.8623	0.0100	73900	80000	-7.7	50.0
Alachlor	Ave	0.1271	0.1163		73200	80000	-8.5	50.0
Di-n-butyl phthalate	Ave	1.051	0.9814	0.0100	74700	80000	-6.6	50.0
Fluoranthene	Ave	1.018	0.9144	0.6000	71900	80000	-10.1	50.0
Pyrene	Ave	1.428	1.309	0.6000	73400	80000	-8.3	50.0
Famphur	Ave	0.3623	0.3362		74200	80000	-7.2	50.0
Butyl benzyl phthalate	Ave	0.5356	0.5040	0.0100	75300	80000	-5.9	50.0
3,3'-Dichlorobenzidine	Lin2		0.2980	0.0100	68000	80000	-15.0	50.0
Benzo[a]anthracene	Ave	1.191	1.085	0.8000	72900	80000	-8.9	50.0
Chrysene	Ave	1.219	1.137	0.7000	74600	80000	-6.7	50.0
Bis(2-ethylhexyl) phthalate	Lin1		0.5999	0.0100	65400	80000	-18.2	50.0
Di-n-octyl phthalate	Qua		0.7631	0.0100	59600	80000	-25.5	50.0
Benzo[b]fluoranthene	Ave	1.144	1.051	0.7000	73500	80000	-8.2	50.0
Benzo[k]fluoranthene	Ave	1.315	1.312	0.7000	79800	80000	-0.2	50.0
Benzo[a]pyrene	Ave	1.138	1.129	0.7000	79400	80000	-0.8	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-437389/51 Calibration Date: 11/13/2018 22:48

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27553.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin1		0.6001	0.5000	57000	80000	-28.7	50.0
Dibenz(a,h)anthracene	Lin2		0.8524	0.4000	69500	80000	-13.1	50.0
Benzo[g,h,i]perylene	Ave	1.047	0.9580	0.5000	73200	80000	-8.5	50.0
2-Fluorophenol (Surr)	Ave	1.477	1.417		76700	80000	-4.1	50.0
Phenol-d5 (Surr)	Ave	1.689	1.584		75000	80000	-6.2	50.0
Nitrobenzene-d5 (Surr)	Ave	0.3555	0.3438		77400	80000	-3.3	50.0
2-Fluorobiphenyl	Ave	1.401	1.303		74400	80000	-7.0	50.0
2,4,6-Tribromophenol (Surr)	Ave	0.1343	0.1298		77300	80000	-3.4	50.0
Terphenyl-d14 (Surr)	Ave	0.998	0.9079		72800	80000	-9.0	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27553.D
Lims ID: CCVC HSL
Client ID:
Sample Type: CCVC
Inject. Date: 13-Nov-2018 22:48:30 ALS Bottle#: 25 Worklist Smp#: 51
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCVC HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:58:20 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:57:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	166734	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	648439	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	95	316571	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	484103	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	352054	40.0	40.0	
* 6 Perylene-d12	264	16.298	16.303	-0.005	98	292305	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	472397	80.0	76.7	
$ 8 Phenol-d5	99	4.029	4.029	0.000	99	528267	80.0	75.0	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	93	445817	80.0	77.4	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	824722	80.0	74.4	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	94	82169	80.0	77.3	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	639291	80.0	72.8	
19 1,4-Dioxane	88	1.785	1.785	0.000	96	207001	80.0	75.9	
20 N-Nitrosodimethylamine	74	2.014	2.014	0.000	86	307719	80.0	76.0	
21 Pyridine	79	2.067	2.067	0.000	84	992324	160.0	150.3	
32 Phenol	94	4.041	4.041	0.000	98	553102	80.0	75.4	
34 Aniline	93	4.070	4.070	0.000	97	666507	80.0	76.5	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	471947	80.0	77.1	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	92	415763	80.0	74.9	
38 n-Decane	43	4.235	4.235	0.000	94	624492	80.0	75.9	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	468617	80.0	76.5	
40 1,3-Dichlorobenzene	146	4.341	4.335	0.006	98	508598	80.0	75.6	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	93	510960	80.0	75.9	
43 Benzyl alcohol	108	4.505	4.505	0.000	94	294533	80.0	74.4	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	488791	80.0	76.3	
45 2-Methylphenol	108	4.611	4.611	0.000	95	417237	80.0	74.5	
46 2,2'-oxybis[1-chloropropan	45	4.635	4.634	0.001	92	716989	80.0	73.5	
47 Indene	116	4.635	4.634	0.001	91	1367341	160.0	153.9	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	66	387403	80.0	73.8	
50 3-Methylphenol	108	4.752	4.752	0.000	74	387403	80.0	73.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	77	387403	80.0	73.8	
52 N-Nitrosodi-n-propylamine	70	4.752	4.752	0.000	88	267831	80.0	72.1	
54 Acetophenone	105	4.758	4.758	0.000	84	550087	80.0	76.2	
58 Hexachloroethane	117	4.875	4.875	0.000	94	194991	80.0	77.5	
59 Nitrobenzene	77	4.922	4.922	0.000	93	452635	80.0	78.4	
63 Isophorone	82	5.152	5.151	0.001	98	772904	80.0	75.9	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	231239	80.0	77.6	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	95	420576	80.0	76.7	
68 Benzoic acid	105	5.375	5.381	-0.006	88	518976	160.0	138.2	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	481747	80.0	76.1	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	85	426635	80.0	77.6	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	343992	80.0	76.6	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	386927	80.0	76.9	
79 Naphthalene	128	5.633	5.633	0.000	98	1189068	80.0	76.0	
80 4-Chloroaniline	127	5.675	5.674	0.000	96	497138	80.0	77.8	
81 2,6-Dichlorophenol	162	5.686	5.686	0.000	96	329826	80.0	75.6	
83 Hexachlorobutadiene	225	5.763	5.762	0.001	96	213872	80.0	78.7	
86 Caprolactam	55	5.998	5.998	0.000	75	191117	80.0	75.1	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	96	330465	80.0	75.8	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	94	816584	80.0	74.5	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	780434	80.0	76.3	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	96	212450	80.0	78.0	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	97	333897	80.0	75.3	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	207336	80.0	74.2	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	96	359542	80.0	72.8	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	93	234860	80.0	74.4	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	94	925243	80.0	73.2	
106 2-Chloronaphthalene	162	6.791	6.791	0.000	96	703887	80.0	73.4	
108 2-Nitroaniline	65	6.879	6.885	-0.006	86	206874	80.0	76.4	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	689479	80.0	73.1	
112 1,3-Dinitrobenzene	168	7.085	7.084	0.001	88	124815	80.0	79.8	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	181370	80.0	76.4	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	1059445	80.0	74.3	
115 3-Nitroaniline	138	7.284	7.290	-0.006	96	189587	80.0	76.2	
117 Acenaphthene	153	7.378	7.378	0.000	94	687105	80.0	73.1	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	86	147788	160.0	145.4	
119 4-Nitrophenol	109	7.455	7.461	-0.006	95	166937	160.0	149.3	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	219374	80.0	76.4	
123 Dibenzofuran	168	7.549	7.549	0.000	97	944079	80.0	72.4	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	178248	80.0	76.9	
127 Hexadecane	57	7.784	7.790	-0.006	91	596757	80.0	72.0	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	656919	80.0	72.3	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	93	330041	80.0	71.3	
135 Fluorene	166	7.890	7.889	0.001	96	701906	80.0	71.2	
138 4-Nitroaniline	138	7.895	7.895	0.000	87	164406	80.0	73.2	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	86	194923	160.0	142.9	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	62	535853	80.0	76.9	
142 Diphenylamine	169	7.995	7.995	0.000	95	535853	68.0	63.4	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	44	735449	80.9	76.3	
144 Azobenzene	77	8.042	8.042	0.000	98	735449	80.0	75.5	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	94	82169	80.0	77.2	
156 4-Bromophenyl phenyl ether	248	8.366	8.371	-0.005	68	191763	80.0	73.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	93	184376	80.0	75.2	
159 Atrazine	200	8.518	8.518	0.000	91	164040	80.0	73.8	
161 n-Octadecane	85	8.700	8.700	0.000	93	208729	80.0	76.8	
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	193481	160.0	147.7	
168 Phenanthrene	178	8.841	8.847	-0.006	97	938387	80.0	72.3	
169 Anthracene	178	8.894	8.894	0.000	97	968122	80.0	74.3	
170 Carbazole	167	9.047	9.047	0.000	95	834912	80.0	73.9	
171 Alachlor	188	9.188	9.188	0.000	93	112569	80.0	73.2	
173 Di-n-butyl phthalate	149	9.382	9.388	-0.006	99	950238	80.0	74.7	
179 Fluoranthene	202	10.122	10.122	0.000	98	885334	80.0	71.9	
182 Pyrene	202	10.422	10.428	-0.006	97	921680	80.0	73.4	
188 Famphur	218	11.350	11.356	-0.006	84	236689	80.0	74.2	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	97	354840	80.0	75.3	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.754	0.001	97	422373	80.0	65.4	
197 3,3'-Dichlorobenzidine	252	12.531	12.531	0.000	73	209807	80.0	68.0	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	98	763777	80.0	72.9	
199 Chrysene	228	12.643	12.643	0.000	97	800584	80.0	74.6	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	537326	80.0	59.6	
203 Benzo[b]fluoranthene	252	15.258	15.257	0.001	97	614164	80.0	73.5	
204 Benzo[k]fluoranthene	252	15.334	15.334	0.000	98	767173	80.0	79.8	
206 Benzo[e]pyrene	252	15.998	16.004	-0.006	97	622232	80.0	74.7	
207 Benzo[a]pyrene	252	16.139	16.139	0.000	77	660143	80.0	79.4	
213 Dibenz(a,h)anthracene	278	19.412	19.411	0.001	94	498345	80.0	69.5	
214 Indeno[1,2,3-cd]pyrene	276	19.312	19.317	-0.005	98	422504	80.0	57.0	
215 Benzo[g,h,i]perylene	276	20.023	20.028	-0.005	97	560050	80.0	73.2	
S 217 Total Cresols	108				0			148.3	
S 218 Methyl Phenols,Total	108				0			148.3	

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

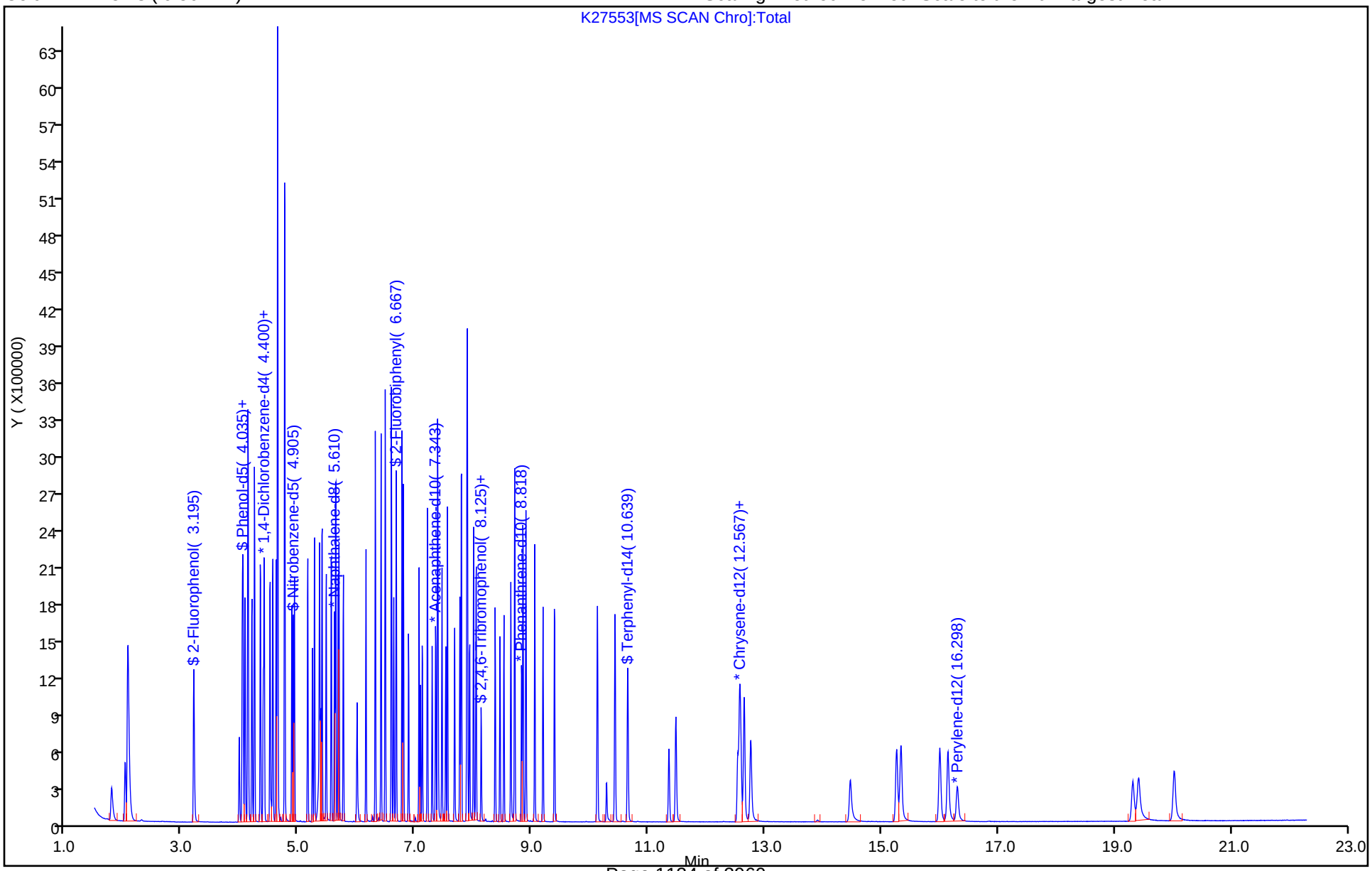
Report Date: 14-Nov-2018 09:58:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27553.D

Injection Date:	13-Nov-2018 22:48:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCVC HSL			Worklist Smp#:	51
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 12-Nov-2018 14:10:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:08 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 12-Nov-2018 14:47:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
28 Pentachlorophenol_T	266	3.549	3.549	0.000	92	78667	NR	NR	
48 Benzidine_T	184	4.624	4.624	0.000	99	599365	NR	NR	
30 DFTPP									
56 4,4'-DDE	246		4.759				ND	ND	Ua
62 4,4'-DDD	235	5.036	5.036	0.000	94	2968	NR	NR	a
70 4,4'-DDT	235	5.229	5.229	0.000	98	242126	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
ND - Not Detected or Marked ND
Review Flags
U - Marked Undetected
a - User Assigned ID

Reagents:

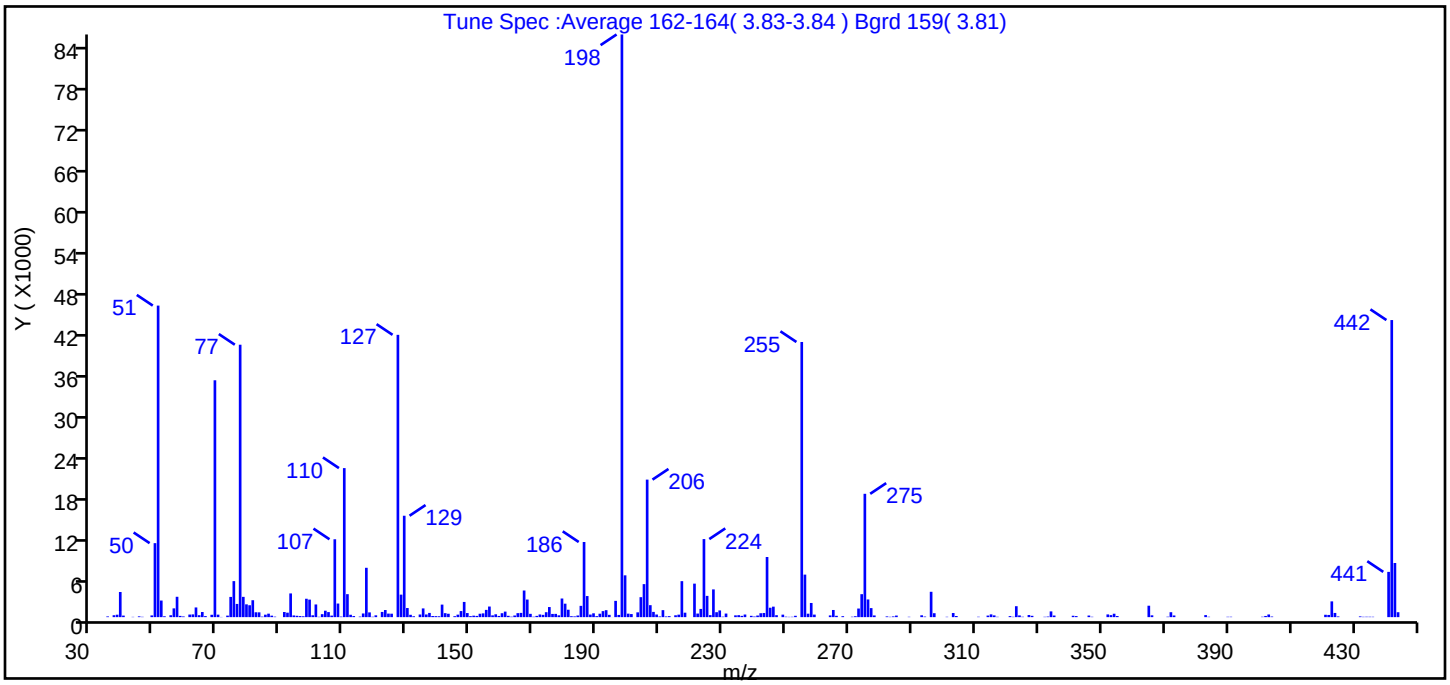
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

30 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	53.5
68	<2% of mass 69	0.4 (1.0)
69	Present	40.7
70	<2% of mass 69	0.4 (1.1)
127	40-60% of mass 198	48.5
197	<1% of mass 198	0.4
199	5-9% of mass 198	7.2
275	10-30% of mass 198	21.2
365	>1% of mass 198	2.0
441	Present but less than mass 443	7.8 (83.6)
442	>40% of mass 198	51.0
443	17-23% of mass 442	9.3 (18.2)

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D\SMSK_8270C.rslt\spectra.d
Injection Date: 12-Nov-2018 14:10:30
Spectrum: Tune Spec :Average 162-164(3.83-3.84) Bgrd 159(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	105	117.00	7237	190.00	146	275.00	18088
37.00	283	118.00	695	191.00	503	276.00	2594
38.00	358	119.00	57	192.00	883	277.00	1326
39.00	3686	120.00	266	193.00	1022	278.00	249
40.00	227	122.00	763	194.00	337	282.00	109
43.00	40	123.00	1044	195.00	7	283.00	48
45.00	115	124.00	519	196.00	2387	284.00	106
46.00	50	125.00	505	197.00	324	285.00	232
49.00	251	127.00	41400	198.00	85448	289.00	52
50.00	10851	128.00	3301	199.00	6131	293.00	271
51.00	45688	129.00	14871	200.00	510	294.00	83
52.00	2434	130.00	1336	201.00	451	296.00	3718
53.00	127	131.00	344	203.00	702	297.00	577
55.00	279	132.00	127	204.00	2928	301.00	52
56.00	1287	134.00	389	205.00	4842	303.00	604
57.00	2986	135.00	1280	206.00	20168	304.00	166
58.00	183	136.00	392	207.00	1755	311.00	57
59.00	101	137.00	620	208.00	770	314.00	230
61.00	380	138.00	166	209.00	384	315.00	407
62.00	405	139.00	147	210.00	100	316.00	257
63.00	1421	140.00	130	211.00	1027	317.00	51
64.00	284	141.00	1839	212.00	100	321.00	150
65.00	752	142.00	584	213.00	148	322.00	53
66.00	152	143.00	497	215.00	271	323.00	1605
68.00	347	145.00	138	216.00	363	324.00	254
69.00	34736	146.00	365	217.00	5278	325.00	59
70.00	365	147.00	891	218.00	653	327.00	309
71.00	28	148.00	2230	221.00	4914	328.00	194
73.00	224	149.00	599	222.00	526	332.00	51
74.00	2966	150.00	149	223.00	1206	333.00	85
75.00	5283	151.00	218	224.00	11448	334.00	843
76.00	1938	152.00	181	225.00	3119	335.00	236
77.00	39952	153.00	498	226.00	295	341.00	203

Report Date: 13-Nov-2018 11:59:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D\SMSK_8270C.rslt\spectra.d
Injection Date: 12-Nov-2018 14:10:30
Spectrum: Tune Spec :Average 162-164(3.83-3.84) Bgrd 159(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	2975	154.00	554	227.00	4069	342.00	156
79.00	1877	155.00	1063	228.00	725	346.00	236
80.00	1746	156.00	1556	229.00	983	347.00	55
81.00	2482	157.00	260	230.00	68	352.00	399
82.00	714	158.00	419	231.00	526	353.00	294
83.00	703	159.00	177	234.00	262	354.00	500
84.00	75	160.00	576	235.00	287	355.00	162
85.00	361	161.00	812	236.00	190	365.00	1676
86.00	510	162.00	196	237.00	385	366.00	266
87.00	217	163.00	68	239.00	194	371.00	63
88.00	70	164.00	240	240.00	88	372.00	724
91.00	751	165.00	585	241.00	236	373.00	245
92.00	653	166.00	624	242.00	575	383.00	300
93.00	3478	167.00	3907	243.00	609	384.00	57
94.00	249	168.00	2580	244.00	8820	390.00	53
95.00	200	169.00	484	245.00	1380	391.00	58
96.00	154	170.00	60	246.00	1538	401.00	60
97.00	123	171.00	183	247.00	287	402.00	173
98.00	2697	172.00	392	249.00	367	403.00	390
99.00	2570	173.00	336	250.00	68	404.00	89
100.00	270	174.00	723	251.00	43	421.00	348
101.00	1861	175.00	1481	252.00	53	422.00	322
102.00	50	176.00	471	253.00	199	423.00	2313
103.00	437	177.00	478	255.00	40352	424.00	616
104.00	943	178.00	264	256.00	6237	425.00	104
105.00	740	179.00	2733	257.00	505	432.00	110
106.00	226	180.00	1974	258.00	2077	433.00	52
107.00	11420	181.00	1088	259.00	372	434.00	62
108.00	1994	182.00	138	264.00	252	435.00	59
109.00	79	183.00	108	265.00	1050	436.00	55
110.00	21856	184.00	240	266.00	198	441.00	6638
111.00	3370	185.00	1656	268.00	139	442.00	43568
112.00	348	186.00	11019	271.00	63	443.00	7940
113.00	158	187.00	3092	272.00	135	444.00	721

Report Date: 13-Nov-2018 11:59:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D\SMSK_8270C.rslt\spectra.d
Injection Date: 12-Nov-2018 14:10:30
Spectrum: Tune Spec :Average 162-164(3.83-3.84) Bgrd 159(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	80	188.00	377	273.00	1262		
116.00	539	189.00	562	274.00	3369		

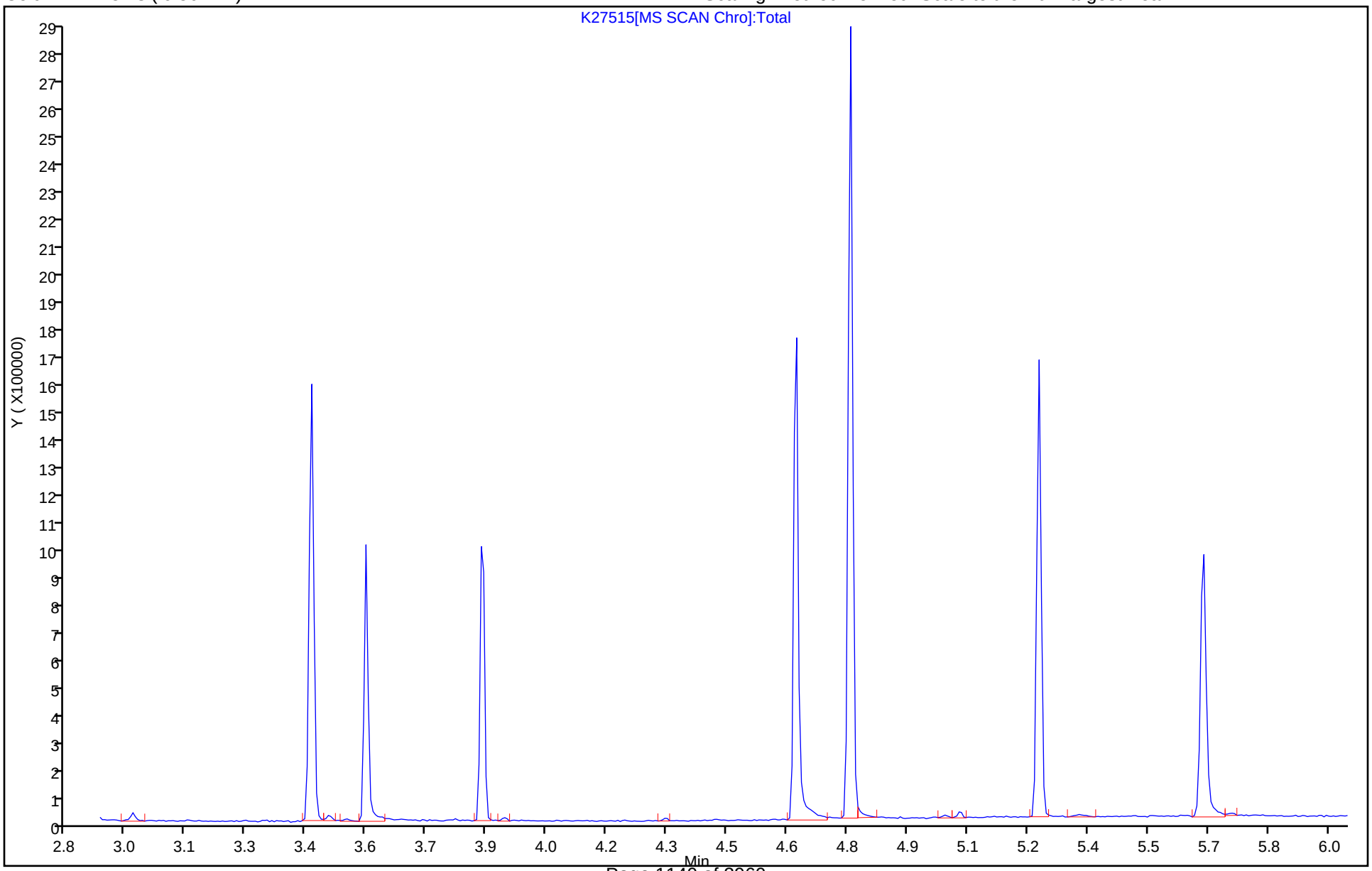
Report Date: 13-Nov-2018 11:59:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D

Injection Date:	12-Nov-2018 14:10:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

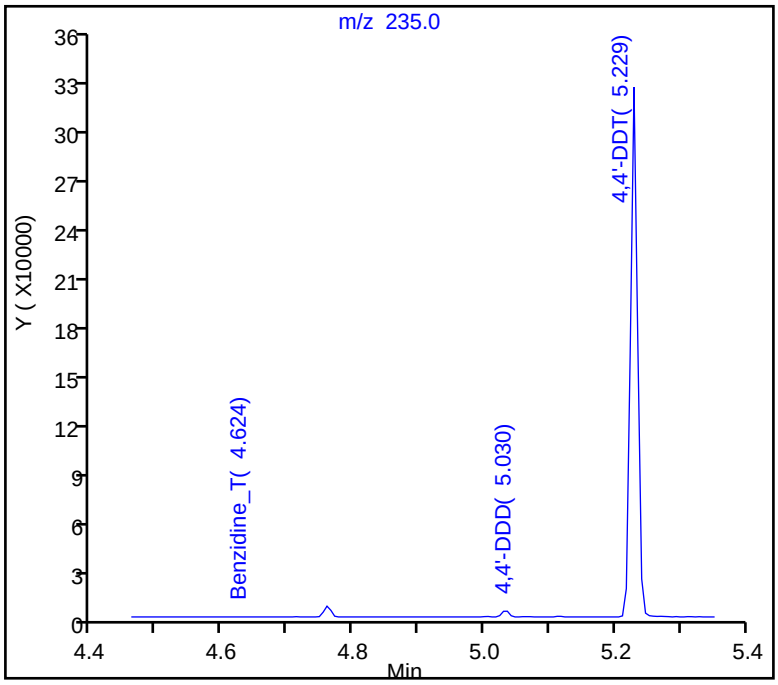


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

70 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

70 4,4'-DDT, Area = 242126
62 4,4'-DDD, Area = 2968
56 4,4'-DDE, Area = 0

%Breakdown: 1.21%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

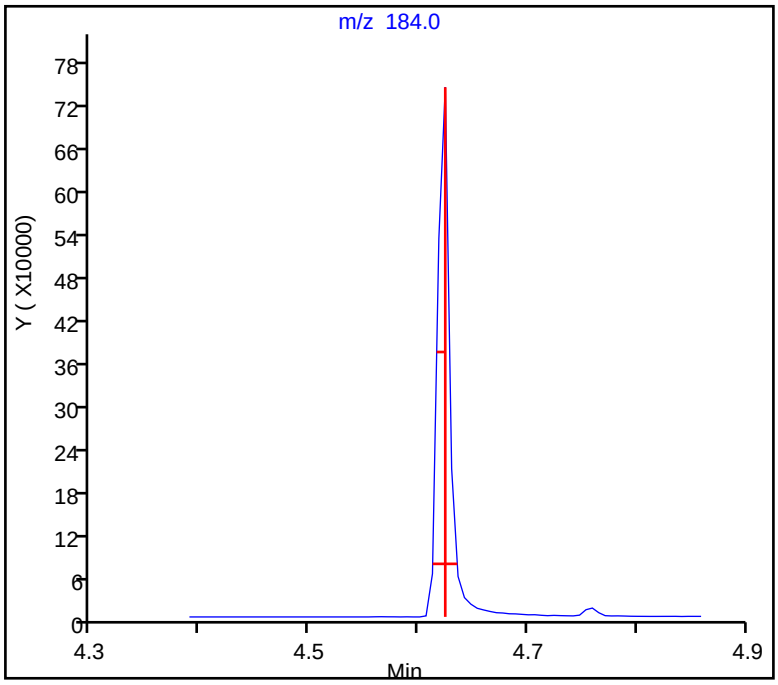
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

48 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 1.0, Max. Tailing < 3.00
Passed



Peak Tailing Report

TestAmerica Denver

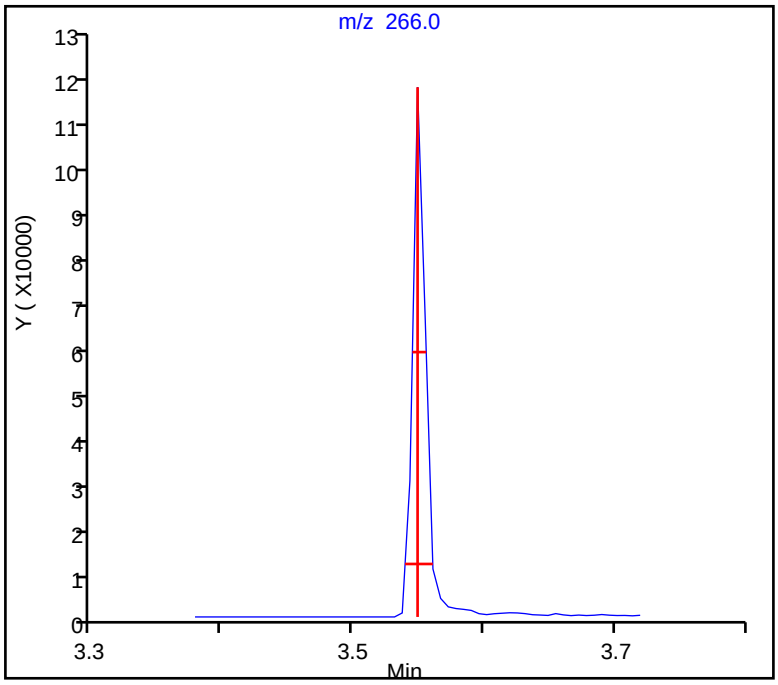
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

28 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.012 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.2, Max. Tailing < 5.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 13-Nov-2018 11:26:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:39 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 13-Nov-2018 11:38:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
28 Pentachlorophenol_T	266	3.543	3.543	0.000	93	85166	NR	NR	
48 Benzidine_T	184	4.613	4.613	0.000	99	662076	NR	NR	
30 DFTPP									
56 4,4'-DDE	246	4.754	4.754	0.000	1	344	NR	NR	a
62 4,4'-DDD	235	5.024	5.024	0.000	92	2722	NR	NR	a
70 4,4'-DDT	235	5.218	5.218	0.000	98	302723	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

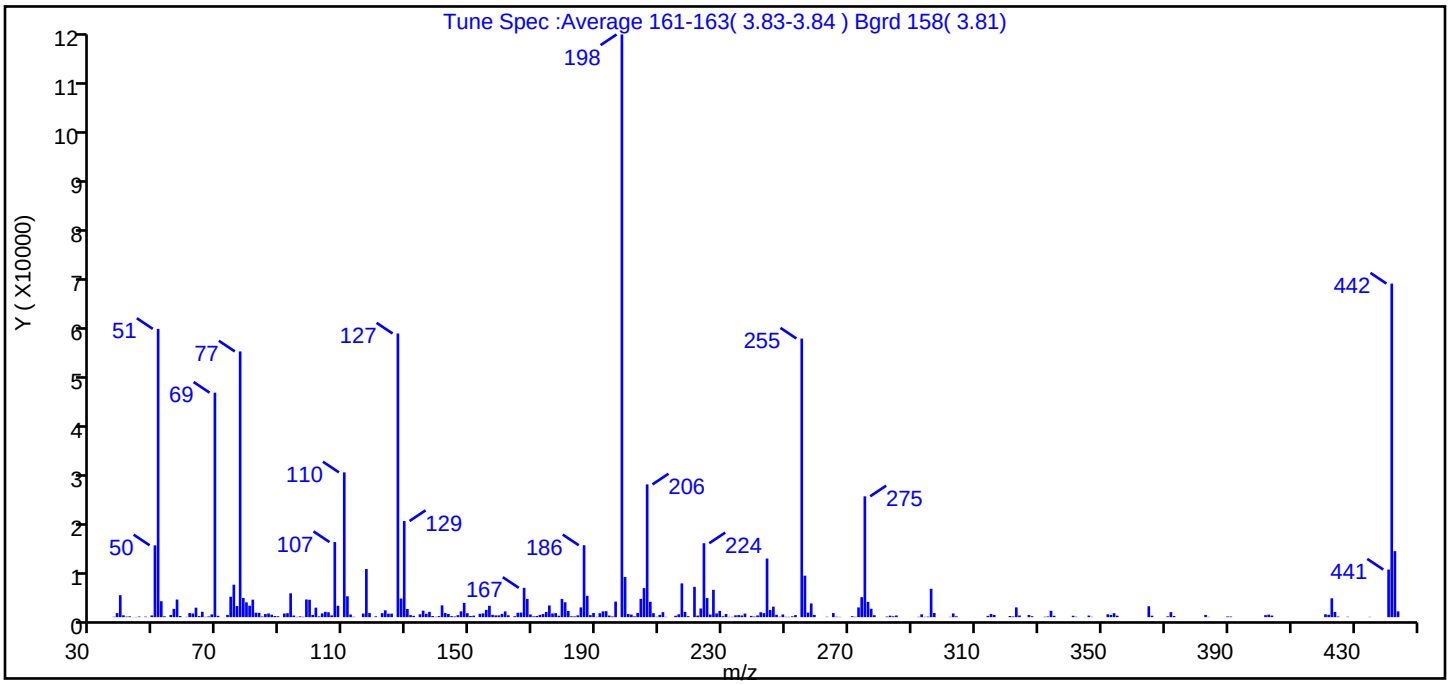
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D
Injection Date: 13-Nov-2018 11:26:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

30 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	49.5
68	<2% of mass 69	0.5 (1.2)
69	Present	38.5
70	<2% of mass 69	0.2 (0.6)
127	40-60% of mass 198	48.7
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.9
275	10-30% of mass 198	20.7
365	>1% of mass 198	1.9
441	Present but less than mass 443	8.2 (72.1)
442	>40% of mass 198	57.2
443	17-23% of mass 442	11.3 (19.8)

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D\SMSK_8270C.rslt\spectra.d
Injection Date: 13-Nov-2018 11:26:30
Spectrum: Tune Spec :Average 161-163(3.83-3.84) Bgrd 158(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	78	113.00	71	189.00	792	267.00	51
38.00	771	116.00	684	190.00	59	271.00	177
39.00	4199	117.00	9204	191.00	752	272.00	68
40.00	349	118.00	781	192.00	1109	273.00	1857
41.00	100	120.00	158	193.00	1141	274.00	3821
42.00	157	122.00	768	194.00	305	275.00	23088
43.00	14	123.00	1305	195.00	137	276.00	2926
44.00	39	124.00	656	196.00	2976	277.00	1606
45.00	117	125.00	672	198.00	111344	278.00	362
47.00	101	127.00	54200	199.00	7671	282.00	117
49.00	322	128.00	3556	200.00	599	283.00	294
50.00	13723	129.00	18368	201.00	492	284.00	160
51.00	55088	130.00	1562	202.00	157	285.00	324
52.00	3049	131.00	388	203.00	804	292.00	61
53.00	167	132.00	251	204.00	3492	293.00	533
55.00	406	134.00	545	205.00	5555	294.00	57
56.00	1576	135.00	1244	206.00	25368	295.00	104
57.00	3365	136.00	649	207.00	2932	296.00	5415
58.00	211	137.00	1024	208.00	760	297.00	791
60.00	54	138.00	215	209.00	72	302.00	57
61.00	780	139.00	66	210.00	441	303.00	705
62.00	700	140.00	196	211.00	954	304.00	166
63.00	1811	141.00	2254	212.00	56	314.00	242
64.00	201	142.00	786	215.00	271	315.00	614
65.00	1029	143.00	606	216.00	539	316.00	411
66.00	57	144.00	194	217.00	6454	321.00	218
67.00	134	145.00	123	218.00	1008	322.00	133
68.00	521	146.00	379	219.00	193	323.00	1864
69.00	42896	147.00	1108	221.00	5787	324.00	315
70.00	255	148.00	2728	222.00	301	327.00	413
73.00	428	149.00	754	223.00	1658	328.00	178
74.00	3902	150.00	219	224.00	14126	332.00	76
75.00	6201	151.00	290	225.00	3643	333.00	134

Report Date: 14-Nov-2018 09:57:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D\SMSK_8270C.rslt\spectra.d
Injection Date: 13-Nov-2018 11:26:30
Spectrum: Tune Spec :Average 161-163(3.83-3.84) Bgrd 158(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	2120	153.00	646	226.00	499	334.00	1221
77.00	50776	154.00	719	227.00	5217	335.00	259
78.00	3655	155.00	1380	228.00	716	341.00	271
79.00	2833	156.00	2176	229.00	1196	342.00	73
80.00	2182	157.00	444	230.00	173	346.00	300
81.00	3343	158.00	337	231.00	595	347.00	58
82.00	846	159.00	344	232.00	61	352.00	545
83.00	821	160.00	618	233.00	60	353.00	423
84.00	131	161.00	1099	234.00	351	354.00	750
85.00	599	162.00	352	235.00	390	355.00	276
86.00	705	164.00	180	236.00	317	365.00	2077
87.00	456	165.00	835	237.00	688	366.00	272
88.00	219	166.00	859	239.00	243	371.00	157
89.00	171	167.00	5595	240.00	109	372.00	953
91.00	694	168.00	3483	241.00	325	373.00	215
92.00	753	169.00	517	242.00	938	383.00	422
93.00	4561	170.00	153	243.00	769	384.00	55
94.00	310	171.00	225	244.00	11199	390.00	136
95.00	58	172.00	433	245.00	1367	391.00	120
96.00	152	173.00	589	246.00	2003	402.00	388
97.00	67	174.00	998	247.00	449	403.00	478
98.00	3379	175.00	2232	248.00	81	404.00	303
99.00	3322	176.00	703	249.00	512	421.00	552
100.00	421	177.00	779	250.00	68	422.00	450
101.00	1811	178.00	275	251.00	61	423.00	3600
102.00	148	179.00	3479	252.00	156	424.00	996
103.00	715	180.00	2842	253.00	397	425.00	126
104.00	1021	181.00	1179	255.00	53240	428.00	77
105.00	933	182.00	163	256.00	7923	435.00	54
106.00	329	183.00	147	257.00	871	441.00	9091
107.00	14350	184.00	345	258.00	2622	442.00	63744
108.00	2175	185.00	1867	259.00	425	443.00	12613
110.00	27664	186.00	13739	263.00	76	444.00	1111
111.00	3991	187.00	4078	265.00	777		

Report Date: 14-Nov-2018 09:57:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D\SMSK_8270C.rslt\spectra.d
Injection Date: 13-Nov-2018 11:26:30
Spectrum: Tune Spec :Average 161-163(3.83-3.84) Bgrd 158(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 270

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	504	188.00	379	266.00	82		

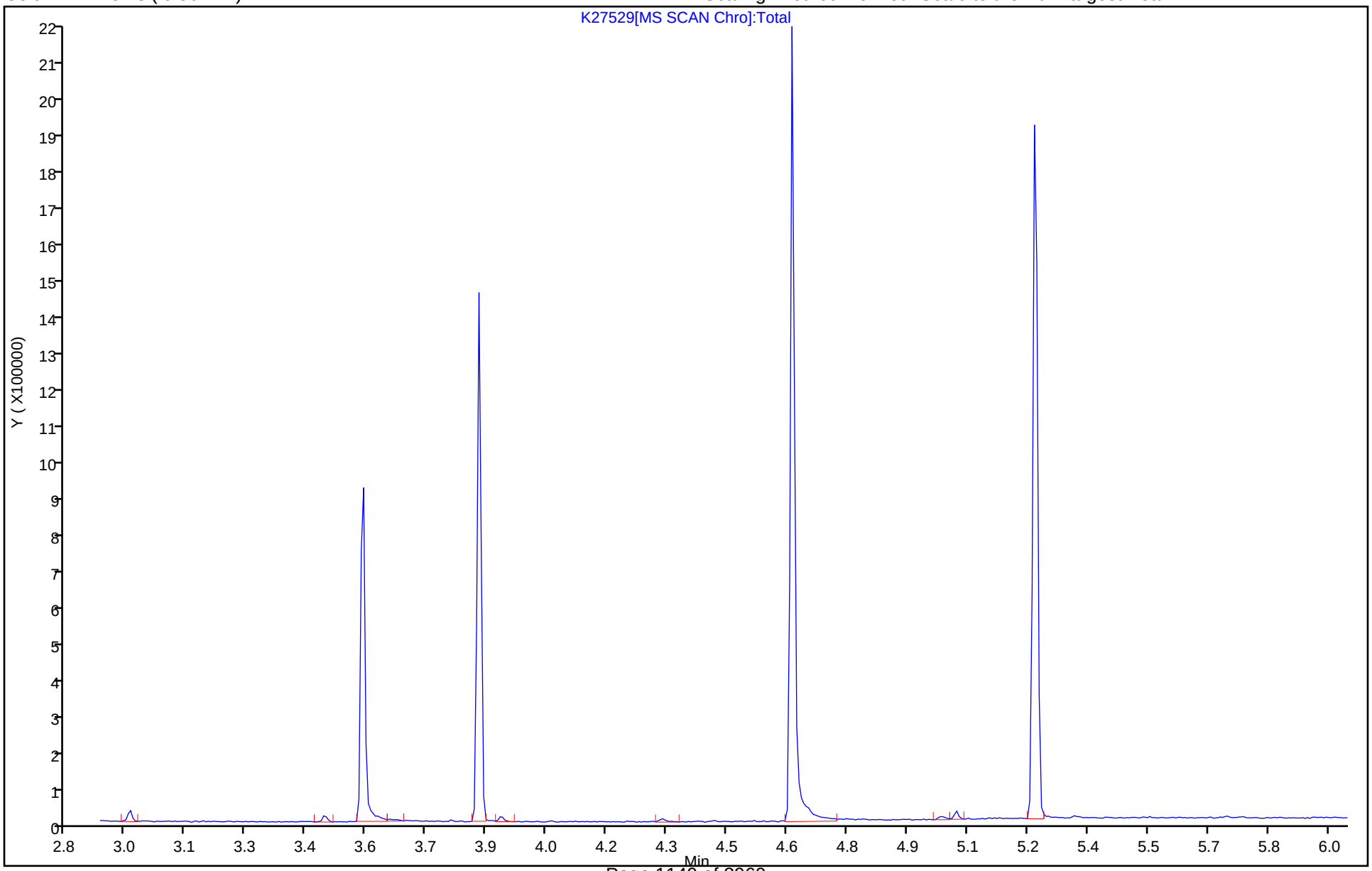
Report Date: 14-Nov-2018 09:57:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D

Injection Date:	13-Nov-2018 11:26:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

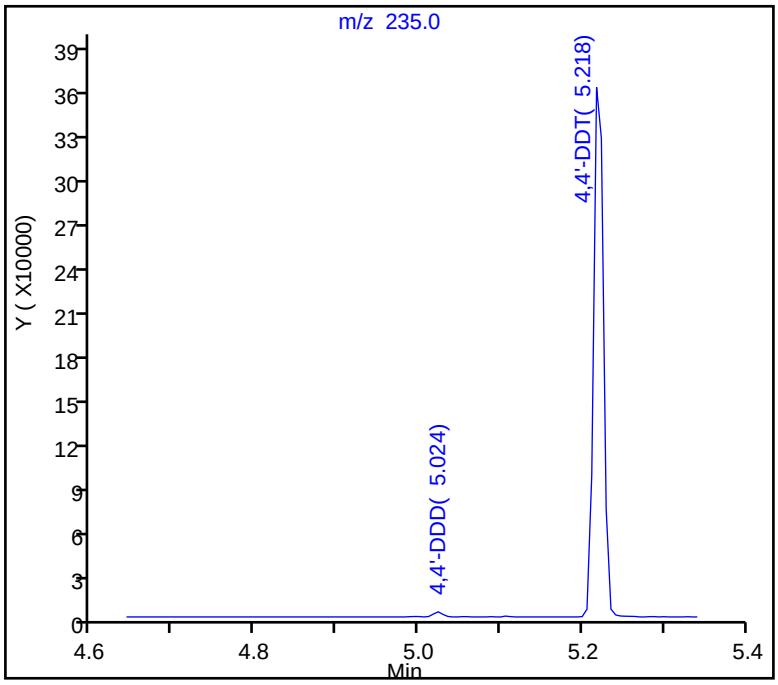


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D
Injection Date: 13-Nov-2018 11:26:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

70 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

70 4,4'-DDT, Area = 302723
62 4,4'-DDD, Area = 2722
56 4,4'-DDE, Area = 344

%Breakdown: 1.00%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

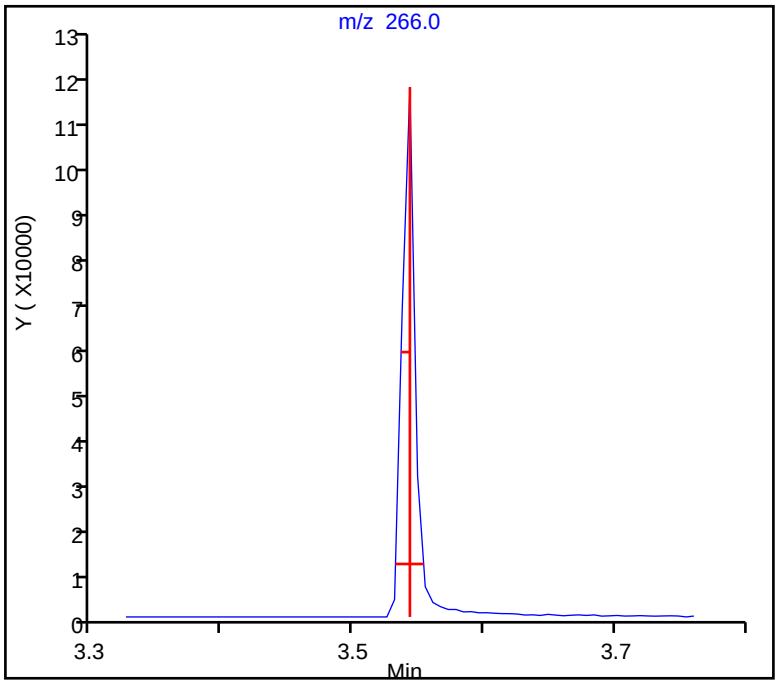
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D
Injection Date: 13-Nov-2018 11:26:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

28 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.0, Max. Tailing < 5.00
Passed



Peak Tailing Report

TestAmerica Denver

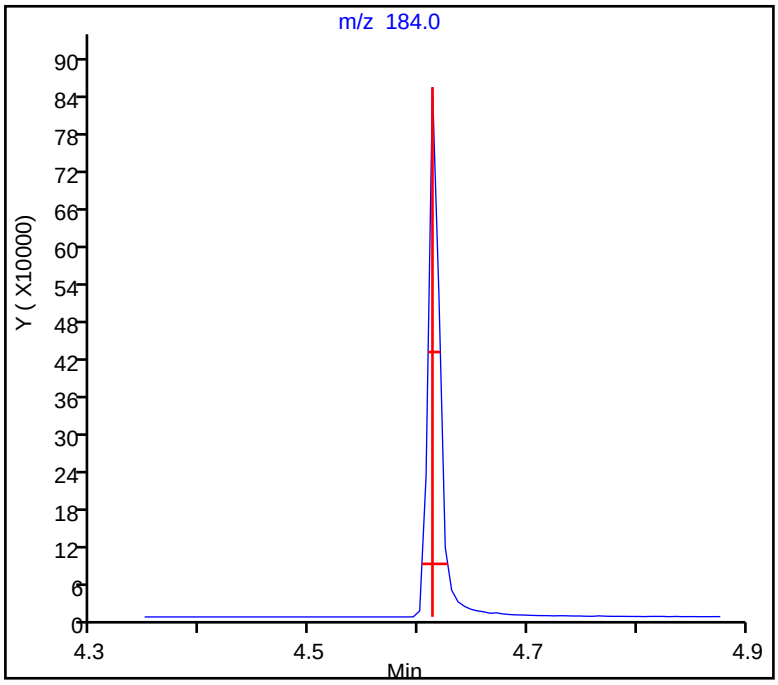
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27529.D
Injection Date: 13-Nov-2018 11:26:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

48 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.014 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.4, Max. Tailing < 3.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-435687/1-A

Matrix: Water | Lab File ID: K27531.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 1000(mL) | Date Analyzed: 11/13/2018 12:09

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	0.50	U	10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	1.0	U	10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	1.0	U	10	1.0	0.32
123-91-1	1,4-Dioxane	4.4	U	18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29
120-83-2	2,4-Dichlorophenol	2.0	U	10	2.0	0.64
105-67-9	2,4-Dimethylphenol	2.0	U	10	2.0	0.58
51-28-5	2,4-Dinitrophenol	30	U	80	30	10
121-14-2	2,4-Dinitrotoluene	4.4	U	20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	4.4	U	20	4.4	1.9
91-58-7	2-Chloronaphthalene	1.0	U	10	1.0	0.26
95-57-8	2-Chlorophenol	4.4	U	10	4.4	2.0
95-48-7	2-Methylphenol	2.0	U	10	2.0	0.98
88-74-4	2-Nitroaniline	4.4	U	50	4.4	1.7
88-75-5	2-Nitrophenol	1.0	U	20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	0.50	U	20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0
99-09-2	3-Nitroaniline	4.4	U	50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4
106-47-8	4-Chloroaniline	4.4	U	25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7
100-01-6	4-Nitroaniline	4.4	U	50	4.4	2.0
100-02-7	4-Nitrophenol	4.0	U	50	4.0	1.2
65-85-0	Benzoic acid	30	U	80	30	10
100-51-6	Benzyl alcohol	0.50	U	25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56
85-68-7	Butyl benzyl phthalate	2.0	U	20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-435687/1-A

Matrix: Water | Lab File ID: K27531.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 1000(mL) | Date Analyzed: 11/13/2018 12:09

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.0	U	10	1.0	0.43
132-64-9	Dibenzofuran	1.0	U	10	1.0	0.29
84-66-2	Diethyl phthalate	1.0	U	20	1.0	0.38
131-11-3	Dimethyl phthalate	0.50	U	20	0.50	0.21
84-74-2	Di-n-butyl phthalate	4.4	U	20	4.4	1.2
117-84-0	Di-n-octyl phthalate	1.0	U	20	1.0	0.35
118-74-1	Hexachlorobenzene	2.0	U	10	2.0	0.66
87-68-3	Hexachlorobutadiene	10	U	30	10	3.3
77-47-4	Hexachlorocyclopentadiene	30	U	50	30	10
67-72-1	Hexachloroethane	4.4	U	10	4.4	2.1
78-59-1	Isophorone	0.50	U	10	0.50	0.21
98-95-3	Nitrobenzene	2.0	U	20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44
87-86-5	Pentachlorophenol	60	U	80	60	20
108-95-2	Phenol	4.4	U	10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	84		43-140
321-60-8	2-Fluorobiphenyl	82		44-119
367-12-4	2-Fluorophenol (Surr)	87		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	87		44-120
4165-62-2	Phenol-d5 (Surr)	90		10-115
1718-51-0	Terphenyl-d14 (Surr)	95		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27531.D
Lims ID: MB 280-435687/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2018 12:09:30 ALS Bottle#: 3 Worklist Smp#: 29
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-435687_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:47:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	159026	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	99	651469	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	328598	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	525607	40.0	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	335728	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	253792	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	508788	100.0	86.7	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	604464	100.0	90.0	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	504982	100.0	87.2	
$ 10 2,4,6-Trichlorophenol-d2	198		6.920					ND	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	944910	100.0	82.1	
$ 12 2,4,6-Tribromophenol	330	8.124	8.130	-0.006	91	92867	100.0	84.2	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	99	792099	100.0	94.5	
17 Triethyl amine	86		2.185					ND	
18 2-Ethoxyethanol	59		2.337					ND	
19 1,4-Dioxane	88		1.785					ND	
20 N-Nitrosodimethylamine	74		2.014					ND	
21 Pyridine	79		2.067					ND	
22 Dimethylformamide	73		2.819					ND	
23 2-Picoline	93		2.990					ND	
24 N-Nitrosomethylethylamine	88		3.054					ND	
25 Acrylamide	71		3.254					ND	
26 Methyl methanesulfonate	80		3.289					ND	U
27 N-Nitrosodiethylamine	102		3.636					ND	
28 Pentachlorophenol_T	266		3.543					ND	
29 Ethyl methanesulfonate	79		3.877					ND	
31 Benzaldehyde	106		3.912					ND	
32 Phenol	94		4.041					ND	
33 Phenylmercaptan	110		3.994					ND	
34 Aniline	93		4.070					ND	
35 Alpha Methyl Styrene	118		4.129					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
36 Bis(2-chloroethyl)ether	93		4.117					ND	
37 Pentachloroethane	117		4.353					ND	U
38 n-Decane	43		4.235					ND	
39 2-Chlorophenol	128		4.194					ND	
40 1,3-Dichlorobenzene	146		4.335					ND	
41 Methyl styrene	118		4.834					ND	
42 1,4-Dichlorobenzene	146		4.405					ND	
43 Benzyl alcohol	108		4.505					ND	
44 1,2-Dichlorobenzene	146		4.552					ND	
45 2-Methylphenol	108		4.611					ND	
46 2,2'-oxybis[1-chloropropan	45		4.634					ND	
47 Indene	116		4.634					ND	
48 Benzidine_T	184		4.613					ND	
49 3 & 4 Methylphenol	108		4.752					ND	
50 3-Methylphenol	108		4.752					ND	
51 4-Methylphenol	108		4.752					ND	
52 N-Nitrosodi-n-propylamine	70		4.752					ND	
53 N-Nitrosopyrrolidine	100		4.929					ND	
54 Acetophenone	105		4.758					ND	
55 N-Nitrosomorpholine	116		4.964					ND	
57 2-Toluidine	106		5.005					ND	
58 Hexachloroethane	117		4.875					ND	
59 Nitrobenzene	77		4.922					ND	
60 Triethyl phosphate	99		5.346					ND	
61 N-Nitrosopiperidine	114		5.270					ND	
63 Isophorone	82		5.151					ND	
64 2-Nitrophenol	139		5.234					ND	
65 2,4-Dimethylphenol	107		5.269					ND	
66 Benzyl dichloride	125		5.610					ND	
67 o,o',o''-Triethylphosphoro	198		5.528					ND	
68 Benzoic acid	105		5.381					ND	
69 Bis(2-chloroethoxy)methane	93		5.351					ND	
71 3,5-Dimethylphenol	107		5.398					ND	
72 2,4-Xylidine	121		5.769					ND	
73 alpha,alpha-Dimethyl phene	58		5.669					ND	
74 2,4-Dichlorophenol	162		5.469					ND	
75 o-Anisidine	80		5.804					ND	
76 1,2,4-Trichlorobenzene	180		5.557					ND	
77 4-chlorobenzenethiol	144		5.745					ND	
78 Alpha-Terpineol	59		5.586					ND	
79 Naphthalene	128		5.633					ND	
80 4-Chloroaniline	127		5.674					ND	
81 2,6-Dichlorophenol	162		5.686					ND	
82 Hexachloropropene	213		5.933					ND	
83 Hexachlorobutadiene	225		5.762					ND	
84 Quinoline	129		6.163					ND	
85 N-Nitrosodi-n-butylamine	84		6.204					ND	
86 Caprolactam	55		5.998					ND	
87 p-Phenylene diamine	108		6.216					ND	
88 5-Methyl-o-Anisidine	122		6.421					ND	
89 4-Chloro-3-methylphenol	107		6.150					ND	
90 Safrole, Total	162		6.421					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
91 Carbofuran phenol	164		6.568					ND	
92 1,3-phenylenediamine	108		6.545					ND	
93 2-Methylnaphthalene	142		6.309					ND	
94 Methyl 4-chlorophenyl sulf	158		6.979					ND	
95 Phthalic anhydride	76		6.297					ND	
96 1-Methylnaphthalene	142		6.409					ND	
97 Hexachlorocyclopentadiene	237		6.479					ND	
98 1,2,4,5-Tetrachlorobenzene	216		6.485					ND	
99 Isosafrole Peak 1	162		6.715					ND	
100 2,4,6-Trichlorophenol	196		6.591					ND	
101 2,3-Dichlorobenzenamine	161		6.585					ND	
102 2,4,5-Trichlorophenol	196		6.626					ND	
103 Isosafrole Peak 2	104		6.938					ND	
104 1,1'-Biphenyl	154		6.773					ND	
105 Toluene diamine (2,4- + 2,	122		7.091					ND	
106 2-Chloronaphthalene	162		6.791					ND	
107 1-Chloronaphthalene	162		7.032					ND	
108 2-Nitroaniline	65		6.885					ND	
109 1,4-Naphthoquinone	158		7.167					ND	U
110 1,4-Dinitrobenzene	168		7.214					ND	
111 Dimethyl phthalate	163		7.061					ND	
112 1,3-Dinitrobenzene	168		7.084					ND	
113 2,6-Dinitrotoluene	165		7.120					ND	
114 Acenaphthylene	152		7.208					ND	
115 3-Nitroaniline	138		7.290					ND	
116 1,3-Dimethyl-2,4-Dinitrobe	77		7.719					ND	
117 Acenaphthene	153		7.378					ND	
118 2,4-Dinitrophenol	184		7.390					ND	
119 4-Nitrophenol	109		7.461					ND	
120 1,3-Dimethyl-2,5-Dinitrobe	179		7.678					ND	
121 Pentachlorobenzene	250		7.737					ND	
122 2,4-Dinitrotoluene	165		7.519					ND	
123 Dibenzofuran	168		7.549					ND	
124 1-Naphthylamine	143		7.837					ND	
125 2,3,4,6-Tetrachlorophenol	232		7.672					ND	
126 1,4-Dimethyl-2,6-Dinitrobe	179		8.019					ND	
127 Hexadecane	57		7.790					ND	
128 1,4-Dimethyl-2,3-Dinitrobe	77		8.054					ND	
129 2-Naphthylamine	143		7.919					ND	
130 Diethyl phthalate	149		7.766					ND	
131 n-hydroxymethylphthalimide	147		7.919					ND	
132 1,2-Dimethyl-3,6-Dinitrobe	179		8.131					ND	
133 Thionazin	97		8.055					ND	
134 4-Chlorophenyl phenyl ethe	204		7.884					ND	
135 Fluorene	166		7.889					ND	
136 Tributyl phosphate	99		8.307					ND	
137 N-Nitro-o-toluidine	152		8.107					ND	
138 4-Nitroaniline	138		7.895					ND	
139 4,6-Dinitro-2-methylphenol	198		7.931					ND	
140 1,5-Dimethyl-2,4-Dinitrobe	179		8.283					ND	
141 N-Nitrosodiphenylamine	169		7.995					ND	
142 Diphenylamine	169		7.995					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
143 1,2-Diphenylhydrazine	77		8.042					ND	
144 Azobenzene	77		8.042					ND	
145 1,5-Dimethyl-2,3-Dinitrobe	179		8.383					ND	
146 Sulfotepp	97		8.360					ND	
147 2,4,6 - Tribromophenol	330		8.130				ND	ND	U
148 1,2-Dimethyl-3,5-Dinitrobe	179		8.495					ND	
149 Phenyl sulfide	186		8.465					ND	
150 Diallate Peak 1	86		8.507					ND	
151 1,3,5-Trinitrobenzene	213		8.448					ND	
152 Phorate	121		8.513					ND	
153 Phenacetin	108		8.513					ND	
154 1,2-Dimethyl-3,4-Dinitrobe	179		8.648					ND	
155 Diallate Peak 2	86		8.595					ND	
156 4-Bromophenyl phenyl ether	248		8.371					ND	
157 Hexachlorobenzene	284		8.454					ND	
158 Dimethoate	87		8.677					ND	
159 Atrazine	200		8.518					ND	
160 1,2-Dimethyl-4,5-Dinitrobe	91		8.889					ND	
161 n-Octadecane	85		8.700					ND	
162 4-Aminobiphenyl	169		8.848					ND	
163 Pentachlorophenol	266		8.642					ND	
164 Pentachloronitrobenzene	237		8.883					ND	
165 Pronamide	173		8.907					ND	
166 Disulfoton	88		9.036					ND	
167 Dinoseb	211		9.042					ND	
168 Phenanthrene	178		8.847					ND	
169 Anthracene	178		8.894					ND	
170 Carbazole	167		9.047					ND	
171 Alachlor	188		9.188					ND	
172 Methyl parathion	109		9.412					ND	
173 Di-n-butyl phthalate	149		9.388					ND	
174 Ethyl Parathion	109		9.835					ND	
175 4-Nitroquinoline-1-oxide	190		9.882					ND	
176 Methapyrilene	97		9.976					ND	
177 Phenyl disulfide	109		9.896					ND	
178 Isodrin	193		10.246					ND	
179 Fluoranthene	202		10.122					ND	
180 Diphenylsulfone	125		10.196					ND	
181 Benzidine	184		10.187					ND	
182 Pyrene	202		10.428					ND	
183 Aramite Peak 1	185		10.945					ND	
184 Octachlorostyrene	308		10.392					ND	
185 Aramite Peak 2	185		11.075					ND	
186 p-Dimethylamino azobenzene	120		11.222					ND	
187 Chlorobenzilate	251		11.310					ND	
188 Famphur	218		11.356					ND	
189 4,4-Dichlorobenzil	139		10.657					ND	
190 Butyl benzyl phthalate	149		11.474					ND	
191 3,3'-Dimethylbenzidine	212		11.838					ND	
193 p-chlorophenyl sulfone	159		11.021					ND	
194 2-Acetylaminofluorene	181		12.350					ND	
195 Bis(2-ethylhexyl) phthalat	149		12.754					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
196 4,4'-Methylene bis(2-chlor	231		13.019					ND	
197 3,3'-Dichlorobenzidine	252		12.531					ND	
198 Benzo[a]anthracene	228		12.566					ND	
199 Chrysene	228		12.643					ND	
200 6-Methylchrysene	242		14.300					ND	
201 Di-n-octyl phthalate	149		14.464					ND	
202 7,12-Dimethylbenz(a)anthra	256		15.910					ND	
203 Benzo[b]fluoranthene	252		15.257					ND	
204 Benzo[k]fluoranthene	252		15.334					ND	
205 Hexachlorophene	196		16.144					ND	
206 Benzo[e]pyrene	252		16.004					ND	
207 Benzo[a]pyrene	252		16.139					ND	
208 Perylene	252		17.491					ND	
209 3-Methylcholanthrene	268		17.902					ND	
210 Tris(2,3-dibromopropyl)pho	119		18.971					ND	
211 Dibenz[a,h]acridine	279		19.477					ND	
212 Dibenz[a,j]acridine	279		19.629					ND	
213 Dibenz(a,h)anthracene	278		19.411					ND	
214 Indeno[1,2,3-cd]pyrene	276		19.317					ND	
215 Benzo[g,h,i]perylene	276		20.028					ND	
216 Dibenzo[a,e]pyrene	302		25.523					ND	
S 217 Total Cresols	108		15.496					ND	
S 218 Methyl Phenols,Total	108		15.496					ND	
S 219 Isosafrole	162		15.496					ND	
S 220 Diallate	86		15.496					ND	
S 221 Aramite, Total	185		15.496					ND	
S 222 Phthalic acid	148		19.689					ND	
14 1,2,3,4-Tetrahydronaphthal	1		0.000					ND	
15 2-Butoxyethanol	1		0.000					ND	
16 2-Phenoxyethanol	1		0.000					ND	
56 4,4'-DDE	246		4.754					ND	
62 4,4'-DDD	235		5.024					ND	
70 4,4'-DDT	235		5.218					ND	
S 231 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

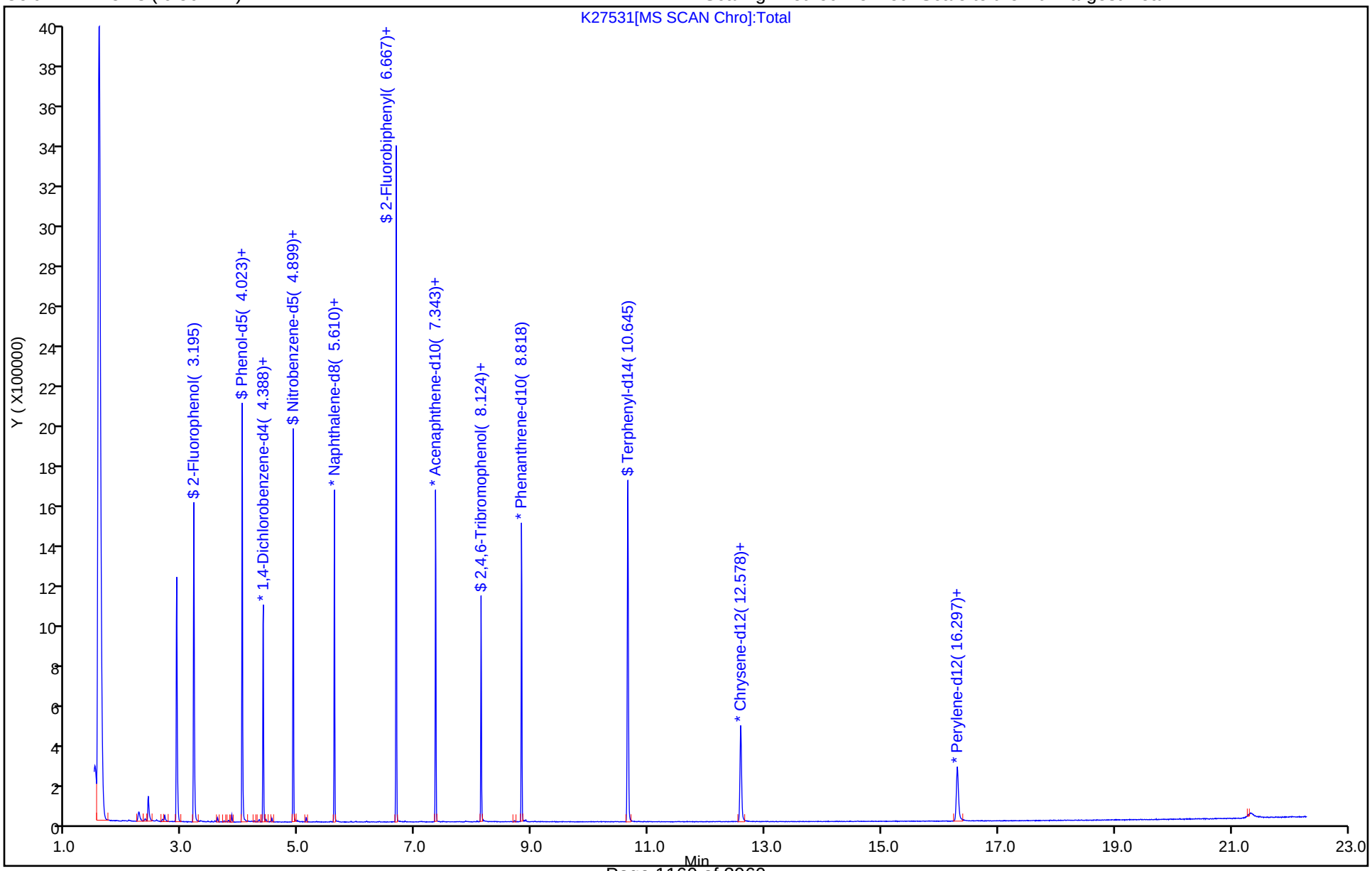
Report Date: 14-Nov-2018 09:57:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27531.D

Injection Date:	13-Nov-2018 12:09:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	MB 280-435687/1-A			Worklist Smp#:	29
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27531.D
Lims ID: MB 280-435687/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2018 12:09:30 ALS Bottle#: 3 Worklist Smp#: 29
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-435687_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:47:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	86.7	86.66
$ 8 Phenol-d5	100.0	90.0	90.00
$ 9 Nitrobenzene-d5	100.0	87.2	87.22
$ 11 2-Fluorobiphenyl	100.0	82.1	82.08
$ 12 2,4,6-Tribromophenol	100.0	84.2	84.18
$ 13 Terphenyl-d14	100.0	94.5	94.54

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-435687/2-A

Matrix: Water | Lab File ID: K27532.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 1000(mL) | Date Analyzed: 11/13/2018 12:38

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	66.9		10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	68.3		10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	66.7		10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	67.3		10	1.0	0.32
123-91-1	1,4-Dioxane	58.5		18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	73.8		20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	78.7		20	1.0	0.29
120-83-2	2,4-Dichlorophenol	71.5		10	2.0	0.64
105-67-9	2,4-Dimethylphenol	62.3		10	2.0	0.58
51-28-5	2,4-Dinitrophenol	146		80	30	10
121-14-2	2,4-Dinitrotoluene	76.7		20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	75.2		20	4.4	1.9
91-58-7	2-Chloronaphthalene	70.2		10	1.0	0.26
95-57-8	2-Chlorophenol	69.8		10	4.4	2.0
95-48-7	2-Methylphenol	70.1		10	2.0	0.98
88-74-4	2-Nitroaniline	74.3		50	4.4	1.7
88-75-5	2-Nitrophenol	72.7		20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	71.6		20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	139		50	4.4	2.0
99-09-2	3-Nitroaniline	60.3		50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	163		80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	71.9		10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	71.2		20	5.0	2.4
106-47-8	4-Chloroaniline	56.4		25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	72.2		10	4.4	1.7
100-01-6	4-Nitroaniline	72.4		50	4.4	2.0
100-02-7	4-Nitrophenol	149		50	4.0	1.2
65-85-0	Benzoic acid	56.1	J	80	30	10
100-51-6	Benzyl alcohol	72.7		25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	75.5		10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	72.6		10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	77.2		20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	70.7		10	2.0	0.56
85-68-7	Butyl benzyl phthalate	74.1		20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-435687/2-A

Matrix: Water | Lab File ID: K27532.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 10/31/2018 10:52

Sample wt/vol: 1000(mL) | Date Analyzed: 11/13/2018 12:38

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437389 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	73.6		10	1.0	0.43
132-64-9	Dibenzofuran	72.5		10	1.0	0.29
84-66-2	Diethyl phthalate	72.8		20	1.0	0.38
131-11-3	Dimethyl phthalate	74.1		20	0.50	0.21
84-74-2	Di-n-butyl phthalate	74.2		20	4.4	1.2
117-84-0	Di-n-octyl phthalate	67.6		20	1.0	0.35
118-74-1	Hexachlorobenzene	73.8		10	2.0	0.66
87-68-3	Hexachlorobutadiene	68.1		30	10	3.3
77-47-4	Hexachlorocyclopentadiene	102		50	30	10
67-72-1	Hexachloroethane	65.6		10	4.4	2.1
78-59-1	Isophorone	70.5		10	0.50	0.21
98-95-3	Nitrobenzene	72.2		20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	69.4		20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	74.9		10	1.0	0.44
87-86-5	Pentachlorophenol	144		80	60	20
108-95-2	Phenol	70.6		10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	95		43-140
321-60-8	2-Fluorobiphenyl	89		44-119
367-12-4	2-Fluorophenol (Surr)	89		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	92		44-120
4165-62-2	Phenol-d5 (Surr)	90		10-115
1718-51-0	Terphenyl-d14 (Surr)	86		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27532.D
Lims ID: LCS 280-435687/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 12:38:30 ALS Bottle#: 4 Worklist Smp#: 30
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-435687_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:48:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	166817	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	665629	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	95	310229	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	471586	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	336927	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	280288	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	550269	100.0	89.3	
$ 8 Phenol-d5	99	4.029	4.029	0.000	97	631559	100.0	89.6	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	92	541892	100.0	91.6	
$ 11 2-Fluorobiphenyl	172	6.667	6.667	0.000	100	968997	100.0	89.2	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	93	99243	100.0	95.3	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	99	726243	100.0	86.4	
19 1,4-Dioxane	88	1.785	1.785	0.000	97	159649	80.0	58.5	
20 N-Nitrosodimethylamine	74	2.020	2.014	0.006	87	279326	80.0	68.9	
21 Pyridine	79	2.067	2.067	0.000	84	691827	160.0	104.7	
31 Benzaldehyde	106	3.976	3.912	0.064	90	180916	80.0	36.1	
32 Phenol	94	4.041	4.041	0.000	98	518141	80.0	70.6	
34 Aniline	93	4.070	4.070	0.000	97	456056	80.0	52.3	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	94	428703	80.0	77.2	
38 n-Decane	43	4.235	4.235	0.000	93	500810	80.0	60.9	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	427700	80.0	69.8	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	448732	80.0	66.7	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	94	453653	80.0	67.3	
43 Benzyl alcohol	108	4.499	4.505	-0.006	93	287657	80.0	72.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	437694	80.0	68.3	
45 2-Methylphenol	108	4.611	4.611	0.000	94	392451	80.0	70.1	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	84	733677	80.0	75.5	
47 Indene	116	4.634	4.634	0.000	92	655419	80.0	67.4	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	79	376180	80.0	71.6	
50 3-Methylphenol	108	4.752	4.752	0.000	89	376180	80.0	71.6	
51 4-Methylphenol	108	4.752	4.752	0.000	94	376180	80.0	71.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.752	4.752	0.000	90	257747	80.0	69.4	
54 Acetophenone	105	4.758	4.758	0.000	90	527351	80.0	72.5	
58 Hexachloroethane	117	4.875	4.875	0.000	95	165164	80.0	65.6	
59 Nitrobenzene	77	4.922	4.922	0.000	93	427600	80.0	72.2	
63 Isophorone	82	5.146	5.151	-0.005	98	736279	80.0	70.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	222555	80.0	72.7	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	94	350619	80.0	62.3	
68 Benzoic acid	105	5.345	5.381	-0.036	90	198544	80.0	56.1	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	471776	80.0	72.6	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	329406	80.0	71.5	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	95	345453	80.0	66.9	
79 Naphthalene	128	5.627	5.633	-0.006	98	1117484	80.0	69.6	
80 4-Chloroaniline	127	5.669	5.674	-0.005	96	369435	80.0	56.4	
81 2,6-Dichlorophenol	162	5.686	5.686	0.000	97	321470	80.0	71.8	
83 Hexachlorobutadiene	225	5.763	5.762	0.001	96	189764	80.0	68.1	
86 Caprolactam	55	5.986	5.998	-0.012	75	191528	80.0	73.3	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	96	318961	80.0	71.2	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	94	781256	80.0	69.4	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	739704	80.0	70.4	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	96	272278	160.0	102.1	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	302490	80.0	66.5	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	215356	80.0	78.7	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	228400	80.0	73.8	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	95	888580	80.0	71.7	
106 2-Chloronaphthalene	162	6.791	6.791	0.000	96	659643	80.0	70.2	
108 2-Nitroaniline	65	6.879	6.885	-0.006	86	197109	80.0	74.3	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	684754	80.0	74.1	
112 1,3-Dinitrobenzene	168	7.085	7.084	0.001	87	120378	80.0	78.5	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	174990	80.0	75.2	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	993401	80.0	71.1	
115 3-Nitroaniline	138	7.284	7.290	-0.006	95	146980	80.0	60.3	
117 Acenaphthene	153	7.378	7.378	0.000	94	665779	80.0	72.3	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	86	145596	160.0	146.1	
119 4-Nitrophenol	109	7.455	7.461	-0.006	94	162808	160.0	148.5	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	215918	80.0	76.7	
123 Dibenzofuran	168	7.549	7.549	0.000	97	925727	80.0	72.5	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	168950	80.0	74.3	
127 Hexadecane	57	7.790	7.790	0.000	92	591931	80.0	72.9	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	648142	80.0	72.8	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	96	327245	80.0	72.2	
135 Fluorene	166	7.890	7.889	0.001	96	686703	80.0	71.1	
138 4-Nitroaniline	138	7.895	7.895	0.000	87	159508	80.0	72.4	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	85	218793	160.0	163.3	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	508771	80.0	74.9	
142 Diphenylamine	169	7.995	7.995	0.000	95	508771	68.0	61.4	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	45	714075	80.9	75.6	
144 Azobenzene	77	8.042	8.042	0.000	98	714075	80.0	74.8	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	93	100046	100.0	95.9	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	68	181687	80.0	71.9	
157 Hexachlorobenzene	284	8.448	8.454	-0.006	94	176340	80.0	73.8	
159 Atrazine	200	8.518	8.518	0.000	91	163302	80.0	75.5	
161 n-Octadecane	85	8.700	8.700	0.000	92	202851	80.0	76.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	183194	160.0	143.7	
168 Phenanthrene	178	8.847	8.847	0.000	97	928339	80.0	73.5	
169 Anthracene	178	8.894	8.894	0.000	97	939068	80.0	74.0	
170 Carbazole	167	9.047	9.047	0.000	96	810109	80.0	73.6	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	100	919041	80.0	74.2	
179 Fluoranthene	202	10.122	10.122	0.000	98	859212	80.0	71.6	
181 Benzidine	184	10.281	10.187	0.094	100	331521	160.0	53.5	
182 Pyrene	202	10.422	10.428	-0.006	98	916224	80.0	76.2	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	98	334228	80.0	74.1	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.754	0.000	97	438457	80.0	70.7	
197 3,3'-Dichlorobenzidine	252	12.531	12.531	0.000	74	415271	160.0	139.3	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	98	723427	80.0	72.1	
199 Chrysene	228	12.643	12.643	0.000	97	768147	80.0	74.8	
201 Di-n-octyl phthalate	149	14.458	14.464	-0.006	99	597254	80.0	67.6	
203 Benzo[b]fluoranthene	252	15.257	15.257	0.000	97	625339	80.0	78.0	
204 Benzo[k]fluoranthene	252	15.334	15.334	0.000	98	733854	80.0	79.6	
207 Benzo[a]pyrene	252	16.139	16.139	0.000	77	605508	80.0	75.9	
213 Dibenz(a,h)anthracene	278	19.412	19.411	0.001	94	520294	80.0	75.6	
214 Indeno[1,2,3-cd]pyrene	276	19.306	19.317	-0.011	99	475063	80.0	66.5	
215 Benzo[g,h,i]perylene	276	20.023	20.028	-0.005	97	571264	80.0	77.9	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

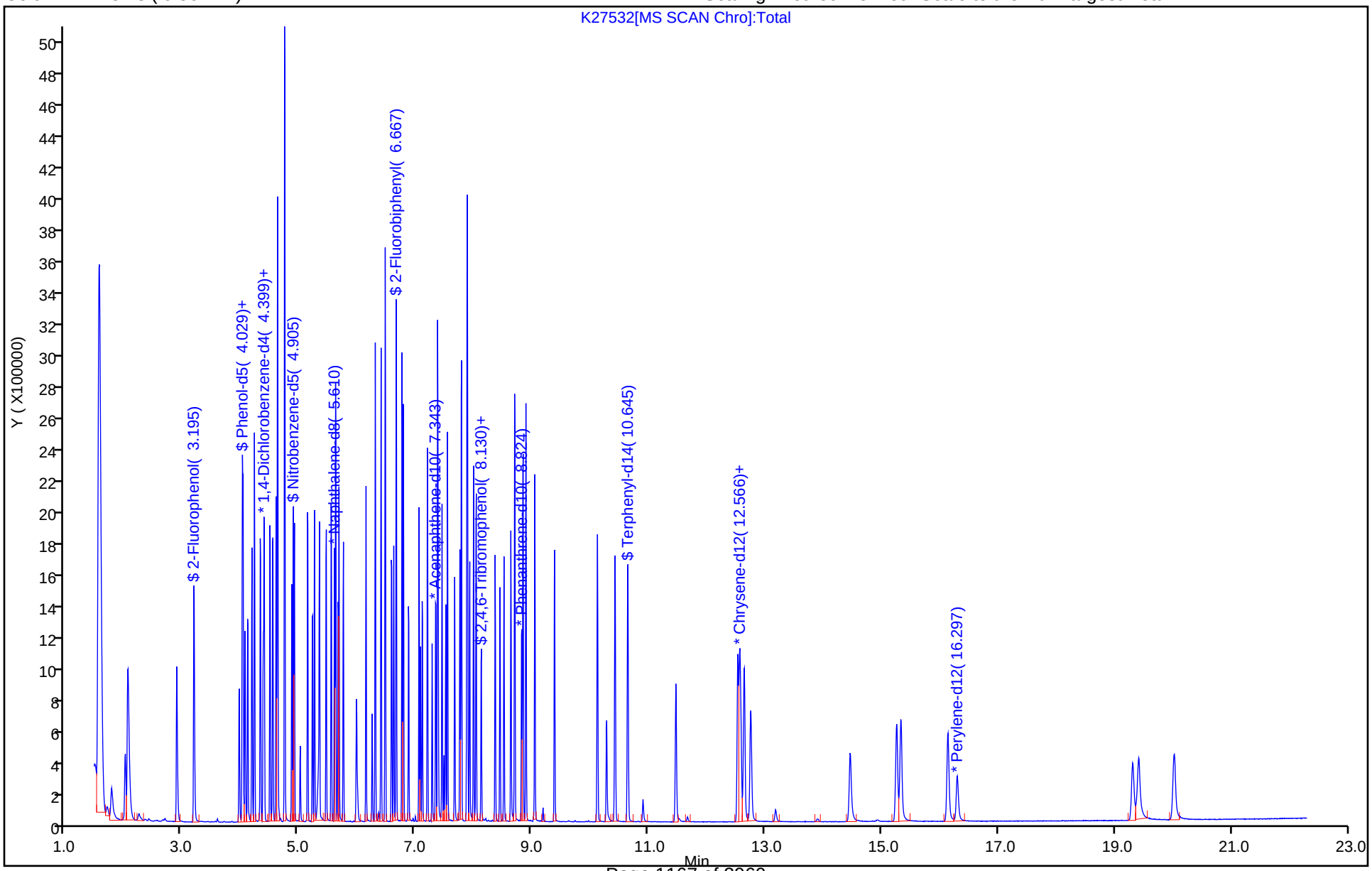
Report Date: 14-Nov-2018 09:57:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27532.D

Injection Date:	13-Nov-2018 12:38:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	LCS 280-435687/2-A			Worklist Smp#:	30
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\K27532.D
Lims ID: LCS 280-435687/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 12:38:30 ALS Bottle#: 4 Worklist Smp#: 30
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-435687_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181113-76149.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 14-Nov-2018 09:57:42 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: kiekeld Date: 14-Nov-2018 09:48:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	89.3	89.34
$ 8 Phenol-d5	100.0	89.6	89.64
$ 9 Nitrobenzene-d5	100.0	91.6	91.60
$ 11 2-Fluorobiphenyl	100.0	89.2	89.16
$ 12 2,4,6-Tribromophenol	100.0	95.3	95.28
$ 13 Terphenyl-d14	100.0	86.4	86.37

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_K Start Date: 11/12/2018 14:10

Analysis Batch Number: 437249 End Date: 11/12/2018 19:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-437249/2		11/12/2018 14:10	1	K27515.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-437249/4		11/12/2018 14:56	1	K27517.D	Rxi-5Sil MS 0.25(mm)
STD004 280-437249/5 IC		11/12/2018 15:25	1	K27518.D	Rxi-5Sil MS 0.25(mm)
STD010 280-437249/6 IC		11/12/2018 15:54	1	K27519.D	Rxi-5Sil MS 0.25(mm)
STD020 280-437249/7 IC		11/12/2018 16:23	1	K27520.D	Rxi-5Sil MS 0.25(mm)
STD050 280-437249/8 IC		11/12/2018 16:52	1	K27521.D	Rxi-5Sil MS 0.25(mm)
STD120 280-437249/9 IC		11/12/2018 17:21	1	K27522.D	Rxi-5Sil MS 0.25(mm)
STD160 280-437249/10 IC		11/12/2018 17:50	1	K27523.D	Rxi-5Sil MS 0.25(mm)
STD200 280-437249/11 IC		11/12/2018 18:19	1	K27524.D	Rxi-5Sil MS 0.25(mm)
ICV 280-437249/12		11/12/2018 18:48	1	K27525.D	Rxi-5Sil MS 0.25(mm)
ICV 280-437249/13		11/12/2018 19:17	1	K27526.D	Rxi-5Sil MS 0.25(mm)
ICV 280-437249/14		11/12/2018 19:45	1	K27527.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_K Start Date: 11/13/2018 11:26

Analysis Batch Number: 437389 End Date: 11/13/2018 22:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-437389/2		11/13/2018 11:26	1	K27529.D	Rxi-5Sil MS 0.25(mm)
CCV 280-437389/3		11/13/2018 11:40	1	K27530.D	Rxi-5Sil MS 0.25(mm)
MB 280-435687/1-A		11/13/2018 12:09	1	K27531.D	Rxi-5Sil MS 0.25(mm)
LCS 280-435687/2-A		11/13/2018 12:38	1	K27532.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 13:07	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 13:36	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 14:05	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 14:34	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 15:03	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 15:32	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 16:01	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 16:31	1		Rxi-5Sil MS 0.25(mm)
280-116270-1		11/13/2018 17:00	1	K27541.D	Rxi-5Sil MS 0.25(mm)
280-116270-8		11/13/2018 17:29	1	K27542.D	Rxi-5Sil MS 0.25(mm)
280-116270-9		11/13/2018 17:58	1	K27543.D	Rxi-5Sil MS 0.25(mm)
280-116270-12		11/13/2018 18:27	1	K27544.D	Rxi-5Sil MS 0.25(mm)
280-116270-13		11/13/2018 18:56	1	K27545.D	Rxi-5Sil MS 0.25(mm)
280-116270-14		11/13/2018 19:25	1	K27546.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 19:54	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 20:23	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 20:52	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 21:21	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 21:50	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/13/2018 22:19	1		Rxi-5Sil MS 0.25(mm)
CCVC 280-437389/51		11/13/2018 22:48	1	K27553.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435687 Batch Start Date: 10/31/18 10:52 Batch Analyst: Zhang, Jian

Batch Method: 3520C Batch End Date: 11/04/18 21:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 280-435687/1		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
LCS 280-435687/2		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
280-116270-C-1	FWGmw-018-181001-GW	3520C, 8270D	T	1435.2 g	500.7 g	934.5 mL	1 mL	7 SU	1-2 SU
280-116270-A-8	FWGmw-016-181001-GW	3520C, 8270D	T	1402.6 g	501.0 g	901.6 mL	1 mL	7 SU	1-2 SU
280-116270-B-9	FWGmw-020-181001-GW	3520C, 8270D	T	1501.0 g	501.1 g	999.9 mL	1 mL	7 SU	1-2 SU
280-116270-C-12	LL3mw-244-181001-GW	3520C, 8270D	T	1498.4 g	500.6 g	997.8 mL	1 mL	7 SU	1-2 SU
280-116270-C-13	SCFmw-004-181001-GW	3520C, 8270D	T	1501.0 g	497.0 g	1004 mL	1 mL	7 SU	1-2 SU
280-116270-B-14	LL1mw-087-181001-GW	3520C, 8270D	T	1407.1 g	500.8 g	906.3 mL	1 mL	7 SU	1-2 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	8270_LCS_Main 00055	8270_LCS_Supp 00308	8270Surrogate 00128		
MB 280-435687/1		3520C, 8270D		11-12 SU			1 mL		
LCS 280-435687/2		3520C, 8270D		11-12 SU	1 mL	1 mL	1 mL		
280-116270-C-1	FWGmw-018-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		
280-116270-A-8	FWGmw-016-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		
280-116270-B-9	FWGmw-020-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		
280-116270-C-12	LL3mw-244-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		
280-116270-C-13	SCFmw-004-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		
280-116270-B-14	LL1mw-087-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435687 Batch Start Date: 10/31/18 10:52 Batch Analyst: Zhang, Jian

Batch Method: 3520C Batch End Date: 11/04/18 21:00

Batch Notes	
Acid Used for pH Adjustment ID	1:1 H2SO4_00077
Balance ID	B318295195
Base Used to Adjust pH ID	10N_NaOH_00132
Batch Comment	DV-OP-0008/0007; H2O N.ELGA;
Analyst ID - Concentration	CR
Concentration 1 Corrected Temperature	84/84 Degrees C
Equipment ID - Concentration 1	A/B
Analyst ID - Extraction	JZ(Trainer)/VV(Trainee)
Extraction 1 End Time	11/01/2018 06:04
Extraction 1 Start Time	10/31/2018 10:59
Method/Fraction	3520C/8270D_DOD5
Na2SO4 ID	0000205461_00008
NaCl ID	173831
Pipette/Syringe/Dispenser ID	Woo!
Prep Solvent ID	MeCl2_Cycl_00410/411
Extraction 2 End Time	11/02/2018 05:07
Extraction 2 Start Time	11/01/2018 09:01
Analyst ID - Spike Analyst	JZ
Analyst ID - Spike Witness Analyst	Reviewer:MF
Sufficient Volume for Batch QC	Yes
Concentration 1 Uncorrected Temperature	85/83 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8270D_SIM_DOD5

Semivolatile Organic Compounds (GC/MS SIM)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rxi-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ	#	FBP	#	TPHL	#
FWGmw-018-181001-GW	280-116270-1	57		51	Q	78	
FWGmw-020-181001-GW	280-116270-9	59		56		81	
	MB 280-435408/1-A	56		57		92	
	LCS 280-435408/2-A	78		66		87	

	QC LIMITS
NBZ = Nitrobenzene-d5	55-111
FBP = 2-Fluorobiphenyl	53-106
TPHL = Terphenyl-d14	58-132

Column to be used to flag recovery values

FORM II 8270D SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F4484.D

Lab ID: LCS 280-435408/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1-Methylnaphthalene	0.900	0.625	69	41-115	
2-Methylnaphthalene	0.900	0.598	66	39-114	
Acenaphthene	0.900	0.685	76	48-114	
Acenaphthylene	0.900	0.648	72	35-121	
Anthracene	0.900	0.704	78	53-119	
Benzo[a]anthracene	0.900	0.848	94	59-120	
Benzo[a]pyrene	0.900	0.731	81	53-120	
Benzo[b]fluoranthene	0.900	0.757	84	53-126	
Benzo[g,h,i]perylene	0.900	0.632	70	44-128	
Benzo[k]fluoranthene	0.900	0.803	89	54-125	
Chrysene	0.900	0.785	87	57-120	
Dibenz(a,h)anthracene	0.900	0.626	70	44-131	
Fluoranthene	0.900	0.783	87	58-120	
Fluorene	0.900	0.694	77	50-118	
Indeno[1,2,3-cd]pyrene	0.900	0.637	71	48-130	
Naphthalene	0.900	0.595	66	43-114	
Phenanthrene	0.900	0.716	80	53-115	
Pyrene	0.900	0.784	87	53-121	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: F4483.D Lab Sample ID: MB 280-435408/1-A

Matrix: Water Date Extracted: 10/29/2018 21:02

Instrument ID: SMS_F Date Analyzed: 11/01/2018 23:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-435408/2-A	F4484.D	11/01/2018 23:30
FWGmw-018-181001-GW	280-116270-1	F4494.D	11/02/2018 04:25
FWGmw-020-181001-GW	280-116270-9	F4495.D	11/02/2018 04:54

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: F4397.D DFTPP Injection Date: 10/29/2018

Instrument ID: SMS_F DFTPP Injection Time: 15:45

Analysis Batch No.: 435404

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	48.2	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	50.4	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	54.1	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	7.1	
275	10.0 - 30.0 % of mass 198	25.0	
365	Greater than 1.0 % of mass 198	3.3	
441	Present but less than mass 443	11.7	(74.1) 3
442	Greater than 40.0 % of mass 198	74.9	
443	17.0 - 23.0 % of mass 442	15.8	(21.1) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 280-435404/3	F4398.D	10/29/2018	16:02
	STD0001 280-435404/4	F4399.D	10/29/2018	16:32
	STD0002 280-435404/5	F4400.D	10/29/2018	17:02
	STD0500 280-435404/6	F4401.D	10/29/2018	17:32
	STD0100 280-435404/7	F4402.D	10/29/2018	18:01
	STD0300 280-435404/8	F4403.D	10/29/2018	18:31
	STD1200 280-435404/9	F4404.D	10/29/2018	19:01
	STD2500 280-435404/10	F4405.D	10/29/2018	19:31
	STD5000 280-435404/11	F4406.D	10/29/2018	20:00
	ICV 280-435404/12	F4407.D	10/29/2018	20:30

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab File ID: F4473.D DFTPP Injection Date: 11/01/2018

Instrument ID: SMS_F DFTPP Injection Time: 18:15

Analysis Batch No.: 435950

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	56.6	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	58.2	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	57.7	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	7.0	
275	10.0 - 30.0 % of mass 198	23.0	
365	Greater than 1.0 % of mass 198	2.4	
441	Present but less than mass 443	10.5	(78.8) 3
442	Greater than 40.0 % of mass 198	65.4	
443	17.0 - 23.0 % of mass 442	13.3	(20.3) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-435950/3	F4474.D	11/01/2018	18:29
	MB 280-435408/1-A	F4483.D	11/01/2018	23:01
	LCS 280-435408/2-A	F4484.D	11/01/2018	23:30
FWGmw-018-181001-GW	280-116270-1	F4494.D	11/02/2018	04:25
FWGmw-020-181001-GW	280-116270-9	F4495.D	11/02/2018	04:54
	CCVC 280-435950/25	F4496.D	11/02/2018	05:24

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: ICIS 280-435404/3 Date Analyzed: 10/29/2018 16:02

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): F4398.D Heated Purge: (Y/N) N

Calibration ID: 34170

		ANT		PHN		CRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		24976	7.71	52568	9.21	52726	13.38
UPPER LIMIT		49952	8.21	105136	9.71	105452	13.88
LOWER LIMIT		12488	7.21	26284	8.71	26363	12.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-435404/12		24945	7.71	53849	9.21	53312	13.36
CCV 280-435950/3		24170	7.72	53542	9.22	51365	13.38
MB 280-435408/1-A		25730	7.71	62866	9.21	66335	13.36
LCS 280-435408/2-A		24762	7.71	56551	9.21	60502	13.36
280-116270-1	FWGmw-018-181001-GW	24121	7.70	51956	9.20	42495	13.35
280-116270-9	FWGmw-020-181001-GW	23242	7.70	52508	9.20	42209	13.35
CCVC 280-435950/25		25141	7.70	53342	9.20	48919	13.35

ANT = Acenaphthene-d10
PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: F4494.D

Analysis Method: 8270D SIM | Date Collected: 10/26/2018 09:30

Extract. Method: 3510C | Date Extracted: 10/29/2018 21:02

Sample wt/vol: 237.3(mL) | Date Analyzed: 11/02/2018 04:25

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435950 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.013	U	0.11	0.013	0.0062
91-57-6	2-Methylnaphthalene	0.013	U	0.11	0.013	0.0063
83-32-9	Acenaphthene	0.042	U Q	0.11	0.042	0.0044
208-96-8	Acenaphthylene	0.042	U Q	0.11	0.042	0.0054
120-12-7	Anthracene	0.042	U Q	0.11	0.042	0.0059
56-55-3	Benzo[a]anthracene	0.013	U	0.11	0.013	0.0044
50-32-8	Benzo[a]pyrene	0.013	U	0.11	0.013	0.0073
205-99-2	Benzo[b]fluoranthene	0.013	U	0.11	0.013	0.0033
191-24-2	Benzo[g,h,i]perylene	0.013	U	0.11	0.013	0.0065
207-08-9	Benzo[k]fluoranthene	0.013	U	0.11	0.013	0.0066
218-01-9	Chrysene	0.013	U	0.11	0.013	0.0035
53-70-3	Dibenz(a,h)anthracene	0.013	U	0.11	0.013	0.0043
206-44-0	Fluoranthene	0.013	U Q	0.11	0.013	0.0051
86-73-7	Fluorene	0.042	U Q	0.11	0.042	0.0058
193-39-5	Indeno[1,2,3-cd]pyrene	0.042	U	0.11	0.042	0.0047
91-20-3	Naphthalene	0.013	U	0.11	0.013	0.0084
85-01-8	Phenanthrene	0.021	U Q	0.11	0.021	0.0098
129-00-0	Pyrene	0.021	U Q	0.11	0.021	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	51	Q	53-106
4165-60-0	Nitrobenzene-d5	57		55-111
1718-51-0	Terphenyl-d14	78		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4494.D
Lims ID: 280-116270-I-1-A
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 04:25:30 ALS Bottle#: 22 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-i-1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:18:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.704	7.721	-0.017	80	24121	600.0	
* 2 Phenanthrene-d10	188	9.197	9.215	-0.018	100	51956	600.0	
* 3 Chrysene-d12	240	13.349	13.376	-0.027	91	42495	600.0	
$ 4 Nitrobenzene-d5	82	5.251	5.256	-0.005	100	7184	285.6	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	15595	254.9	
$ 6 Terphenyl-d14	244	11.186	11.212	-0.026	98	30112	392.3	
10 Naphthalene	128		5.985				ND	
11 2-Methylnaphthalene	142		6.663				ND	
12 1-Methylnaphthalene	142		6.769				ND	
14 Acenaphthylene	152		7.575				ND	
15 Acenaphthene	153		7.747				ND	
18 Fluorene	166		8.264				ND	
20 Phenanthrene	178		9.232				ND	
21 Anthracene	178		9.284				ND	
23 Fluoranthene	202		10.641				ND	
24 Pyrene	202		10.987				ND	
26 Benzo[a]anthracene	228		13.349				ND	
27 Chrysene	228		13.439				ND	
30 Benzo[b]fluoranthene	252		16.264				ND	
31 Benzo[k]fluoranthene	252		16.342				ND	
32 Benzo[a]pyrene	252		17.204				ND	
33 Indeno[1,2,3-cd]pyrene	276		20.520				ND	
34 Dibenz(a,h)anthracene	278		20.612				ND	
35 Benzo[g,h,i]perylene	276		21.264				ND	

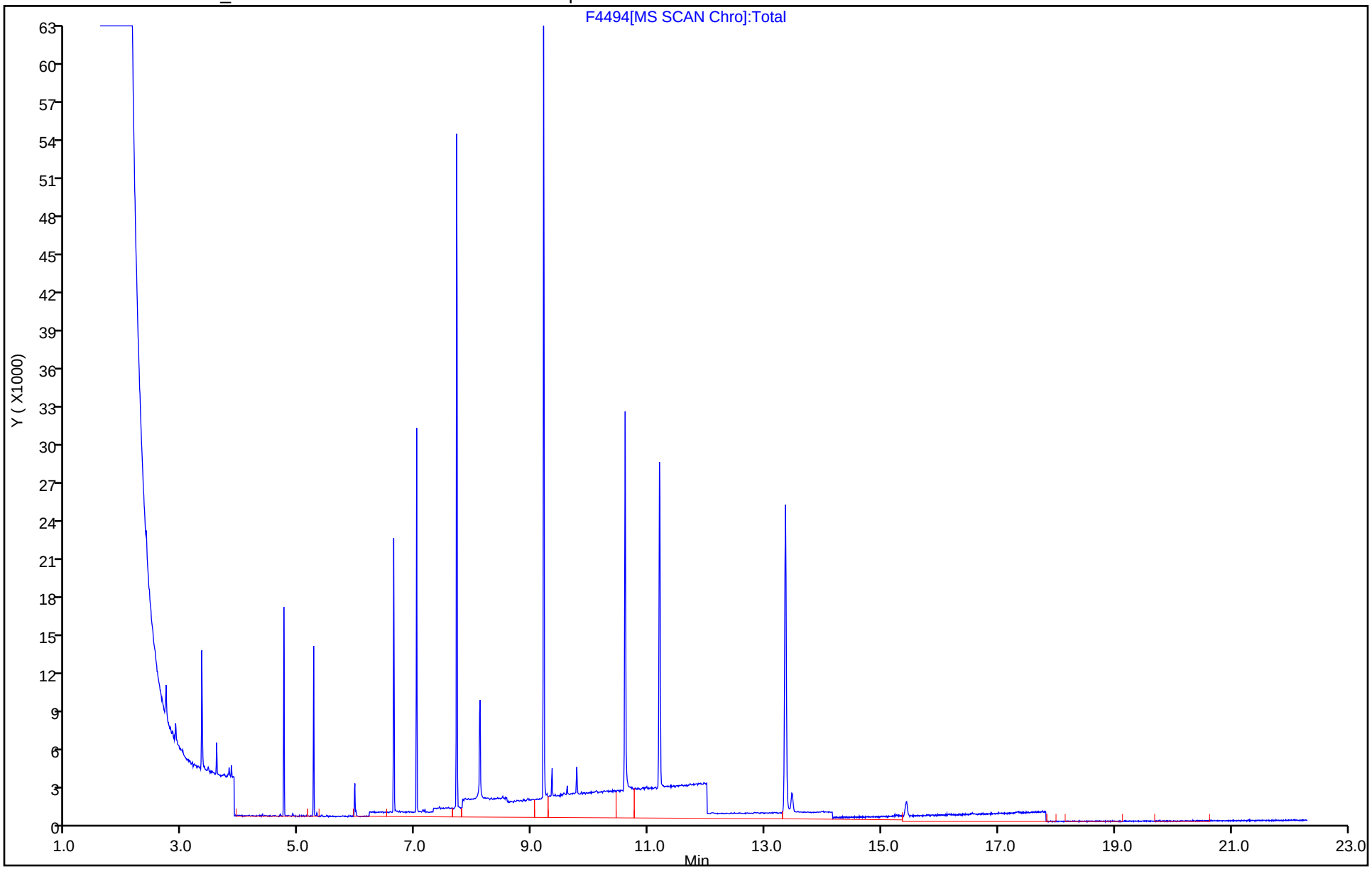
Reagents:

MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 02-Nov-2018 17:20:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4494.D				
Injection Date:	02-Nov-2018 04:25:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-116270-I-1-A	Lab Sample ID:	280-116270-1	Worklist Smp#:	23
Client ID:	FWGmw-018-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4494.D				
Lims ID:	280-116270-I-1-A				
Client ID:	FWGmw-018-181001-GW				
Sample Type:	Client				
Inject. Date:	02-Nov-2018 04:25:30	ALS Bottle#:	22	Worklist Smp#:	23
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-i-1-a				
Operator ID:	WICKHAMM	Instrument ID:	SMS_F		
Method:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m				
Limit Group:	MSSV - 8270C-SIM				
Last Update:	02-Nov-2018 17:19:52	Calib Date:	29-Oct-2018 20:00:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D				
Column 1 :			Det: MS SCAN		
Process Host:	XAWRK011				

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:18:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	285.6	57.12
$ 5 2-Fluorobiphenyl	500.0	254.9	50.98
$ 6 Terphenyl-d14	500.0	392.3	78.47
$ 53 2-methylnaphthalene-d10	0.0	0	0.00
$ 54 Fluoranthene-d10	0.0	0	0.00

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-020-181001-GW | Lab Sample ID: 280-116270-9

Matrix: Water | Lab File ID: F4495.D

Analysis Method: 8270D SIM | Date Collected: 10/26/2018 10:00

Extract. Method: 3510C | Date Extracted: 10/29/2018 21:02

Sample wt/vol: 217.2(mL) | Date Analyzed: 11/02/2018 04:54

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435950 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.014	U	0.12	0.014	0.0068
91-57-6	2-Methylnaphthalene	0.014	U	0.12	0.014	0.0069
83-32-9	Acenaphthene	0.046	U	0.12	0.046	0.0048
208-96-8	Acenaphthylene	0.046	U	0.12	0.046	0.0059
120-12-7	Anthracene	0.046	U	0.12	0.046	0.0064
56-55-3	Benzo[a]anthracene	0.014	U	0.12	0.014	0.0048
50-32-8	Benzo[a]pyrene	0.014	U M	0.12	0.014	0.0079
205-99-2	Benzo[b]fluoranthene	0.014	U	0.12	0.014	0.0036
191-24-2	Benzo[g,h,i]perylene	0.014	U	0.12	0.014	0.0071
207-08-9	Benzo[k]fluoranthene	0.014	U	0.12	0.014	0.0073
218-01-9	Chrysene	0.014	U	0.12	0.014	0.0038
53-70-3	Dibenz(a,h)anthracene	0.014	U	0.12	0.014	0.0047
206-44-0	Fluoranthene	0.014	U	0.12	0.014	0.0055
86-73-7	Fluorene	0.046	U	0.12	0.046	0.0063
193-39-5	Indeno[1,2,3-cd]pyrene	0.046	U	0.12	0.046	0.0052
91-20-3	Naphthalene	0.014	U	0.12	0.014	0.0092
85-01-8	Phenanthrene	0.023	U	0.12	0.023	0.011
129-00-0	Pyrene	0.023	U	0.12	0.023	0.0070

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	56		53-106
4165-60-0	Nitrobenzene-d5	59		55-111
1718-51-0	Terphenyl-d14	81		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4495.D
Lims ID: 280-116270-H-9-A
Client ID: FWGmw-020-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 04:54:30 ALS Bottle#: 23 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-h-9-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:18:44

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
*	1 Acenaphthene-d10	164	7.704	7.721	-0.017	78	23242	600.0	
*	2 Phenanthrene-d10	188	9.197	9.215	-0.018	100	52508	600.0	
*	3 Chrysene-d12	240	13.349	13.376	-0.027	91	42209	600.0	
$	4 Nitrobenzene-d5	82	5.251	5.256	-0.005	100	7104	293.1	
$	5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	99	16372	277.7	
$	6 Terphenyl-d14	244	11.186	11.212	-0.026	98	31551	406.8	
	10 Naphthalene	128		5.985				ND	
	11 2-Methylnaphthalene	142		6.663				ND	
	12 1-Methylnaphthalene	142		6.769				ND	
	14 Acenaphthylene	152		7.575				ND	
	15 Acenaphthene	153		7.747				ND	
	18 Fluorene	166		8.264				ND	
	20 Phenanthrene	178		9.232				ND	
	21 Anthracene	178		9.284				ND	
	23 Fluoranthene	202		10.641				ND	
	24 Pyrene	202		10.987				ND	
	26 Benzo[a]anthracene	228		13.349				ND	
	27 Chrysene	228		13.439				ND	
	30 Benzo[b]fluoranthene	252		16.264				ND	
	31 Benzo[k]fluoranthene	252		16.342				ND	
	32 Benzo[a]pyrene	252		17.204				ND	U
	33 Indeno[1,2,3-cd]pyrene	276		20.520				ND	
	34 Dibenz(a,h)anthracene	278		20.612				ND	
	35 Benzo[g,h,i]perylene	276		21.264				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

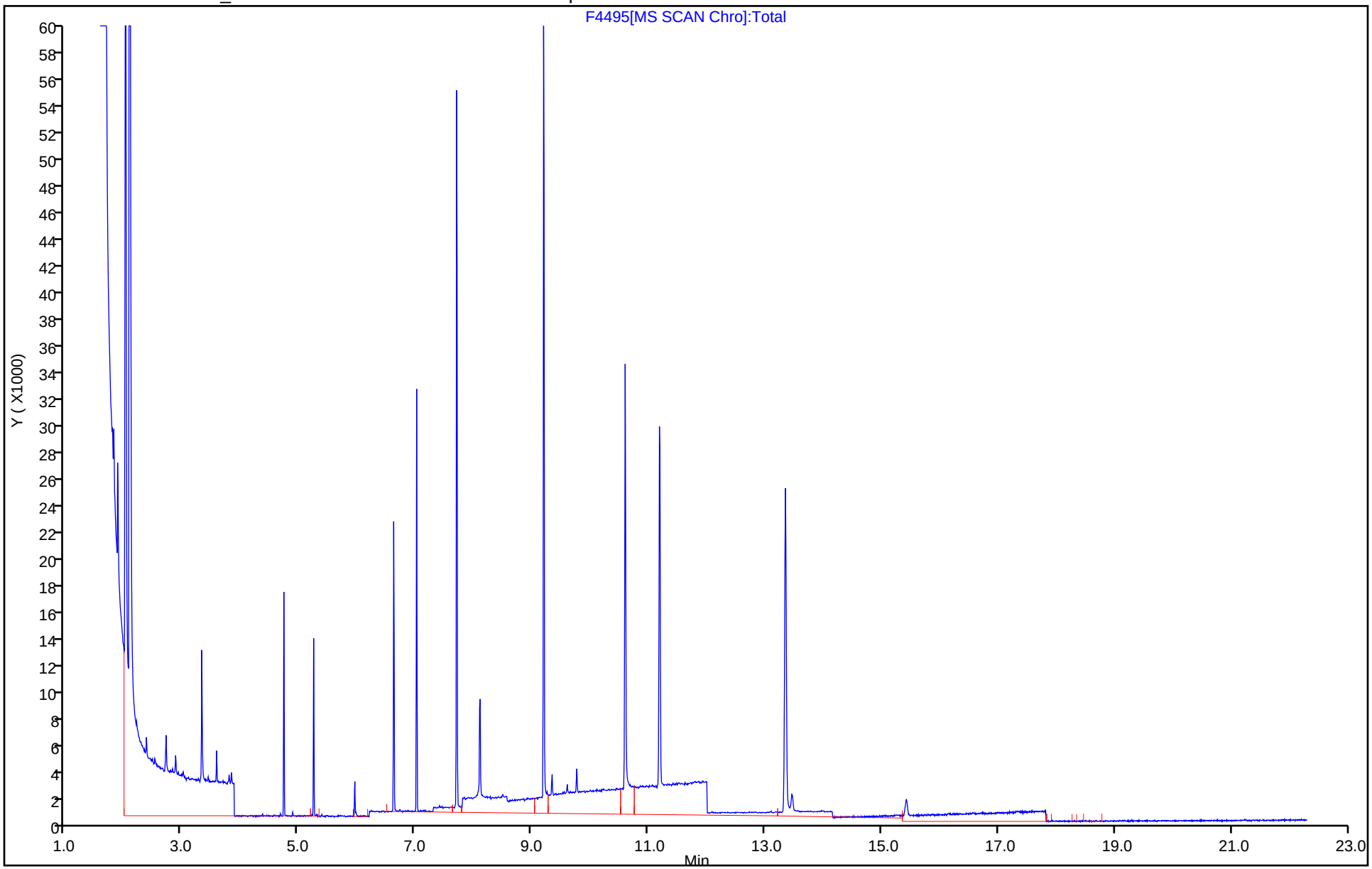
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 02-Nov-2018 17:20:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4495.D

Injection Date:	02-Nov-2018 04:54:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-116270-H-9-A	Lab Sample ID:	280-116270-9	Worklist Smp#:	24
Client ID:	FWGmw-020-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4495.D
Lims ID: 280-116270-H-9-A
Client ID: FWGmw-020-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 04:54:30 ALS Bottle#: 23 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-h-9-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:18:44

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	293.1	58.62
$ 5 2-Fluorobiphenyl	500.0	277.7	55.55
$ 6 Terphenyl-d14	500.0	406.8	81.35
$ 53 2-methylnaphthalene-d10	0.0	0	0.00
$ 54 Fluoranthene-d10	0.0	0	0.00

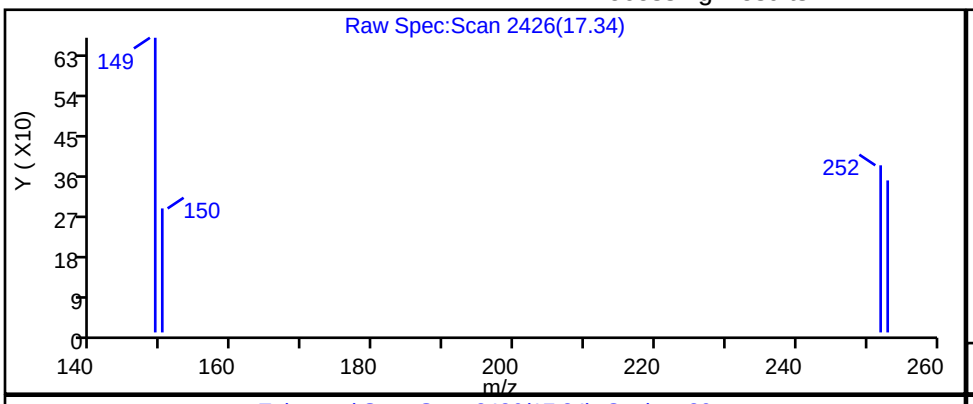
User Disabled Compound Report

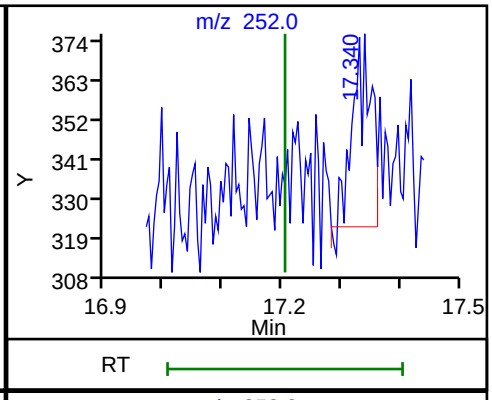
TestAmerica Denver

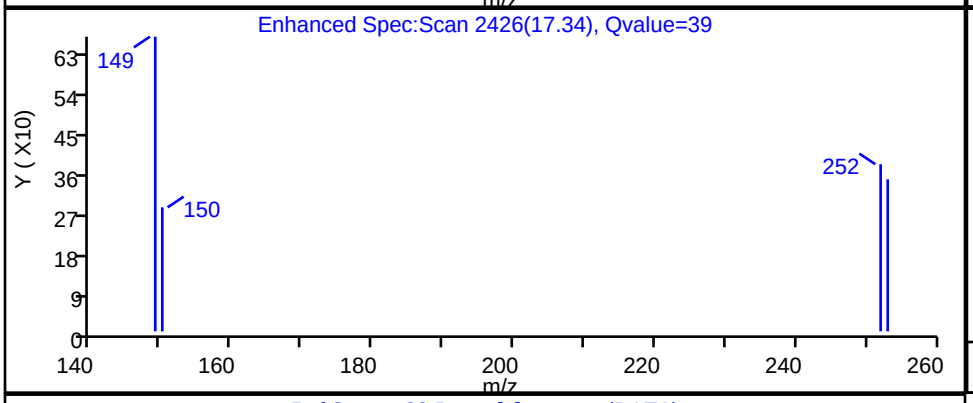
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4495.D				
Injection Date:	02-Nov-2018 04:54:30	Instrument ID:	SMS_F		
Lims ID:	280-116270-H-9-A	Lab Sample ID:	280-116270-9		
Client ID:	FWGmw-020-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	23	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

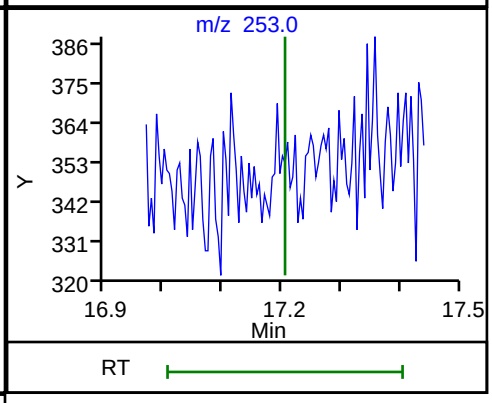
32 Benzo[a]pyrene, CAS: 50-32-8

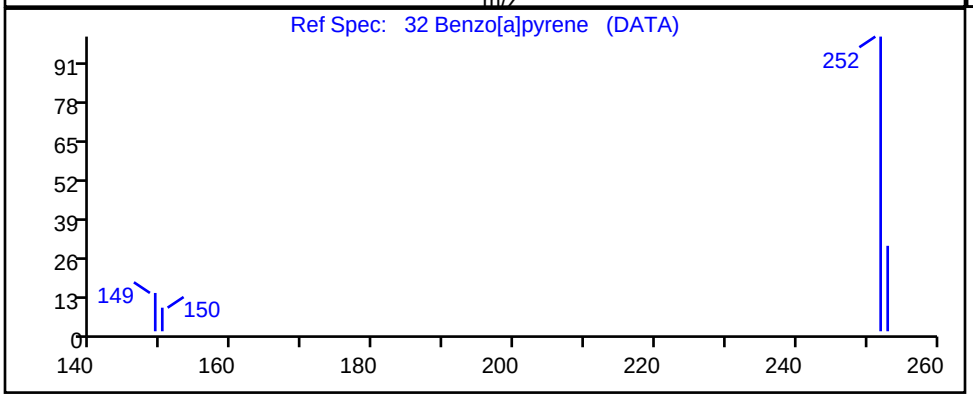
Processing Results











RT	Mass	Response	Amount
17.34	252.00	118	1.760344
17.20	253.00	0	

Reviewer: wickhamm, 02-Nov-2018 17:18:39

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0001 280-435404/4	F4399.D
Level 2	STD0002 280-435404/5	F4400.D
Level 3	STD0500 280-435404/6	F4401.D
Level 4	STD0100 280-435404/7	F4402.D
Level 5	STD0300 280-435404/8	F4403.D
Level 6	ICIS 280-435404/3	F4398.D
Level 7	STD1200 280-435404/9	F4404.D
Level 8	STD2500 280-435404/10	F4405.D
Level 9	STD5000 280-435404/11	F4406.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Naphthalene	2.1846 1.9317	2.1325 1.9242	1.9253 2.1369	2.0155 1.8473	1.9859	Ave		2.0093			0.7000	5.8		15.0			
2-Methylnaphthalene	1.4108 1.3067	1.4210 1.3357	1.2881 1.4942	1.3272 1.3101	1.3564	Ave		1.3611			0.4000	5.0		15.0			
1-Methylnaphthalene	1.2577 1.1758	1.3333 1.1903	1.1627 1.3407	1.1929 1.1799	1.2141	Ave		1.2275			0.0500	5.5		15.0			
Acenaphthylene	1.5393 1.4653	1.5290 1.5556	1.3767 1.8684	1.3803 1.7999	1.4370	Ave		1.5502			0.9000	11.2		15.0			
Acenaphthene	1.3971 1.2438	1.3888 1.2810	1.1957 1.4589	1.2847 1.2943	1.2982	Ave		1.3158			0.9000	6.3		15.0			
Fluorene	1.6924 1.4483	1.4532 1.5425	1.3833 1.8129	1.4356 1.5643	1.4878	Ave		1.5356			0.9000	9.0		15.0			
Phenanthrene	1.3869 1.1491	1.2554 1.1710	1.1148 1.3249	1.1521 1.2101	1.1765	Ave		1.2156			0.7000	7.4		15.0			
Anthracene	0.9752 0.8551	0.9151 0.9103	0.7843 1.1002	0.7672 1.0875	0.8217	Ave		0.9130			0.7000	13.4		15.0			
Fluoranthene	1.5024 1.2170	1.2737 1.2795	1.1208 1.5075	1.1335 1.3694	1.2213	Ave		1.2917			0.6000	11.0		15.0			
Pyrene	1.5440 1.1839	1.3828 1.2574	1.1509 1.4693	1.1557 1.3735	1.1972	Ave		1.3016			0.6000	11.2		15.0			
Benzo[a]anthracene	1.1454 0.9645	1.1393 0.9706	0.8939 1.1429	0.9025 1.0842	0.9172	Ave		1.0178			0.8000	10.7		15.0			
Chrysene	1.4073 1.2088	1.2828 1.2210	1.1494 1.3836	1.1879 1.2272	1.2189	Ave		1.2541			0.7000	7.0		15.0			
Benzo[b]fluoranthene	1.3643 1.1831	1.2519 1.1537	1.1198 1.3197	1.1430 1.1828	1.1485	Ave		1.2074			0.7000	7.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo[k]fluoranthene	+++++ 1.1826	1.0702 1.2834	1.0247 1.4444	1.0510 1.3213	1.1054	Ave		1.1854			0.7000	12.7		15.0			
Benzo[a]pyrene	+++++ 0.9879	1.0406 0.9140	0.8863 1.1244	0.8696 +++++	0.8472	Ave		0.9529			0.7000	10.7		15.0			
Indeno[1,2,3-cd]pyrene	1.4047 1.2420	1.3985 1.1114	1.1114 1.2556	1.1980 1.1220	1.1497	Ave		1.2215			0.5000	9.4		15.0			
Dibenz(a,h)anthracene	1.3839 1.3169	1.3083 1.2157	1.1503 1.3642	1.2406 1.2331	1.2137	Ave		1.2696			0.4000	6.1		15.0			
Benzo[g,h,i]perylene	1.9573 1.5238	1.7220 1.3909	1.4009 1.5476	1.5399 1.3376	1.4976	Ave		1.5464			0.5000	12.3		15.0			
Nitrobenzene-d5	0.7546 0.6055	0.6363 0.5921	0.5726 0.6809	0.5763 0.6359	0.5769	Ave		0.6257				9.6		15.0			
2-methylnaphthalene-d10	1.1620 0.9878	1.1351 0.9900	0.9766 1.1155	1.0065 0.9769	1.0174	Ave		1.0408				7.2		15.0			
2-Fluorobiphenyl	1.6541 1.4461	1.6275 1.4470	1.4592 1.6605	1.4692 1.4496	1.4823	Ave		1.5217				6.3		15.0			
Fluoranthene-d10	1.0103 0.9642	0.9922 1.0026	0.9242 1.1650	0.9182 1.0836	0.9638	Ave		1.0027				7.8		15.0			
Terphenyl-d14	0.9129 0.8120	0.9193 0.8628	0.7922 1.0015	0.8063 0.9261	0.9437	Ave		0.8863				8.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0001 280-435404/4	F4399.D
Level 2	STD0002 280-435404/5	F4400.D
Level 3	STD0500 280-435404/6	F4401.D
Level 4	STD0100 280-435404/7	F4402.D
Level 5	STD0300 280-435404/8	F4403.D
Level 6	ICIS 280-435404/3	F4398.D
Level 7	STD1200 280-435404/9	F4404.D
Level 8	STD2500 280-435404/10	F4405.D
Level 9	STD5000 280-435404/11	F4406.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Naphthalene	ANT	Ave	799 48246	1689 129326	4085 208192	8519 448120	24560	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-Methylnaphthalene	ANT	Ave	1032 65273	2251 179548	5466 291162	11219 635609	33550	20.0 1200	40.0 2400	100 5000	200 10000	600
1-Methylnaphthalene	ANT	Ave	460 29366	1056 79998	2467 130622	5042 286227	15015	10.0 600	20.0 1200	50.0 2500	100 5000	300
Acenaphthylene	ANT	Ave	563 36597	1211 104551	2921 182035	5834 436620	17771	10.0 600	20.0 1200	50.0 2500	100 5000	300
Acenaphthene	ANT	Ave	511 31066	1100 86093	2537 142141	5430 313964	16055	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluorene	ANT	Ave	619 36172	1151 103673	2935 176625	6068 379461	18400	10.0 600	20.0 1200	50.0 2500	100 5000	300
Phenanthrene	PHN	Ave	1068 60407	2118 172037	5059 284570	10412 611829	31665	10.0 600	20.0 1200	50.0 2500	100 5000	300
Anthracene	PHN	Ave	751 44949	1544 133735	3559 236321	6933 549841	22115	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluoranthene	PHN	Ave	1157 63976	2149 187968	5086 323789	10244 692368	32871	10.0 600	20.0 1200	50.0 2500	100 5000	300
Pyrene	PHN	Ave	1189 62237	2333 184722	5223 315592	10444 694454	32223	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[a]anthracene	CRY	Ave	879 50852	1881 152521	3978 267604	7777 612573	24476	10.0 600	20.0 1200	50.0 2500	100 5000	300
Chrysene	CRY	Ave	1080 63737	2118 191863	5115 323973	10237 693366	32528	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[b]fluoranthene	CRY	Ave	1047 62382	2067 181300	4983 309018	9850 668265	30648	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[k]fluoranthene	CRY	Ave	+++++ 62355	1767 201669	4560 338217	9057 746517	29499	+++++ 600	20.0 1200	50.0 2500	100 5000	300

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 435404

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 16:02 Calibration End Date: 10/29/2018 20:00 Calibration ID: 34170

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Benzo[a]pyrene	CRY	Ave	+++++ 52087	1718 143629	3944 263293	7494 +++++	22609	+++++ 600	20.0 1200	50.0 2500	100 +++++	300
Indeno[1,2,3-cd]pyrene	CRY	Ave	1078 65485	2309 174647	4946 294007	10324 633911	30679	10.0 600	20.0 1200	50.0 2500	100 5000	300
Dibenz(a,h)anthracene	CRY	Ave	1062 69433	2160 191031	5119 319437	10691 696717	32389	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[g,h,i]perylene	CRY	Ave	1502 80345	2843 218564	6234 362369	13270 755750	39963	10.0 600	20.0 1200	50.0 2500	100 5000	300
Nitrobenzene-d5	ANT	Ave	276 15122	504 39792	1215 66335	2436 154261	7134	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-methylnaphthalene-d10	ANT	Ave	425 24672	899 66535	2072 108683	4254 236976	12582	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-Fluorobiphenyl	ANT	Ave	605 36119	1289 97251	3096 161780	6210 351658	18332	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluoranthene-d10	PHN	Ave	778 50686	1674 147296	4194 250239	8298 547857	25942	10.0 600	20.0 1200	50.0 2500	100 5000	300
Terphenyl-d14	PHN	Ave	703 42687	1551 126747	3595 215115	7287 468240	25400	10.0 600	20.0 1200	50.0 2500	100 5000	300

Curve Type Legend:
Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4398.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 29-Oct-2018 16:02:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: icis
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:24 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 18:55:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	82	24976	600.0	600.0	
* 2 Phenanthrene-d10	188	9.214	9.214	0.000	97	52568	600.0	600.0	
* 3 Chrysene-d12	240	13.376	13.376	0.000	98	52726	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	100	15122	600.0	580.6	
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	99	36119	600.0	570.2	
$ 6 Terphenyl-d14	244	11.211	11.211	0.000	98	42687	600.0	549.7	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.557	2.557	0.000	44	11236	600.0	585.3	
10 Naphthalene	128	5.985	5.985	0.000	100	48246	600.0	576.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	96	65273	1200.0	1152.0	
12 1-Methylnaphthalene	142	6.769	6.769	0.000	92	29366	600.0	574.7	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	55965	1200.0	1143.2	
14 Acenaphthylene	152	7.574	7.574	0.000	98	36597	600.0	567.2	
15 Acenaphthene	153	7.747	7.747	0.000	100	31066	600.0	567.2	
16 Dibenzofuran	168	7.915	7.915	0.000	98	46652	600.6	564.6	
17 Diethyl phthalate	149	8.118	8.118	0.000	97	50922	1204.8	1067.7	
18 Fluorene	166	8.264	8.264	0.000	100	36172	600.0	565.9	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	100	23094	600.0	590.5	
20 Phenanthrene	178	9.232	9.232	0.000	100	60407	600.0	567.2	
21 Anthracene	178	9.284	9.284	0.000	1	44949	600.0	562.0	
22 Di-n-butyl phthalate	149	9.785	9.785	0.000	1	64945	1200.0	1220.7	
23 Fluoranthene	202	10.641	10.641	0.000	100	63976	600.0	565.3	
24 Pyrene	202	10.987	10.987	0.000	100	62237	600.0	545.7	
25 Butyl benzyl phthalate	149	10.987	10.987	0.000	1	531	1200.0	0	
26 Benzo[a]anthracene	228	13.358	13.358	0.000	50	50852	600.0	568.5	
27 Chrysene	228	13.439	13.439	0.000	95	63737	600.0	578.3	
28 Bis(2-ethylhexyl) phthalat	149	12.115	12.115	0.000	1	22182	1200.0	1165.6	
29 Di-n-octyl phthalate	149	15.332	15.332	0.000	1	42928	1200.0	1273.1	
30 Benzo[b]fluoranthene	252	16.268	16.268	0.000	99	62382	600.0	587.9	
31 Benzo[k]fluoranthene	252	16.347	16.347	0.000	99	62355	600.0	598.6	
32 Benzo[a]pyrene	252	17.213	17.213	0.000	98	52087	600.0	622.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.529	20.529	0.000	91	65485	600.0	610.1	
34 Dibenz(a,h)anthracene	278	20.616	20.616	0.000	84	69433	600.0	622.3	
35 Benzo[g,h,i]perylene	276	21.272	21.272	0.000	94	80345	600.0	591.2	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.000	96	24672	600.0	569.4	
$ 54 Fluoranthene-d10	212	10.615	10.615	0.000	98	50686	600.0	577.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

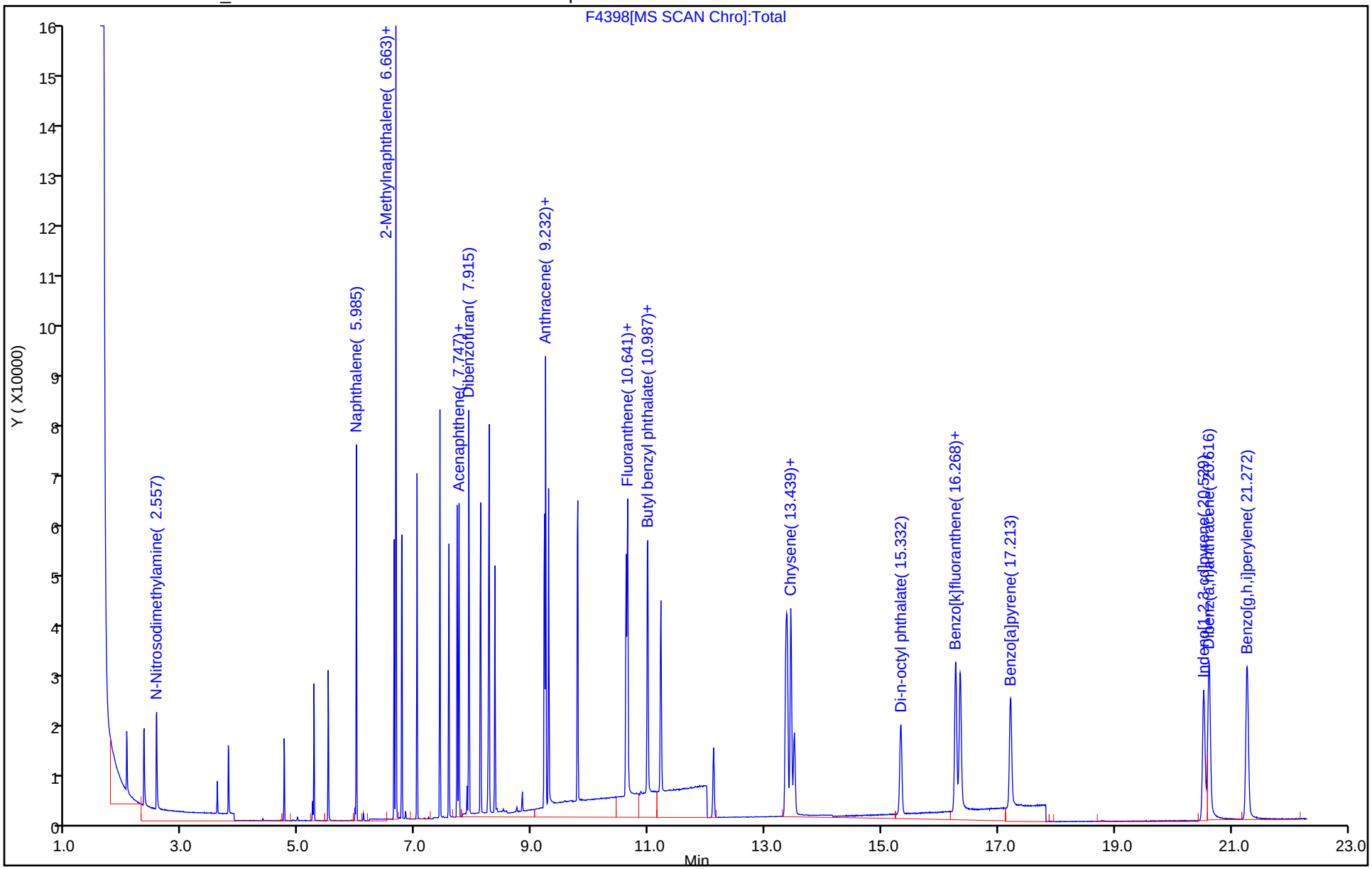
MS-SIMSL 0.6_00144 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4398.D

Injection Date:	29-Oct-2018 16:02:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	icis			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Lims ID: STD0001
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Oct-2018 16:32:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0001
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:28 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 19:09:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	90	21945	600.0	600.0	M
* 2 Phenanthrene-d10	188	9.206	9.214	-0.008	99	46205	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.376	-0.009	91	46044	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	85	276	10.0	12.1	Ma
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	91	605	10.0	10.9	a
$ 6 Terphenyl-d14	244	11.203	11.211	-0.008	24	703	10.0	10.3	a
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.564	2.557	0.007	15	266	10.0	15.8	
10 Naphthalene	128	5.985	5.985	0.000	95	799	10.0	10.9	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	1032	20.0	20.7	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	96	460	10.0	10.2	Ma
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	896	20.0	20.8	
14 Acenaphthylene	152	7.566	7.574	-0.008	86	563	10.0	9.93	
15 Acenaphthene	153	7.739	7.747	-0.008	75	511	10.0	10.6	
16 Dibenzofuran	168	7.915	7.915	0.000	94	812	10.0	11.2	
17 Diethyl phthalate	149	8.109	8.118	-0.009	98	1420	20.1	33.9	
18 Fluorene	166	8.264	8.264	0.000	90	619	10.0	11.0	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	82	396	10.0	11.5	Ma
20 Phenanthrene	178	9.232	9.232	0.000	75	1068	10.0	11.4	
21 Anthracene	178	9.284	9.284	0.000	1	751	10.0	10.7	
22 Di-n-butyl phthalate	149	9.776	9.785	-0.009	1	974	20.0	24.8	
23 Fluoranthene	202	10.632	10.641	-0.009	33	1157	10.0	11.6	
24 Pyrene	202	10.978	10.987	-0.009	30	1189	10.0	11.9	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.349	13.358	-0.009	74	879	10.0	11.3	
27 Chrysene	228	13.430	13.439	-0.009	71	1080	10.0	11.2	
28 Bis(2-ethylhexyl) phthalat	149		12.115				ND	ND	
29 Di-n-octyl phthalate	149		15.332				ND	ND	U
30 Benzo[b]fluoranthene	252	16.255	16.268	-0.013	49	1047	10.0	11.3	
31 Benzo[k]fluoranthene	252		16.347				ND	ND	MU
32 Benzo[a]pyrene	252	17.195	17.213	-0.018	41	812	10.0	11.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.520	20.529	-0.009	70	1078	10.0	11.5	M
34 Dibenz(a,h)anthracene	278	20.599	20.616	-0.017	78	1062	10.0	10.9	
35 Benzo[g,h,i]perylene	276	21.255	21.272	-0.017	72	1502	10.0	12.7	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.001	96	425	10.0	11.2	
$ 54 Fluoranthene-d10	212	10.606	10.615	-0.009	0	778	10.0	10.1	M

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

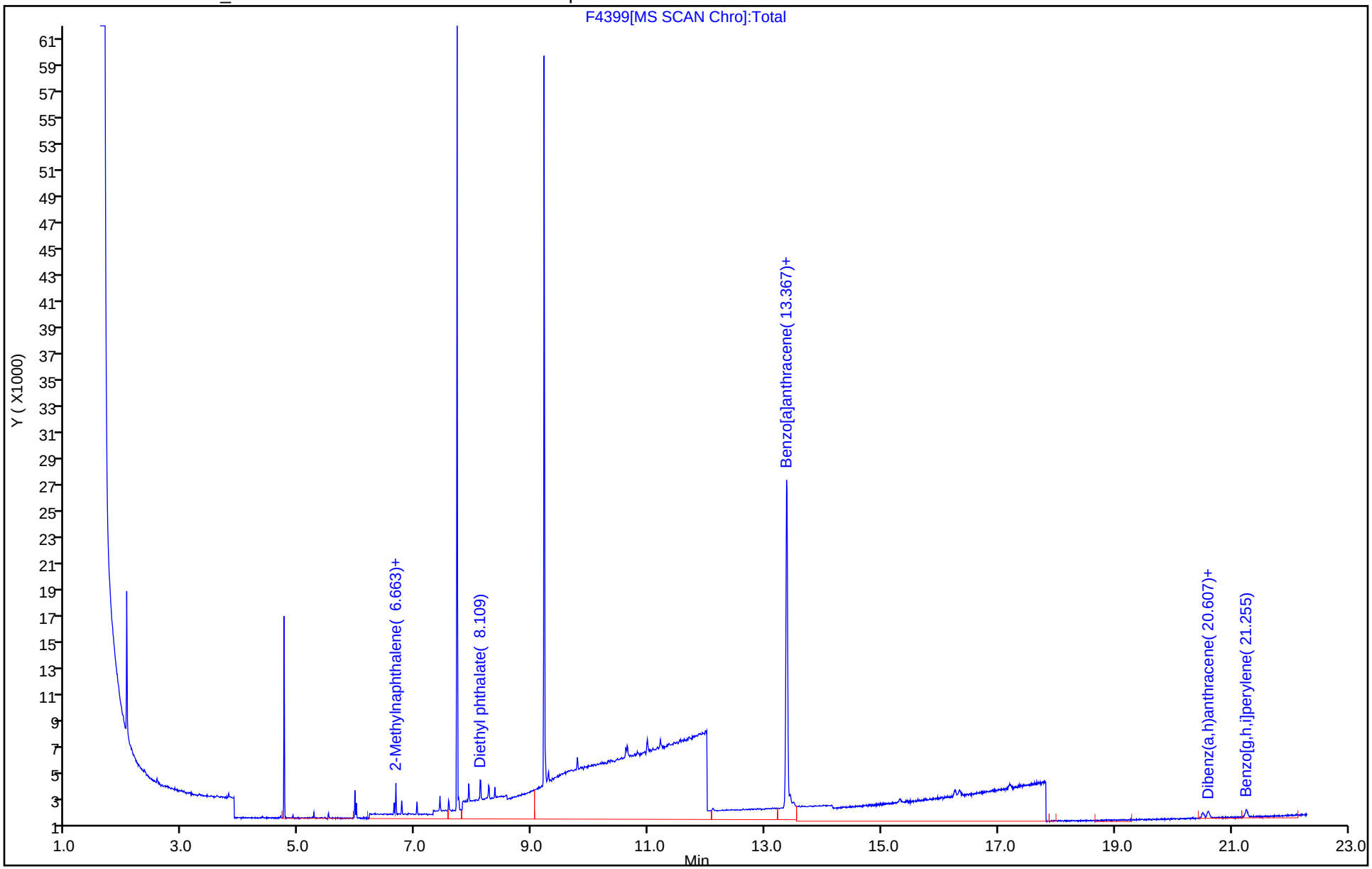
MS-SIMSL 0.01_00005 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D

Injection Date:	29-Oct-2018 16:32:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0001			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

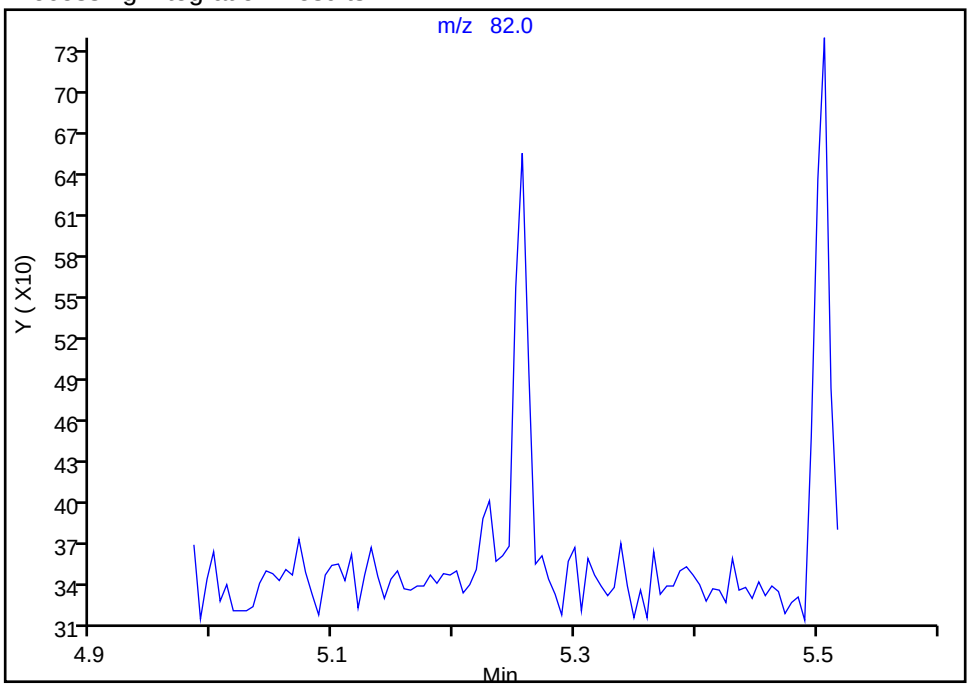
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

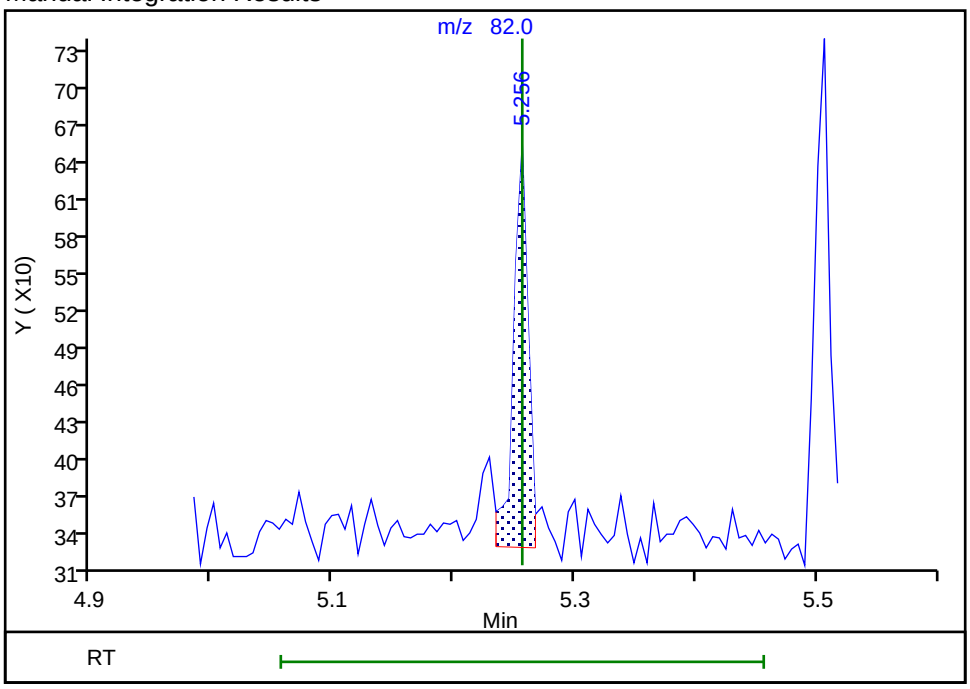
Not Detected
Expected RT: 5.26

Processing Integration Results



Manual Integration Results

RT: 5.26
Area: 276
Amount: 12.060809
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:07:52
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

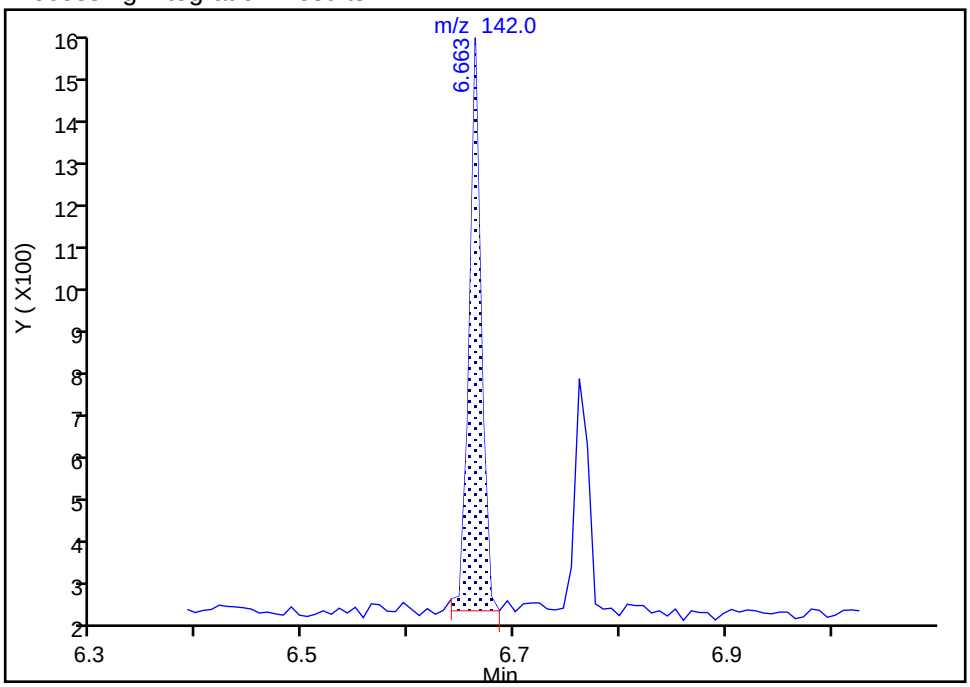
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

12 1-Methylnaphthalene, CAS: 90-12-0

Signal: 1

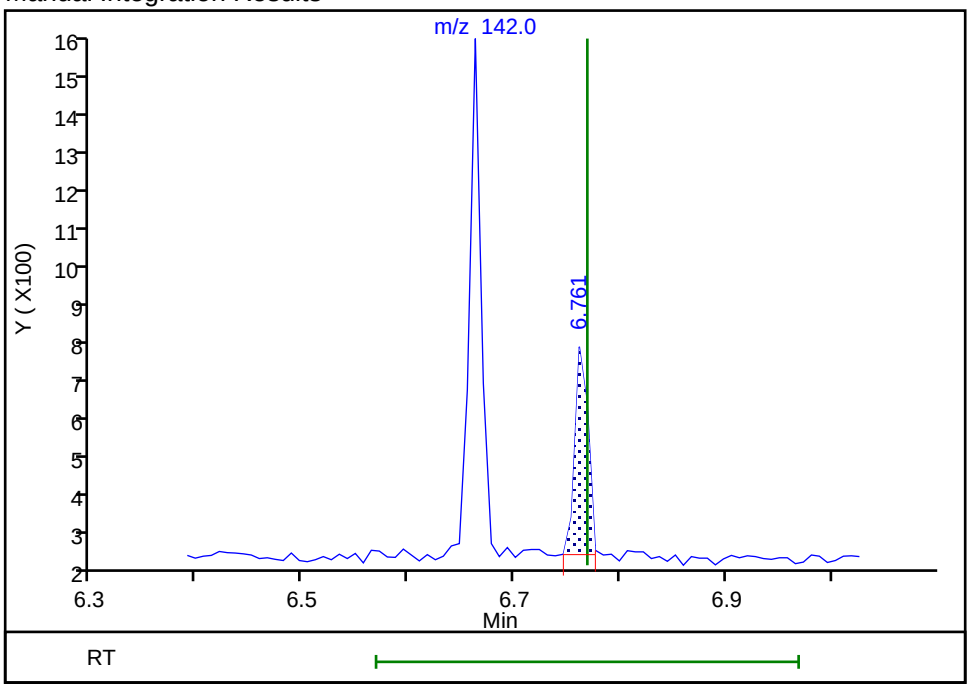
Processing Integration Results

RT: 6.66
Area: 1032
Amount: 14.920564
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 460
Amount: 10.246089
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:08:12
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

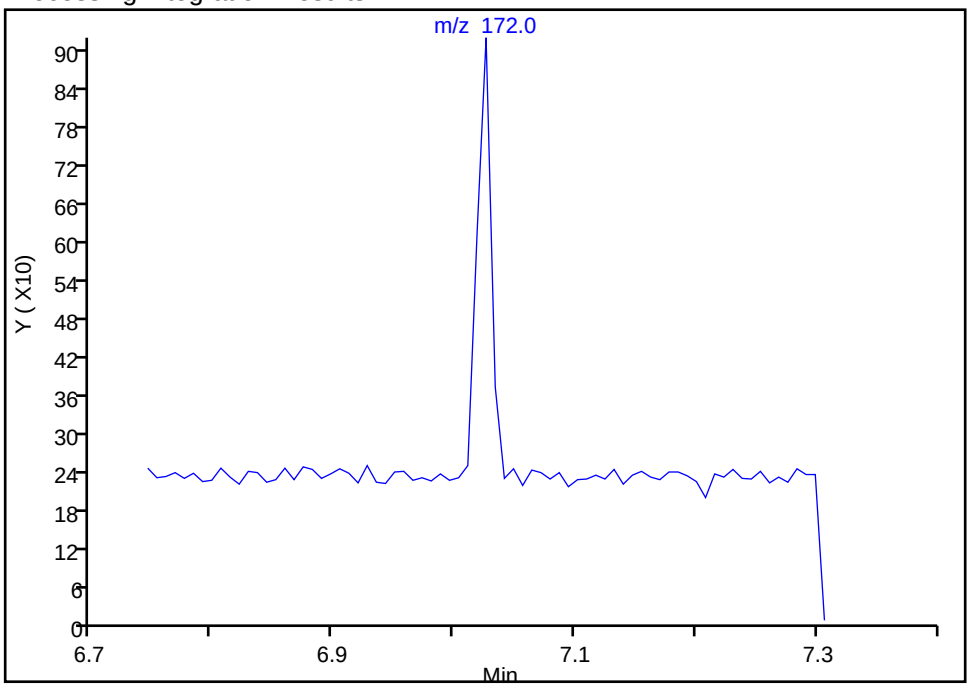
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 5 2-Fluorobiphenyl, CAS: 321-60-8

Signal: 1

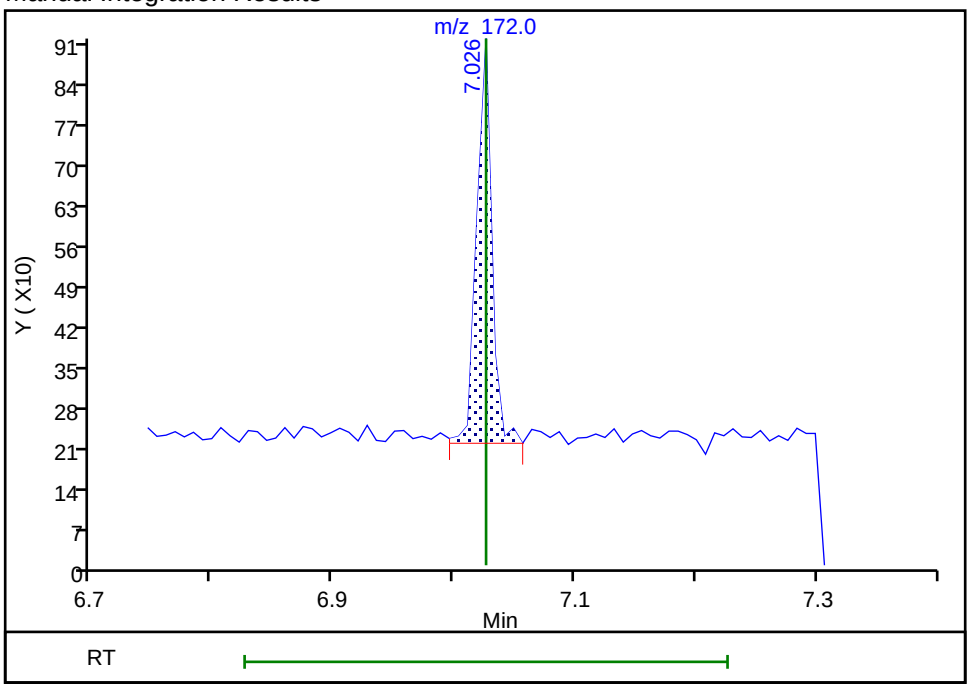
Not Detected
Expected RT: 7.03

Processing Integration Results



Manual Integration Results

RT: 7.03
Area: 605
Amount: 10.870084
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:07:57
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

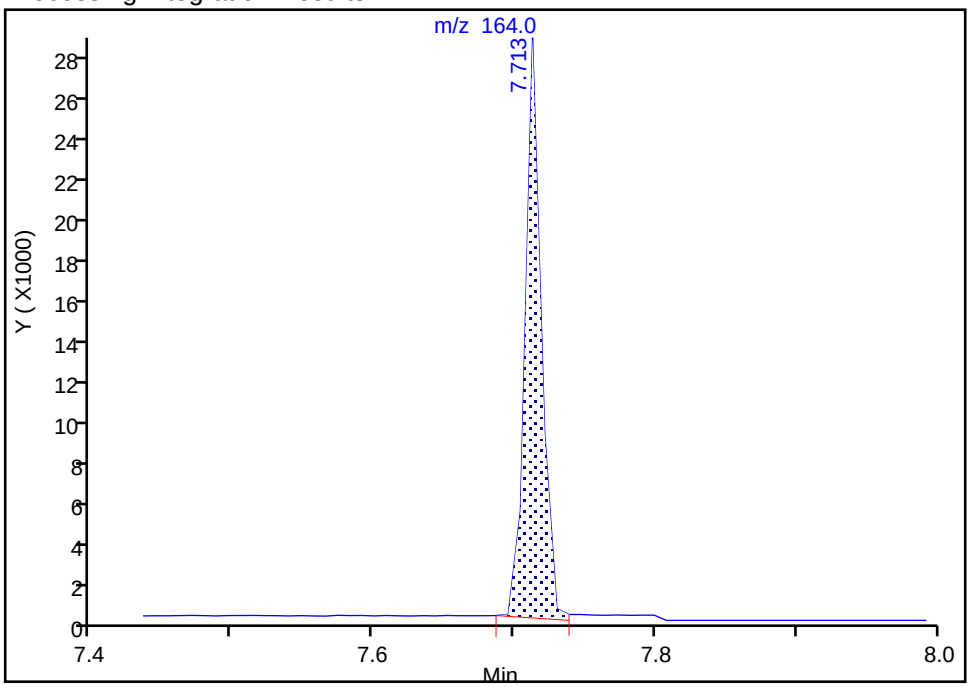
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

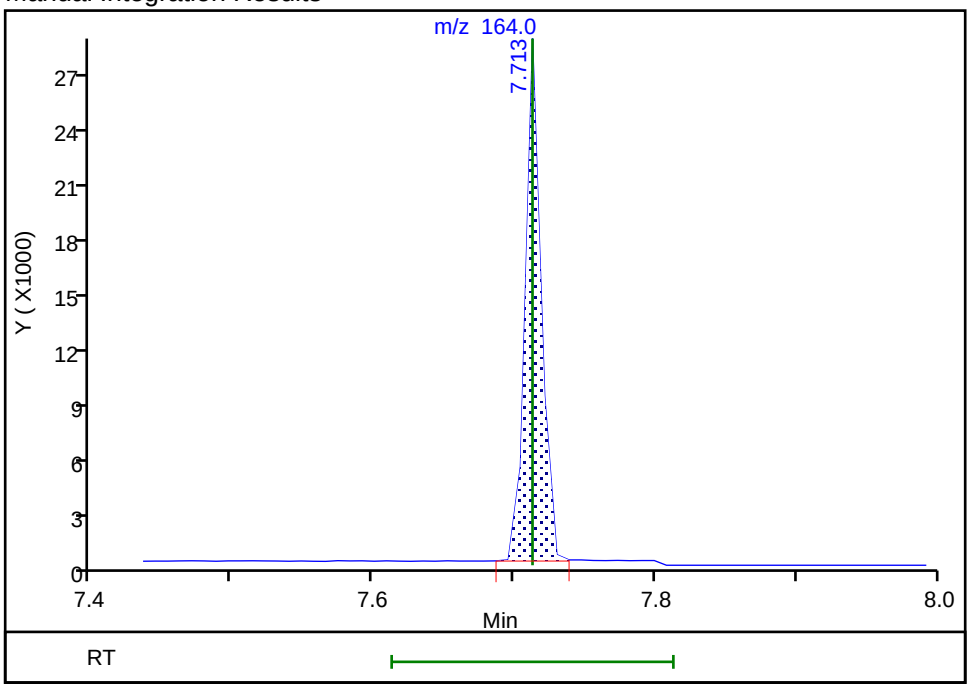
Processing Integration Results

RT: 7.71
Area: 22335
Amount: 600.0000
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 21945
Amount: 600.0000
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:07:30
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

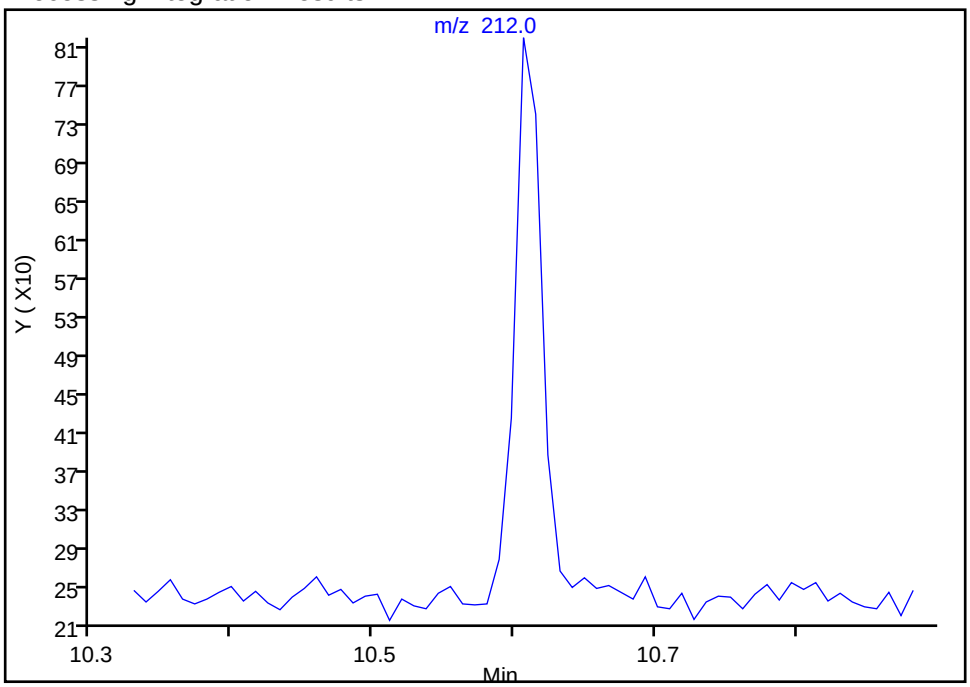
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 54 Fluoranthene-d10, CAS: 93951-69-0

Signal: 1

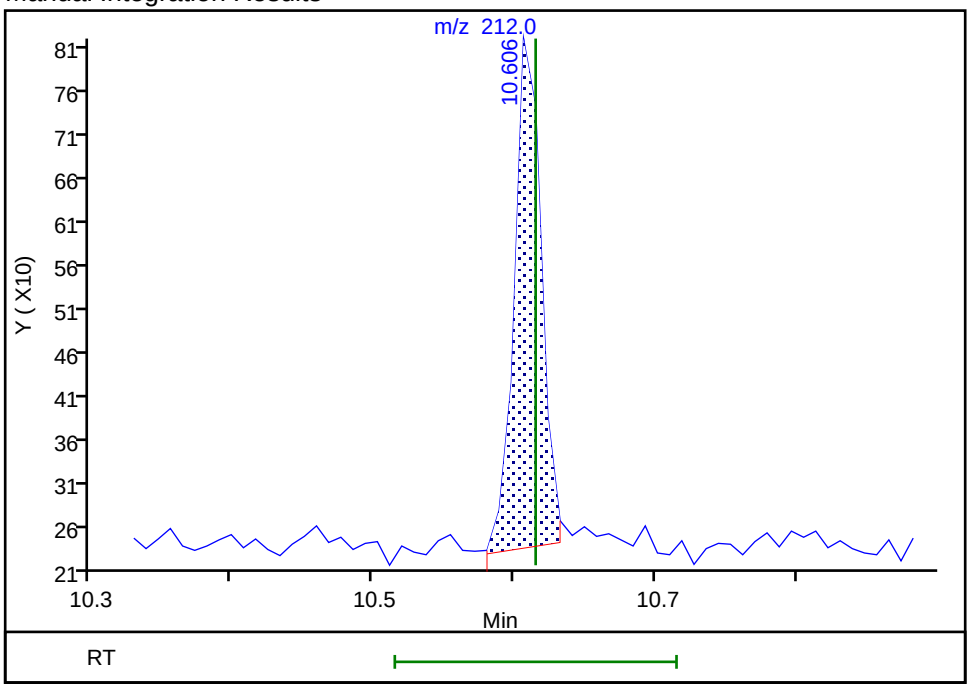
Not Detected
Expected RT: 10.61

Processing Integration Results



Manual Integration Results

RT: 10.61
Area: 778
Amount: 10.075750
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:09:31
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

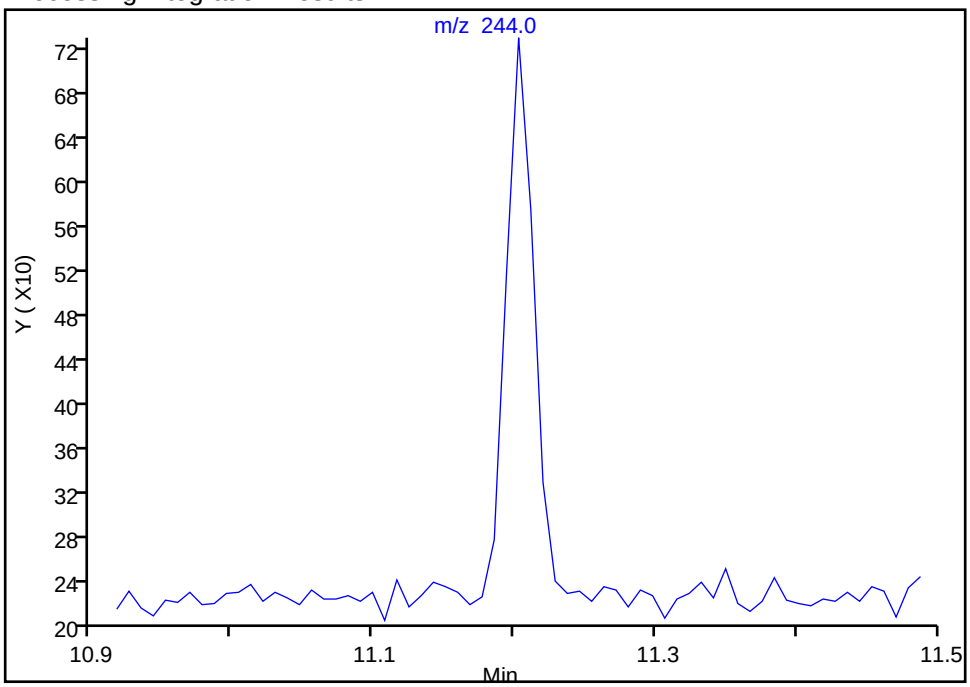
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 6 Terphenyl-d14, CAS: 1718-51-0

Signal: 1

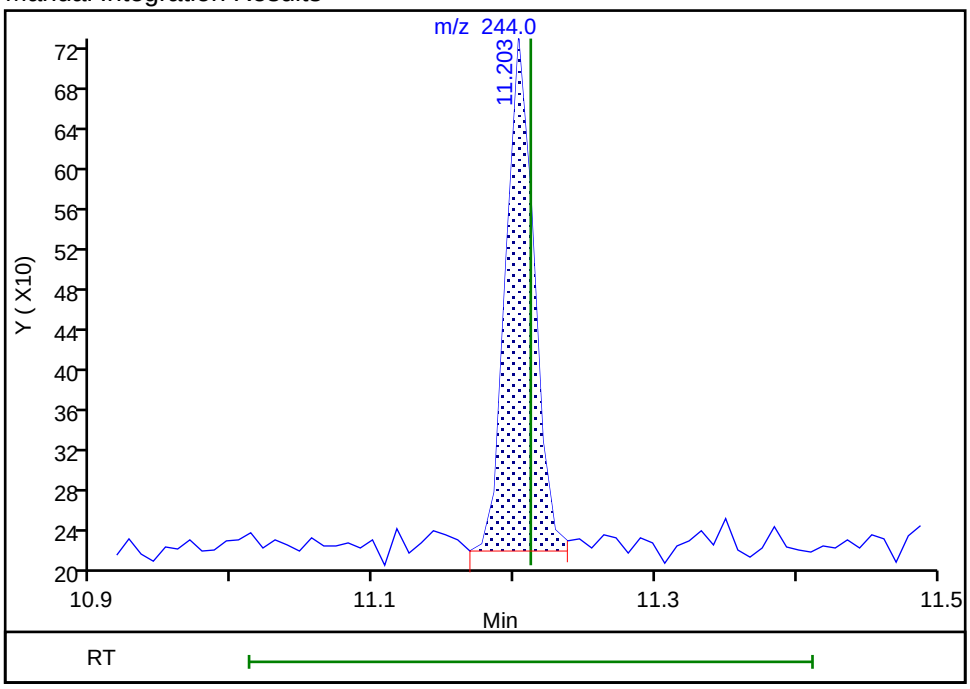
Not Detected
Expected RT: 11.21

Processing Integration Results



Manual Integration Results

RT: 11.20
Area: 703
Amount: 10.299826
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:08:01
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

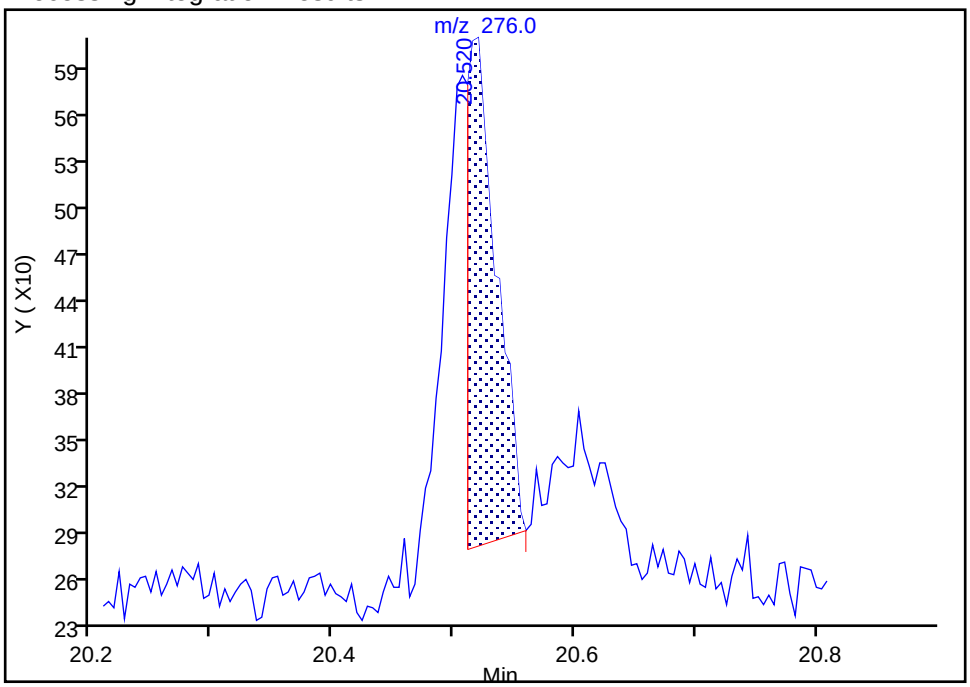
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D
Injection Date: 29-Oct-2018 16:32:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

33 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

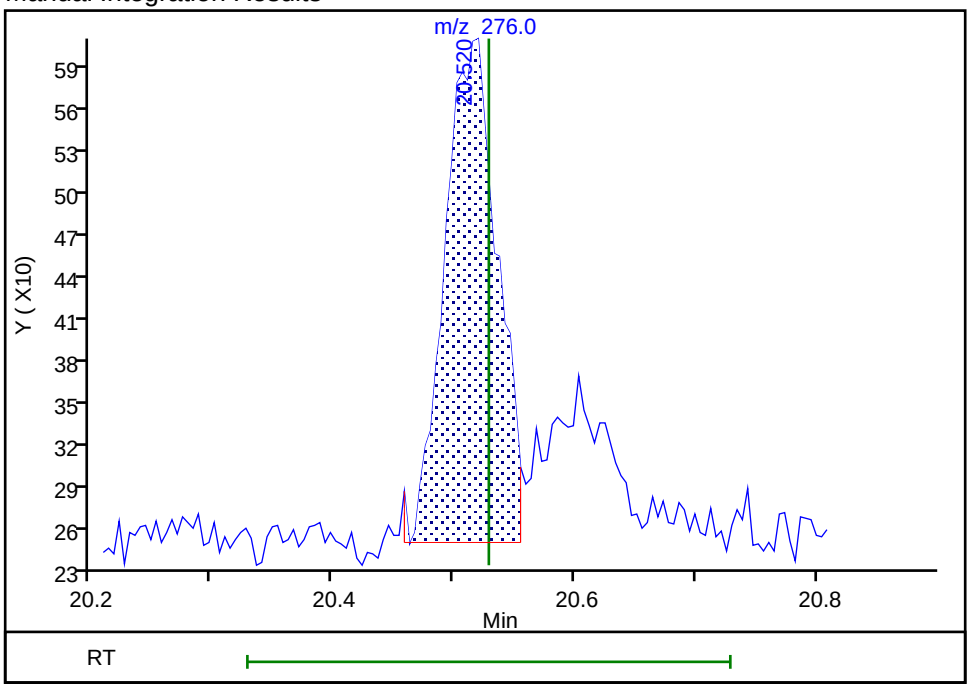
Processing Integration Results

RT: 20.52
Area: 543
Amount: 11.679407
Amount Units: ng/ml



Manual Integration Results

RT: 20.52
Area: 1078
Amount: 11.500284
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:09:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

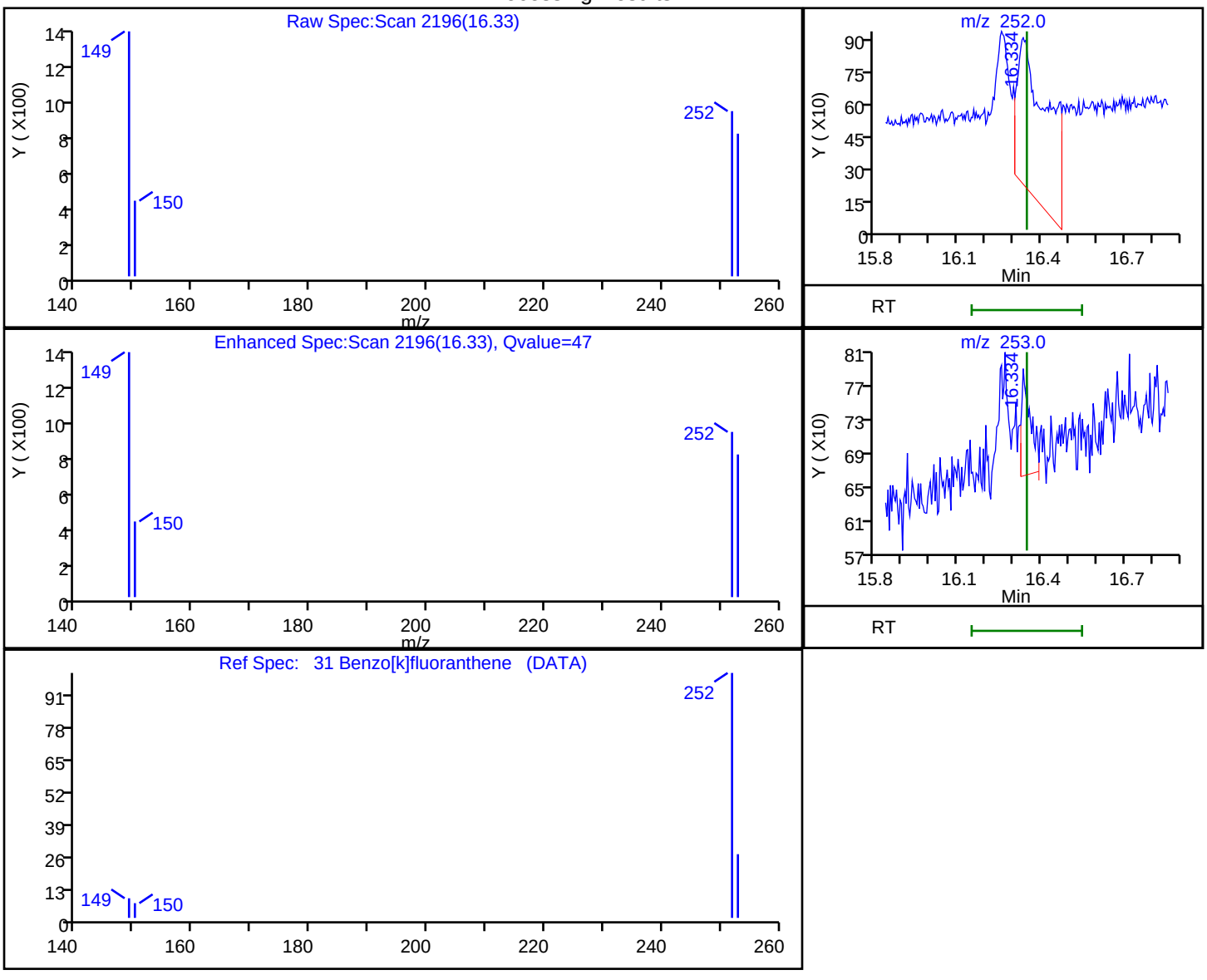
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4399.D				
Injection Date:	29-Oct-2018 16:32:30	Instrument ID:	SMS_F		
Lims ID:	STD0001				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

31 Benzo[k]fluoranthene, CAS: 207-08-9

Processing Results



RT	Mass	Response	Amount
16.33	252.00	5536	31.733538
16.33	253.00	276	

Reviewer: wickhamm, 29-Oct-2018 19:09:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Lims ID: STD0002
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Oct-2018 17:02:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0002
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:32 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:53:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	-0.001	89	23761	600.0	600.0	M
* 2 Phenanthrene-d10	188	9.206	9.214	-0.008	99	50615	600.0	600.0	
* 3 Chrysene-d12	240	13.376	13.376	0.000	90	49531	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	91	504	20.0	20.3	a
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	97	1289	20.0	21.4	a
$ 6 Terphenyl-d14	244	11.203	11.211	-0.008	34	1551	20.0	20.7	a
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.563	2.557	0.006	17	404	20.0	22.1	
10 Naphthalene	128	5.985	5.985	0.000	98	1689	20.0	21.2	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	100	2251	40.0	41.8	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	97	1056	20.0	21.7	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	1815	40.0	39.0	
14 Acenaphthylene	152	7.566	7.574	-0.008	93	1211	20.0	19.7	
15 Acenaphthene	153	7.747	7.747	0.000	92	1100	20.0	21.1	M
16 Dibenzofuran	168	7.914	7.915	-0.001	96	1669	20.0	21.2	
17 Diethyl phthalate	149	8.109	8.118	-0.009	98	2364	40.2	52.1	
18 Fluorene	166	8.264	8.264	0.000	94	1151	20.0	18.9	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	767	20.0	20.4	
20 Phenanthrene	178	9.232	9.232	0.000	93	2118	20.0	20.7	
21 Anthracene	178	9.283	9.284	-0.001	1	1544	20.0	20.0	
22 Di-n-butyl phthalate	149	9.776	9.785	-0.009	1	2026	40.0	46.5	
23 Fluoranthene	202	10.632	10.641	-0.009	50	2149	20.0	19.7	
24 Pyrene	202	10.978	10.987	-0.009	50	2333	20.0	21.2	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.349	13.358	-0.009	77	1881	20.0	22.4	
27 Chrysene	228	13.430	13.439	-0.009	84	2118	20.0	20.5	
28 Bis(2-ethylhexyl) phthalat	149	12.106	12.115	-0.009	1	723	40.0	39.5	
29 Di-n-octyl phthalate	149		15.332				ND	ND	U
30 Benzo[b]fluoranthene	252	16.259	16.268	-0.009	72	2067	20.0	20.7	
31 Benzo[k]fluoranthene	252	16.338	16.347	-0.009	66	1767	20.0	18.1	M
32 Benzo[a]pyrene	252	17.195	17.213	-0.018	51	1718	20.0	21.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.511	20.529	-0.018	84	2309	20.0	22.9	M
34 Dibenz(a,h)anthracene	278	20.607	20.616	-0.009	93	2160	20.0	20.6	
35 Benzo[g,h,i]perylene	276	21.259	21.272	-0.013	86	2843	20.0	22.3	
$ 53 2-methylnaphthalene-d10	152	6.632	6.633	0.000	98	899	20.0	21.8	
$ 54 Fluoranthene-d10	212	10.615	10.615	0.000	21	1674	20.0	19.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

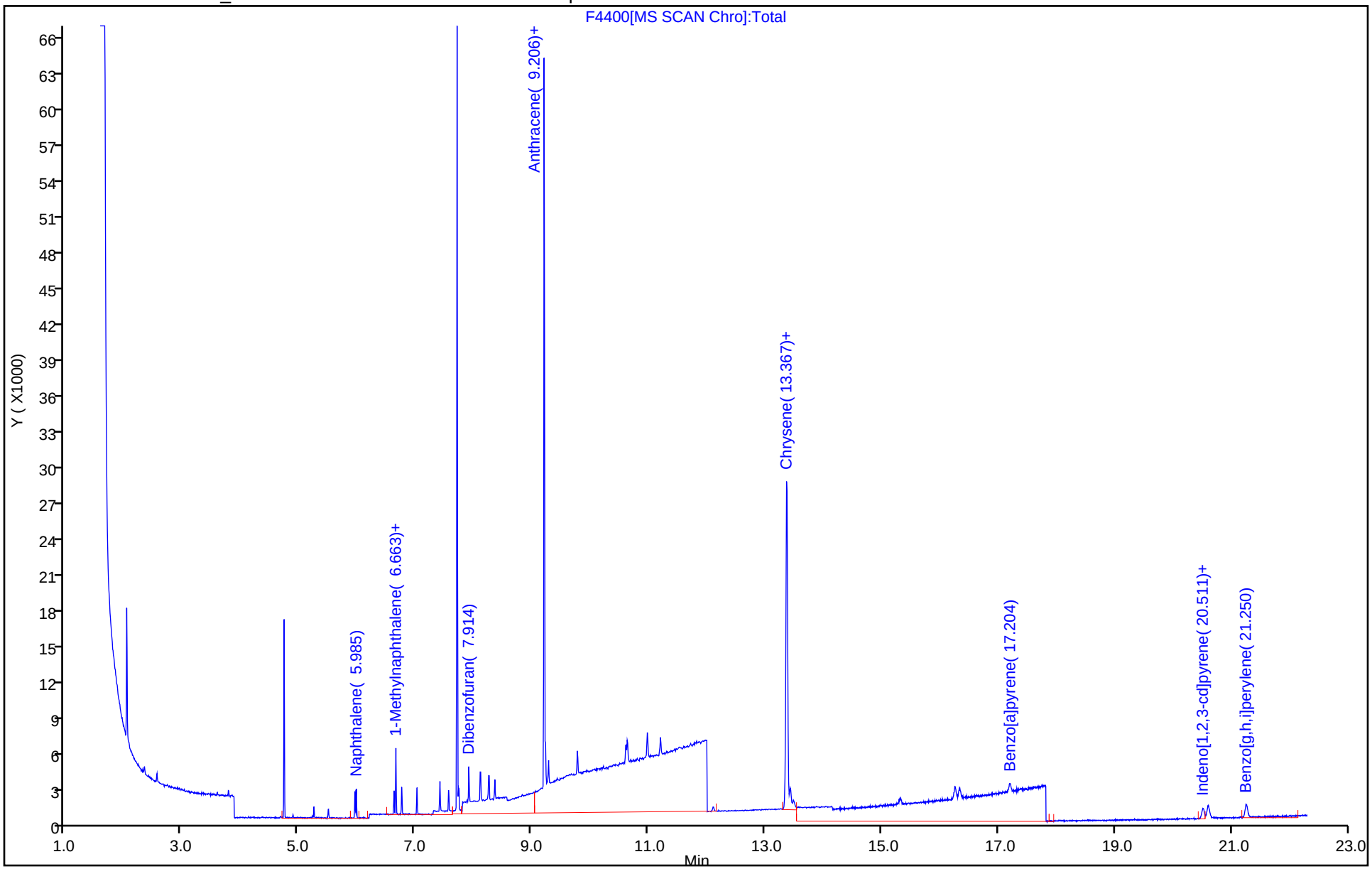
MS-SIMSL 0.02_00079 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:32 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D

Injection Date:	29-Oct-2018 17:02:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0002			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

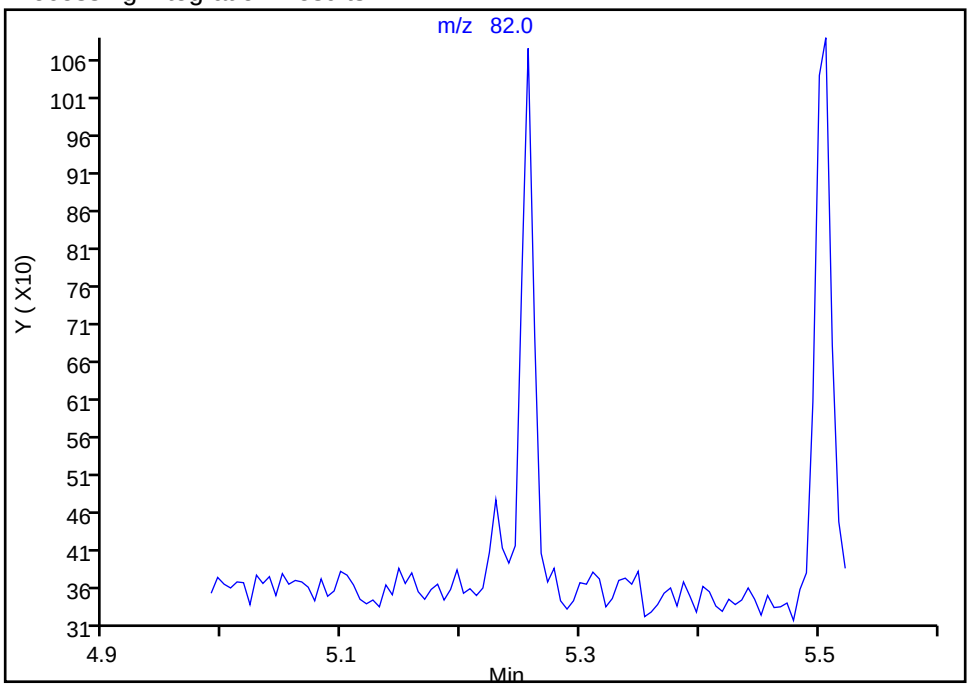
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

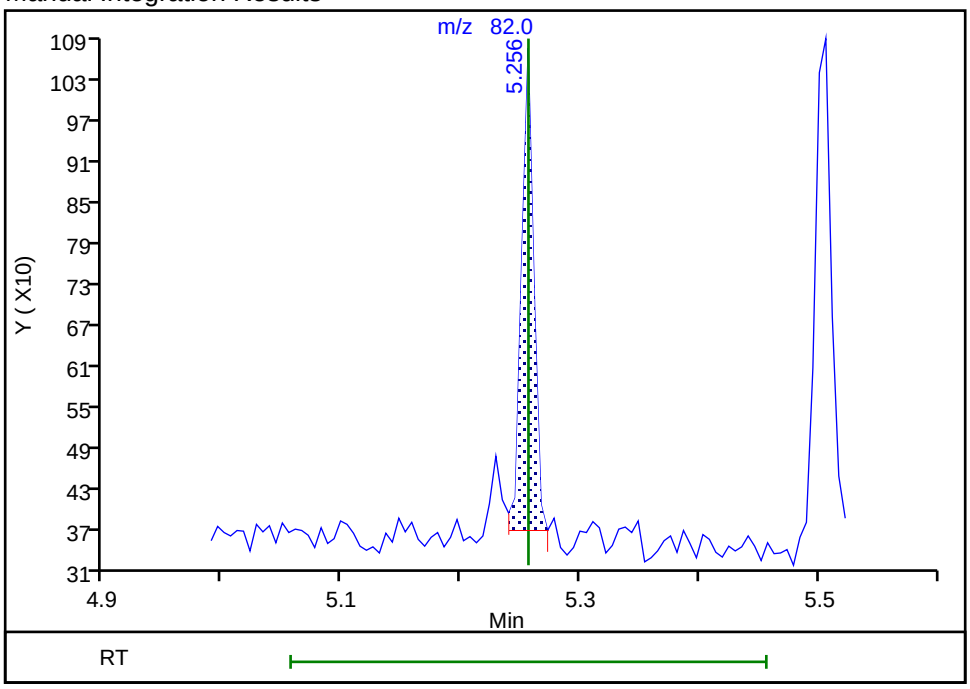
Processing Integration Results

Not Detected
Expected RT: 5.26



Manual Integration Results

RT: 5.26
Area: 504
Amount: 20.340835
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:03
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

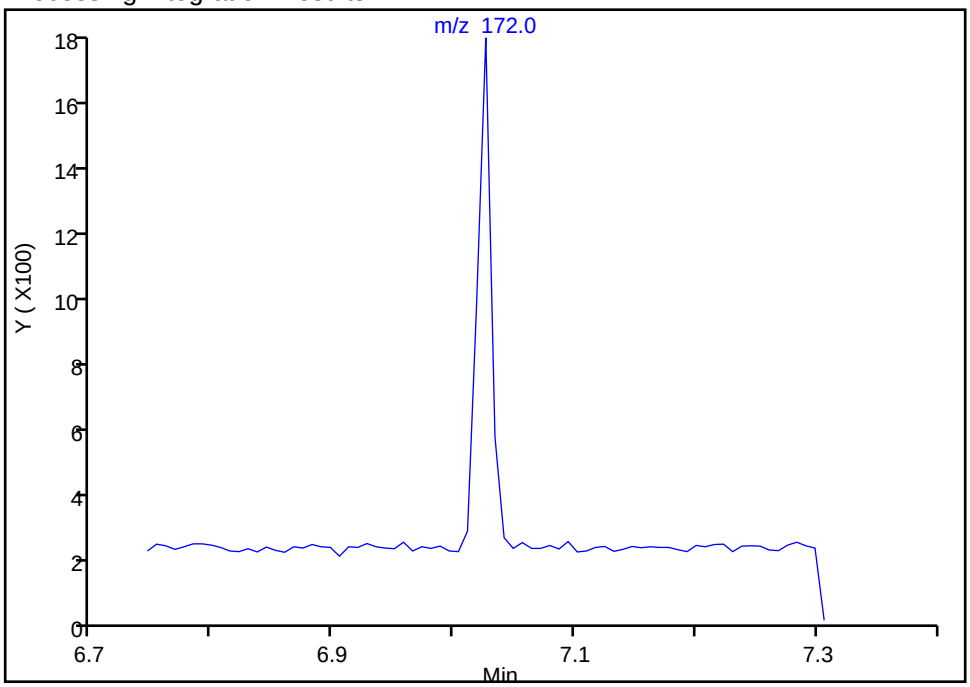
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 5 2-Fluorobiphenyl, CAS: 321-60-8

Signal: 1

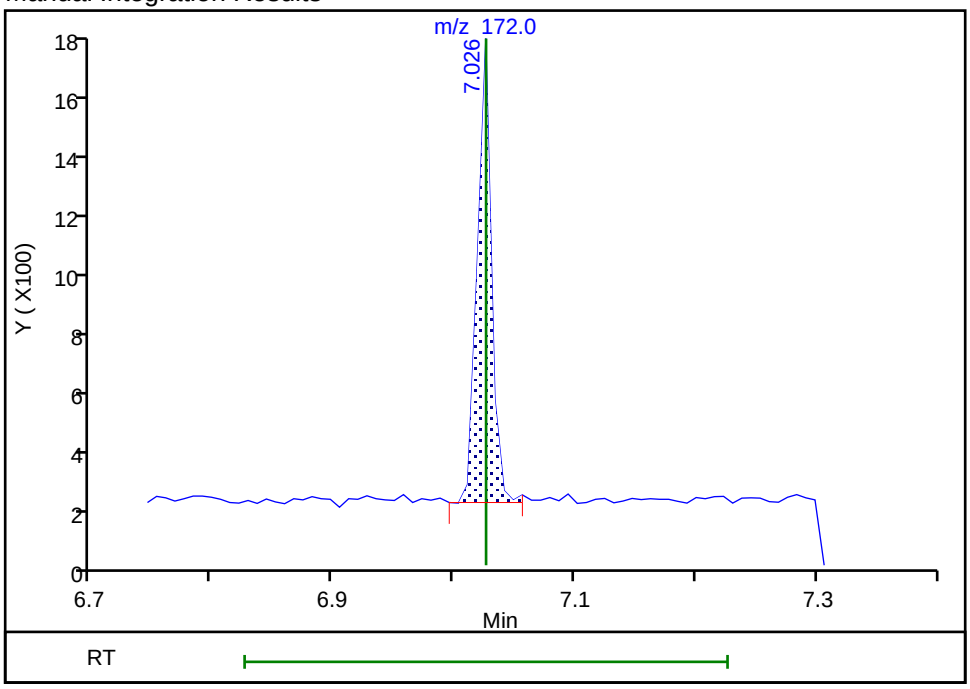
Not Detected
Expected RT: 7.03

Processing Integration Results



Manual Integration Results

RT: 7.03
Area: 1289
Amount: 21.389534
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:06
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

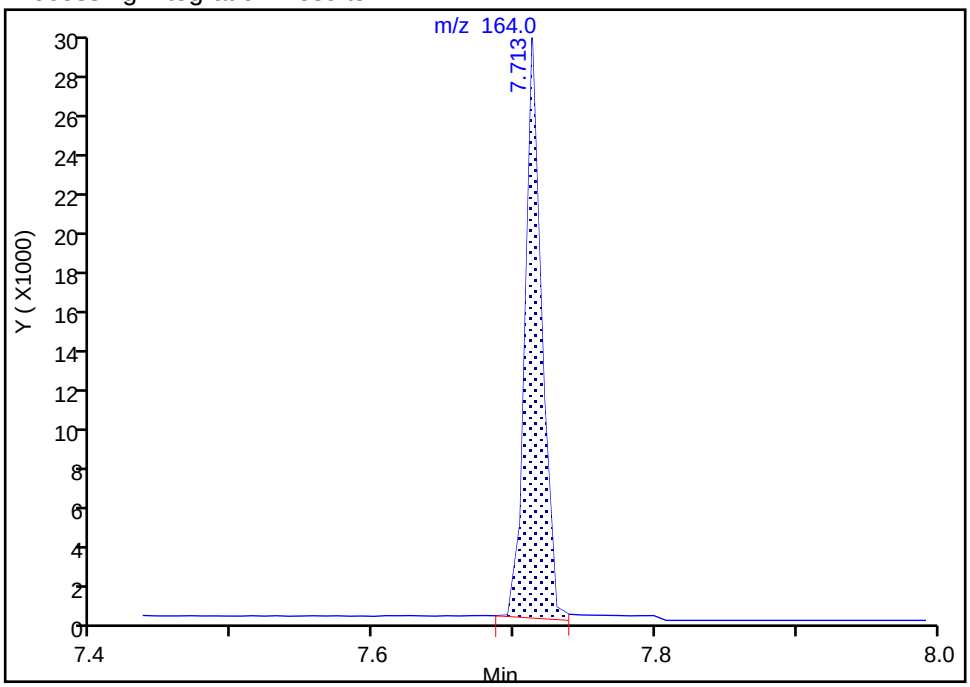
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

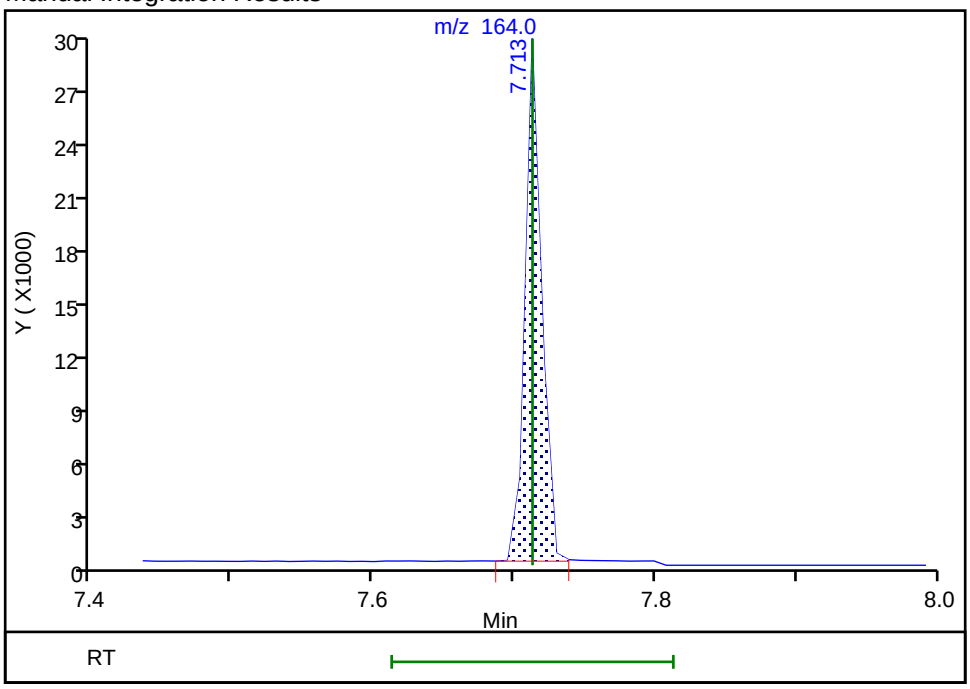
RT: 7.71
Area: 24169
Amount: 600.0000
Amount Units: ng/ml

Processing Integration Results



RT: 7.71
Area: 23761
Amount: 600.0000
Amount Units: ng/ml

Manual Integration Results



Reviewer: wickhamm, 29-Oct-2018 19:09:51
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

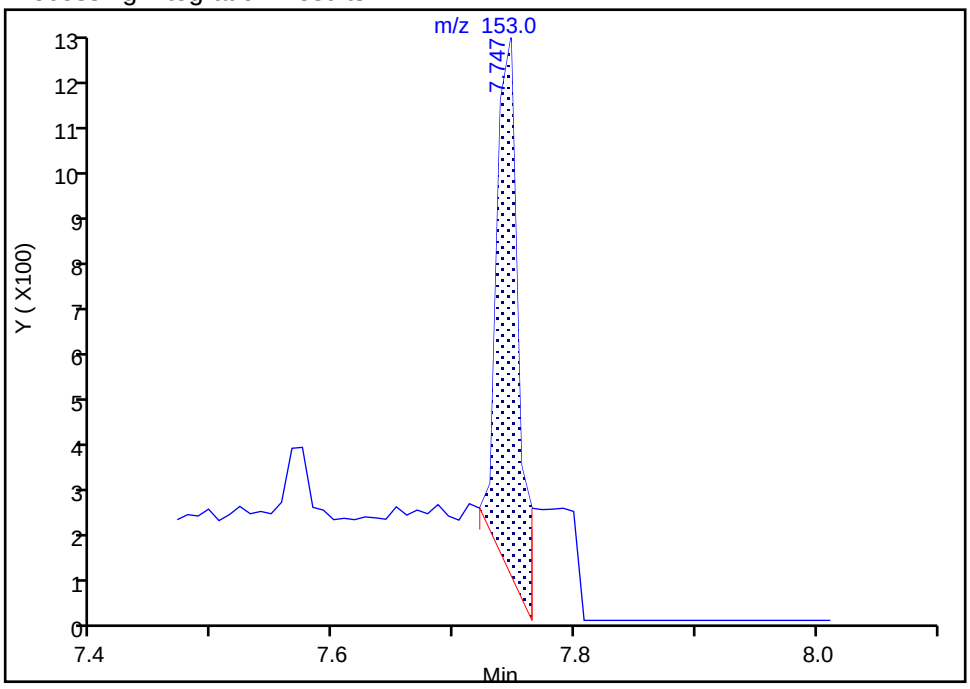
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

15 Acenaphthene, CAS: 83-32-9

Signal: 1

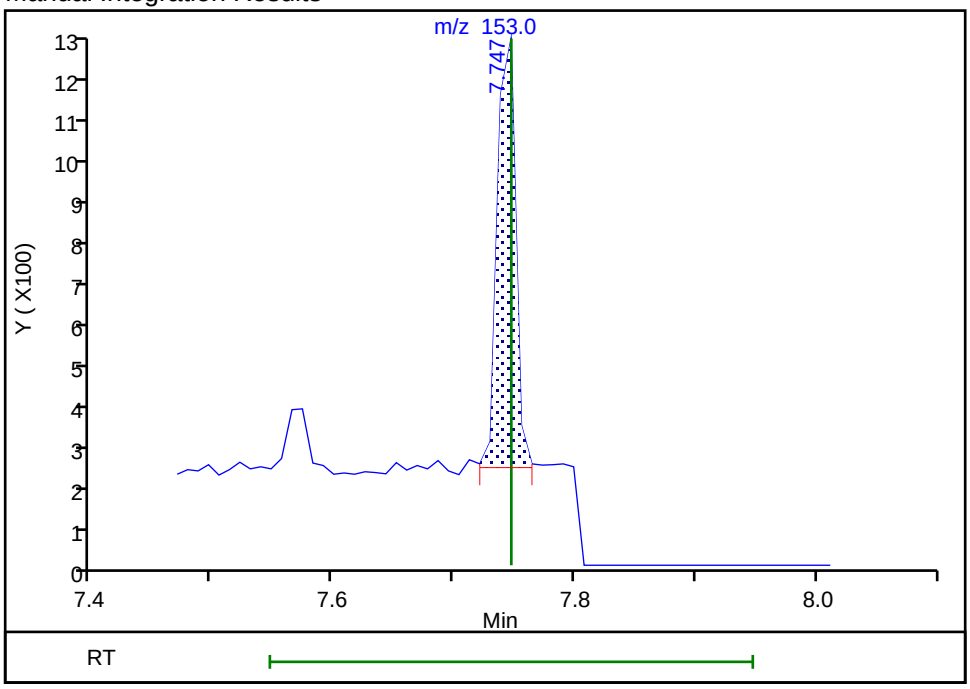
Processing Integration Results

RT: 7.75
Area: 1454
Amount: 25.981549
Amount Units: ng/ml



Manual Integration Results

RT: 7.75
Area: 1100
Amount: 21.109445
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:20
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

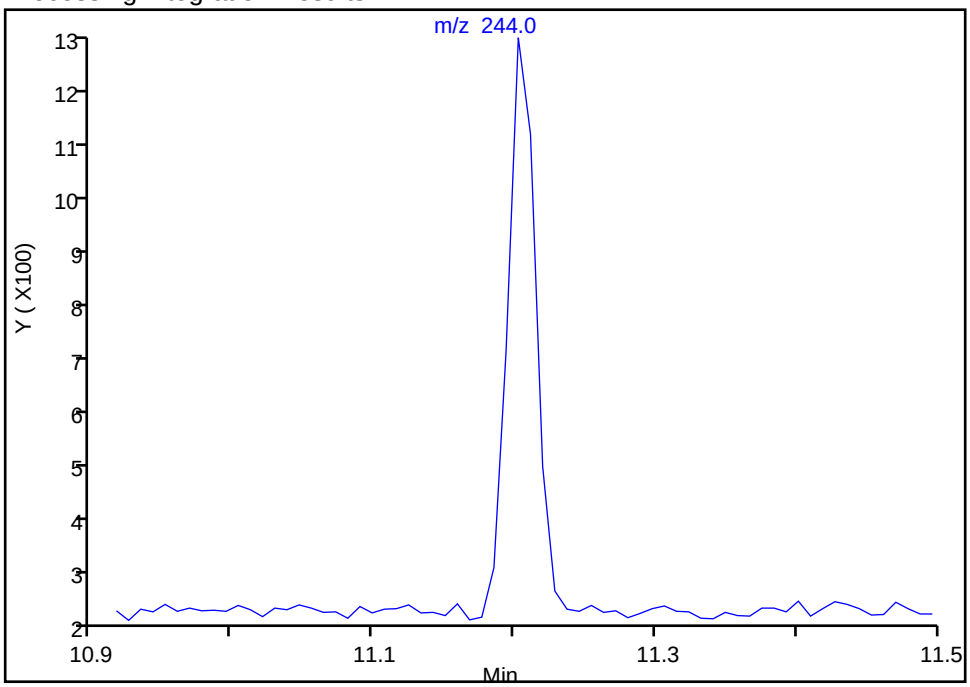
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 6 Terphenyl-d14, CAS: 1718-51-0

Signal: 1

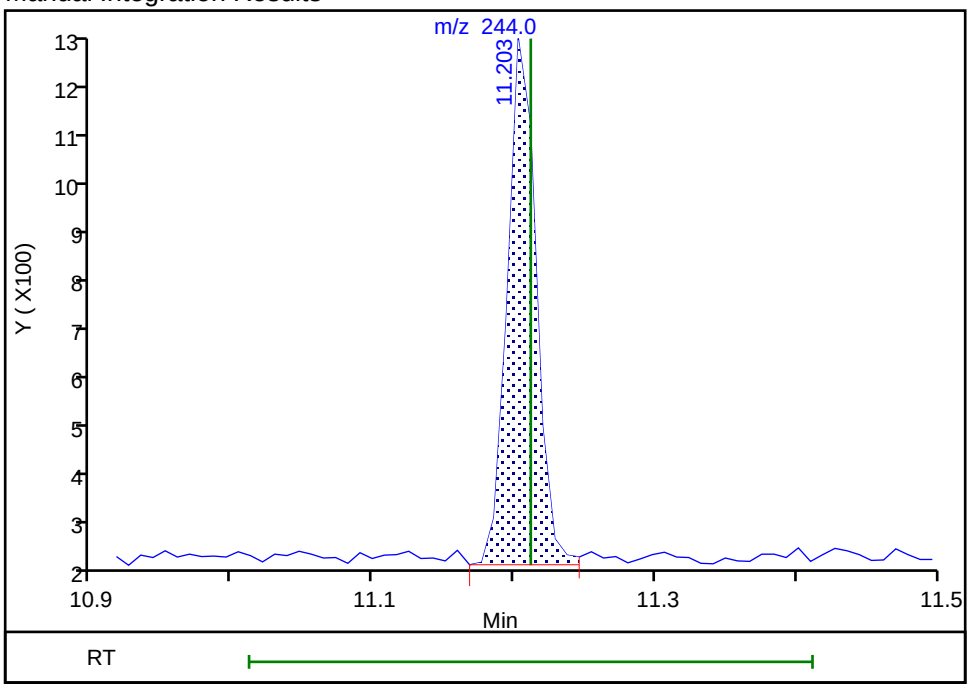
Not Detected
Expected RT: 11.21

Processing Integration Results



Manual Integration Results

RT: 11.20
Area: 1551
Amount: 20.744171
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:10
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

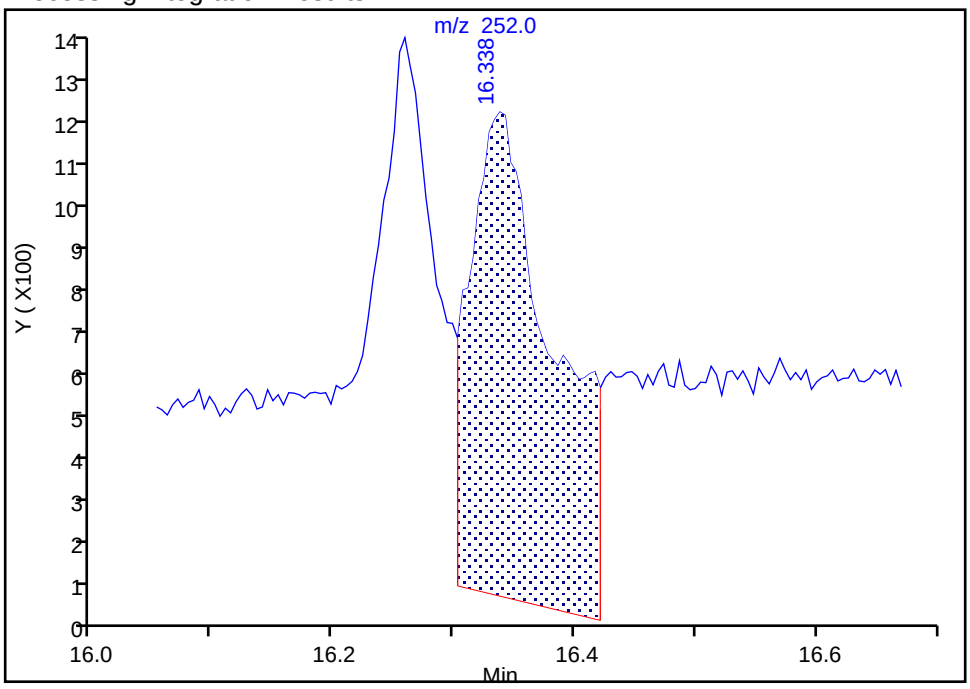
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

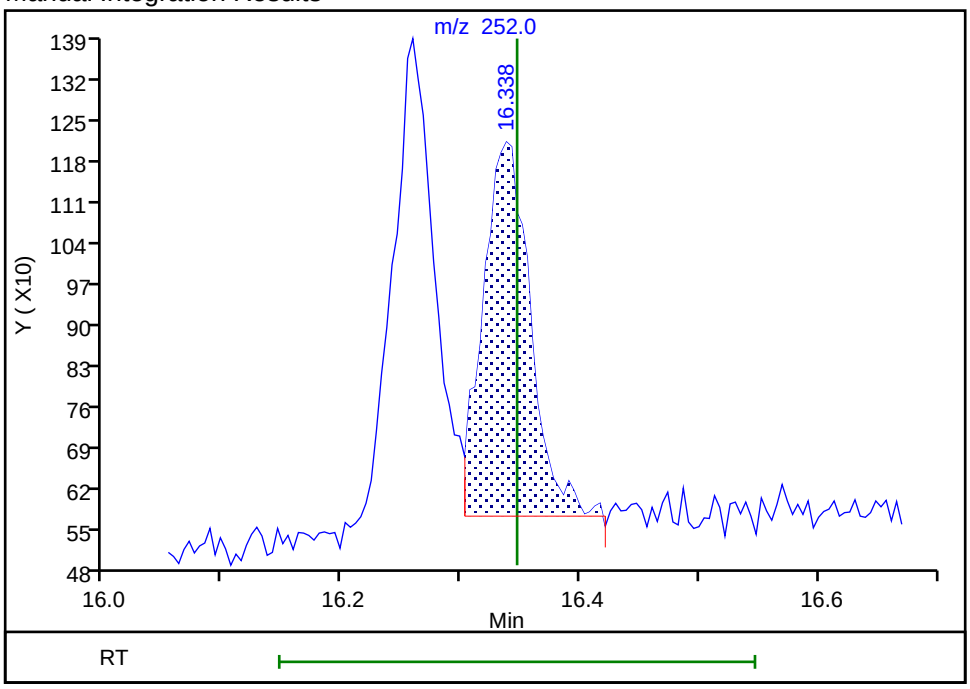
Processing Integration Results

RT: 16.34
Area: 5654
Amount: 40.212900
Amount Units: ng/ml



Manual Integration Results

RT: 16.34
Area: 1767
Amount: 18.057246
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:41
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

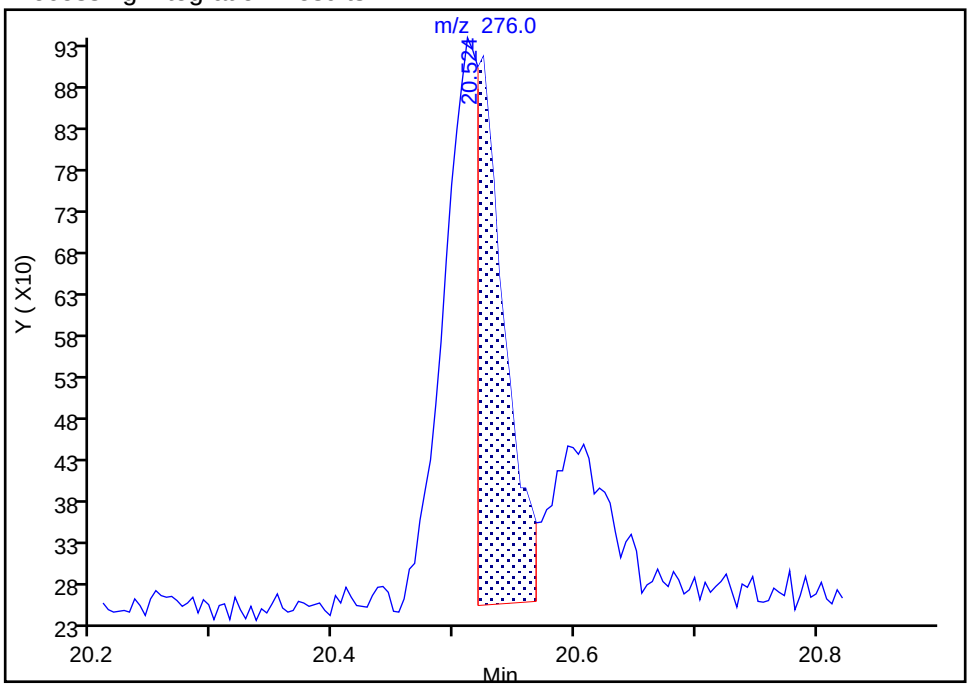
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4400.D
Injection Date: 29-Oct-2018 17:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

33 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

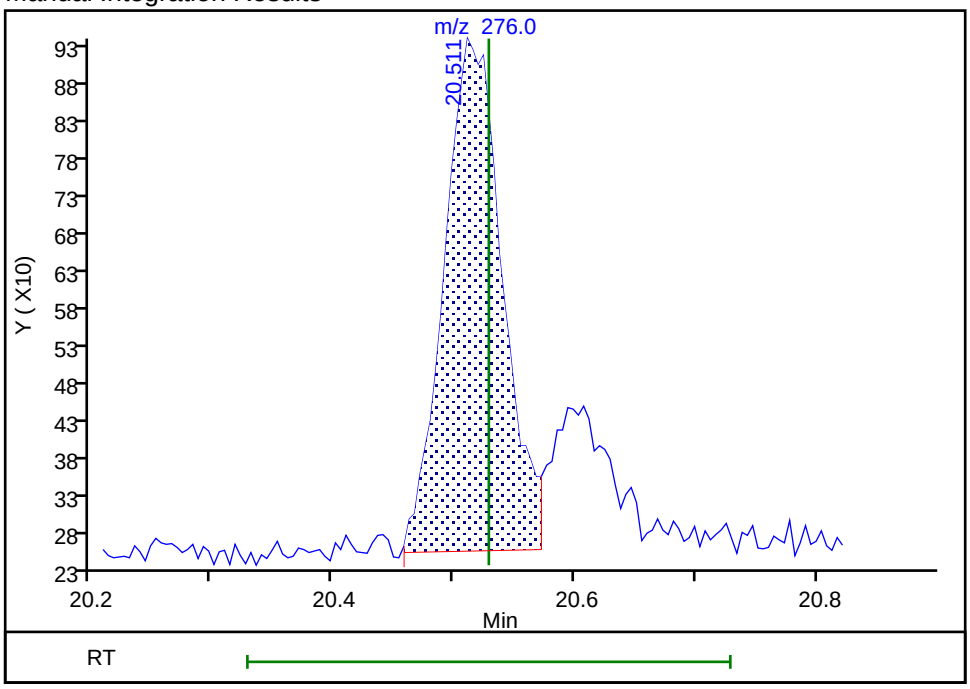
Processing Integration Results

RT: 20.52
Area: 1079
Amount: 13.124137
Amount Units: ng/ml



Manual Integration Results

RT: 20.51
Area: 2309
Amount: 22.898639
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:10:50
Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 29-Oct-2018 21:58:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4401.D
Lims ID: STD0500
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Oct-2018 17:32:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0500
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:35 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:54:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	93	25461	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.214	-0.008	98	54456	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.376	-0.009	91	53401	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	96	1215	50.0	45.8	a
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	97	3096	50.0	47.9	
$ 6 Terphenyl-d14	244	11.203	11.211	-0.008	61	3595	50.0	44.7	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.564	2.557	0.007	24	1021	50.0	52.2	
10 Naphthalene	128	5.985	5.985	0.000	99	4085	50.0	47.9	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	100	5466	100.0	94.6	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	99	2467	50.0	47.4	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	4253	100.0	85.2	
14 Acenaphthylene	152	7.566	7.574	-0.008	98	2921	50.0	44.4	
15 Acenaphthene	153	7.739	7.747	-0.008	92	2537	50.0	45.4	
16 Dibenzofuran	168	7.915	7.915	0.000	96	3911	50.1	46.4	
17 Diethyl phthalate	149	8.109	8.118	-0.009	98	4645	100.4	95.5	
18 Fluorene	166	8.254	8.264	-0.010	89	2935	50.0	45.0	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	93	1864	50.0	46.0	
20 Phenanthrene	178	9.232	9.232	0.000	96	5059	50.0	45.9	
21 Anthracene	178	9.284	9.284	0.000	1	3559	50.0	43.0	
22 Di-n-butyl phthalate	149	9.776	9.785	-0.009	1	4749	100.0	99.7	
23 Fluoranthene	202	10.632	10.641	-0.009	92	5086	50.0	43.4	
24 Pyrene	202	10.978	10.987	-0.009	91	5223	50.0	44.2	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.358	-0.018	90	3978	50.0	43.9	
27 Chrysene	228	13.430	13.439	-0.009	97	5115	50.0	45.8	
28 Bis(2-ethylhexyl) phthalat	149	12.106	12.115	-0.009	1	1736	100.0	88.1	
29 Di-n-octyl phthalate	149	15.310	15.332	-0.022	1	3137	100.0	116.7	
30 Benzo[b]fluoranthene	252	16.251	16.268	-0.017	87	4983	50.0	46.4	
31 Benzo[k]fluoranthene	252	16.334	16.347	-0.013	82	4560	50.0	43.2	
32 Benzo[a]pyrene	252	17.191	17.213	-0.022	75	3944	50.0	46.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.511	20.529	-0.018	99	4946	50.0	45.5	
34 Dibenz(a,h)anthracene	278	20.599	20.616	-0.017	95	5119	50.0	45.3	
35 Benzo[g,h,i]perylene	276	21.251	21.272	-0.021	98	6234	50.0	45.3	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.001	93	2072	50.0	46.9	
$ 54 Fluoranthene-d10	212	10.606	10.615	-0.009	62	4194	50.0	46.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

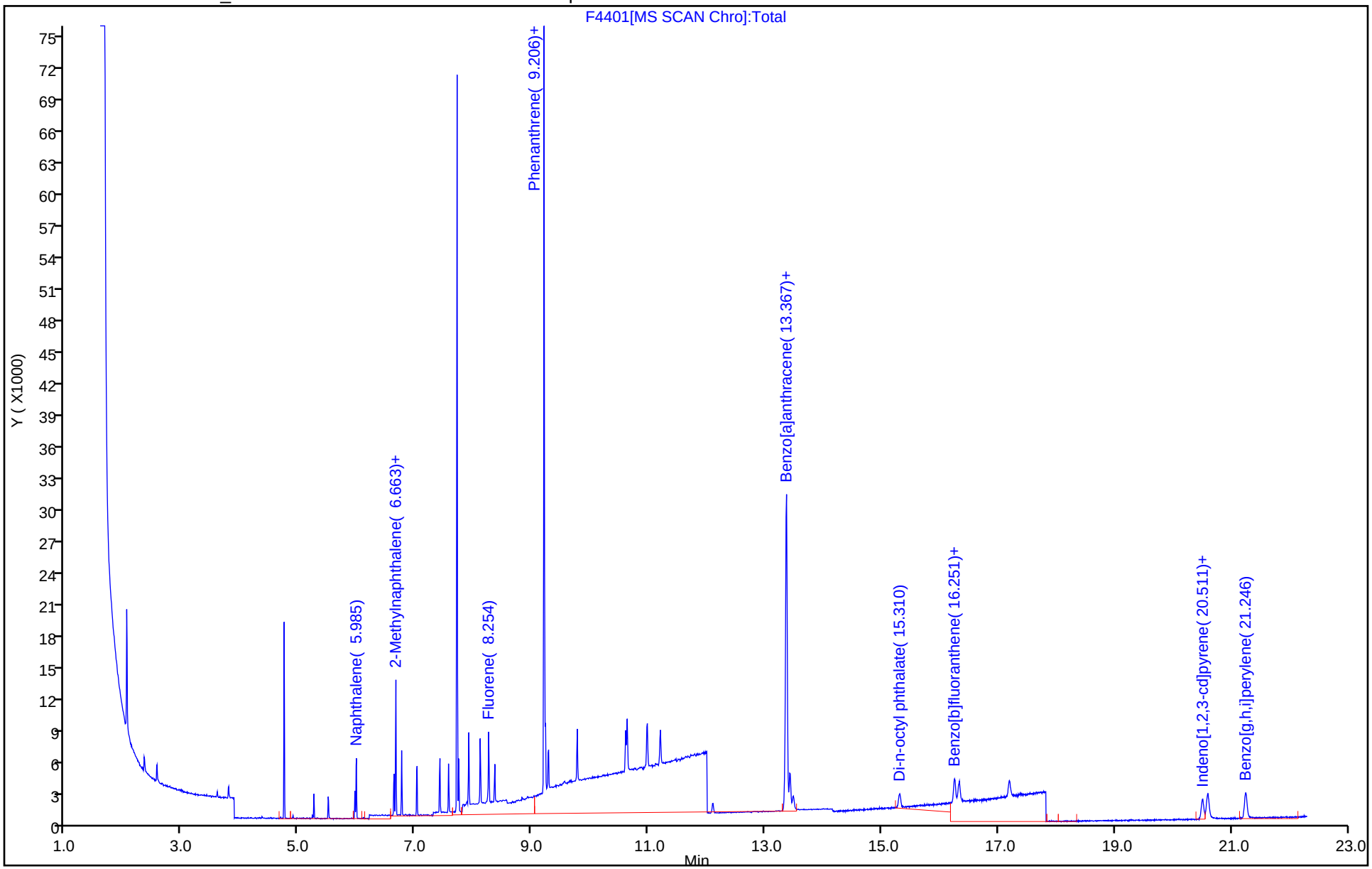
MS-SIMSL 0.05_00007 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4401.D

Injection Date:	29-Oct-2018 17:32:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0500			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

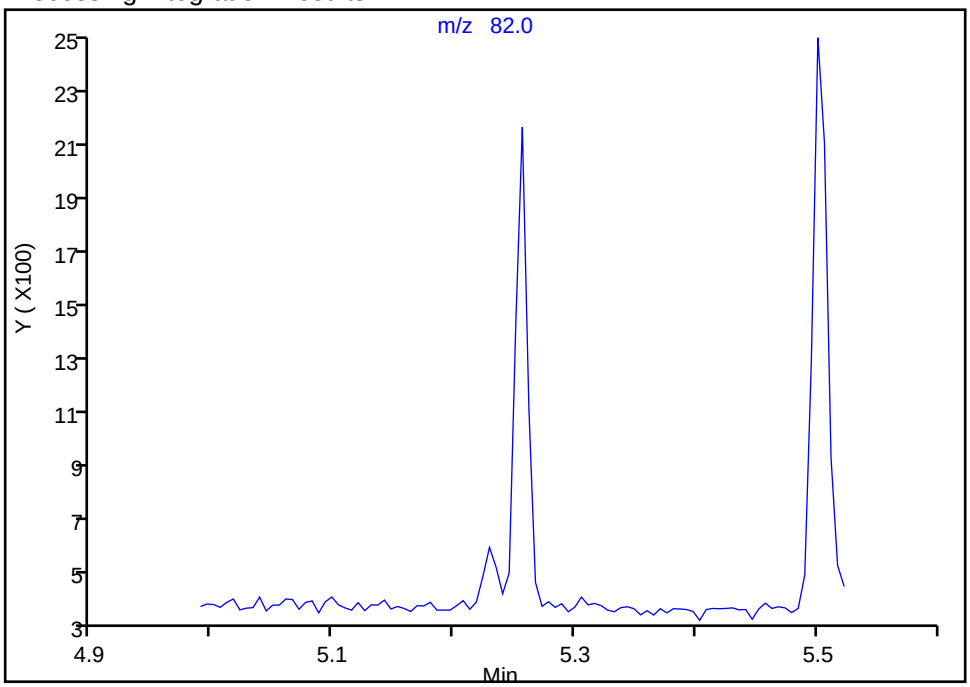
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4401.D
Injection Date: 29-Oct-2018 17:32:30 Instrument ID: SMS_F
Lims ID: STD0500
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

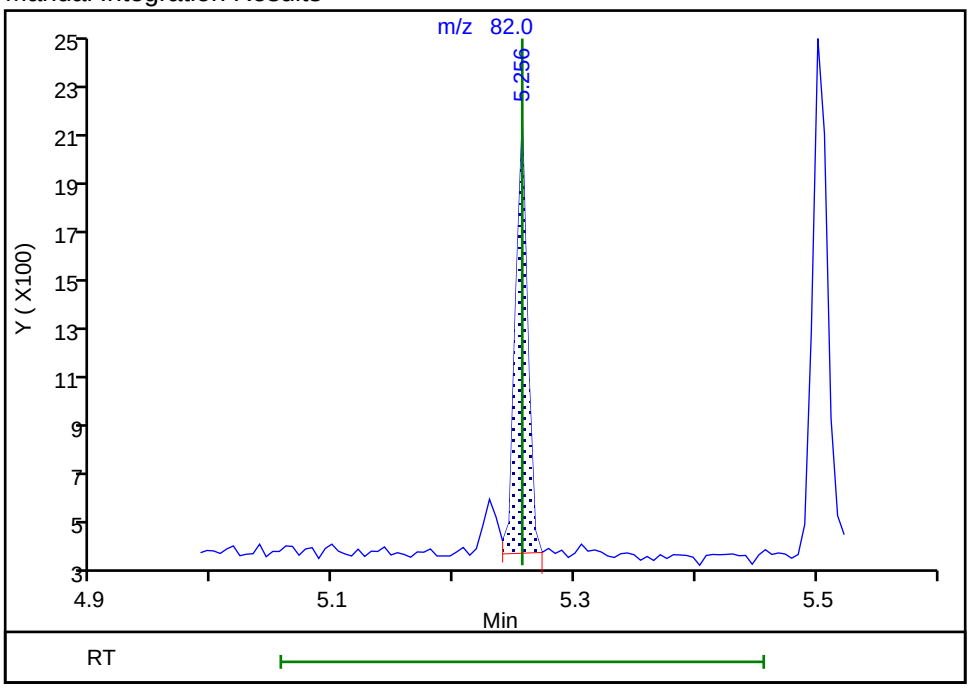
Not Detected
Expected RT: 5.26

Processing Integration Results



Manual Integration Results

RT: 5.26
Area: 1215
Amount: 45.761870
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:11:13
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 29-Oct-2018 21:58:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Lims ID: STD0100
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Oct-2018 18:01:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0100
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:37 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 19:12:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	96	25360	600.0	600.0	M
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	54223	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.367	0.000	91	51705	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	97	2436	100.0	92.1	
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	98	6210	100.0	96.6	
$ 6 Terphenyl-d14	244	11.203	11.203	0.000	88	7287	100.0	91.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.563	2.563	0.000	32	1907	100.0	97.8	
10 Naphthalene	128	5.980	5.980	0.000	100	8519	100.0	100.3	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	99	11219	200.0	195.0	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	99	5042	100.0	97.2	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	8891	200.0	178.9	
14 Acenaphthylene	152	7.566	7.566	0.000	100	5834	100.0	89.0	
15 Acenaphthene	153	7.739	7.739	0.000	95	5430	100.0	97.6	M
16 Dibenzofuran	168	7.915	7.915	0.000	95	8017	100.1	95.5	
17 Diethyl phthalate	149	8.109	8.109	0.000	98	8830	200.8	182.3	
18 Fluorene	166	8.254	8.254	0.000	91	6068	100.0	93.5	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	94	3831	100.0	95.0	
20 Phenanthrene	178	9.223	9.223	0.000	99	10412	100.0	94.8	
21 Anthracene	178	9.275	9.275	0.000	1	6933	100.0	84.0	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	9634	200.0	199.8	
23 Fluoranthene	202	10.632	10.632	0.000	96	10244	100.0	87.8	
24 Pyrene	202	10.969	10.969	0.000	95	10444	100.0	88.8	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	93	7777	100.0	88.7	
27 Chrysene	228	13.430	13.430	0.000	97	10237	100.0	94.7	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	3311	200.0	168.7	
29 Di-n-octyl phthalate	149	15.306	15.306	0.000	1	6237	200.0	218.5	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	95	9850	100.0	94.7	
31 Benzo[k]fluoranthene	252	16.329	16.329	0.000	92	9057	100.0	88.7	M
32 Benzo[a]pyrene	252	17.186	17.186	0.000	87	7494	100.0	91.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.507	20.507	0.000	97	10324	100.0	98.1	
34 Dibenz(a,h)anthracene	278	20.599	20.599	0.000	89	10691	100.0	97.7	
35 Benzo[g,h,i]perylene	276	21.250	21.250	0.000	99	13270	100.0	99.6	
$ 53 2-methylnaphthalene-d10	152	6.632	6.632	0.000	92	4254	100.0	96.7	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	84	8298	100.0	91.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

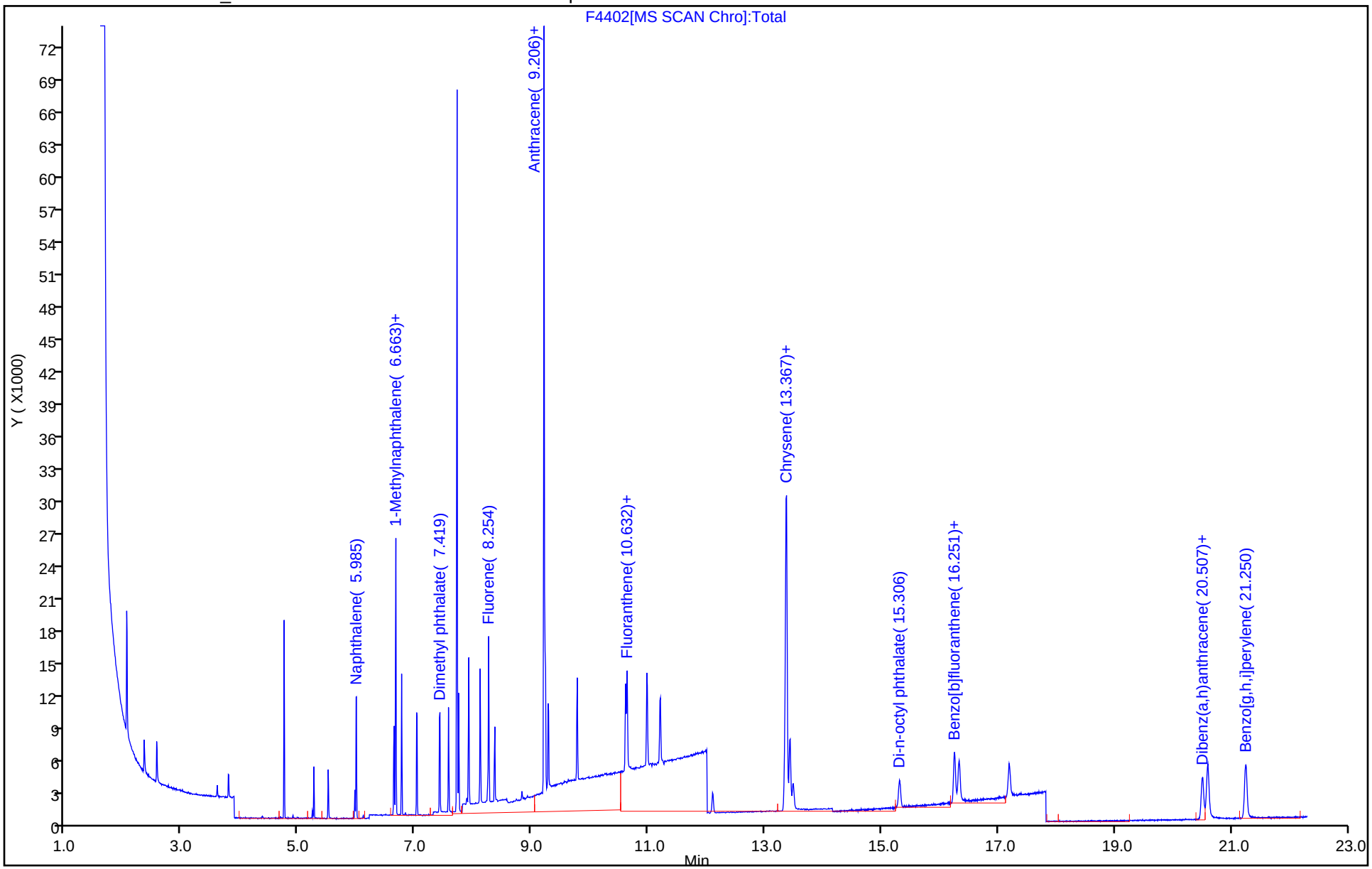
MS-SIMSL 0.1_00075 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D

Injection Date:	29-Oct-2018 18:01:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0100			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

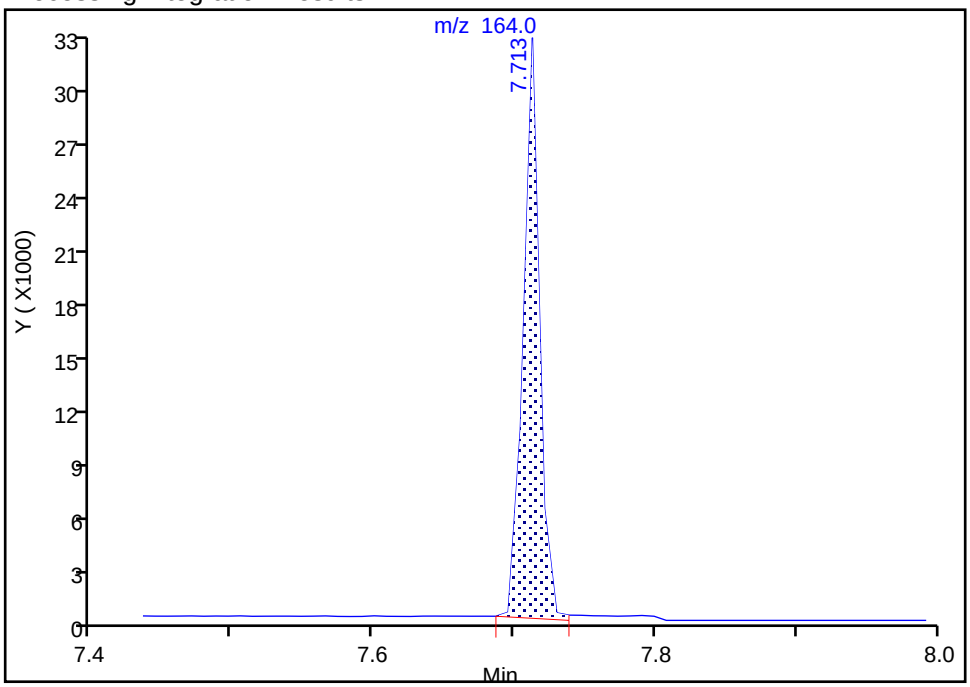
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Injection Date: 29-Oct-2018 18:01:30 Instrument ID: SMS_F
Lims ID: STD0100
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

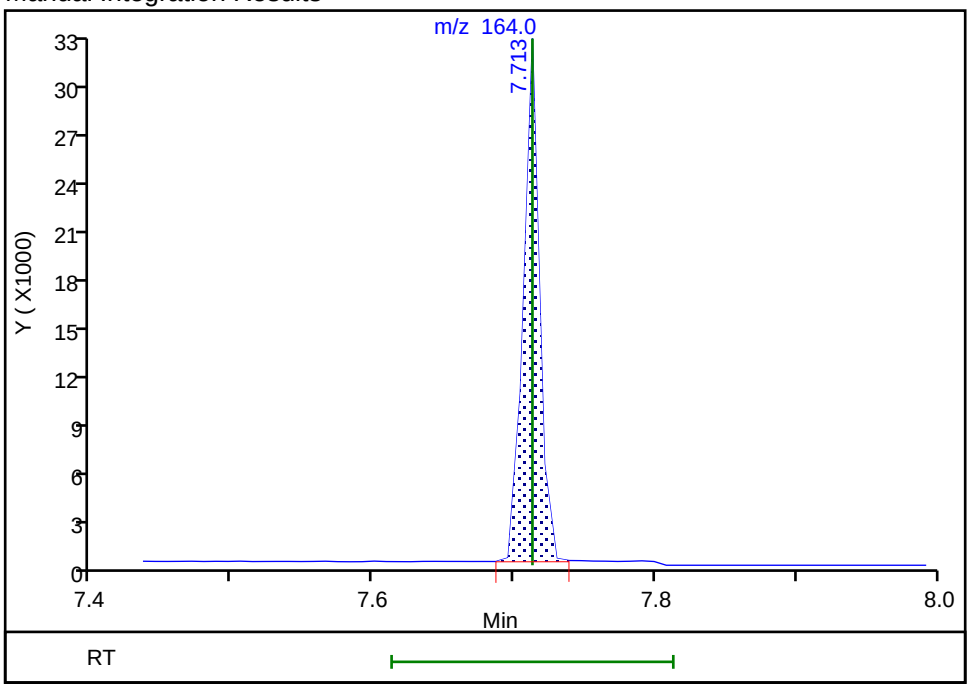
Processing Integration Results

RT: 7.71
Area: 25715
Amount: 600.0000
Amount Units: ng/ml



Manual Integration Results

RT: 7.71
Area: 25360
Amount: 600.0000
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:11:59
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

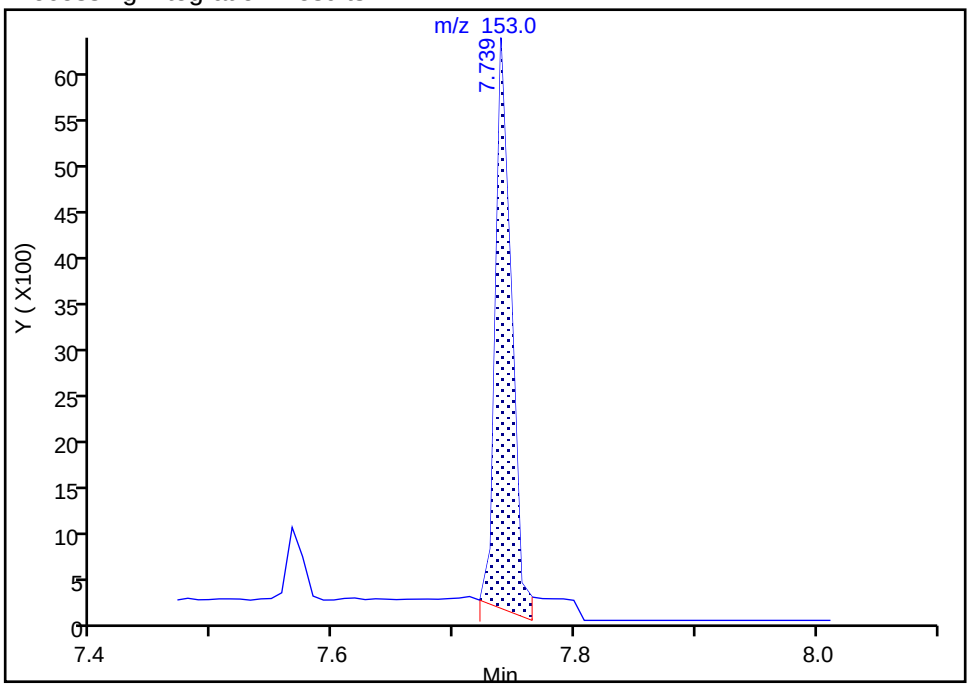
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Injection Date: 29-Oct-2018 18:01:30 Instrument ID: SMS_F
Lims ID: STD0100
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

15 Acenaphthene, CAS: 83-32-9

Signal: 1

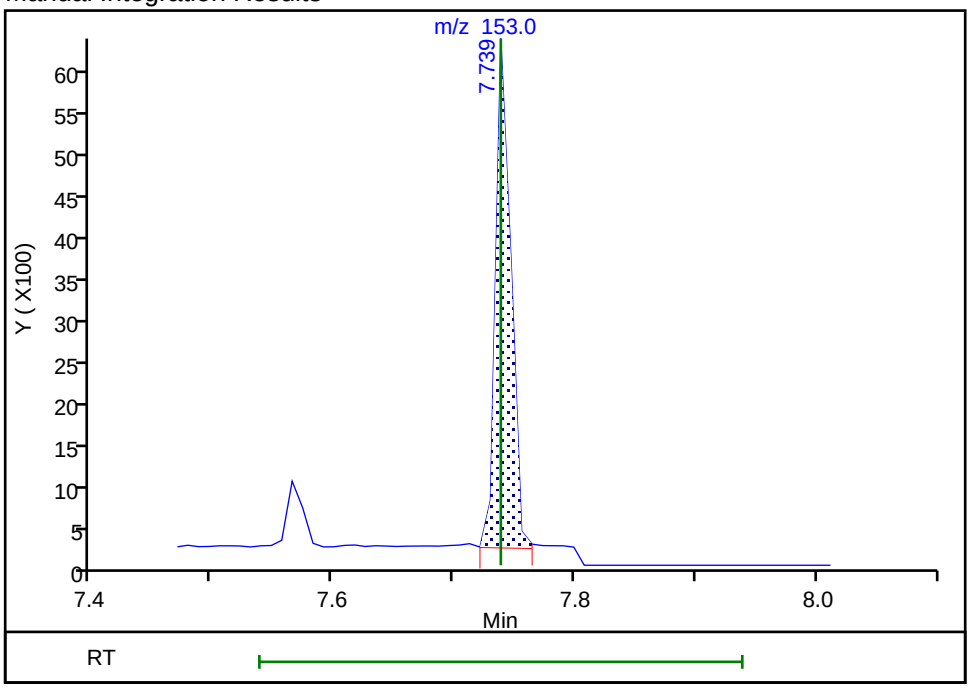
Processing Integration Results

RT: 7.74
Area: 5737
Amount: 103.0078
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 5430
Amount: 97.633625
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:12:13
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

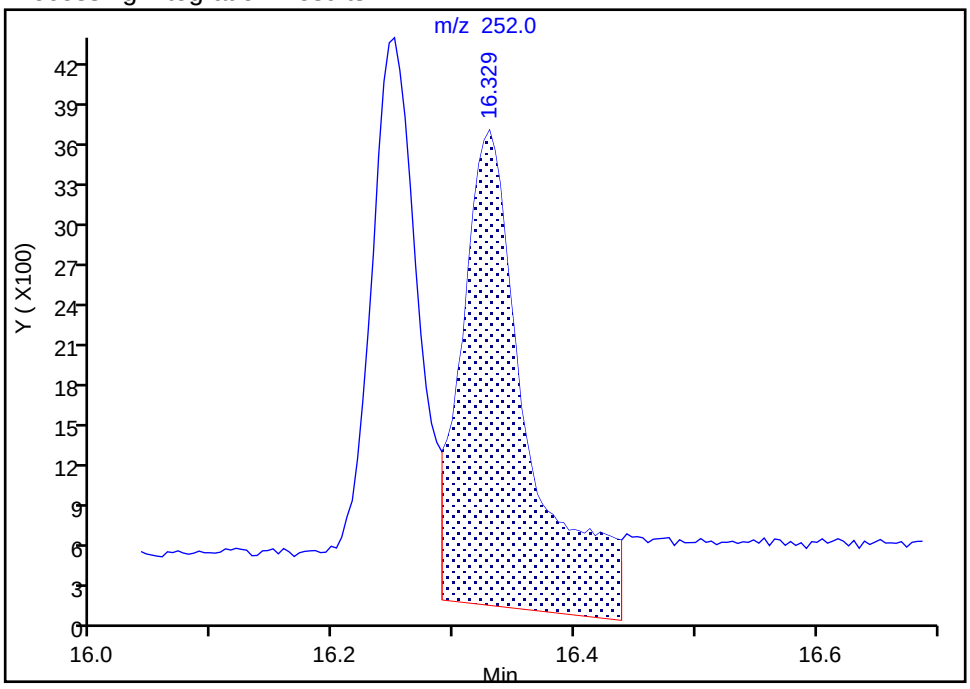
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4402.D
Injection Date: 29-Oct-2018 18:01:30 Instrument ID: SMS_F
Lims ID: STD0100
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

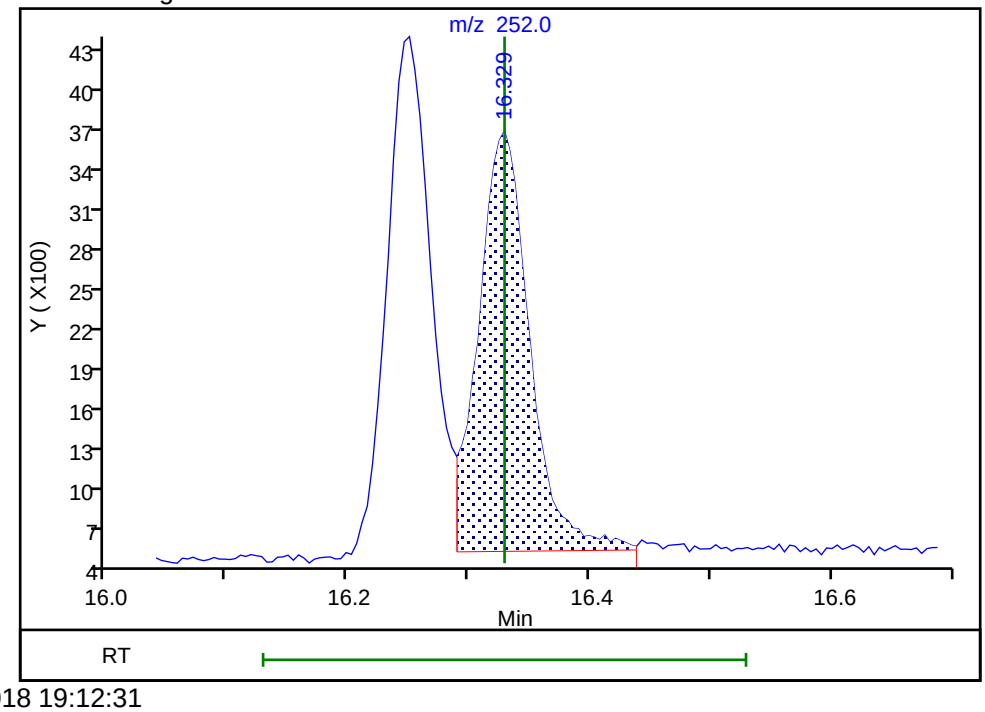
Processing Integration Results

RT: 16.33
Area: 13516
Amount: 116.2875
Amount Units: ng/ml



Manual Integration Results

RT: 16.33
Area: 9057
Amount: 88.663297
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:12:31
Audit Action: Assigned New Baseline Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D
Lims ID: STD0300
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Oct-2018 18:31:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0300
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:40 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 19:14:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	24734	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	98	53830	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.367	0.000	93	53371	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	99	7134	300.0	276.6	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	99	18332	300.0	292.2	
$ 6 Terphenyl-d14	244	11.203	11.203	0.000	97	25400	300.0	319.4	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.557	2.563	-0.006	31	5372	300.0	282.6	
10 Naphthalene	128	5.980	5.980	0.000	100	24560	300.0	296.5	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	98	33550	600.0	597.9	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	98	15015	300.0	296.7	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	27212	600.0	561.3	
14 Acenaphthylene	152	7.566	7.566	0.000	100	17771	300.0	278.1	
15 Acenaphthene	153	7.739	7.739	0.000	96	16055	300.0	296.0	M
16 Dibenzofuran	168	7.915	7.915	0.001	94	23943	300.3	292.6	
17 Diethyl phthalate	149	8.109	8.109	0.000	98	24452	602.4	517.7	
18 Fluorene	166	8.254	8.254	0.000	93	18400	300.0	290.7	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	93	11463	300.0	286.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	31665	300.0	290.3	
21 Anthracene	178	9.275	9.275	0.000	1	22115	300.0	270.0	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	29593	600.0	586.9	
23 Fluoranthene	202	10.632	10.632	0.000	100	32871	300.0	283.7	
24 Pyrene	202	10.969	10.969	0.000	98	32223	300.0	275.9	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	60	24476	300.0	270.3	
27 Chrysene	228	13.430	13.430	0.000	95	32528	300.0	291.6	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	9865	600.0	506.2	
29 Di-n-octyl phthalate	149	15.306	15.306	0.000	1	18714	600.0	584.7	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	100	30648	300.0	285.4	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	99	29499	300.0	279.8	M
32 Benzo[a]pyrene	252	17.191	17.186	0.005	99	22609	300.0	266.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.502	20.507	-0.005	92	30679	300.0	282.4	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	85	32389	300.0	286.8	
35 Benzo[g,h,i]perylene	276	21.246	21.250	-0.004	95	39963	300.0	290.5	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	90	12582	300.0	293.2	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	96	25942	300.0	288.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

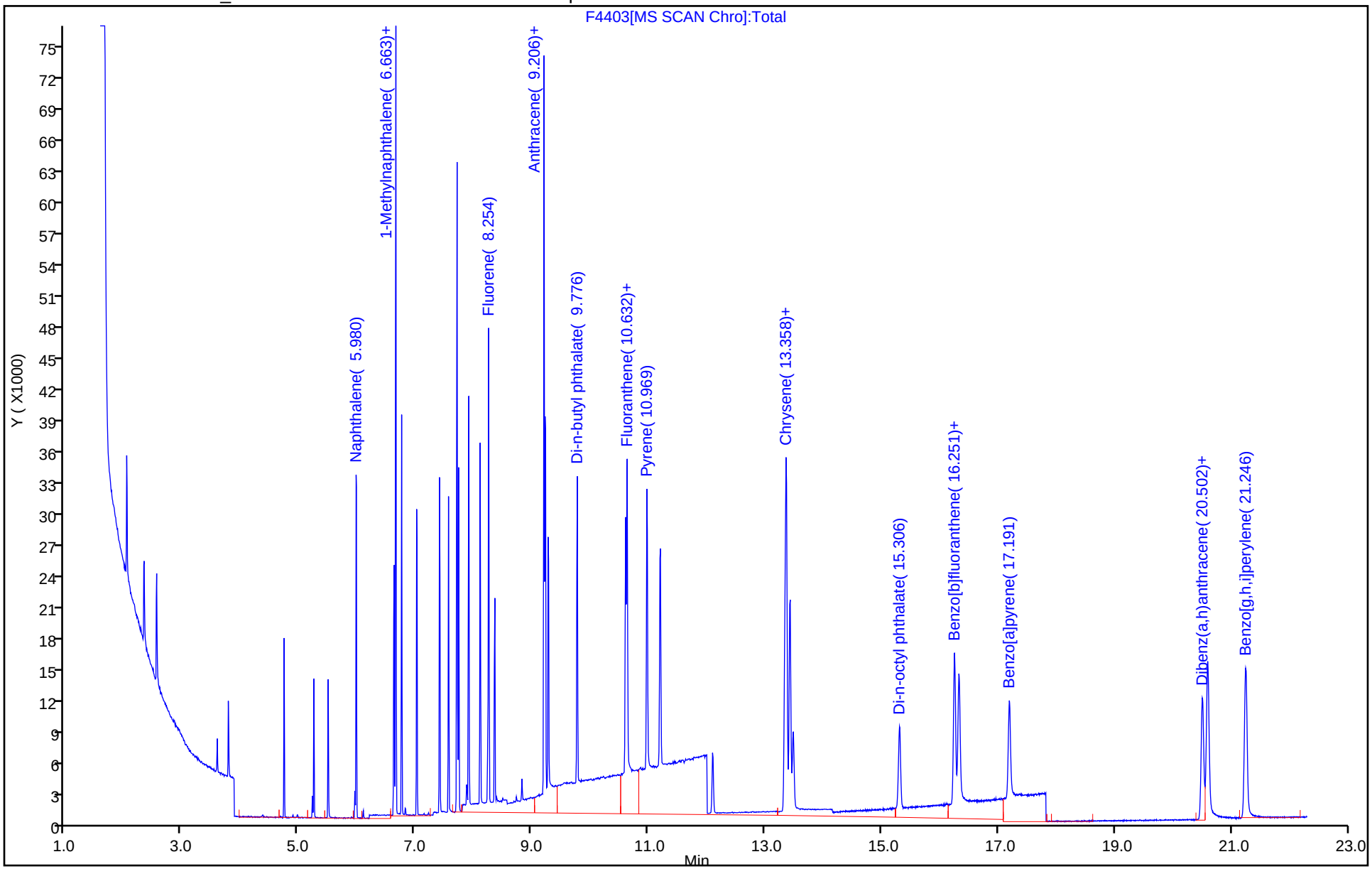
MS-SIMSL 0.3_00074 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D

Injection Date:	29-Oct-2018 18:31:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0300			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

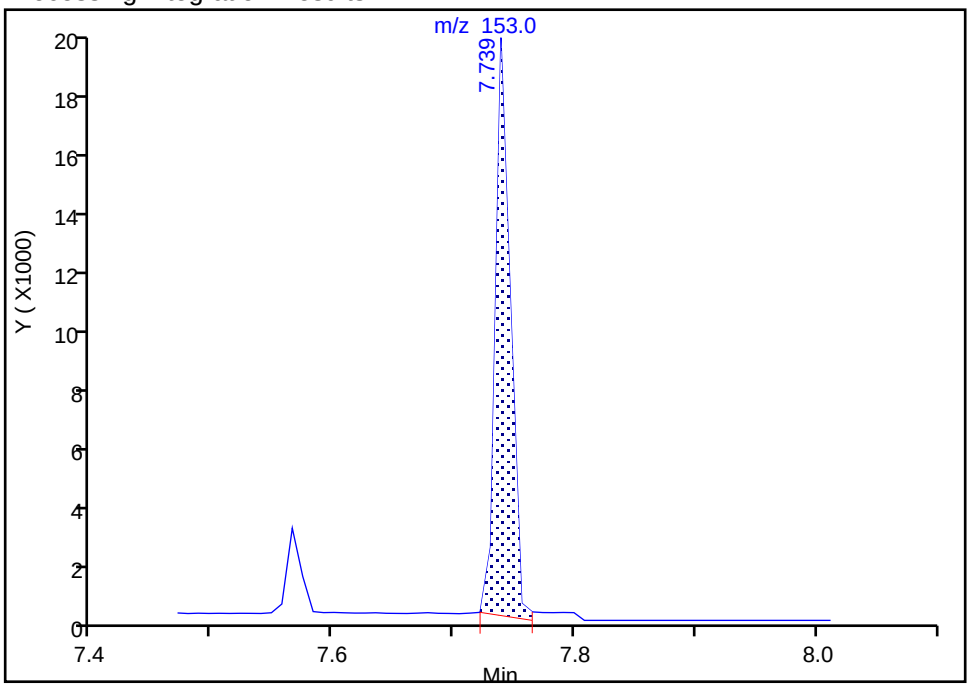
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D
Injection Date: 29-Oct-2018 18:31:30 Instrument ID: SMS_F
Lims ID: STD0300
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

15 Acenaphthene, CAS: 83-32-9

Signal: 1

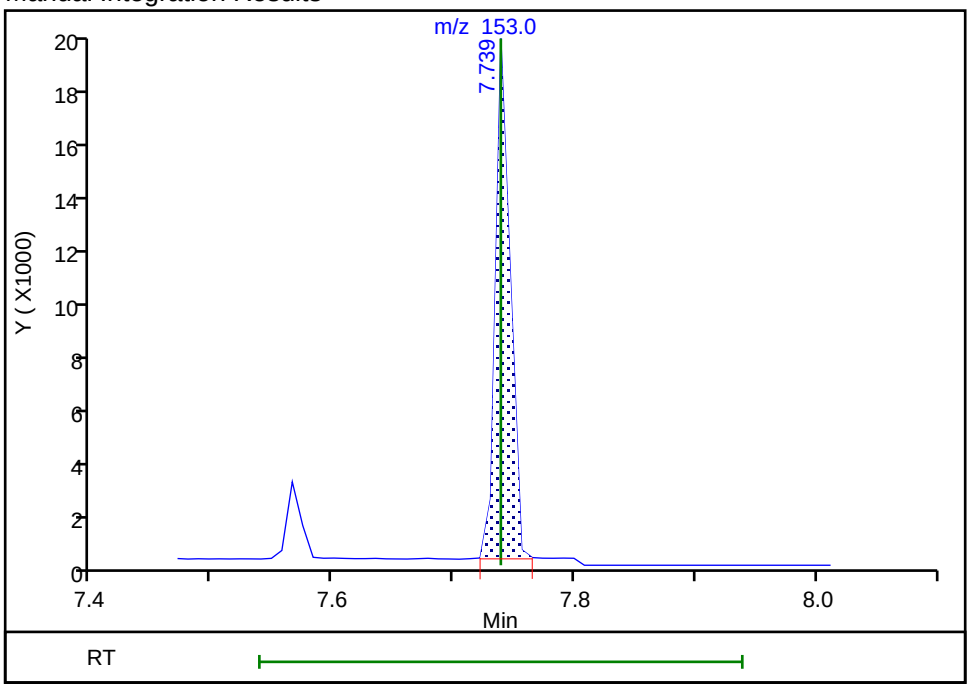
Processing Integration Results

RT: 7.74
Area: 16366
Amount: 304.0823
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 16055
Amount: 295.9817
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:13:25
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

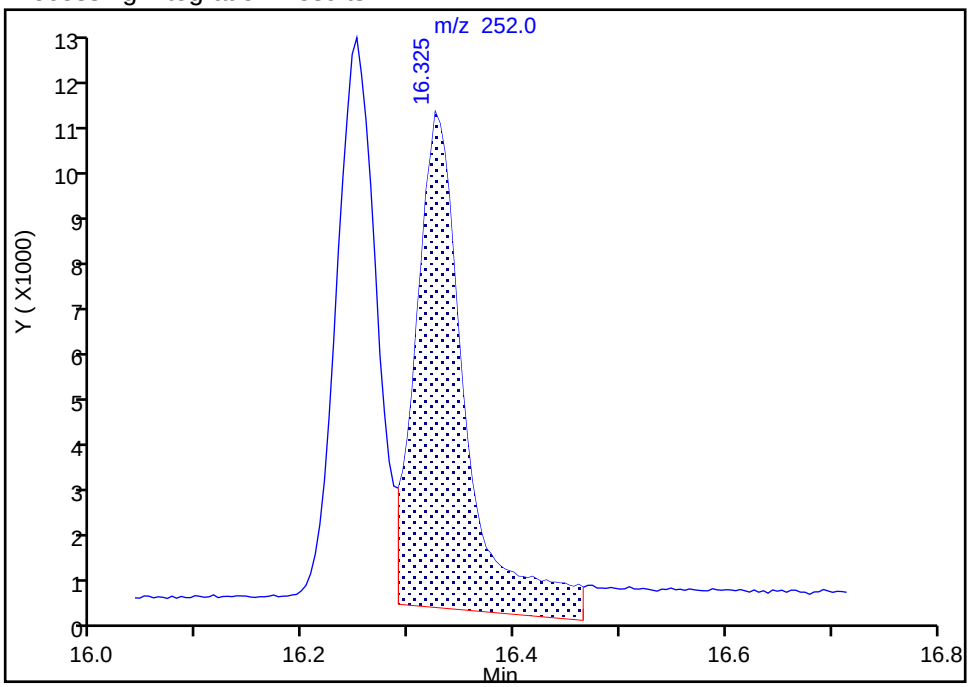
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4403.D
Injection Date: 29-Oct-2018 18:31:30 Instrument ID: SMS_F
Lims ID: STD0300
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

31 Benzo[k]fluoranthene, CAS: 207-08-9

Signal: 1

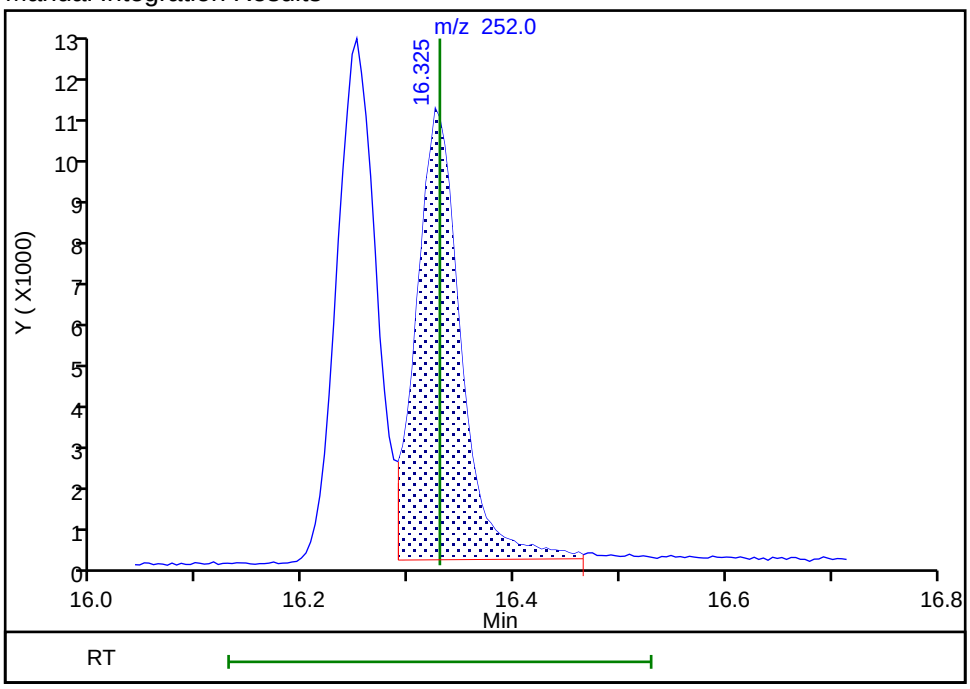
Processing Integration Results

RT: 16.32
Area: 34013
Amount: 341.2154
Amount Units: ng/ml



Manual Integration Results

RT: 16.32
Area: 29499
Amount: 279.7654
Amount Units: ng/ml



Reviewer: wickhamm, 29-Oct-2018 19:13:49
Audit Action: Assigned New Baseline Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4404.D
Lims ID: STD1200
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Oct-2018 19:01:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std1200
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:43 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:55:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	98	33605	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	73455	600.0	600.0	
* 3 Chrysene-d12	240	13.367	13.367	0.000	98	78570	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	39792	1200.0	1135.5	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	97251	1200.0	1141.0	
$ 6 Terphenyl-d14	244	11.203	11.203	0.000	99	126747	1200.0	1168.1	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.551	2.563	-0.012	43	30045	1200.0	1163.2	
10 Naphthalene	128	5.980	5.980	0.000	100	129326	1200.0	1149.2	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	179548	2400.0	2355.2	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	79998	1200.0	1163.6	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	159540	2400.0	2422.1	
14 Acenaphthylene	152	7.566	7.566	0.000	99	104551	1200.0	1204.2	
15 Acenaphthene	153	7.739	7.739	0.000	97	86093	1200.0	1168.2	
16 Dibenzofuran	168	7.915	7.915	0.001	92	129484	1201.2	1164.6	
17 Diethyl phthalate	149	8.109	8.109	0.000	98	157153	2409.6	2449.0	
18 Fluorene	166	8.255	8.254	0.001	95	103673	1200.0	1205.4	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	61347	1200.0	1122.6	
20 Phenanthrene	178	9.223	9.223	0.000	100	172037	1200.0	1156.0	
21 Anthracene	178	9.275	9.275	0.000	1	133735	1200.0	1196.5	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	202164	2400.0	2391.8	
23 Fluoranthene	202	10.632	10.632	0.000	100	187968	1200.0	1188.7	
24 Pyrene	202	10.970	10.969	0.001	99	184722	1200.0	1159.2	
25 Butyl benzyl phthalate	149	10.970	10.987	-0.017	1	1353	2400.0	0	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	42	152521	1200.0	1144.3	
27 Chrysene	228	13.421	13.430	-0.009	95	191863	1200.0	1168.3	
28 Bis(2-ethylhexyl) phthalat	149	12.106	12.097	0.009	1	68082	2400.0	2560.2	
29 Di-n-octyl phthalate	149	15.310	15.306	0.004	1	121239	2400.0	2251.6	
30 Benzo[b]fluoranthene	252	16.246	16.251	-0.005	97	181300	1200.0	1146.6	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	98	201669	1200.0	1299.2	
32 Benzo[a]pyrene	252	17.191	17.186	0.005	95	143629	1200.0	1151.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.507	20.507	0.000	90	174647	1200.0	1091.9	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	83	191031	1200.0	1149.0	
35 Benzo[g,h,i]perylene	276	21.251	21.250	0.001	93	218564	1200.0	1079.3	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	89	66535	1200.0	1141.3	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	100	147296	1200.0	1199.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

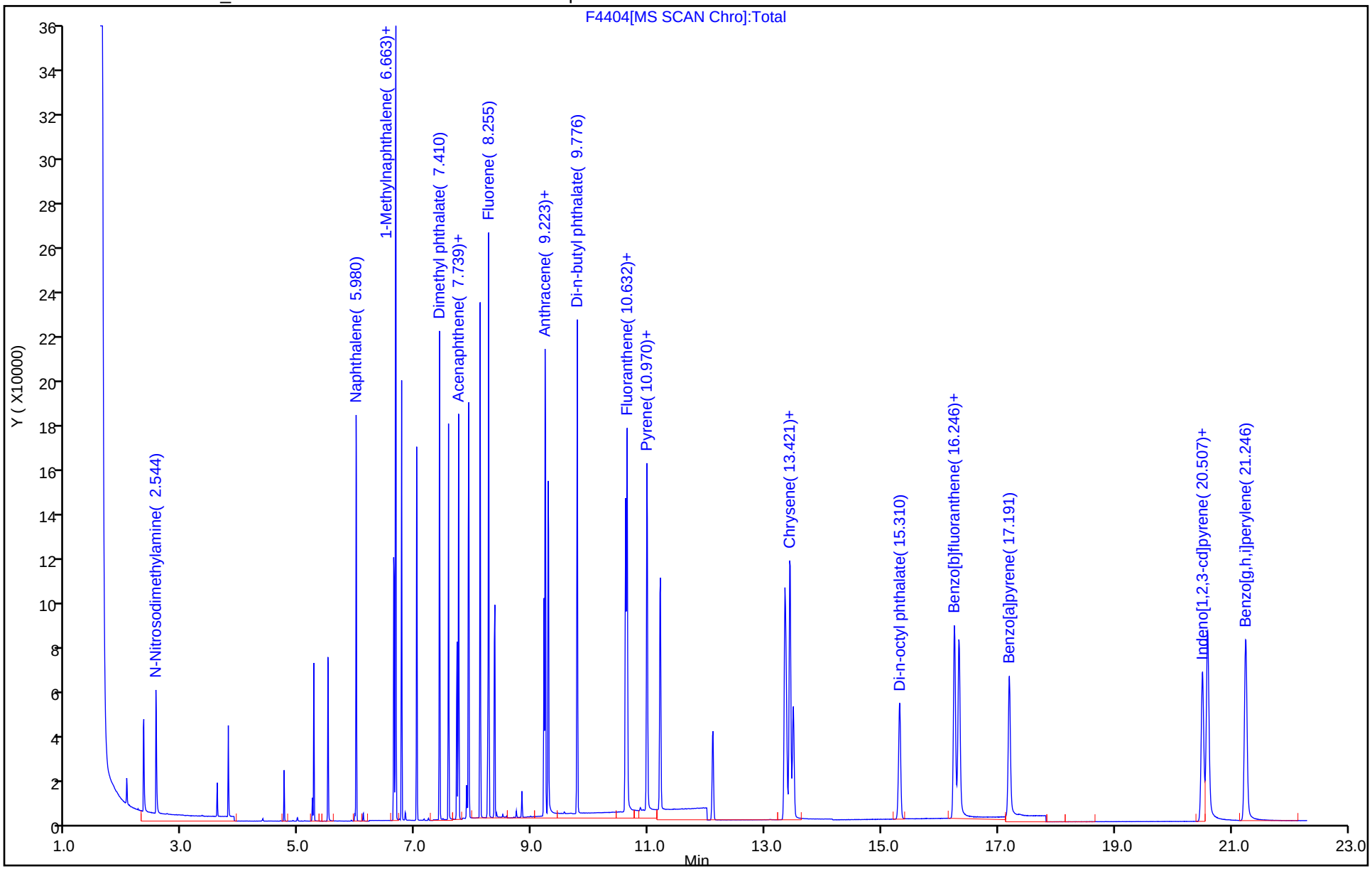
MS-SIMSL 1.2_00075 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4404.D

Injection Date:	29-Oct-2018 19:01:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD1200			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4405.D
Lims ID: STD2500
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 29-Oct-2018 19:31:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std2500
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:45 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 20:07:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	23383	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	51550	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.367	-0.009	47	56197	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	98	66335	2500.0	2720.5	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	161780	2500.0	2728.0	
$ 6 Terphenyl-d14	244	11.194	11.203	-0.009	98	215115	2500.0	2824.9	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.544	2.563	-0.019	44	47383	2500.0	2636.4	
10 Naphthalene	128	5.980	5.980	0.000	100	208192	2500.0	2658.7	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	291162	5000.0	5488.9	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	130622	2500.0	2730.6	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	278989	5000.0	6087.2	
14 Acenaphthylene	152	7.566	7.566	0.000	99	182035	2500.0	3013.2	
15 Acenaphthene	153	7.739	7.739	0.000	97	142141	2500.0	2771.8	
16 Dibenzofuran	168	7.915	7.915	0.001	91	215284	2502.5	2782.8	
17 Diethyl phthalate	149	8.109	8.109	0.000	99	274435	5020.0	6146.1	
18 Fluorene	166	8.254	8.254	0.000	96	176625	2500.0	2951.4	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	91	104402	2500.0	2722.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	284570	2500.0	2724.6	
21 Anthracene	178	9.275	9.275	0.000	1	236321	2500.0	3012.8	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	376147	5000.0	5000.8	
23 Fluoranthene	202	10.632	10.632	0.000	100	323789	2500.0	2917.6	
24 Pyrene	202	10.969	10.969	0.000	99	315592	2500.0	2822.0	
25 Butyl benzyl phthalate	149	10.969	10.987	-0.018	1	2047	5000.0	0	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	38	267604	2500.0	2807.1	
27 Chrysene	228	13.421	13.430	-0.009	94	323973	2500.0	2758.1	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	131365	5000.0	7039.1	
29 Di-n-octyl phthalate	149	15.310	15.306	0.004	1	230150	5000.0	5063.6	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	97	309018	2500.0	2732.5	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	97	338217	2500.0	3046.3	
32 Benzo[a]pyrene	252	17.191	17.186	0.005	95	263293	2500.0	2950.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.502	20.507	-0.005	90	294007	2500.0	2569.8	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	83	319437	2500.0	2686.2	
35 Benzo[g,h,i]perylene	276	21.251	21.250	0.001	93	362369	2500.0	2501.9	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	88	108683	2500.0	2679.3	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	100	250239	2500.0	2904.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

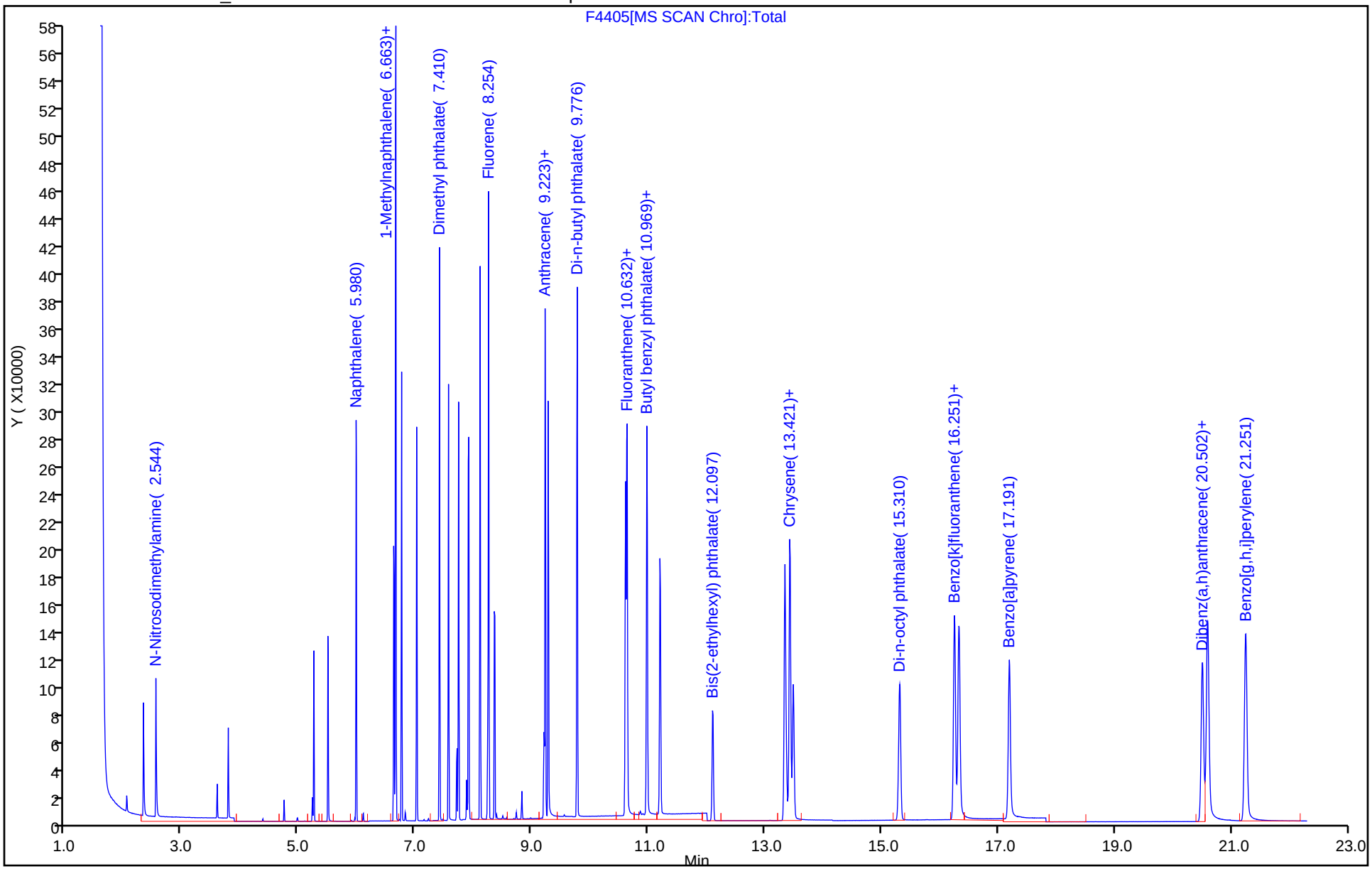
MS-SIMSL 2.5_00074 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4405.D

Injection Date:	29-Oct-2018 19:31:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD2500			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D
Lims ID: STD5000
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 29-Oct-2018 20:00:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std5000
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:48 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:00:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	97	29110	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	60672	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.367	-0.009	32	67799	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	97	154261	5000.0	5081.8	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	351658	5000.0	4763.1	
$ 6 Terphenyl-d14	244	11.194	11.203	-0.009	98	468240	5000.0	5224.5	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.544	2.563	-0.019	42	104151	5000.0	4654.8	
10 Naphthalene	128	5.980	5.980	0.000	100	448120	5000.0	4596.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	635609	10000	9624.9	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	286227	5000.0	4806.2	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	640600	10000	11227	
14 Acenaphthylene	152	7.566	7.566	0.000	99	436620	5000.0	5805.5	
15 Acenaphthene	153	7.739	7.739	0.000	98	313964	5000.0	4918.0	
16 Dibenzofuran	168	7.915	7.915	0.001	91	455166	5005.0	4726.0	
17 Diethyl phthalate	149	8.109	8.109	0.000	100	644109	10040	11587	
18 Fluorene	166	8.255	8.254	0.000	97	379461	5000.0	5093.3	
19 N-Nitrosodiphenylamine	169	8.352	8.361	-0.009	97	225054	5000.0	4985.8	
20 Phenanthrene	178	9.223	9.223	0.000	100	611829	5000.0	4977.2	
21 Anthracene	178	9.275	9.275	0.000	1	549841	5000.0	5956.0	
22 Di-n-butyl phthalate	149	9.776	9.776	0.000	1	974337	10000	8549.0	
23 Fluoranthene	202	10.632	10.632	0.000	100	692368	5000.0	5300.9	
24 Pyrene	202	10.970	10.969	0.001	99	694454	5000.0	5276.1	
25 Butyl benzyl phthalate	149	10.970	10.987	-0.017	1	4451	10000	0	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	37	612573	5000.0	5326.1	
27 Chrysene	228	13.421	13.430	-0.009	95	693366	5000.0	4892.7	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	370566	10000	16871	
29 Di-n-octyl phthalate	149	15.310	15.306	0.004	1	692105	10000	9993.0	
30 Benzo[b]fluoranthene	252	16.251	16.251	0.000	97	668265	5000.0	4897.9	
31 Benzo[k]fluoranthene	252	16.325	16.329	-0.004	97	746517	5000.0	5573.2	
32 Benzo[a]pyrene	252	17.187	17.186	0.001	94	608628	5000.0	5652.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.503	20.507	-0.005	90	633911	5000.0	4592.7	
34 Dibenz(a,h)anthracene	278	20.594	20.599	-0.005	83	696717	5000.0	4856.3	
35 Benzo[g,h,i]perylene	276	21.246	21.250	-0.004	93	755750	5000.0	4325.0	
$ 53 2-methylnaphthalene-d10	152	6.633	6.632	0.001	88	236976	5000.0	4692.7	
$ 54 Fluoranthene-d10	212	10.606	10.606	0.000	100	547857	5000.0	5403.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

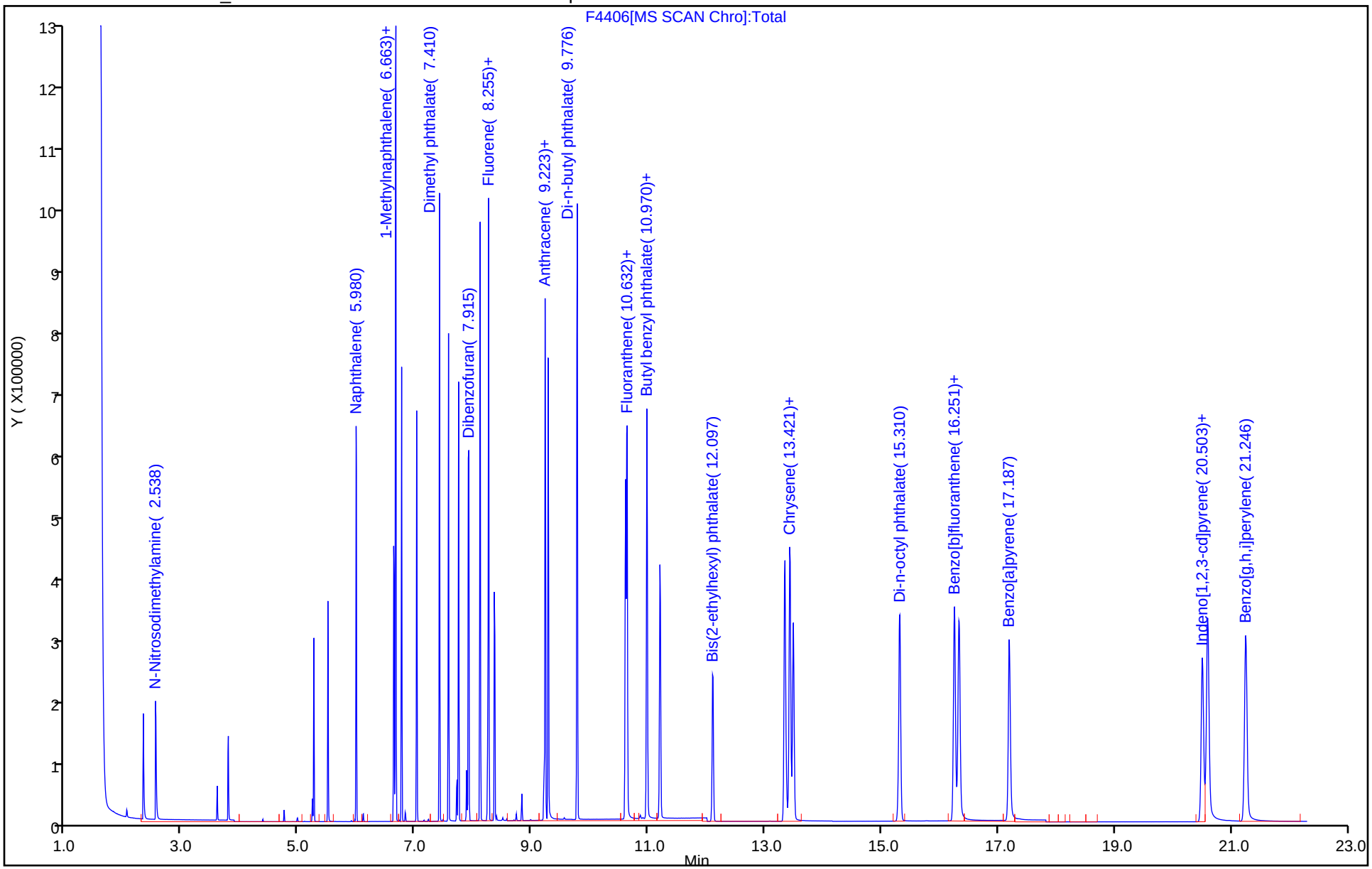
MS-SIMSL 5_00076 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Injection Date:	29-Oct-2018 20:00:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD5000			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-435404/12 Calibration Date: 10/29/2018 20:30

Instrument ID: SMS_F Calib Start Date: 10/29/2018 16:02

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/29/2018 20:00

Lab File ID: F4407.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	2.009	1.988	0.7000	594000	600000	-1.0	20.0
2-Methylnaphthalene	Ave	1.361	1.341	0.4000	591000	600000	-1.5	20.0
1-Methylnaphthalene	Ave	1.227	1.282	0.0500	626000	600000	4.4	20.0
Acenaphthylene	Ave	1.550	1.482	0.9000	573000	600000	-4.4	20.0
Acenaphthene	Ave	1.316	1.296	0.9000	591000	600000	-1.5	20.0
Fluorene	Ave	1.536	1.568	0.9000	613000	600000	2.1	20.0
Phenanthrene	Ave	1.216	1.208	0.7000	596000	600000	-0.6	20.0
Anthracene	Ave	0.9130	0.8833	0.7000	580000	600000	-3.3	20.0
Fluoranthene	Ave	1.292	1.193	0.6000	554000	600000	-7.6	20.0
Pyrene	Ave	1.302	1.239	0.6000	571000	600000	-4.8	20.0
Benzo[a]anthracene	Ave	1.018	0.9412	0.8000	555000	600000	-7.5	20.0
Chrysene	Ave	1.254	1.330	0.7000	636000	600000	6.0	20.0
Benzo[b]fluoranthene	Ave	1.207	1.111	0.7000	552000	600000	-8.0	20.0
Benzo[k]fluoranthene	Ave	1.185	1.197	0.7000	606000	600000	1.0	20.0
Benzo[a]pyrene	Ave	0.9529	0.8365	0.7000	527000	600000	-12.2	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.221	1.061	0.5000	521000	600000	-13.2	20.0
Dibenz(a,h)anthracene	Ave	1.270	1.190	0.4000	562000	600000	-6.3	20.0
Benzo[g,h,i]perylene	Ave	1.546	1.388	0.5000	539000	600000	-10.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4407.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 29-Oct-2018 20:30:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: icv
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:48 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 21:00:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.713	0.000	98	24945	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.206	0.000	97	53849	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.367	-0.009	99	53312	600.0	600.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.551	2.563	-0.012	38	11591	600.0	604.5	
10 Naphthalene	128	5.980	5.980	0.000	100	49602	600.0	593.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	33457	600.0	591.2	
12 1-Methylnaphthalene	142	6.761	6.761	0.000	97	31971	600.0	626.5	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	28341	600.0	579.6	
14 Acenaphthylene	152	7.566	7.566	0.000	99	36958	600.0	573.5	
15 Acenaphthene	153	7.739	7.739	0.000	97	32331	600.0	591.0	
16 Dibenzofuran	168	7.915	7.915	0.001	92	49912	600.0	604.8	
17 Diethyl phthalate	149	8.109	8.109	0.000	99	26909	600.0	564.9	
18 Fluorene	166	8.255	8.254	0.001	96	39120	600.0	612.8	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	23887	600.0	596.2	
20 Phenanthrene	178	9.223	9.223	0.000	100	65050	600.0	596.2	
21 Anthracene	178	9.275	9.275	0.000	1	47562	600.0	580.5	
22 Di-n-butyl phthalate	149	9.777	9.776	0.000	1	30011	600.0	594.4	
23 Fluoranthene	202	10.632	10.632	0.000	100	64262	600.0	554.3	
24 Pyrene	202	10.970	10.969	0.001	99	66709	600.0	571.0	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.340	13.340	0.000	51	50177	600.0	554.8	
27 Chrysene	228	13.421	13.430	-0.009	95	70890	600.0	636.2	
28 Bis(2-ethylhexyl) phthalat	149	12.097	12.097	0.000	1	9620	600.0	493.5	
29 Di-n-octyl phthalate	149	15.302	15.306	-0.004	1	17200	600.0	541.1	
30 Benzo[b]fluoranthene	252	16.246	16.251	-0.005	99	59221	600.0	552.0	
31 Benzo[k]fluoranthene	252	16.321	16.329	-0.008	98	63832	600.0	606.0	
32 Benzo[a]pyrene	252	17.191	17.186	0.005	97	44594	600.0	526.7	
33 Indeno[1,2,3-cd]pyrene	276	20.503	20.507	-0.004	91	56553	600.0	521.1	
34 Dibenz(a,h)anthracene	278	20.590	20.599	-0.009	84	63428	600.0	562.2	
35 Benzo[g,h,i]perylene	276	21.246	21.250	-0.004	94	74019	600.0	538.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

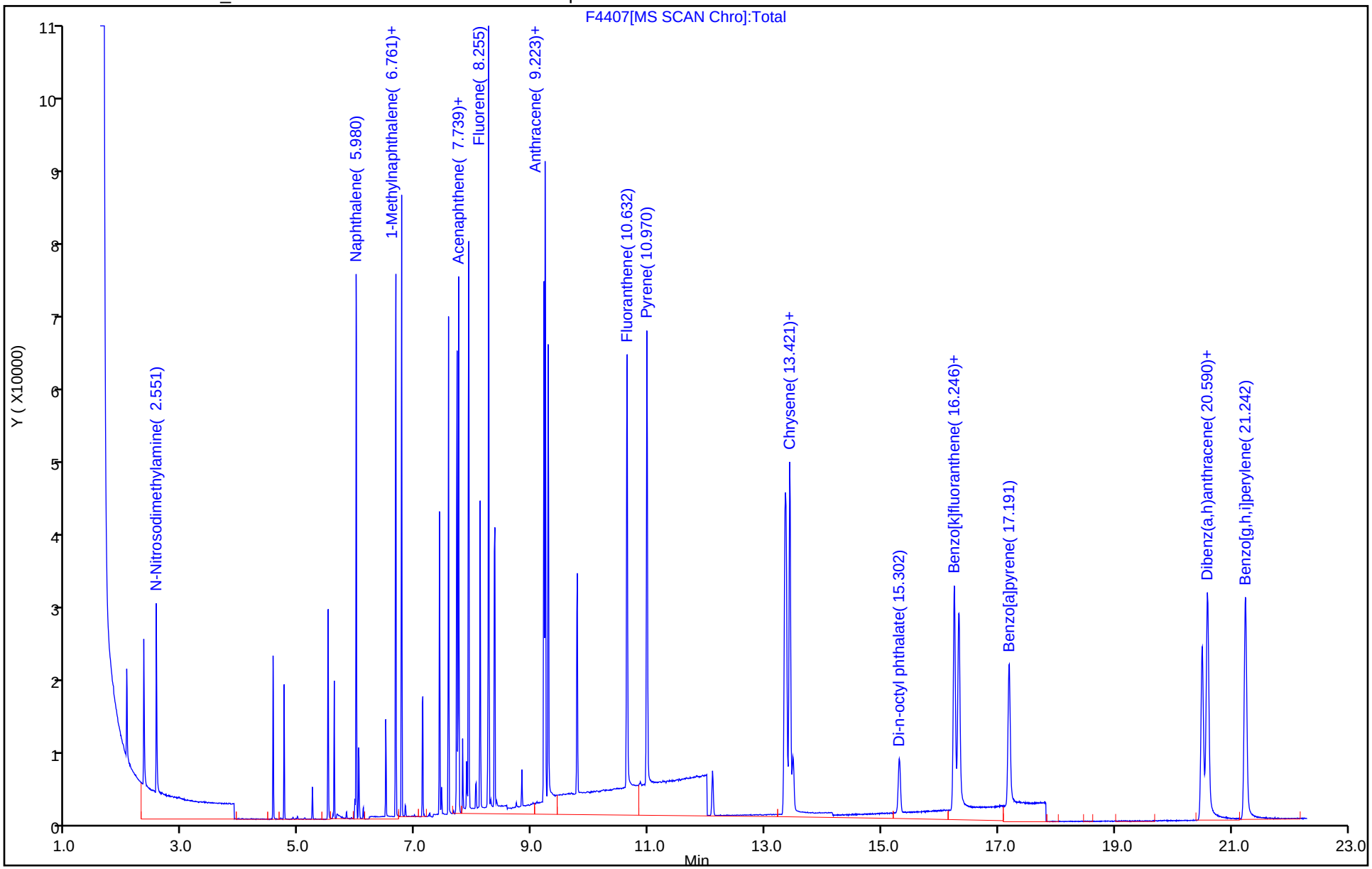
MS-SIM SSV2_00004 Amount Added: 200.00 Units: uL

Report Date: 29-Oct-2018 21:58:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4407.D

Injection Date:	29-Oct-2018 20:30:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	icv			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-435950/3 Calibration Date: 11/01/2018 18:29

Instrument ID: SMS_F Calib Start Date: 10/29/2018 16:02

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/29/2018 20:00

Lab File ID: F4474.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	2.009	2.014	0.7000	601000	600000	0.2	20.0
2-Methylnaphthalene	Ave	1.361	1.359	0.4000	1200000	1200000	-0.2	20.0
1-Methylnaphthalene	Ave	1.227	1.210	0.0500	591000	600000	-1.5	20.0
Acenaphthylene	Ave	1.550	1.593	0.9000	616000	600000	2.7	20.0
Acenaphthene	Ave	1.316	1.303	0.9000	594000	600000	-1.0	20.0
Fluorene	Ave	1.536	1.558	0.9000	609000	600000	1.5	20.0
Phenanthrene	Ave	1.216	1.223	0.7000	603000	600000	0.6	20.0
Anthracene	Ave	0.9130	0.9306	0.7000	612000	600000	1.9	20.0
Fluoranthene	Ave	1.292	1.279	0.6000	594000	600000	-1.0	20.0
Pyrene	Ave	1.302	1.236	0.6000	570000	600000	-5.0	20.0
Benzo[a]anthracene	Ave	1.018	0.9645	0.8000	569000	600000	-5.2	20.0
Chrysene	Ave	1.254	1.292	0.7000	618000	600000	3.0	20.0
Benzo[b]fluoranthene	Ave	1.207	1.106	0.7000	550000	600000	-8.4	20.0
Benzo[k]fluoranthene	Ave	1.185	1.167	0.7000	591000	600000	-1.5	20.0
Benzo[a]pyrene	Ave	0.9529	0.9335	0.7000	588000	600000	-2.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.221	1.062	0.5000	522000	600000	-13.1	20.0
Dibenz(a,h)anthracene	Ave	1.270	1.135	0.4000	536000	600000	-10.6	20.0
Benzo[g,h,i]perylene	Ave	1.546	1.366	0.5000	530000	600000	-11.7	20.0
Nitrobenzene-d5	Ave	0.6257	0.6481		622000	600000	3.6	20.0
2-methylnaphthalene-d10	Ave	1.041	1.012		583000	600000	-2.8	35.0
2-Fluorobiphenyl	Ave	1.522	1.514		597000	600000	-0.5	20.0
Fluoranthene-d10	Ave	1.003	0.9891		592000	600000	-1.4	35.0
Terphenyl-d14	Ave	0.8863	0.8390		568000	600000	-5.3	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4474.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 01-Nov-2018 18:29:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 01-Nov-2018 18:55:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.721	7.721	0.000	93	24170	600.0	600.0	M
* 2 Phenanthrene-d10	188	9.215	9.215	0.000	97	53542	600.0	600.0	
* 3 Chrysene-d12	240	13.376	13.376	0.000	98	51365	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.256	5.256	0.000	99	15665	600.0	621.5	
$ 5 2-Fluorobiphenyl	172	7.026	7.026	0.000	100	36585	600.0	596.8	
$ 6 Terphenyl-d14	244	11.212	11.212	0.000	100	44919	600.0	567.9	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.531	2.531	0.000	40	11935	600.0	642.4	
10 Naphthalene	128	5.985	5.985	0.000	100	48684	600.0	601.5	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	95	65676	1200.0	1197.8	
12 1-Methylnaphthalene	142	6.769	6.769	0.000	93	29234	600.0	591.2	
13 Dimethyl phthalate	163	7.419	7.419	0.000	1	66030	1200.0	1393.8	
14 Acenaphthylene	152	7.575	7.575	0.000	98	38491	600.0	616.4	
15 Acenaphthene	153	7.747	7.747	0.000	99	31495	600.0	594.2	
16 Dibenzofuran	168	7.915	7.915	0.000	95	47591	600.6	595.1	
17 Diethyl phthalate	149	8.119	8.119	0.000	96	72560	1204.8	1572.1	
18 Fluorene	166	8.264	8.264	0.000	99	37663	600.0	608.9	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	100	24915	600.0	625.5	
20 Phenanthrene	178	9.232	9.232	0.000	100	65456	600.0	603.4	
21 Anthracene	178	9.284	9.284	0.000	1	49825	600.0	611.6	
22 Di-n-butyl phthalate	149	9.785	9.785	0.000	1	80379	1200.0	1445.3	
23 Fluoranthene	202	10.641	10.641	0.000	100	68485	600.0	594.2	
24 Pyrene	202	10.987	10.987	0.000	100	66189	600.0	569.8	
25 Butyl benzyl phthalate	149	10.987	10.987	0.000	1	620	1200.0	0	
26 Benzo[a]anthracene	228	13.349	13.349	0.000	42	49541	600.0	568.6	
27 Chrysene	228	13.439	13.439	0.000	95	66359	600.0	618.1	
28 Bis(2-ethylhexyl) phthalat	149	12.115	12.115	0.000	1	24637	1200.0	1271.0	
29 Di-n-octyl phthalate	149	15.319	15.319	0.000	1	41316	1200.0	1259.2	
30 Benzo[b]fluoranthene	252	16.264	16.264	0.000	98	56824	600.0	549.7	
31 Benzo[k]fluoranthene	252	16.342	16.342	0.000	98	59957	600.0	590.8	
32 Benzo[a]pyrene	252	17.204	17.204	0.000	96	47947	600.0	587.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.520	20.520	0.000	91	54539	600.0	521.6	
34 Dibenz(a,h)anthracene	278	20.612	20.612	0.000	85	58298	600.0	536.4	
35 Benzo[g,h,i]perylene	276	21.264	21.264	0.000	95	70150	600.0	529.9	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.000	99	24456	600.0	583.3	
$ 54 Fluoranthene-d10	212	10.615	10.615	0.000	100	52959	600.0	591.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

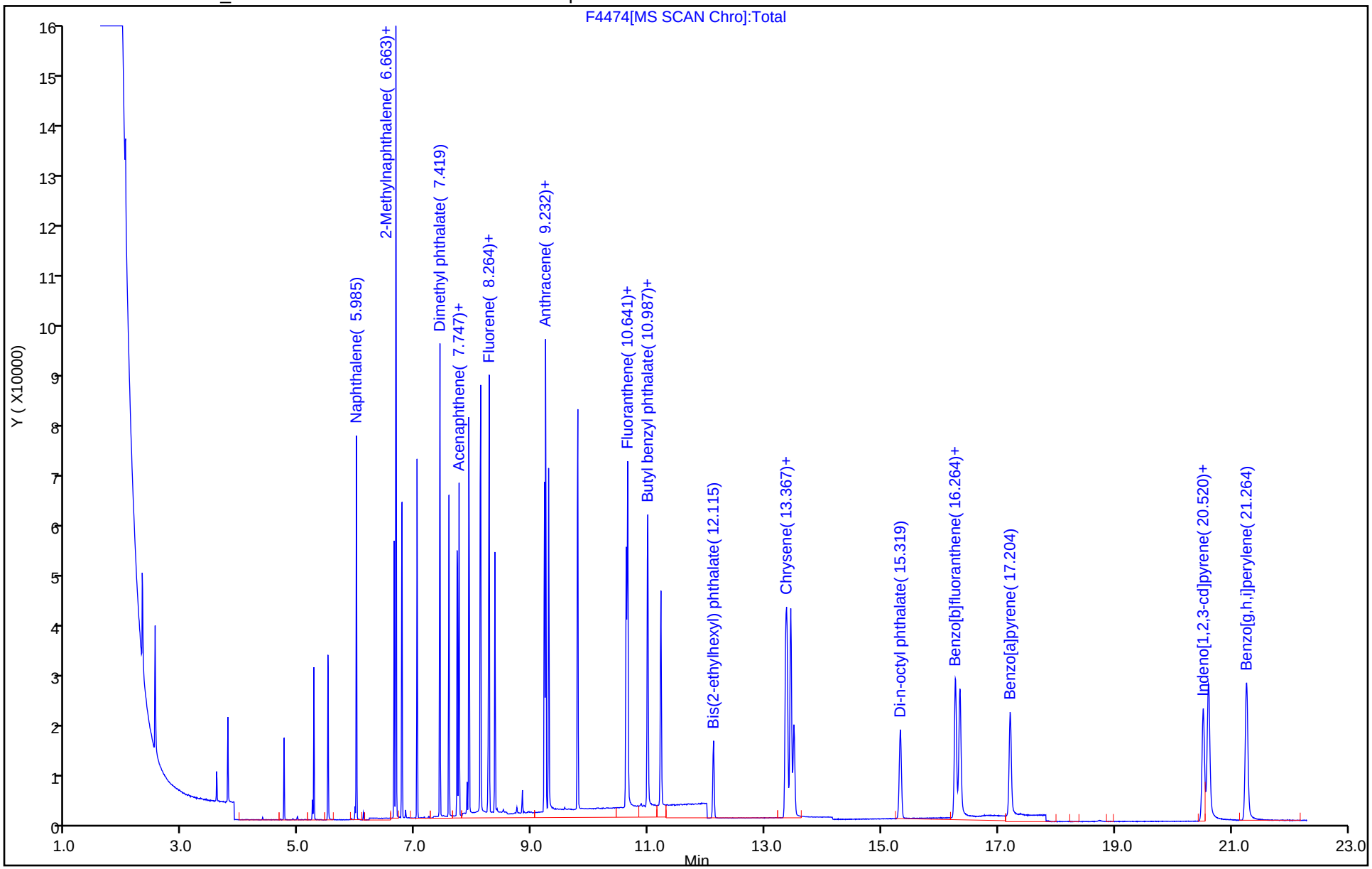
MS-SIM CCV_00080 Amount Added: 200.00 Units: uL

Report Date: 02-Nov-2018 17:19:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4474.D

Injection Date:	01-Nov-2018 18:29:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	ccv			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

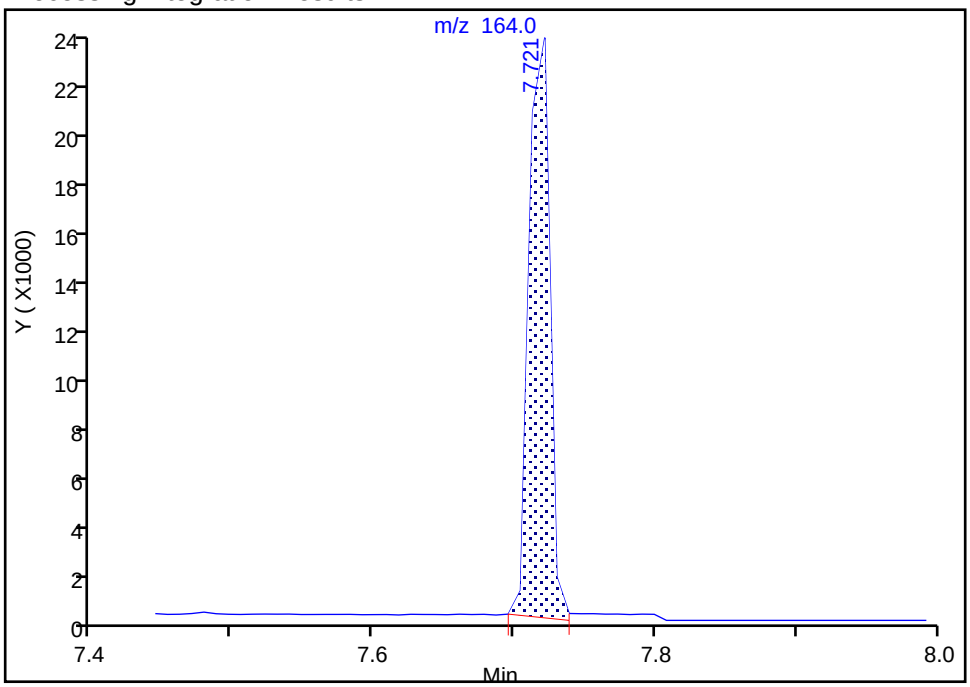
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4474.D
Injection Date: 01-Nov-2018 18:29:30 Instrument ID: SMS_F
Lims ID: ccv
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

* 1 Acenaphthene-d10, CAS: 15067-26-2

Signal: 1

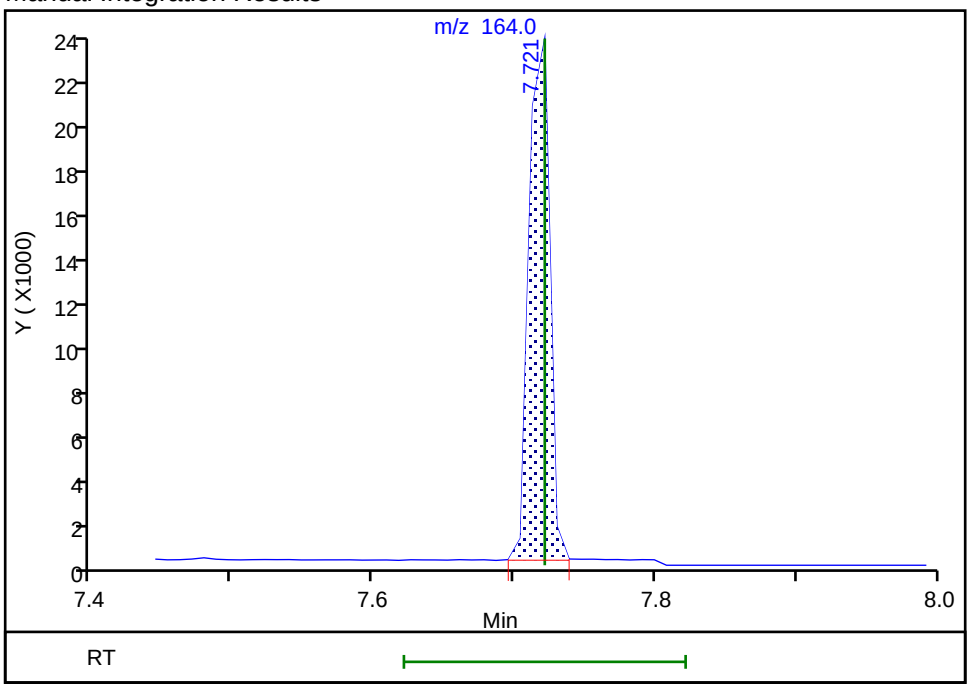
Processing Integration Results

RT: 7.72
Area: 24481
Amount: 600.0000
Amount Units: ng/ml



Manual Integration Results

RT: 7.72
Area: 24170
Amount: 600.0000
Amount Units: ng/ml



Reviewer: wickhamm, 01-Nov-2018 18:55:14
Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVC 280-435950/25 Calibration Date: 11/02/2018 05:24

Instrument ID: SMS_F Calib Start Date: 10/29/2018 16:02

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 10/29/2018 20:00

Lab File ID: F4496.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	2.009	2.093	0.7000	625000	600000	4.2	50.0
2-Methylnaphthalene	Ave	1.361	1.409	0.4000	1240000	1200000	3.5	50.0
1-Methylnaphthalene	Ave	1.227	1.259	0.0500	615000	600000	2.6	50.0
Acenaphthylene	Ave	1.550	1.440	0.9000	557000	600000	-7.1	50.0
Acenaphthene	Ave	1.316	1.291	0.9000	589000	600000	-1.9	50.0
Fluorene	Ave	1.536	1.499	0.9000	586000	600000	-2.4	50.0
Phenanthrene	Ave	1.216	1.242	0.7000	613000	600000	2.1	50.0
Anthracene	Ave	0.9130	0.8292	0.7000	545000	600000	-9.2	50.0
Fluoranthene	Ave	1.292	1.236	0.6000	574000	600000	-4.3	50.0
Pyrene	Ave	1.302	1.147	0.6000	529000	600000	-11.8	50.0
Benzo[a]anthracene	Ave	1.018	0.7952*	0.8000	469000	600000	-21.9	50.0
Chrysene	Ave	1.254	1.318	0.7000	630000	600000	5.1	50.0
Benzo[b]fluoranthene	Ave	1.207	0.9256	0.7000	460000	600000	-23.3	50.0
Benzo[k]fluoranthene	Ave	1.185	1.110	0.7000	562000	600000	-6.4	50.0
Benzo[a]pyrene	Ave	0.9529	0.5911*	0.7000	372000	600000	-38.0	50.0
Indeno[1,2,3-cd]pyrene	Ave	1.221	0.7397	0.5000	363000	600000	-39.4	50.0
Dibenz(a,h)anthracene	Ave	1.270	0.8811	0.4000	416000	600000	-30.6	50.0
Benzo[g,h,i]perylene	Ave	1.546	1.084	0.5000	421000	600000	-29.9	50.0
Nitrobenzene-d5	Ave	0.6257	0.5867		563000	600000	-6.2	50.0
2-methylnaphthalene-d10	Ave	1.041	1.028		593000	600000	-1.2	50.0
2-Fluorobiphenyl	Ave	1.522	1.562		616000	600000	2.7	50.0
Fluoranthene-d10	Ave	1.003	0.9152		548000	600000	-8.7	50.0
Terphenyl-d14	Ave	0.8863	0.8129		550000	600000	-8.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4496.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 02-Nov-2018 05:24:30 ALS Bottle#: 24 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:20:37 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 14:42:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.704	7.721	-0.017	79	25141	600.0	600.0	
* 2 Phenanthrene-d10	188	9.197	9.215	-0.018	100	53342	600.0	600.0	
* 3 Chrysene-d12	240	13.349	13.376	-0.027	96	48919	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.251	5.256	-0.005	100	14749	600.0	562.6	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	99	39276	600.0	616.0	
$ 6 Terphenyl-d14	244	11.185	11.212	-0.027	99	43359	600.0	550.3	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.531	2.531	0.000	45	11742	600.0	607.6	
10 Naphthalene	128	5.980	5.985	-0.005	100	52616	600.0	624.9	
11 2-Methylnaphthalene	142	6.655	6.663	-0.008	96	70848	1200.0	1242.2	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	93	31655	600.0	615.5	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	55851	1200.0	1133.4	a
14 Acenaphthylene	152	7.566	7.575	-0.008	98	36191	600.0	557.2	
15 Acenaphthene	153	7.739	7.747	-0.008	100	32467	600.0	588.9	
16 Dibenzofuran	168	7.905	7.915	-0.010	94	49703	600.6	597.5	
17 Diethyl phthalate	149	8.099	8.119	-0.020	95	57499	1204.8	1197.7	
18 Fluorene	166	8.254	8.264	-0.010	100	37680	600.0	585.6	
19 N-Nitrosodiphenylamine	169	8.351	8.361	-0.010	100	20399	600.0	514.0	
20 Phenanthrene	178	9.223	9.232	-0.009	100	66230	600.0	612.8	
21 Anthracene	178	9.275	9.284	-0.009	1	44231	600.0	545.0	
22 Di-n-butyl phthalate	149	9.768	9.785	-0.017	1	54315	1200.0	1029.2	
23 Fluoranthene	202	10.624	10.641	-0.017	100	65950	600.0	574.3	
24 Pyrene	202	10.961	10.987	-0.026	99	61208	600.0	528.9	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.322	13.349	-0.027	45	38902	600.0	468.8	
27 Chrysene	228	13.412	13.439	-0.027	95	64455	600.0	630.4	
28 Bis(2-ethylhexyl) phthalat	149	12.088	12.115	-0.027	1	15380	1200.0	796.4	
29 Di-n-octyl phthalate	149	15.284	15.319	-0.035	1	27611	1200.0	909.8	
30 Benzo[b]fluoranthene	252	16.229	16.264	-0.035	98	45280	600.0	460.0	
31 Benzo[k]fluoranthene	252	16.307	16.342	-0.035	98	54303	600.0	561.9	
32 Benzo[a]pyrene	252	17.169	17.204	-0.035	97	28915	600.0	372.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.480	20.520	-0.040	92	36184	600.0	363.3	
34 Dibenz(a,h)anthracene	278	20.568	20.612	-0.044	86	43100	600.0	416.4	
35 Benzo[g,h,i]perylene	276	21.224	21.264	-0.040	95	53019	600.0	420.5	
$ 53 2-methylnaphthalene-d10	152	6.625	6.633	-0.008	98	25852	600.0	592.8	
$ 54 Fluoranthene-d10	212	10.598	10.615	-0.017	100	48818	600.0	547.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

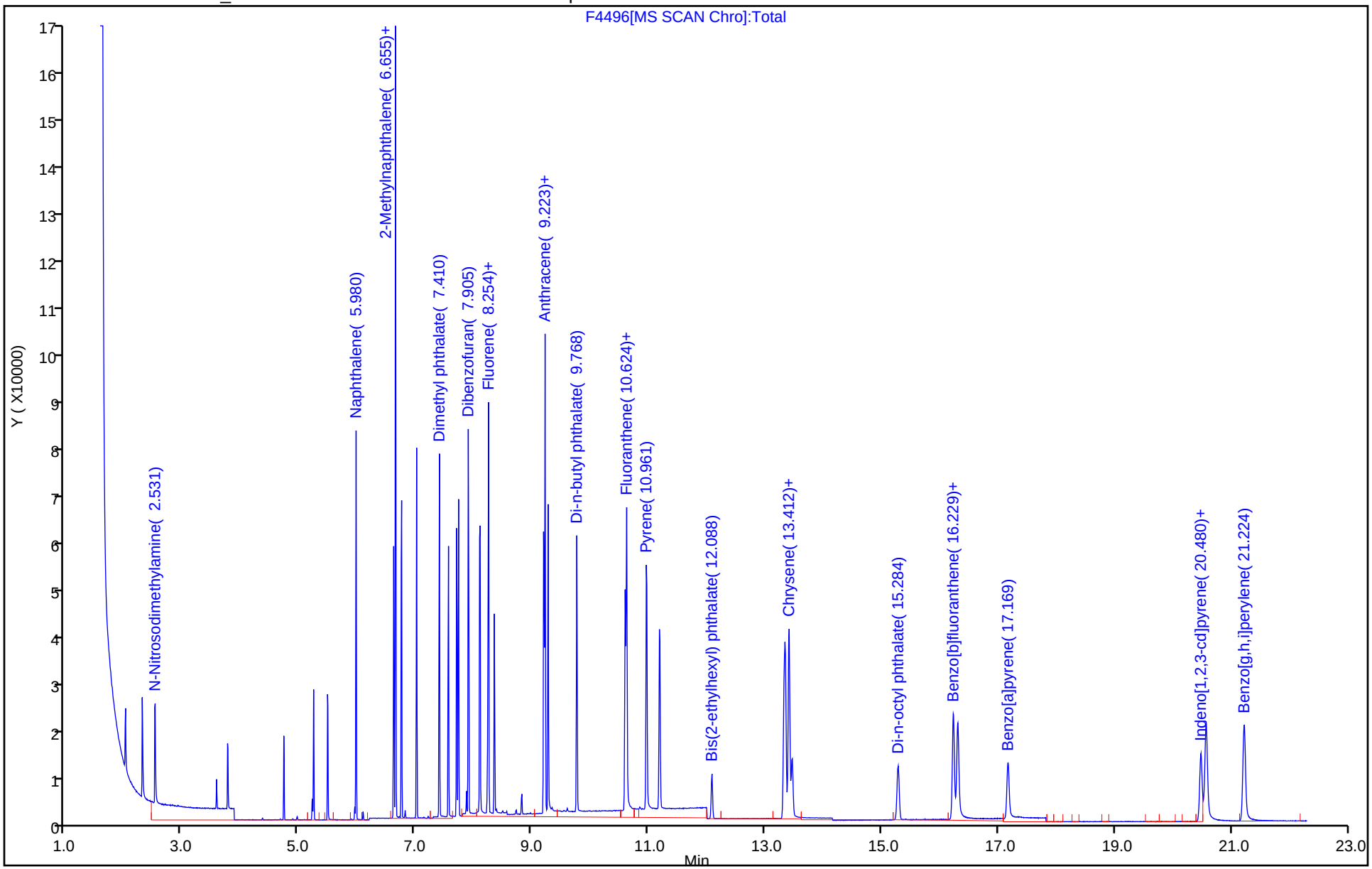
MS-SIM CCV_00080 Amount Added: 200.00 Units: uL

Report Date: 02-Nov-2018 17:20:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4496.D

Injection Date:	02-Nov-2018 05:24:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	ccvc			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 29-Oct-2018 15:45:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 29-Oct-2018 21:58:20 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK003

First Level Reviewer: wickhamm Date: 29-Oct-2018 18:56:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
38 Pentachlorophenol_T	266	3.885	3.885	0.000	80	328371	NR	NR	
39 DFTPP									
40 Benzidine_T	184	4.977	4.977	0.000	96	2499541	NR	NR	
41 4,4'-DDE	246	4.149	4.149	0.000	42	7831	NR	NR	
42 4,4'-DDD	235	5.415	5.415	0.000	62	12474	NR	NR	a
43 4,4'-DDT	235	5.642	5.642	0.000	96	1044699	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

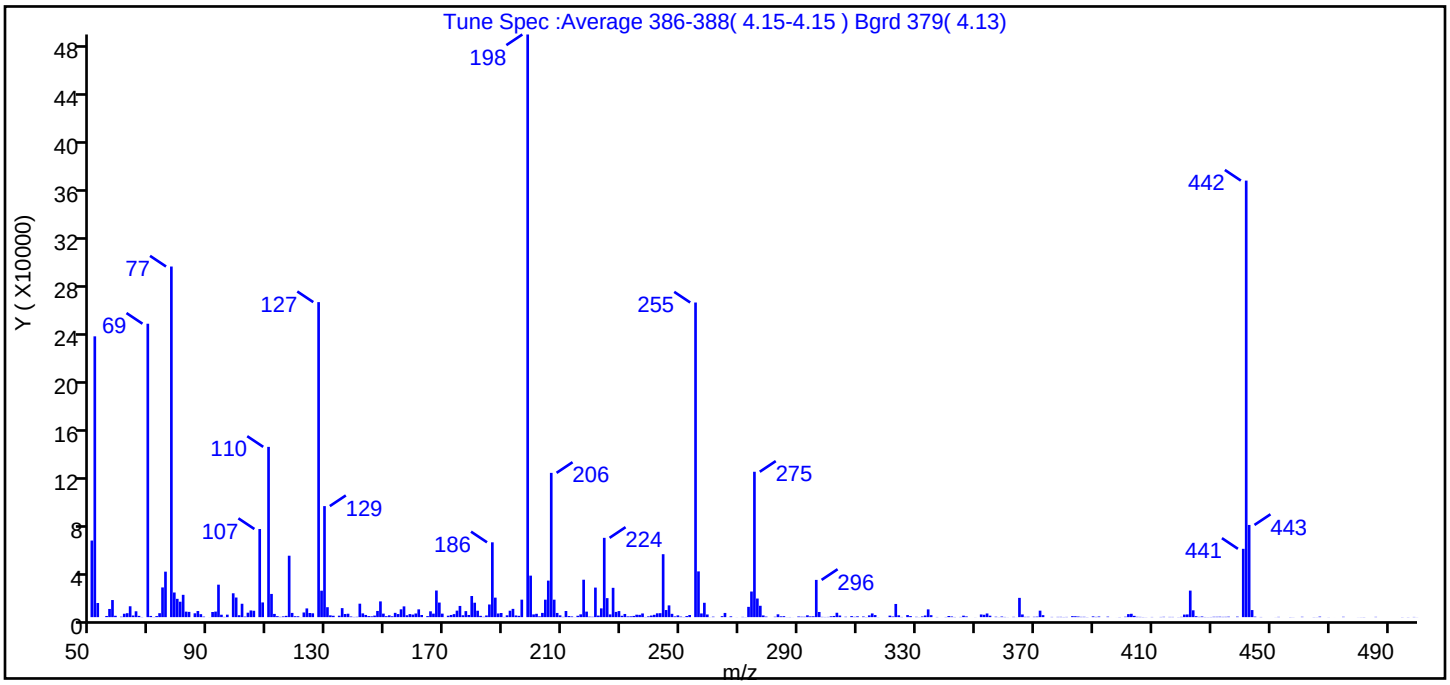
MS-DFTPP_00047 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

39 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	48.2
68	<2% of mass 69	0.0 (0.0)
69	Present	50.4
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	54.1
197	<1% of mass 198	0.0
199	5-9% of mass 198	7.1
275	10-30% of mass 198	25.0
365	>1% of mass 198	3.3
441	Present but less than mass 443	11.7 (74.1)
442	>40% of mass 198	74.9
443	17-23% of mass 442	15.8 (21.1)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 15:45:30
Spectrum: Tune Spec :Average 386-388(4.15-4.15) Bgrd 379(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	63336	154.00	2550	248.00	602	361.00	56
51.00	232192	155.00	6473	249.00	1470	363.00	261
52.00	11685	156.00	8905	250.00	434	364.00	35
55.00	958	157.00	1569	251.00	132	365.00	15938
56.00	6769	158.00	2527	252.00	894	366.00	2232
57.00	14139	159.00	2126	253.00	1778	367.00	247
58.00	1137	160.00	3009	255.00	260160	368.00	304
60.00	368	161.00	6442	256.00	37832	370.00	306
61.00	2801	162.00	1769	257.00	3075	371.00	395
62.00	3263	164.00	844	258.00	11876	372.00	5362
63.00	9000	165.00	4819	259.00	2194	373.00	1635
64.00	1342	166.00	2896	260.00	48	376.00	191
65.00	4853	167.00	22016	261.00	391	378.00	214
66.00	1052	168.00	12056	264.00	814	379.00	239
67.00	129	169.00	2910	265.00	3479	380.00	132
69.00	242624	170.00	34	266.00	39	381.00	189
70.00	1003	171.00	1194	267.00	661	383.00	840
71.00	112	172.00	1796	269.00	45	384.00	752
72.00	875	173.00	2498	271.00	231	385.00	521
73.00	3276	174.00	5371	272.00	92	386.00	245
74.00	24576	175.00	9260	273.00	8499	387.00	272
75.00	37608	176.00	1547	274.00	21184	388.00	103
77.00	289920	177.00	4987	275.00	120208	390.00	629
78.00	20376	178.00	1798	276.00	15389	391.00	209
79.00	15127	179.00	17472	277.00	9398	392.00	532
80.00	12746	180.00	11923	278.00	1402	393.00	3
81.00	18456	181.00	5305	279.00	443	395.00	432
82.00	4553	182.00	1093	282.00	343	396.00	9
83.00	4352	183.00	244	283.00	2338	398.00	19
85.00	3173	184.00	1380	284.00	677	399.00	123
86.00	5067	185.00	10470	285.00	808	401.00	360
87.00	2466	186.00	61872	286.00	75	402.00	2491
88.00	436	187.00	16130	287.00	135	403.00	2782

Report Date: 29-Oct-2018 21:58:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 15:45:30
Spectrum: Tune Spec :Average 386-388(4.15-4.15) Bgrd 379(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
90.00	43	188.00	3025	288.00	26	404.00	1056
91.00	4254	189.00	3425	290.00	539	405.00	279
92.00	4594	190.00	153	291.00	354	406.00	204
93.00	26848	191.00	1512	292.00	320	407.00	125
94.00	1991	192.00	5323	293.00	1537	408.00	69
95.00	203	193.00	6843	294.00	607	410.00	160
96.00	2057	194.00	1386	295.00	674	413.00	169
98.00	19736	195.00	1082	296.00	30800	414.00	274
99.00	16224	196.00	14476	297.00	4266	416.00	195
100.00	1593	198.00	481792	298.00	223	417.00	189
101.00	11069	199.00	34320	299.00	154	419.00	100
102.00	466	200.00	2272	300.00	202	420.00	239
103.00	3671	201.00	2780	301.00	701	421.00	2125
104.00	5535	202.00	645	302.00	984	422.00	2237
105.00	5269	203.00	3511	303.00	3630	423.00	21944
107.00	72872	204.00	14443	304.00	1342	424.00	5644
108.00	12162	205.00	30208	305.00	12	425.00	767
110.00	140800	206.00	119304	306.00	329	426.00	238
111.00	19192	207.00	14443	308.00	855	427.00	542
112.00	2680	208.00	3478	309.00	249	428.00	142
113.00	815	209.00	1498	310.00	681	429.00	101
114.00	234	210.00	222	312.00	534	430.00	141
115.00	621	211.00	5081	313.00	121	431.00	304
116.00	1067	212.00	888	314.00	1459	432.00	302
117.00	50800	213.00	570	315.00	3073	433.00	360
118.00	3505	214.00	59	316.00	1702	434.00	237
119.00	746	215.00	1138	317.00	85	435.00	269
120.00	718	216.00	2314	319.00	2	436.00	398
121.00	46	217.00	30952	320.00	18	438.00	10
122.00	3857	218.00	4575	321.00	1237	439.00	437
123.00	7219	219.00	396	322.00	527	441.00	56496
124.00	3426	220.00	309	323.00	10900	442.00	360960
125.00	3187	221.00	24440	324.00	1498	443.00	76232
127.00	260480	222.00	1279	325.00	167	444.00	5850

Report Date: 29-Oct-2018 21:58:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 29-Oct-2018 15:45:30
Spectrum: Tune Spec :Average 386-388(4.15-4.15) Bgrd 379(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 365

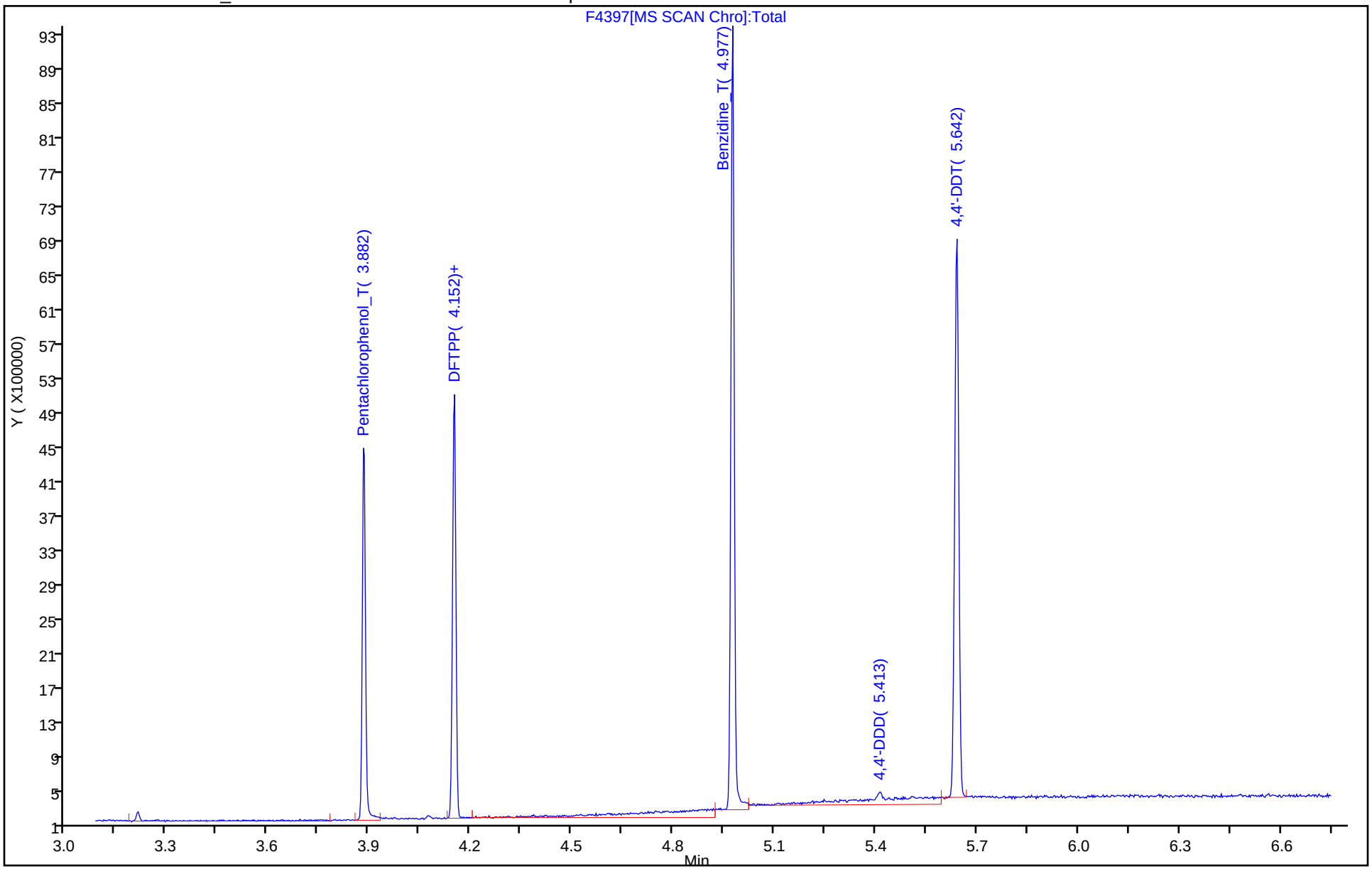
m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	21880	223.00	7257	327.00	1721	445.00	418
129.00	91816	224.00	65576	328.00	880	447.00	147
130.00	8210	225.00	15720	330.00	282	452.00	47
131.00	1494	226.00	2279	331.00	73	453.00	219
132.00	1143	227.00	24248	332.00	557	457.00	121
134.00	1199	228.00	4334	333.00	1357	458.00	72
135.00	7460	229.00	5023	334.00	6428	461.00	292
136.00	2605	230.00	1135	335.00	1618	465.00	104
137.00	2830	231.00	2630	337.00	156	466.00	70
138.00	520	232.00	623	340.00	146	467.00	427
139.00	177	233.00	674	341.00	938	470.00	66
140.00	270	234.00	1012	342.00	546	472.00	7
141.00	11129	235.00	2021	343.00	146	475.00	292
142.00	3117	236.00	1904	345.00	180	480.00	43
143.00	1824	237.00	3059	346.00	1216	481.00	71
144.00	866	238.00	144	347.00	597	482.00	108
145.00	665	239.00	643	350.00	49	486.00	235
146.00	1273	240.00	1335	352.00	2214	490.00	4
147.00	5122	241.00	1930	353.00	1965	495.00	102
148.00	13021	242.00	3169	354.00	3036	497.00	98
149.00	2917	243.00	3275	355.00	1204	499.00	167
150.00	772	244.00	52048	357.00	361	500.00	51
151.00	1494	245.00	5880	358.00	77		
152.00	725	246.00	9721	359.00	504		
153.00	3545	247.00	2746	360.00	171		

Report Date: 29-Oct-2018 21:58:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D

Injection Date:	29-Oct-2018 15:45:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

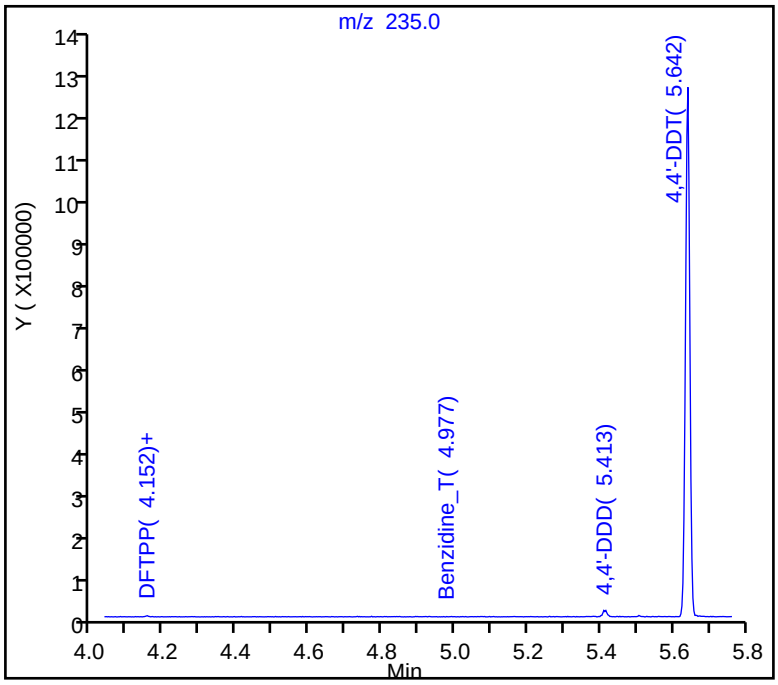


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

43 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

43 4,4'-DDT, Area = 1044699
41 4,4'-DDE, Area = 7831
42 4,4'-DDD, Area = 12474

%Breakdown: 1.91%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

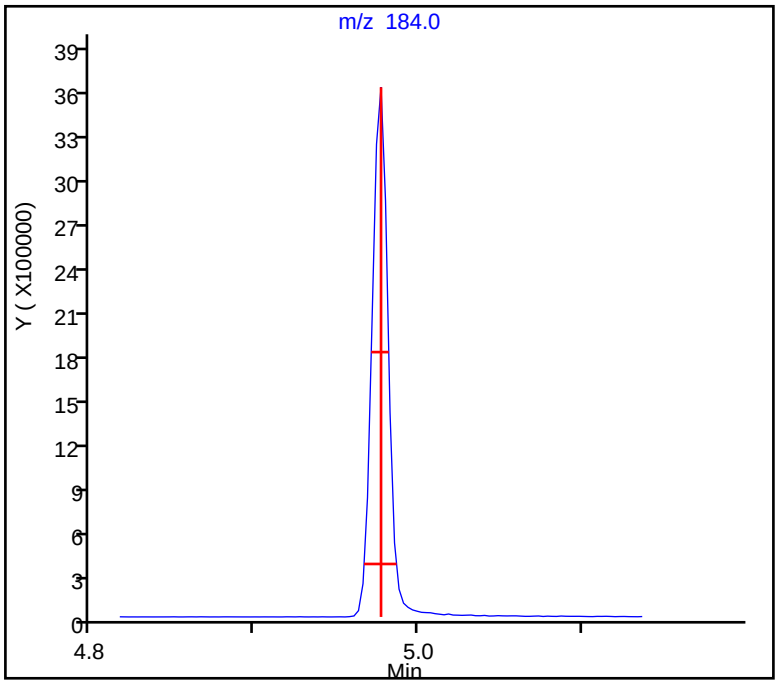
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

40 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 0.9, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

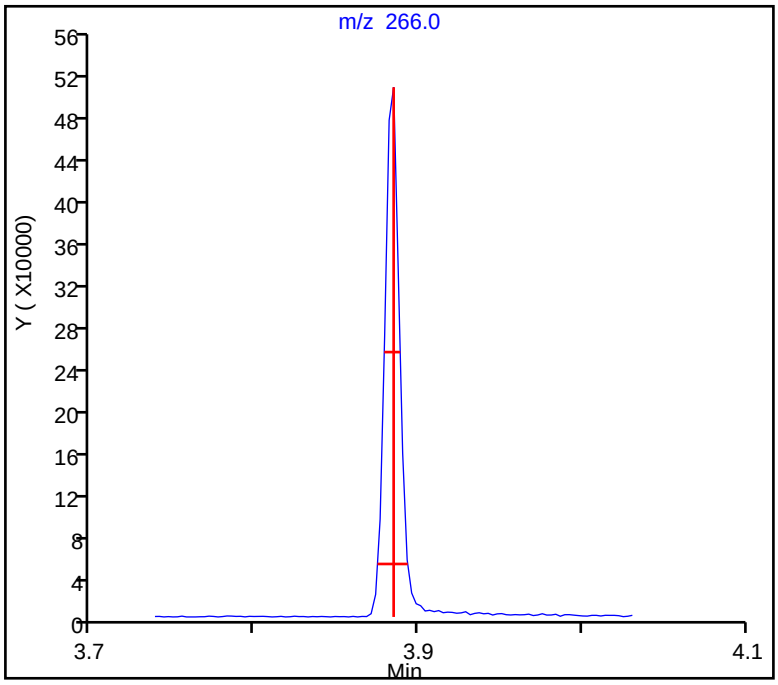
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4397.D
Injection Date: 29-Oct-2018 15:45:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

38 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 0.9, Max. Tailing < 2.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 01-Nov-2018 18:15:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:48 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 01-Nov-2018 18:54:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
38 Pentachlorophenol_T	266	3.879	3.879	0.000	75	357815	NR	NR	
39 DFTPP									
40 Benzidine_T	184	4.963	4.963	0.000	96	3121217	NR	NR	
41 4,4'-DDE	246	4.147	4.147	0.000	35	7438	NR	NR	
42 4,4'-DDD	235	5.396	5.396	0.000	79	16236	NR	NR	a
43 4,4'-DDT	235	5.620	5.620	0.000	95	1290022	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

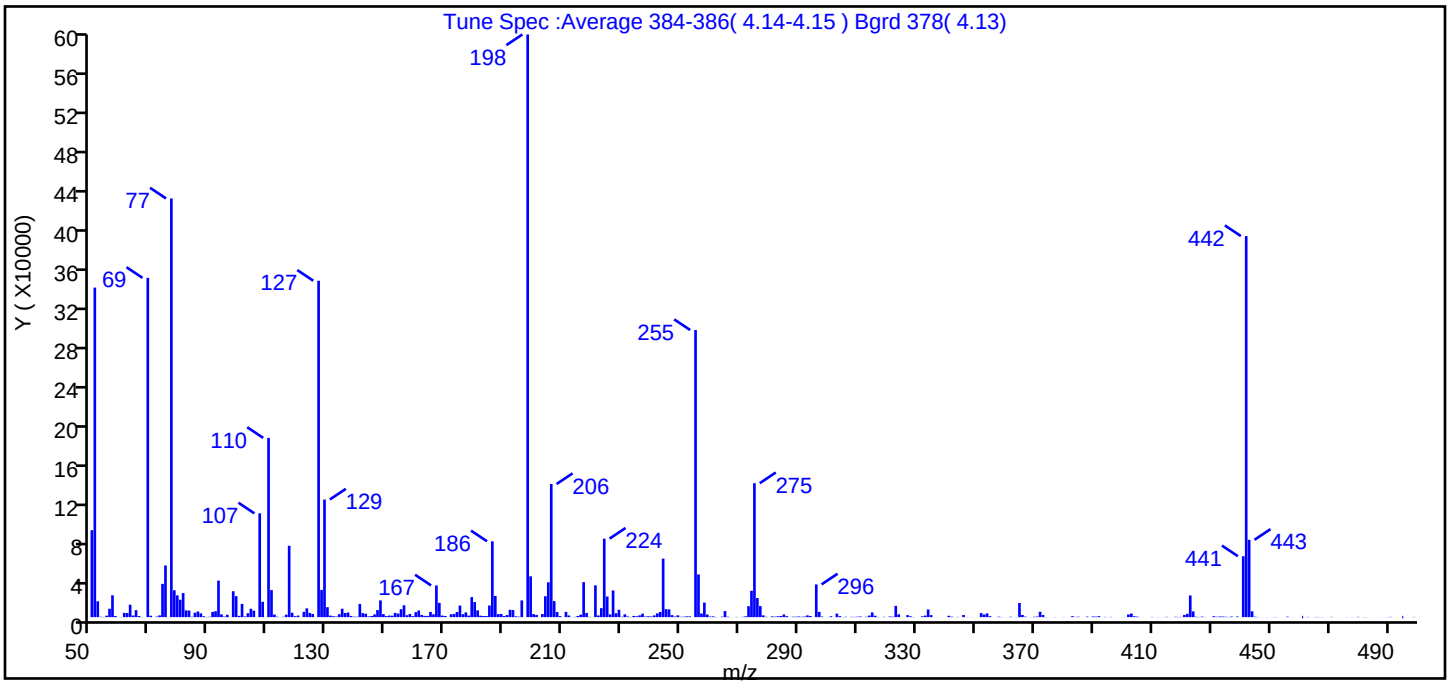
MS-DFTPP_00047 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D
Injection Date: 01-Nov-2018 18:15:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

39 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	56.6
68	<2% of mass 69	0.0 (0.0)
69	Present	58.2
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	57.7
197	<1% of mass 198	0.0
199	5-9% of mass 198	7.0
275	10-30% of mass 198	23.0
365	>1% of mass 198	2.4
441	Present but less than mass 443	10.5 (78.8)
442	>40% of mass 198	65.4
443	17-23% of mass 442	13.3 (20.3)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 01-Nov-2018 18:15:30
Spectrum: Tune Spec :Average 384-386(4.14-4.15) Bgrd 378(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 364

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	88928	148.00	17144	244.00	59880	358.00	457
51.00	337088	149.00	3076	245.00	8123	359.00	199
52.00	16255	150.00	1108	246.00	7967	361.00	87
53.00	363	151.00	1591	247.00	2070	362.00	388
54.00	187	152.00	1468	248.00	649	364.00	134
55.00	1494	153.00	4343	249.00	1860	365.00	14467
56.00	8561	154.00	3678	250.00	348	366.00	2245
57.00	22352	155.00	8100	251.00	455	367.00	523
58.00	1122	156.00	12128	252.00	780	369.00	66
59.00	51	157.00	1980	253.00	789	370.00	401
60.00	135	158.00	3255	255.00	293696	371.00	622
61.00	4389	159.00	1062	256.00	43680	372.00	5523
62.00	4196	160.00	5077	257.00	3720	373.00	2187
63.00	12713	161.00	6789	258.00	14874	374.00	105
64.00	1653	162.00	2215	259.00	2695	377.00	138
65.00	7154	163.00	1326	260.00	594	380.00	124
66.00	1139	164.00	1295	261.00	777	383.00	989
67.00	166	165.00	5362	262.00	174	384.00	237
69.00	347072	166.00	2882	264.00	531	385.00	437
70.00	1444	167.00	32448	265.00	6179	388.00	551
71.00	29	168.00	14604	266.00	448	390.00	693
72.00	560	169.00	1587	267.00	80	391.00	571
73.00	1773	170.00	1191	269.00	219	392.00	1029
74.00	34056	172.00	2970	271.00	301	394.00	252
75.00	52872	173.00	3320	272.00	846	396.00	263
77.00	428288	174.00	5212	273.00	11206	398.00	4
78.00	27480	175.00	11835	274.00	26944	400.00	71
79.00	22240	176.00	2966	275.00	137024	401.00	78
80.00	17824	177.00	4852	276.00	19520	402.00	2747
81.00	24656	178.00	1609	277.00	11281	403.00	3659
82.00	6902	179.00	20528	278.00	1805	404.00	867
83.00	6730	180.00	15417	279.00	325	405.00	549
84.00	348	181.00	6937	281.00	780	406.00	26

Report Date: 02-Nov-2018 17:19:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 01-Nov-2018 18:15:30
Spectrum: Tune Spec :Average 384-386(4.14-4.15) Bgrd 378(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 364

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	4512	182.00	1498	282.00	481	407.00	37
86.00	5787	183.00	1175	283.00	921	410.00	219
87.00	3818	184.00	1180	284.00	1161	412.00	125
88.00	936	185.00	11897	285.00	2731	414.00	92
89.00	179	186.00	77576	286.00	1059	415.00	286
90.00	400	187.00	21640	288.00	413	416.00	49
91.00	5311	188.00	3114	289.00	460	418.00	372
92.00	6082	189.00	3315	290.00	675	419.00	229
93.00	37384	190.00	1136	291.00	380	420.00	268
94.00	2877	191.00	2165	292.00	625	421.00	2294
95.00	598	192.00	7561	293.00	1825	422.00	3425
96.00	2468	193.00	7298	294.00	1162	423.00	22200
98.00	26504	194.00	843	296.00	33504	424.00	5868
99.00	21432	195.00	481	297.00	5380	425.00	392
100.00	1330	196.00	17152	298.00	570	426.00	190
101.00	13586	198.00	596032	300.00	106	427.00	505
102.00	731	199.00	41752	301.00	913	428.00	208
103.00	4021	200.00	3142	302.00	46	431.00	961
104.00	8564	201.00	2289	303.00	3584	432.00	354
105.00	6619	203.00	3248	304.00	1073	433.00	657
107.00	106176	204.00	21392	305.00	96	434.00	621
108.00	15722	205.00	35624	306.00	362	435.00	422
110.00	183360	206.00	136192	307.00	11	436.00	187
111.00	27696	207.00	16456	308.00	330	437.00	614
112.00	2644	208.00	5182	309.00	245	439.00	651
113.00	432	209.00	1088	310.00	449	441.00	62328
115.00	364	211.00	5374	311.00	651	442.00	389824
116.00	2510	212.00	1711	313.00	371	443.00	79104
117.00	73048	213.00	76	314.00	1592	444.00	5934
118.00	4463	214.00	257	315.00	4816	445.00	458
119.00	990	215.00	1211	316.00	1427	446.00	143
120.00	1614	216.00	2513	317.00	201	449.00	110
121.00	21	217.00	35800	319.00	302	451.00	111
122.00	5424	218.00	4272	320.00	30	452.00	200

Report Date: 02-Nov-2018 17:19:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 01-Nov-2018 18:15:30
Spectrum: Tune Spec :Average 384-386(4.14-4.15) Bgrd 378(4.13)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 364

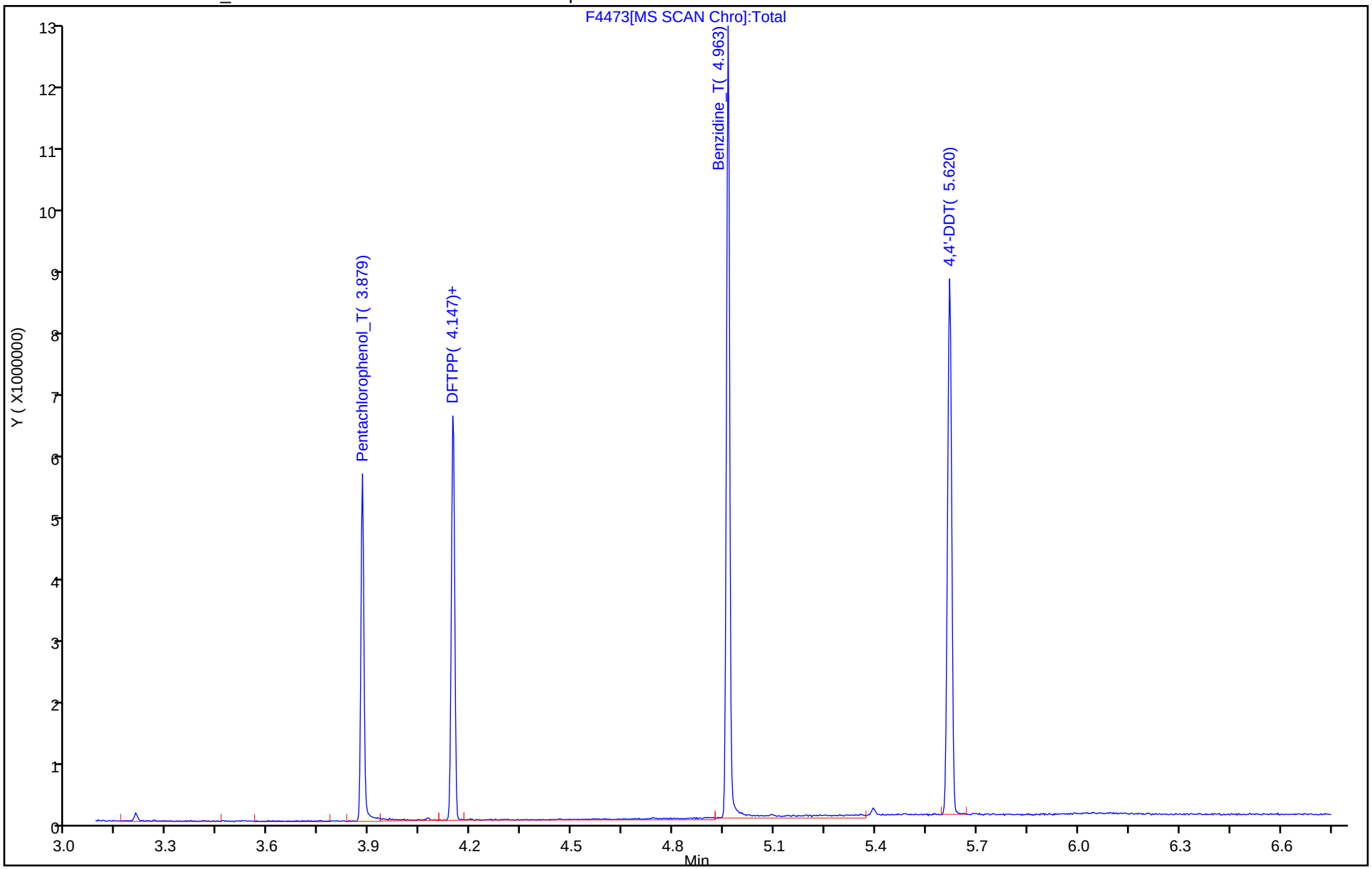
m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	9001	219.00	283	321.00	630	456.00	501
124.00	4275	221.00	32528	322.00	451	458.00	72
125.00	3241	222.00	1733	323.00	11560	461.00	2
127.00	344128	223.00	9189	324.00	2839	463.00	279
128.00	27848	224.00	80320	327.00	2052	464.00	31
129.00	120328	225.00	21072	328.00	869	465.00	78
130.00	10171	226.00	2786	329.00	184	466.00	239
131.00	1549	227.00	27288	332.00	826	467.00	111
132.00	947	228.00	4028	333.00	1625	468.00	146
133.00	601	229.00	7535	334.00	7842	470.00	30
134.00	3042	230.00	439	335.00	2073	471.00	267
135.00	8624	231.00	2890	337.00	85	473.00	19
136.00	4298	232.00	682	341.00	1377	476.00	92
137.00	4730	233.00	194	342.00	499	478.00	134
138.00	1262	234.00	1268	344.00	245	480.00	319
139.00	484	235.00	892	346.00	2188	482.00	144
140.00	407	236.00	1810	347.00	208	483.00	139
141.00	13530	237.00	3533	348.00	11	486.00	36
142.00	4096	238.00	604	349.00	86	488.00	77
143.00	3497	239.00	922	350.00	21	490.00	127
144.00	715	240.00	661	352.00	4109	491.00	257
145.00	1156	241.00	1767	353.00	2733	492.00	45
146.00	2810	242.00	3839	354.00	3800	495.00	2
147.00	7225	243.00	5260	355.00	973	499.00	237

Report Date: 02-Nov-2018 17:19:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D

Injection Date:	01-Nov-2018 18:15:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

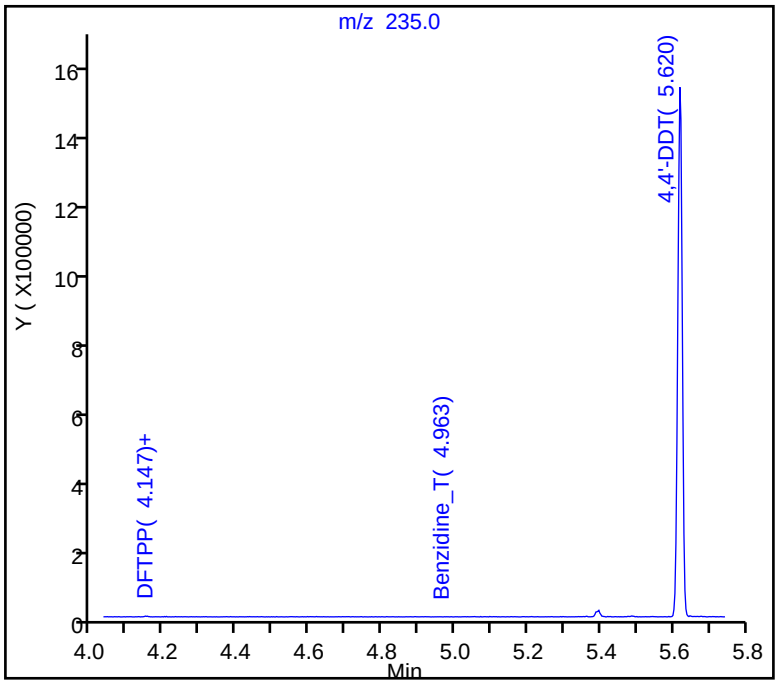


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D
Injection Date: 01-Nov-2018 18:15:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

43 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

43 4,4'-DDT, Area = 1290022
41 4,4'-DDE, Area = 7438
42 4,4'-DDD, Area = 16236

%Breakdown: 1.80%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

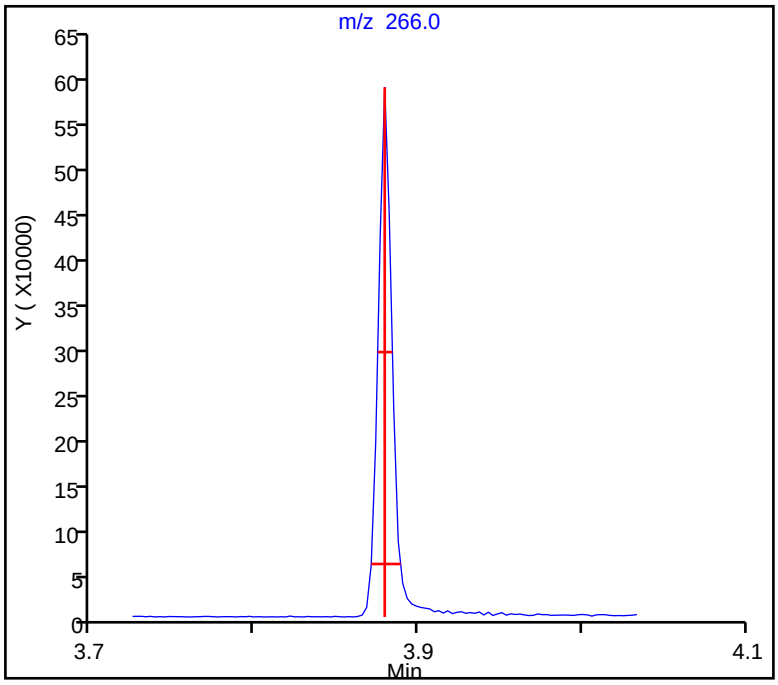
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D
Injection Date: 01-Nov-2018 18:15:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

38 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.008 (min.)

Tailing Factor = 1.2, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

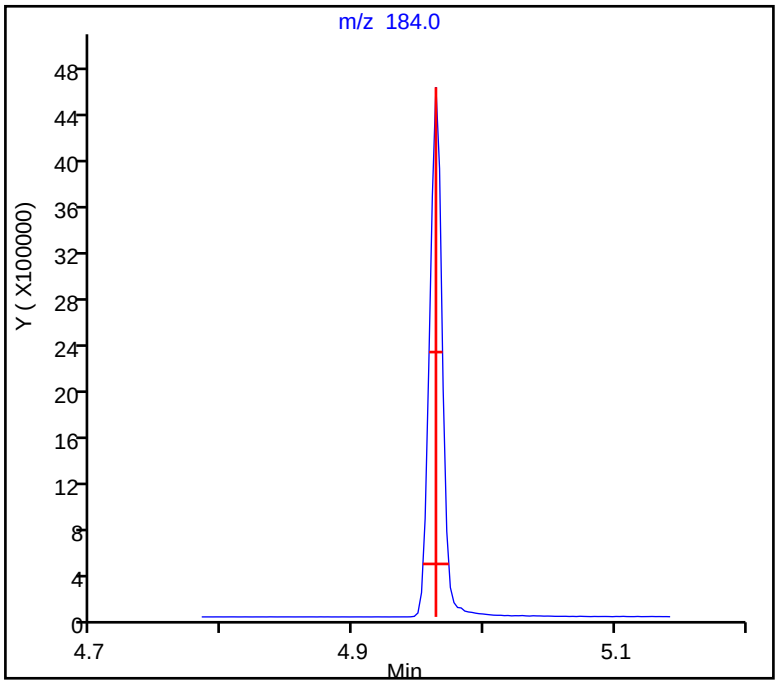
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4473.D
Injection Date: 01-Nov-2018 18:15:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

40 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.0, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-435408/1-A

Matrix: Water | Lab File ID: F4483.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 10/29/2018 21:02

Sample wt/vol: 250(mL) | Date Analyzed: 11/01/2018 23:01

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435950 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.012	U	0.10	0.012	0.0059
91-57-6	2-Methylnaphthalene	0.012	U	0.10	0.012	0.0060
83-32-9	Acenaphthene	0.040	U	0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.040	U	0.10	0.040	0.0051
120-12-7	Anthracene	0.040	U M	0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.012	U	0.10	0.012	0.0042
50-32-8	Benzo[a]pyrene	0.012	U M	0.10	0.012	0.0069
205-99-2	Benzo[b]fluoranthene	0.012	U M	0.10	0.012	0.0031
191-24-2	Benzo[g,h,i]perylene	0.012	U M	0.10	0.012	0.0062
207-08-9	Benzo[k]fluoranthene	0.012	U M	0.10	0.012	0.0063
218-01-9	Chrysene	0.012	U	0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.012	U	0.10	0.012	0.0041
206-44-0	Fluoranthene	0.012	U	0.10	0.012	0.0048
86-73-7	Fluorene	0.040	U	0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.040	0.0045
91-20-3	Naphthalene	0.012	U	0.10	0.012	0.0080
85-01-8	Phenanthrene	0.0181	J	0.10	0.020	0.0093
129-00-0	Pyrene	0.020	U	0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	57		53-106
4165-60-0	Nitrobenzene-d5	56		55-111
1718-51-0	Terphenyl-d14	92		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D
Lims ID: MB 280-435408/1-A
Client ID:
Sample Type: MB
Inject. Date: 01-Nov-2018 23:01:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb280-435408_1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:10:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.721	-0.008	98	25730	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.215	-0.009	97	62866	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.376	-0.018	90	66335	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.251	5.256	-0.005	99	7562	500.0	281.8	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	18685	500.0	286.3	
$ 6 Terphenyl-d14	244	11.194	11.212	-0.018	100	42663	500.0	459.4	
8 1,4-Dioxane	88		1.692					ND	
9 N-Nitrosodimethylamine	74		2.531					ND	U
10 Naphthalene	128		5.985					ND	
11 2-Methylnaphthalene	142		6.663					ND	
12 1-Methylnaphthalene	142		6.769					ND	
13 Dimethyl phthalate	163		7.419					ND	U
14 Acenaphthylene	152		7.575					ND	
15 Acenaphthene	153		7.747					ND	
16 Dibenzofuran	168		7.915					ND	
17 Diethyl phthalate	149	8.109	8.119	-0.010	100	11437		232.8	
18 Fluorene	166		8.264					ND	
19 N-Nitrosodiphenylamine	169		8.361					ND	
20 Phenanthrene	178	9.223	9.232	-0.009	77	577		4.53	
21 Anthracene	178		9.284					ND	U
22 Di-n-butyl phthalate	149	9.768	9.785	-0.017	1	1200		22.6	
23 Fluoranthene	202		10.641					ND	
24 Pyrene	202		10.987					ND	
25 Butyl benzyl phthalate	149		10.987					ND	
26 Benzo[a]anthracene	228		13.349					ND	
27 Chrysene	228		13.439					ND	
28 Bis(2-ethylhexyl) phthalat	149		12.115					ND	
29 Di-n-octyl phthalate	149	15.302	15.319	-0.017	1	189		23.5	
30 Benzo[b]fluoranthene	252		16.264					ND	U
31 Benzo[k]fluoranthene	252		16.342					ND	U
32 Benzo[a]pyrene	252		17.204					ND	U
33 Indeno[1,2,3-cd]pyrene	276		20.520					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
34 Dibenz(a,h)anthracene	278		20.612					ND	
35 Benzo[g,h,i]perylene	276		21.264					ND	U
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.000	90	11868	500.0	265.9	
$ 54 Fluoranthene-d10	212	10.606	10.615	-0.009	100	42828	500.0	407.7	
38 Pentachlorophenol_T	266		3.879					ND	
40 Benzidine_T	184		4.963					ND	
41 4,4'-DDE	246		4.147					ND	
42 4,4'-DDD	235		5.396					ND	
43 4,4'-DDT	235		5.620					ND	
S 44 TPAH	1		0.000					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

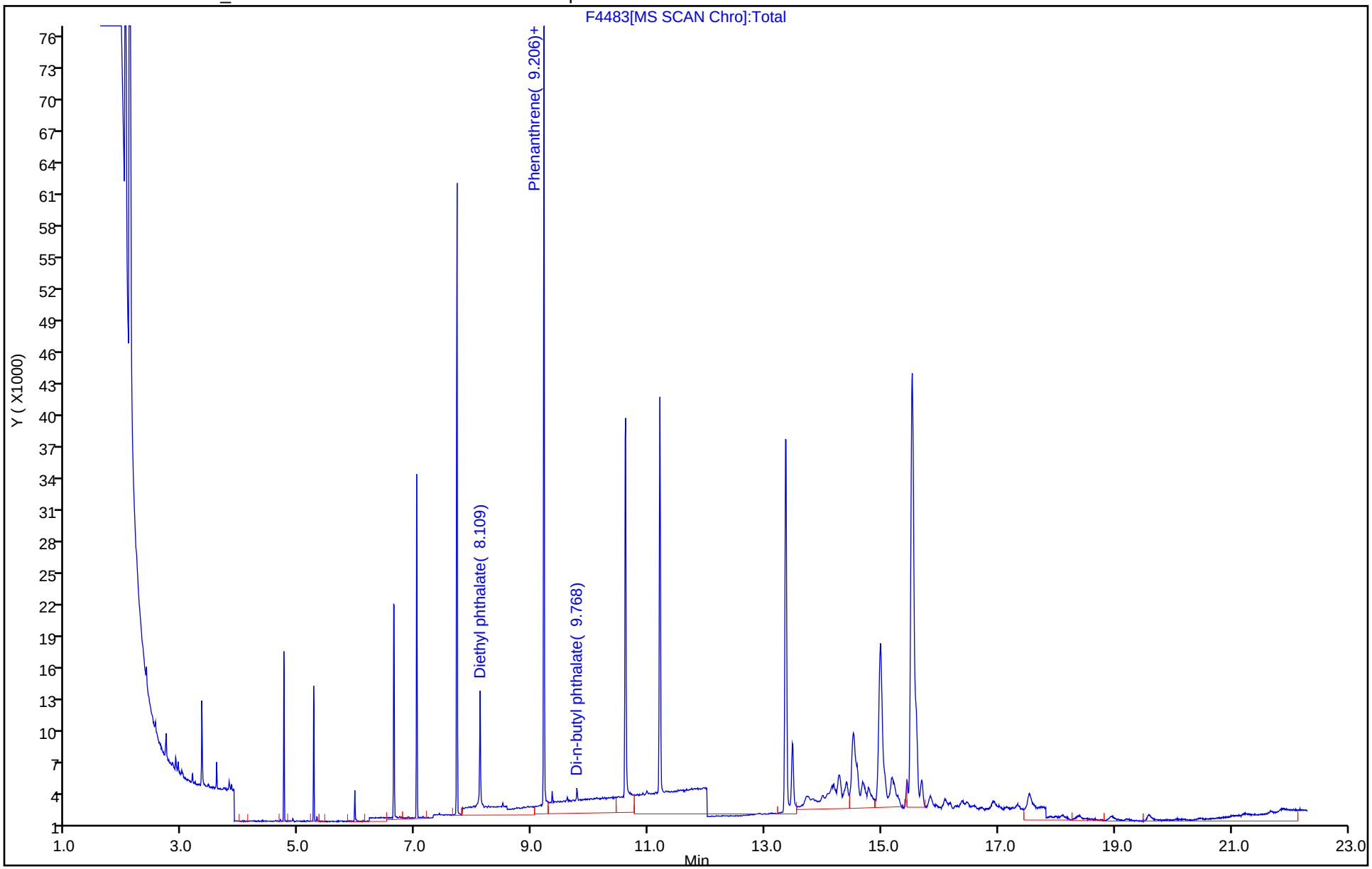
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 02-Nov-2018 17:20:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D

Injection Date:	01-Nov-2018 23:01:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	MB 280-435408/1-A			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D
Lims ID: MB 280-435408/1-A
Client ID:
Sample Type: MB
Inject. Date: 01-Nov-2018 23:01:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb280-435408_1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:10:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	281.8	56.37
$ 5 2-Fluorobiphenyl	500.0	286.3	57.27
$ 6 Terphenyl-d14	500.0	459.4	91.88
$ 53 2-methylnaphthalene-d10	500.0	265.9	53.18
$ 54 Fluoranthene-d10	500.0	407.7	81.53

Report Date: 02-Nov-2018 17:20:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D

Injection Date: 01-Nov-2018 23:01:30 Instrument ID: SMS_F

Lims ID: MB 280-435408/1-A

Client ID:

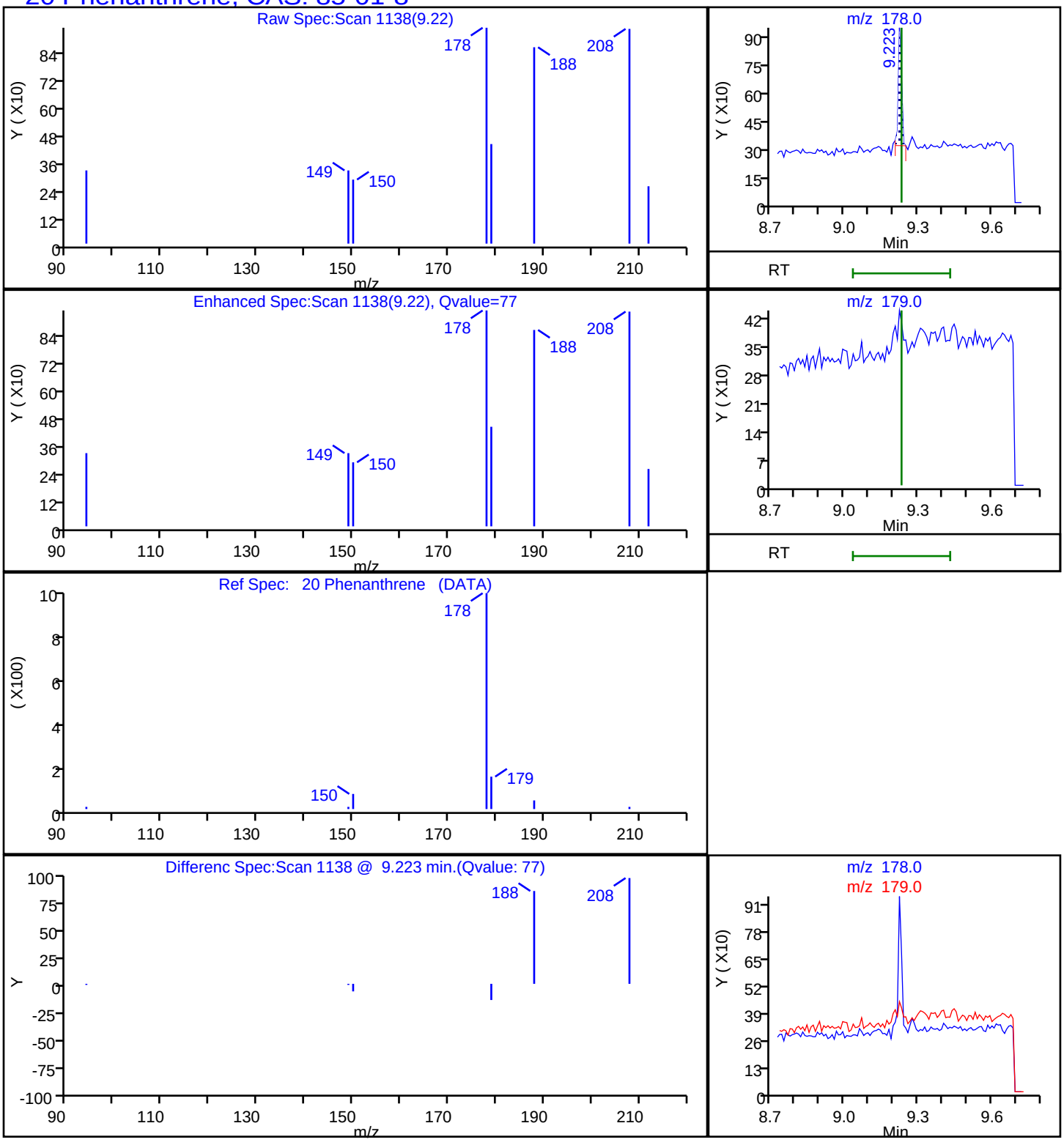
Operator ID: WICKHAMM ALS Bottle#: 11 Worklist Smp#: 12

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

Column: Detector MS SCAN

20 Phenanthrene, CAS: 85-01-8



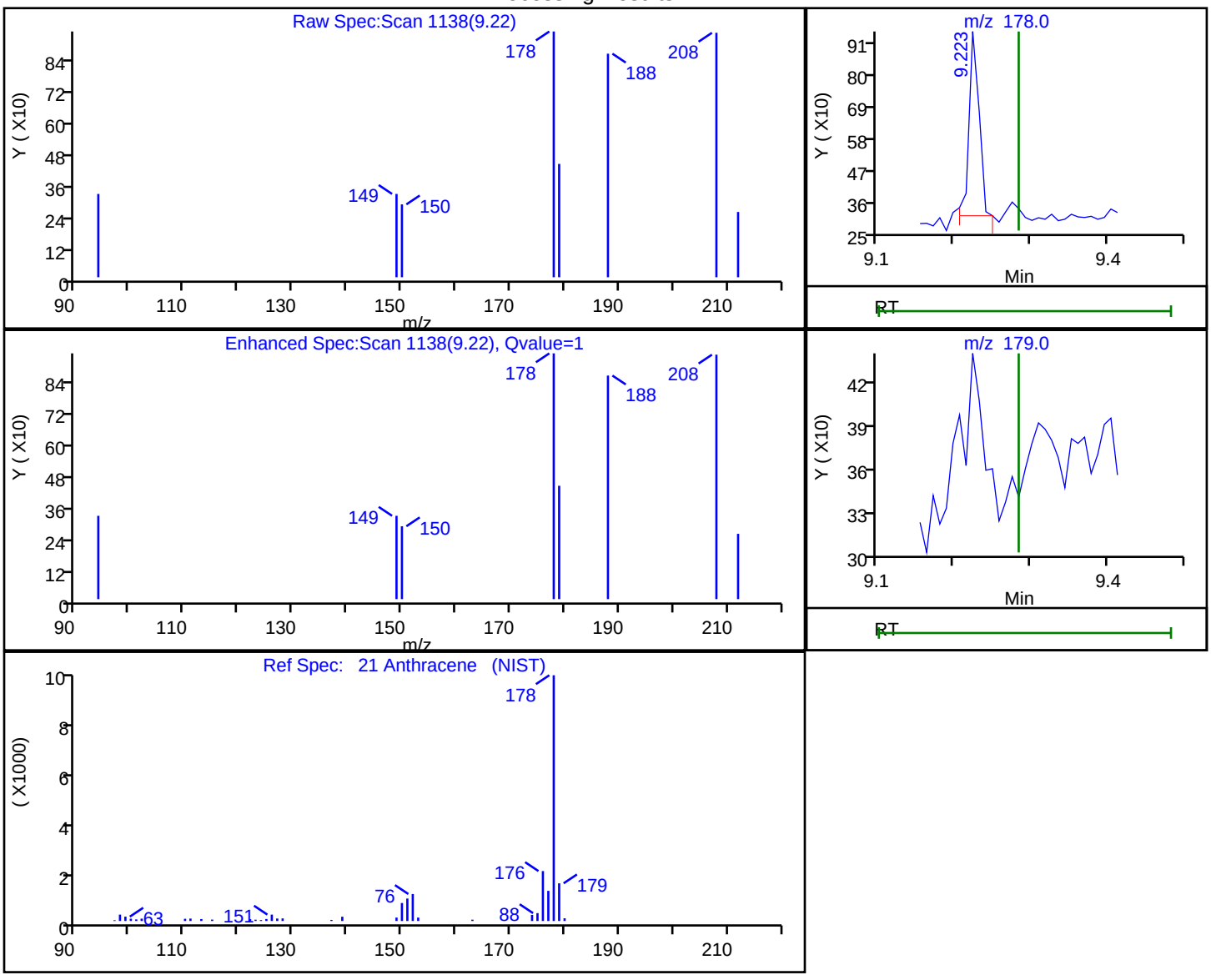
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D				
Injection Date:	01-Nov-2018 23:01:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-435408/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

21 Anthracene, CAS: 120-12-7

Processing Results



RT	Mass	Response	Amount
9.22	178.00	576	6.021569
9.28	179.00	0	

Reviewer: wickhamm, 02-Nov-2018 17:10:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

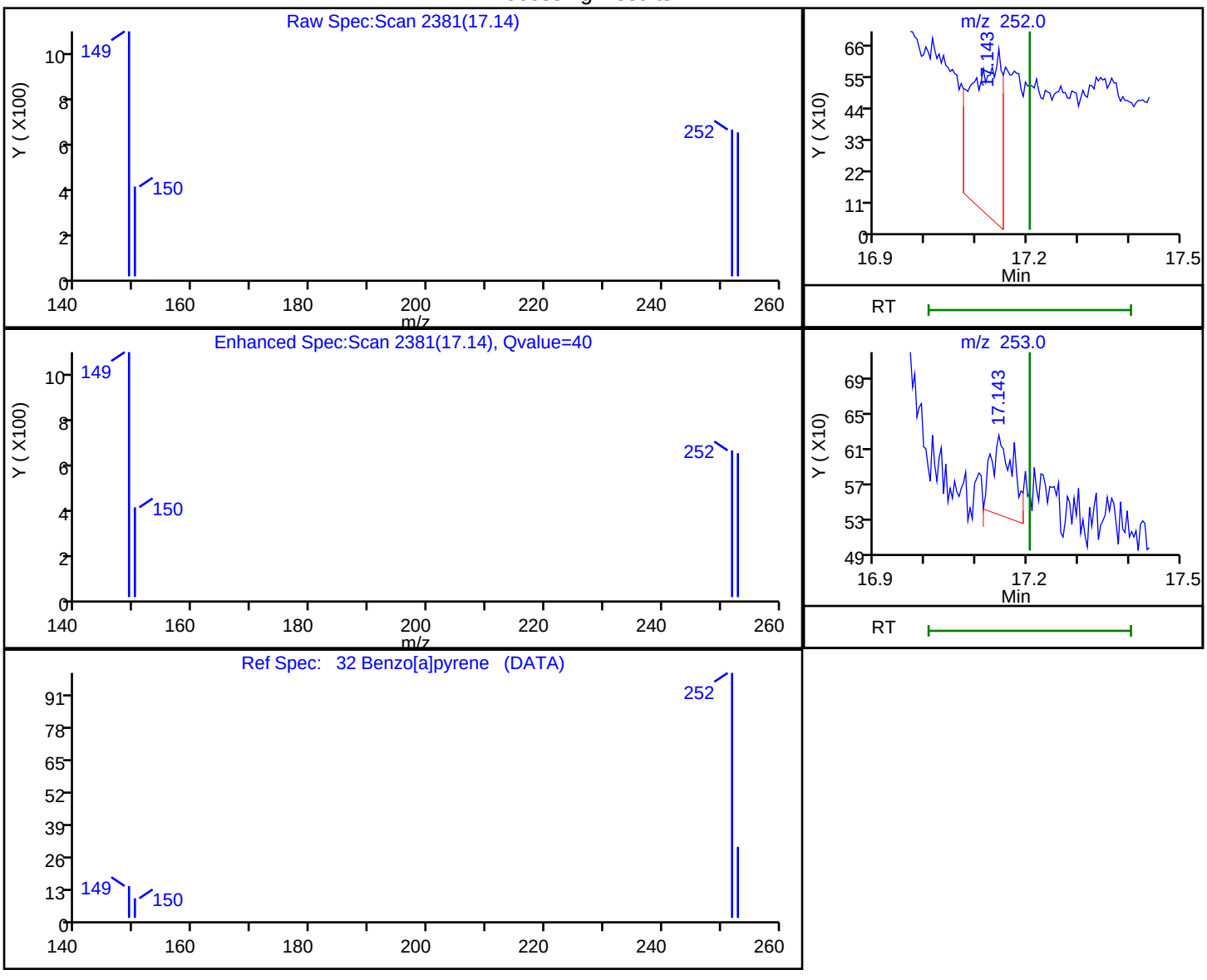
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D
Injection Date: 01-Nov-2018 23:01:30 Instrument ID: SMS_F
Lims ID: MB 280-435408/1-A
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

32 Benzo[a]pyrene, CAS: 50-32-8

Processing Results



RT	Mass	Response	Amount
17.14	252.00	2352	22.326219
17.14	253.00	265	

Reviewer: wickhamm, 02-Nov-2018 17:10:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

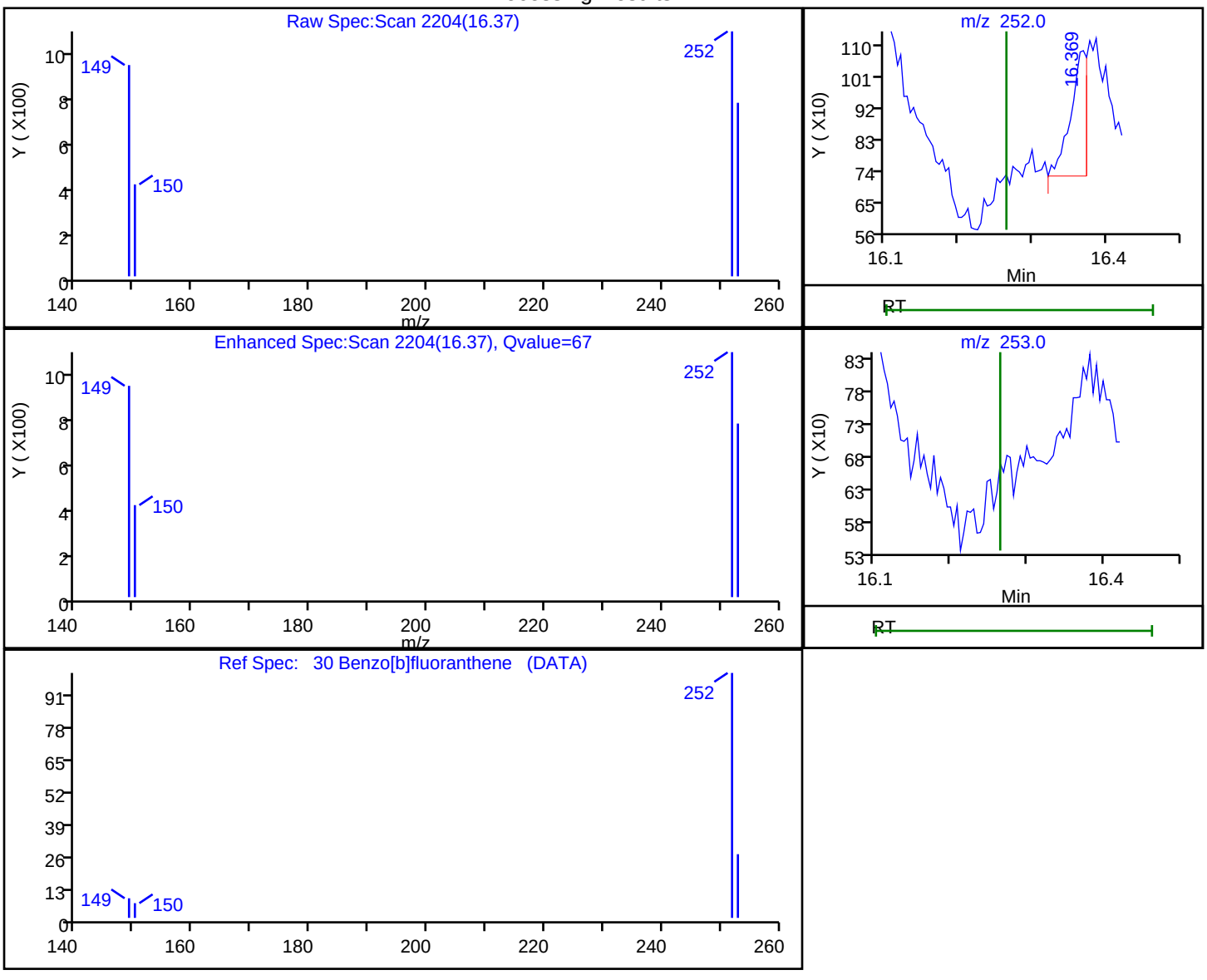
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D				
Injection Date:	01-Nov-2018 23:01:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-435408/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

30 Benzo[b]fluoranthene, CAS: 205-99-2

Processing Results



RT	Mass	Response	Amount
16.37	252.00	565	4.232451
16.26	253.00	0	

Reviewer: wickhamm, 02-Nov-2018 17:10:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

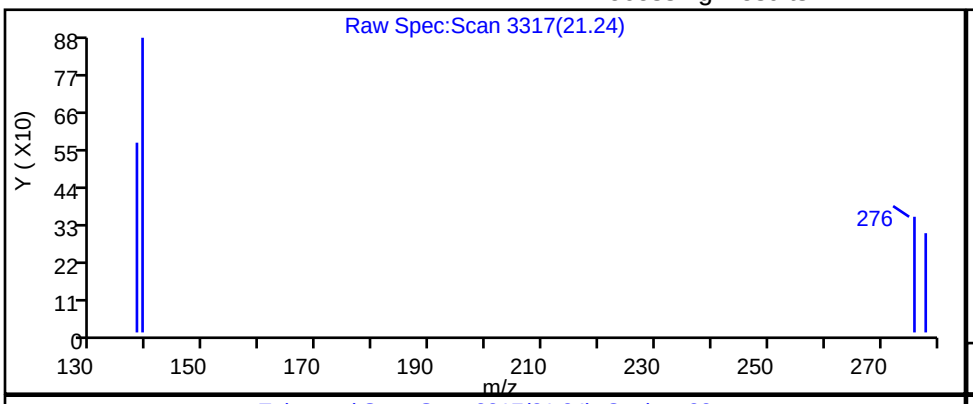
User Disabled Compound Report

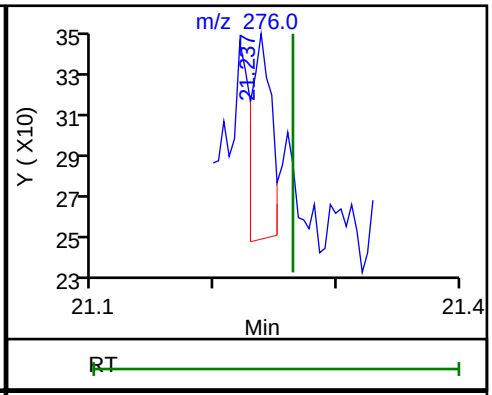
TestAmerica Denver

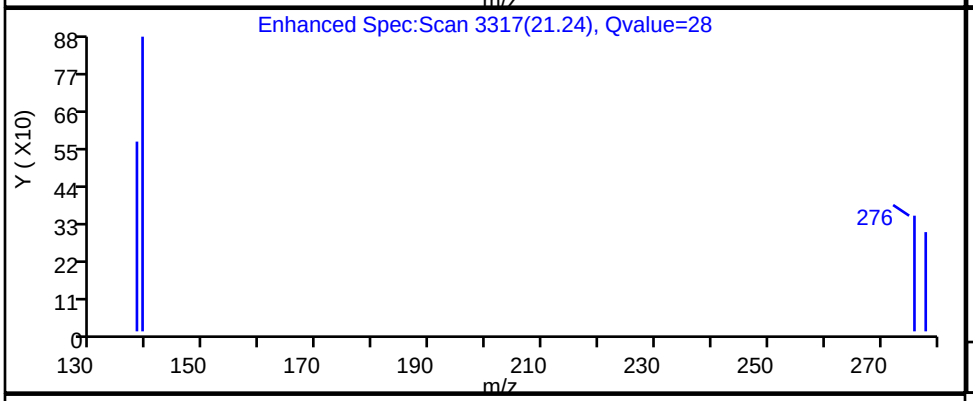
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D				
Injection Date:	01-Nov-2018 23:01:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-435408/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

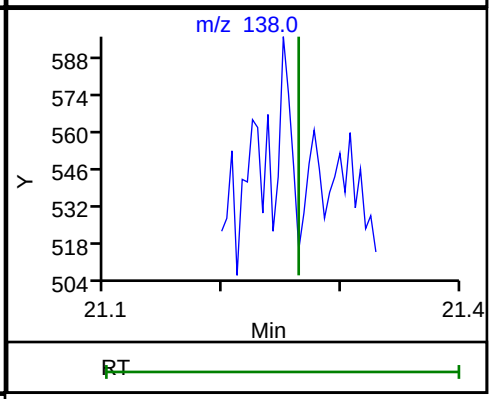
35 Benzo[g,h,i]perylene, CAS: 191-24-2

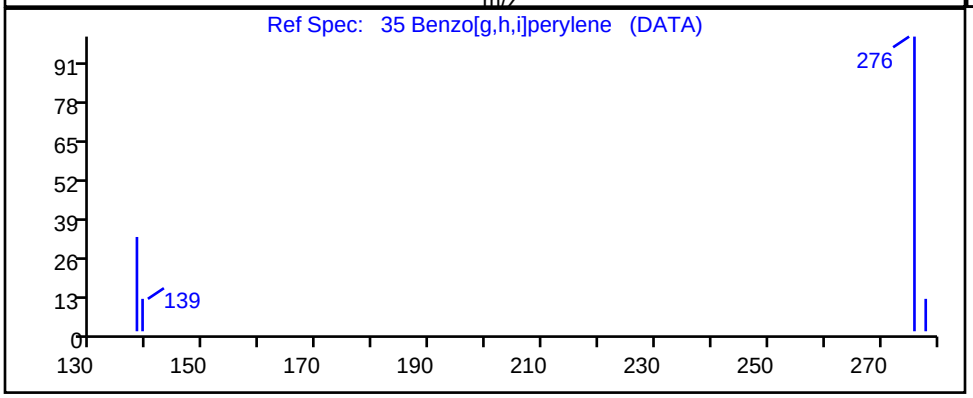
Processing Results











RT	Mass	Response	Amount
21.24	276.00	104	0.608310
21.26	138.00	0	

Reviewer: wickhamm, 02-Nov-2018 17:10:18

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

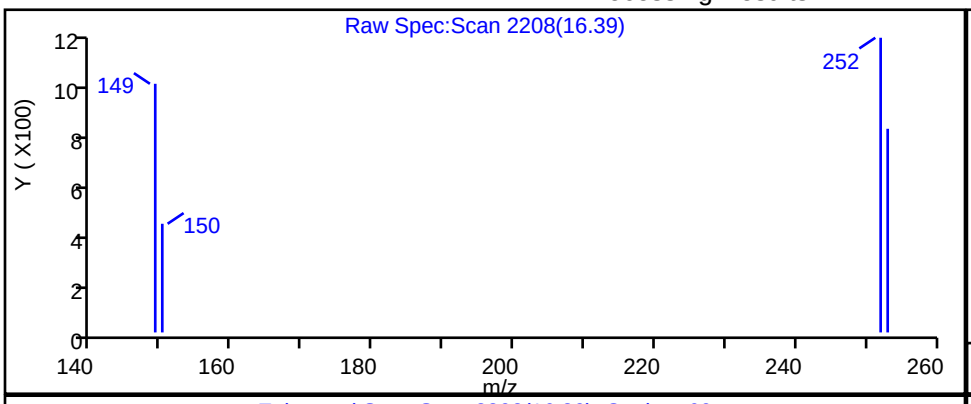
User Disabled Compound Report

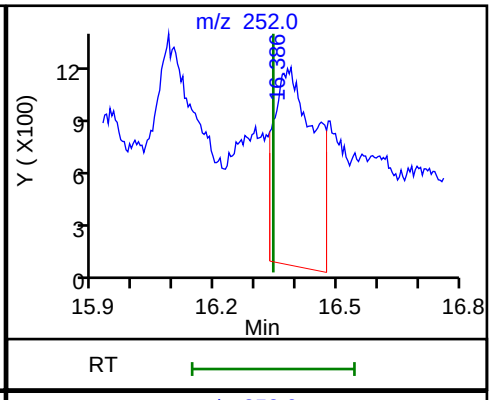
TestAmerica Denver

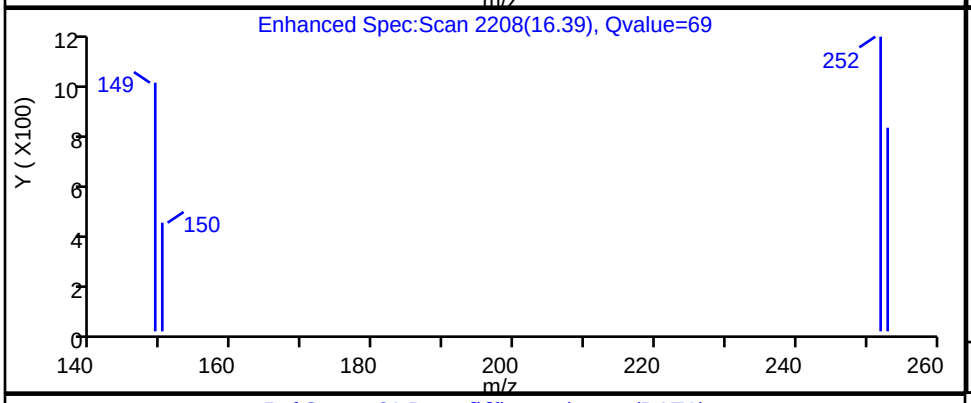
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4483.D				
Injection Date:	01-Nov-2018 23:01:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-435408/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	11	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

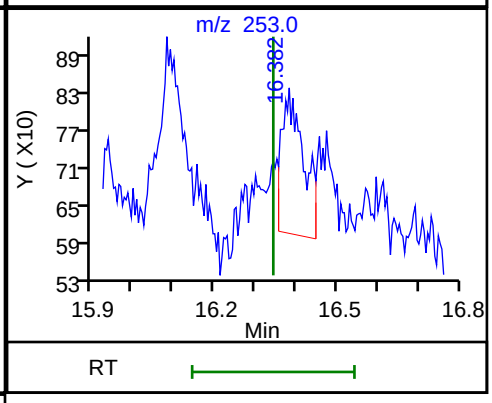
31 Benzo[k]fluoranthene, CAS: 207-08-9

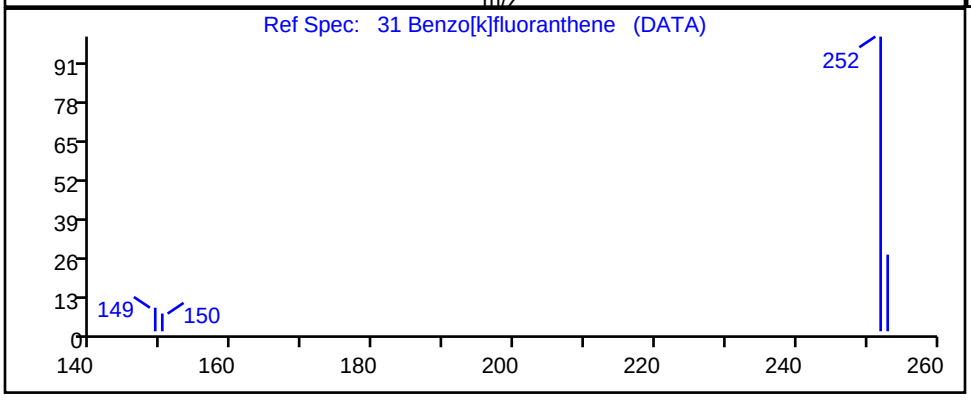
Processing Results











RT	Mass	Response	Amount
16.39	252.00	7521	57.388505
16.38	253.00	843	

Reviewer: wickhamm, 02-Nov-2018 17:10:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-435408/2-A

Matrix: Water | Lab File ID: F4484.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 10/29/2018 21:02

Sample wt/vol: 250(mL) | Date Analyzed: 11/01/2018 23:30

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435950 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.625		0.10	0.012	0.0059
91-57-6	2-Methylnaphthalene	0.598		0.10	0.012	0.0060
83-32-9	Acenaphthene	0.685		0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.648		0.10	0.040	0.0051
120-12-7	Anthracene	0.704		0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.848		0.10	0.012	0.0042
50-32-8	Benzo[a]pyrene	0.731		0.10	0.012	0.0069
205-99-2	Benzo[b]fluoranthene	0.757		0.10	0.012	0.0031
191-24-2	Benzo[g,h,i]perylene	0.632		0.10	0.012	0.0062
207-08-9	Benzo[k]fluoranthene	0.803		0.10	0.012	0.0063
218-01-9	Chrysene	0.785		0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.626		0.10	0.012	0.0041
206-44-0	Fluoranthene	0.783		0.10	0.012	0.0048
86-73-7	Fluorene	0.694		0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	0.637		0.10	0.040	0.0045
91-20-3	Naphthalene	0.595		0.10	0.012	0.0080
85-01-8	Phenanthrene	0.716		0.10	0.020	0.0093
129-00-0	Pyrene	0.784		0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	66		53-106
4165-60-0	Nitrobenzene-d5	78		55-111
1718-51-0	Terphenyl-d14	87		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4484.D
Lims ID: LCS 280-435408/2-A
Client ID:
Sample Type: LCS
Inject. Date: 01-Nov-2018 23:30:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-435408_2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:11:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.713	7.721	-0.008	97	24762	600.0	600.0	
* 2 Phenanthrene-d10	188	9.206	9.215	-0.009	97	56551	600.0	600.0	
* 3 Chrysene-d12	240	13.358	13.376	-0.018	92	60502	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.251	5.256	-0.005	99	10089	500.0	390.7	
$ 5 2-Fluorobiphenyl	172	7.019	7.026	-0.007	100	20695	500.0	329.5	
$ 6 Terphenyl-d14	244	11.194	11.212	-0.018	99	36490	500.0	436.8	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.538	2.531	0.007	32	2517	225.0	132.2	
10 Naphthalene	128	5.980	5.985	-0.005	100	12339	225.0	148.8	
11 2-Methylnaphthalene	142	6.663	6.663	0.000	97	8393	225.0	149.4	
12 1-Methylnaphthalene	142	6.761	6.769	-0.008	98	7911	225.0	156.2	
13 Dimethyl phthalate	163	7.410	7.419	-0.009	1	9934	225.0	204.7	
14 Acenaphthylene	152	7.566	7.575	-0.008	99	10365	225.0	162.0	
15 Acenaphthene	153	7.739	7.747	-0.008	97	9294	225.0	171.1	
16 Dibenzofuran	168	7.915	7.915	0.000	93	13660	225.0	166.7	
17 Diethyl phthalate	149	8.109	8.119	-0.010	100	20628	225.0	436.2	
18 Fluorene	166	8.254	8.264	-0.010	95	11000	225.0	173.6	
19 N-Nitrosodiphenylamine	169	8.361	8.361	0.000	92	7020	225.0	166.9	
20 Phenanthrene	178	9.223	9.232	-0.009	100	20502	225.0	178.9	
21 Anthracene	178	9.275	9.284	-0.009	1	15140	225.0	175.9	
22 Di-n-butyl phthalate	149	9.768	9.785	-0.017	1	13371	225.0	263.5	
23 Fluoranthene	202	10.624	10.641	-0.017	98	23820	225.0	195.7	
24 Pyrene	202	10.969	10.987	-0.018	99	24046	225.0	196.0	
25 Butyl benzyl phthalate	149		10.987				ND	ND	
26 Benzo[a]anthracene	228	13.331	13.349	-0.018	63	21749	225.0	211.9	
27 Chrysene	228	13.421	13.439	-0.018	96	24826	225.0	196.3	
28 Bis(2-ethylhexyl) phthalat	149	12.088	12.115	-0.027	1	4265	225.0	208.3	
29 Di-n-octyl phthalate	149	15.288	15.319	-0.031	1	7817	225.0	232.5	
30 Benzo[b]fluoranthene	252	16.233	16.264	-0.031	99	23044	225.0	189.3	
31 Benzo[k]fluoranthene	252	16.316	16.342	-0.026	100	24000	225.0	200.8	
32 Benzo[a]pyrene	252	17.173	17.204	-0.031	99	17565	225.0	182.8	
33 Indeno[1,2,3-cd]pyrene	276	20.485	20.520	-0.035	94	19616	225.0	159.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
34 Dibenz(a,h)anthracene	278	20.581	20.612	-0.031	87	20046	225.0	156.6	
35 Benzo[g,h,i]perylene	276	21.229	21.264	-0.035	96	24651	225.0	158.1	
$ 53 2-methylnaphthalene-d10	152	6.633	6.633	0.000	89	13627	500.0	317.2	
$ 54 Fluoranthene-d10	212	10.606	10.615	-0.009	100	43016	500.0	455.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

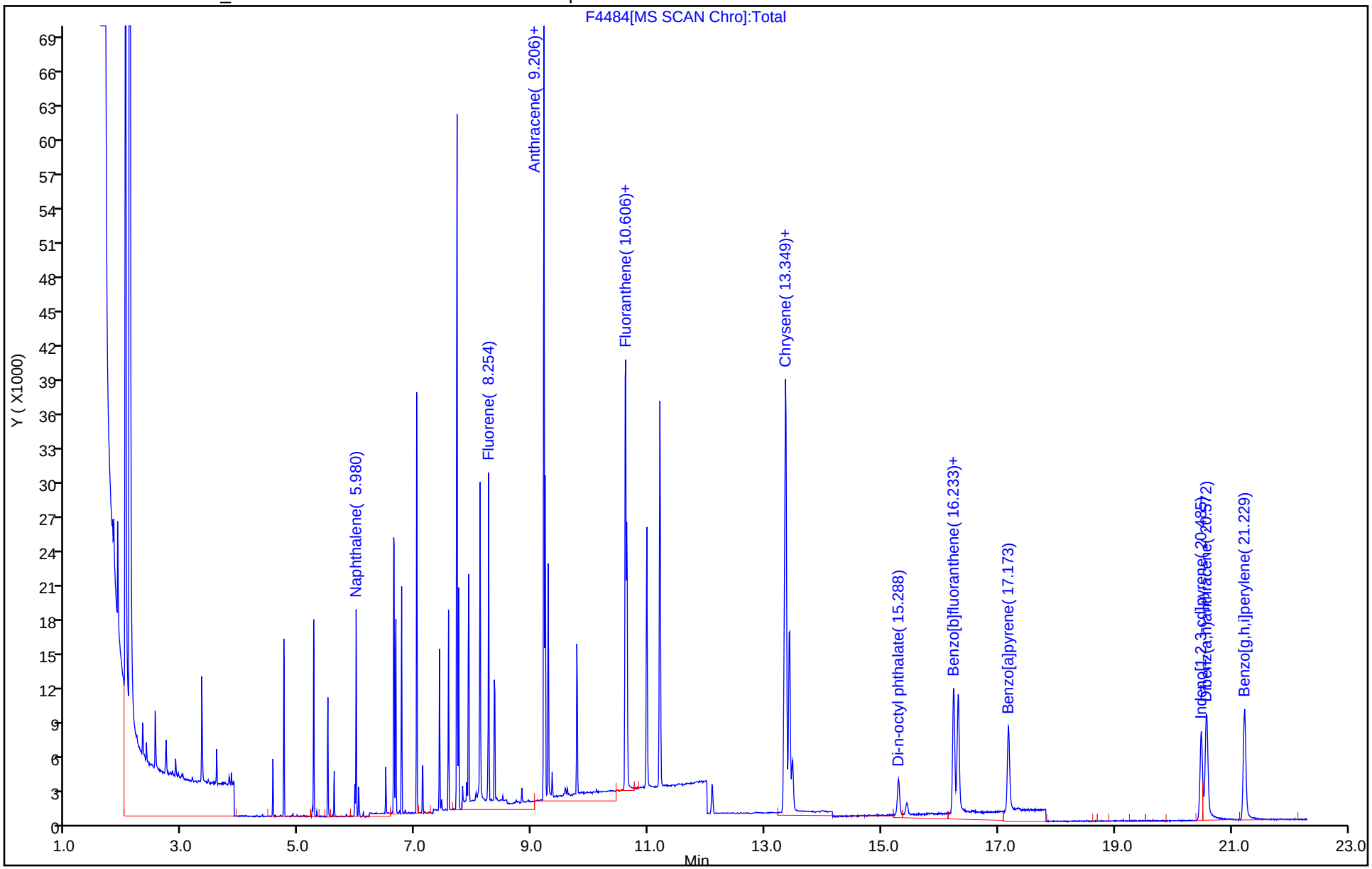
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 02-Nov-2018 17:20:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4484.D

Injection Date:	01-Nov-2018 23:30:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	LCS 280-435408/2-A			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\F4484.D
Lims ID: LCS 280-435408/2-A
Client ID:
Sample Type: LCS
Inject. Date: 01-Nov-2018 23:30:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-435408_2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181101-75734.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 02-Nov-2018 17:19:52 Calib Date: 29-Oct-2018 20:00:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181029-75596.b\F4406.D

Column 1 : Det: MS SCAN
Process Host: XAWRK011

First Level Reviewer: wickhamm Date: 02-Nov-2018 17:11:18

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	390.7	78.14
$ 5 2-Fluorobiphenyl	500.0	329.5	65.91
$ 6 Terphenyl-d14	500.0	436.8	87.36
$ 53 2-methylnaphthalene-d10	500.0	317.2	63.45
$ 54 Fluoranthene-d10	500.0	455.2	91.03

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_F Start Date: 10/29/2018 15:45

Analysis Batch Number: 435404 End Date: 10/29/2018 20:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-435404/2		10/29/2018 15:45	1	F4397.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-435404/3		10/29/2018 16:02	1	F4398.D	Rxi-5Sil MS 0.25(mm)
STD0001 280-435404/4 IC		10/29/2018 16:32	1	F4399.D	Rxi-5Sil MS 0.25(mm)
STD0002 280-435404/5 IC		10/29/2018 17:02	1	F4400.D	Rxi-5Sil MS 0.25(mm)
STD0500 280-435404/6 IC		10/29/2018 17:32	1	F4401.D	Rxi-5Sil MS 0.25(mm)
STD0100 280-435404/7 IC		10/29/2018 18:01	1	F4402.D	Rxi-5Sil MS 0.25(mm)
STD0300 280-435404/8 IC		10/29/2018 18:31	1	F4403.D	Rxi-5Sil MS 0.25(mm)
STD1200 280-435404/9 IC		10/29/2018 19:01	1	F4404.D	Rxi-5Sil MS 0.25(mm)
STD2500 280-435404/10 IC		10/29/2018 19:31	1	F4405.D	Rxi-5Sil MS 0.25(mm)
STD5000 280-435404/11 IC		10/29/2018 20:00	1	F4406.D	Rxi-5Sil MS 0.25(mm)
ICV 280-435404/12		10/29/2018 20:30	1	F4407.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SMS_F Start Date: 11/01/2018 18:15

Analysis Batch Number: 435950 End Date: 11/02/2018 05:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-435950/2		11/01/2018 18:15	1	F4473.D	Rxi-5Sil MS 0.25(mm)
CCV 280-435950/3		11/01/2018 18:29	1	F4474.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 19:05	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 19:34	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 20:04	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 20:33	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 21:03	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 21:32	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 22:02	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/01/2018 22:31	1		Rxi-5Sil MS 0.25(mm)
MB 280-435408/1-A		11/01/2018 23:01	1	F4483.D	Rxi-5Sil MS 0.25(mm)
LCS 280-435408/2-A		11/01/2018 23:30	1	F4484.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 00:00	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 00:29	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 00:59	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 01:28	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 01:58	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 02:27	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 02:57	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 03:26	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/02/2018 03:55	1		Rxi-5Sil MS 0.25(mm)
280-116270-1		11/02/2018 04:25	1	F4494.D	Rxi-5Sil MS 0.25(mm)
280-116270-9		11/02/2018 04:54	1	F4495.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-435950/25		11/02/2018 05:24	1	F4496.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435408 Batch Start Date: 10/29/18 21:02 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 10/30/18 12:19

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	8270BO-SIMLCS 00031
MB 280-435408/1		3510C, 8270D SIM				250 mL	1 mL	7 SU	
LCS 280-435408/2		3510C, 8270D SIM				250 mL	1 mL	7 SU	0.25 mL
280-116270-I-1	FWGmw-018-181001-GW	3510C, 8270D SIM	T	419.5 g	182.2 g	237.3 mL	1 mL	7 SU	
280-116270-H-9	FWGmw-020-181001-GW	3510C, 8270D SIM	T	398.6 g	181.4 g	217.2 mL	1 mL	7 SU	

Lab Sample ID	Client Sample ID	Method Chain	Basis	SIM_LVI_SURR 00006					
MB 280-435408/1		3510C, 8270D SIM		0.25 mL					
LCS 280-435408/2		3510C, 8270D SIM		0.25 mL					
280-116270-I-1	FWGmw-018-181001-GW	3510C, 8270D SIM	T	0.25 mL					
280-116270-H-9	FWGmw-020-181001-GW	3510C, 8270D SIM	T	0.25 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435408 Batch Start Date: 10/29/18 21:02 Batch Analyst: Exstrum, Adam J

Batch Method: 3510C Batch End Date: 10/30/18 12:19

Batch Notes	
Balance ID	24750399
Batch Comment	DV-OP-0006/0007
Analyst ID - Concentration	MF/CR
Concentration 1 Corrected Temperature	84/84 Degrees C
Equipment ID - Concentration 1	A/B
Analyst ID - Extraction	AE
Method/Fraction	3510C_LVI/8270D_SIM_DOD5
Na2SO4 ID	0000205461_00006
NaCl ID	181957
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00410
Prep Solvent Volume Used	90 mL
Analyst ID - Spike Analyst	AE
Analyst ID - Spike Witness Analyst	Reviewer: RC
Sufficient Volume for Batch QC	Yes
Concentration 1 Uncorrected Temperature	85/83 Degrees C
Reagent Water ID	S. ELGA

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8081B_DOD5

Organochlorine Pesticides (GC)

FORM II
PESTICIDES SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): CLP1 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCX1 #	DCBP1 #
LL3mw-244-181001-GW	280-116270-12	58	75
SCFmw-004-181001-GW	280-116270-13	58	78
	MB 280-435801/1-A	58	71
	LCS 280-435801/2-A	48	70
	LCS 280-435801/3-A	44	68

	QC LIMITS
TCX = Tetrachloro-m-xylene	44-124
DCBP = DCB Decachlorobiphenyl	34-122

Column to be used to flag recovery values

FORM II 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11140016.D

Lab ID: LCS 280-435801/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
4,4'-DDD	0.500	0.402	80	56-143	
4,4'-DDE	0.500	0.313	63	57-135	
4,4'-DDT	0.500	0.398	80	51-143	
Aldrin	0.500	0.292	58	45-134	
alpha-BHC	0.500	0.380	76	54-138	
alpha-Chlordane	0.500	0.394	79	60-129	
beta-BHC	0.500	0.362	72	56-136	
delta-BHC	0.500	0.403	81	52-142	
Dieldrin	0.500	0.429	86	60-136	
Endosulfan I	0.500	0.404	81	62-126	
Endosulfan II	0.500	0.406	81	52-135	
Endosulfan sulfate	0.500	0.455	91	62-133	
Endrin	0.500	0.415	83	60-138	
Endrin aldehyde	0.500	0.295	59	51-132	
Endrin ketone	0.500	0.414	83	58-134	
gamma-BHC (Lindane)	0.500	0.387	77	59-134	
gamma-Chlordane	0.500	0.380	76	56-136	
Heptachlor	0.500	0.317	63	54-130	
Heptachlor epoxide	0.500	0.380	76	61-133	
Methoxychlor	0.500	0.458	92	54-145	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11140017.D

Lab ID: LCS 280-435801/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Toxaphene	2.00	1.13 J	57	33-134	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM IV
PESTICIDES METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: MB 280-435801/1-A

Matrix: Water Date Extracted: 11/01/2018 08:30

Lab File ID:(1) 11140015.D Lab File ID:(2) 11140015.D

Date Analyzed:(1) 11/14/2018 19:18 Date Analyzed:(2) 11/14/2018 19:18

Instrument ID:(1) SGC_P2 Instrument ID:(2) SGC_P2

GC Column:(1) CLP1 ID: 0.32(mm) GC Column:(2) CLP2 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-435801/2-A	11/14/2018 19:36	11/14/2018 19:36
	LCS 280-435801/3-A	11/14/2018 19:53	11/14/2018 19:53
SCFmw-004-181001-GW	280-116270-13	11/14/2018 23:06	11/14/2018 23:06
LL3mw-244-181001-GW	280-116270-12	11/14/2018 23:24	11/14/2018 23:24

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: STD4 280-433303/29 Date Analyzed: 10/13/2018 19:57

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 024F3201.D Heated Purge: (Y/N) N

Calibration ID: 33989

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1639866372	3.02				
UPPER LIMIT		3279732744	3.52				
LOWER LIMIT		819933186	2.52				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-433303/33		1735793263	3.02				
ICV 280-433303/34		1963980017	3.02				
ICV 280-433303/35		1776097136	3.02				
ICV 280-433303/36		1833818877	3.02				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: STD4 280-433303/29 Date Analyzed: 10/13/2018 19:57

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 024F3201.D Heated Purge: (Y/N) N

Calibration ID: 33990

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		184249474	2.84				
UPPER LIMIT		368498948	3.34				
LOWER LIMIT		92124737	2.34				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-433303/33		195320590	2.84				
ICV 280-433303/34		209759075	2.84				
ICV 280-433303/35		196652802	2.84				
ICV 280-433303/36		196779319	2.84				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: CCVIS 280-437597/13 Date Analyzed: 11/14/2018 18:26

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11140013.D Heated Purge: (Y/N) N

Calibration ID: 33989

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2400162034	3.01				
UPPER LIMIT		4800324068	3.51				
LOWER LIMIT		1200081017	2.51				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-435801/1-A		2303108317	3.00				
LCS 280-435801/2-A		2344508294	3.01				
LCS 280-435801/3-A		2419130566	3.01				
280-116270-13	SCFmw-004-181001-GW	2365474120	3.01				
280-116270-12	LL3mw-244-181001-GW	2456724083	3.01				
CCV 280-437597/34		2326924871	3.01				
CCV 280-437597/35		2680048812	3.01				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: CCVIS 280-437597/13 Date Analyzed: 11/14/2018 18:26

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11140013.D Heated Purge: (Y/N) N

Calibration ID: 33990

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		222733655	2.81				
UPPER LIMIT		445467310	3.31				
LOWER LIMIT		111366828	2.31				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-435801/1-A		214122130	2.81				
LCS 280-435801/2-A		216972951	2.81				
LCS 280-435801/3-A		222829089	2.81				
280-116270-13	SCFmw-004-181001-GW	220808800	2.81				
280-116270-12	LL3mw-244-181001-GW	225061720	2.82				
CCV 280-437597/34		218570872	2.81				
CCV 280-437597/35		251325781	2.81				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-435801/2-A

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/14/2018 19:36 Date Analyzed (2): 11/14/2018 19:36

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
alpha-BHC	1		4.48	4.47	4.49	0.380		3.1
	2		4.41	4.41	4.43	0.368		
gamma-BHC (Lindane)	1		4.77	4.76	4.78	0.387		8.3
	2		4.73	4.72	4.74	0.421		
beta-BHC	1		4.84	4.84	4.86	0.362		14.8
	2		4.80	4.80	4.82	0.420		
delta-BHC	1		4.99	4.98	5.01	0.403		3.4
	2		5.04	5.03	5.05	0.418		
Heptachlor	1		5.16	5.16	5.18	0.317		11.1
	2		5.08	5.07	5.09	0.354		
Aldrin	1		5.43	5.43	5.45	0.292		16.8
	2		5.35	5.34	5.36	0.345		
Heptachlor epoxide	1		6.04	6.04	6.06	0.380		11.7
	2		5.88	5.88	5.90	0.427		
gamma-Chlordane	1		6.17	6.17	6.19	0.380		7.9
	2		6.08	6.08	6.10	0.411		
alpha-Chlordane	1		6.31	6.31	6.33	0.394		4.8
	2		6.24	6.23	6.26	0.414		
4,4'-DDE	1		6.39	6.38	6.41	0.313		25.5
	2		6.42	6.41	6.44	0.405		
Endosulfan I	1		6.46	6.46	6.48	0.404		6.2
	2		6.30	6.29	6.31	0.430		
Dieldrin	1		6.72	6.71	6.73	0.429		1.5
	2		6.59	6.58	6.61	0.436		
Endrin	1		6.96	6.96	6.98	0.415		9.5
	2		6.91	6.90	6.93	0.456		
4,4'-DDD	1		7.02	7.02	7.04	0.402		3.4
	2		7.04	7.03	7.05	0.416		
Endosulfan II	1		7.20	7.20	7.22	0.406		1.6
	2		7.13	7.13	7.15	0.399		
4,4'-DDT	1		7.32	7.31	7.34	0.398		13.9
	2		7.37	7.36	7.38	0.458		
Endrin aldehyde	1		7.64	7.64	7.66	0.295		12.3
	2		7.49	7.49	7.51	0.333		
Methoxychlor	1		7.82	7.82	7.84	0.458		3.4
	2		8.10	8.09	8.12	0.473		
Endosulfan sulfate	1		8.10	8.10	8.12	0.455		7.8
	2		7.78	7.78	7.80	0.420		
Endrin ketone	1		8.39	8.39	8.41	0.414		1.8
	2		8.34	8.33	8.36	0.407		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-435801/3-A

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/14/2018 19:53 Date Analyzed (2): 11/14/2018 19:53

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Toxaphene	1	1	6.22	6.20	6.23	0.520	1.13	35.5
		2	6.82	6.81	6.83	0.783		
		4	7.85	7.84	7.86	1.22		
		5	8.17	8.16	8.18	2.00		
	2	2	7.08	7.08	7.10	1.42	1.62	
		3	7.22	7.22	7.24	1.57		
		5	8.03	8.03	8.05	1.86		

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-244-181001-GW | Lab Sample ID: 280-116270-12

Matrix: Water | Lab File ID: 11140042.D

Analysis Method: 8081B | Date Collected: 10/26/2018 08:50

Extraction Method: 3510C | Date Extracted: 11/01/2018 08:30

Sample wt/vol: 990.2(mL) | Date Analyzed: 11/14/2018 23:24

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437597 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.020	U	0.050	0.020	0.0078
72-55-9	4,4'-DDE	0.020	U	0.050	0.020	0.0076
50-29-3	4,4'-DDT	0.050	U	0.050	0.050	0.015
309-00-2	Aldrin	0.020	U	0.050	0.020	0.0060
319-84-6	alpha-BHC	0.020	U	0.050	0.020	0.0054
5103-71-9	alpha-Chlordane	0.020	U	0.050	0.020	0.0054
319-85-7	beta-BHC	0.020	U	0.050	0.020	0.0088
319-86-8	delta-BHC	0.020	U	0.050	0.020	0.0059
60-57-1	Dieldrin	0.020	U	0.050	0.020	0.0064
959-98-8	Endosulfan I	0.020	U	0.050	0.020	0.0059
33213-65-9	Endosulfan II	0.020	U	0.050	0.020	0.0071
1031-07-8	Endosulfan sulfate	0.020	U	0.050	0.020	0.0058
72-20-8	Endrin	0.020	U	0.050	0.020	0.0080
7421-93-4	Endrin aldehyde	0.020	U	0.050	0.020	0.0089
53494-70-5	Endrin ketone	0.020	U	0.050	0.020	0.0071
58-89-9	gamma-BHC (Lindane)	0.020	U	0.050	0.020	0.0070
5103-74-2	gamma-Chlordane	0.020	U	0.050	0.020	0.0092
76-44-8	Heptachlor	0.020	U	0.050	0.020	0.0078
1024-57-3	Heptachlor epoxide	0.020	U	0.050	0.020	0.0076
72-43-5	Methoxychlor	0.050	U	0.050	0.050	0.013
8001-35-2	Toxaphene	0.81	U	2.0	0.81	0.37

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	75		34-122
877-09-8	Tetrachloro-m-xylene	58		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140042.D
Lims ID: 280-116270-A-12-A
Client ID: LL3mw-244-181001-GW
Sample Type: Client
Inject. Date: 14-Nov-2018 23:24:15 ALS Bottle#: 24 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-A-12-
Misc. Info.: 280-0076199-042
Operator ID: TEM Instrument ID: SGC_P2

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:13:42 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical						
1		1.000			ND	
2		0.000				
* 2 1-Bromo-2-nitrobenzene						
1	3.010	3.005	0.005	2456724083	150.0	
2	2.815	2.812	0.003	225061720	150.0	
$ 4 Tetrachloro-m-xylene						
1	3.902	3.900	0.002	203935700	11.6	
2	3.792	3.792	0.000	24526266	12.9	
					RPD = 10.93	
5 Hexachlorobenzene						
1	4.309	4.307	0.002	2926612	0.4471	
2	4.269	4.269	0.000	913760	-0.0962	
					RPD = 309.72	
6 Diallate						
1		4.336			ND	
2		4.226				
7 Propachlor						
1		4.477			ND	
2		4.104				
8 alpha-BHC						
1		4.477			ND	
2		4.415				
9 gamma-BHC (Lindane)						
1		4.765			ND	
2		4.728				
10 beta-BHC						
1		4.843			ND	
2		4.805				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
11 2,4,5-Trichlorophenol						
1		4.861			ND	
2		4.772				
12 delta-BHC						
1		4.991			ND	
2		5.037				
14 Chlordane (technical)						
1		5.102			ND	
1		5.568				
1		6.179				
1		6.317				
1		7.132				
2		4.969				
2		5.489				
2		6.087				
2		6.243				
2		7.188				
13 Technical Chlordane						
1		5.102			ND	
1		5.568				
1		6.179				
1		6.317				
1		7.132				
2		4.969				
2		5.489				
2		6.087				
2		6.243				
2		7.188				
15 Heptachlor						
1		5.165			ND	
2		5.078				
16 Aldrin						
1		5.433			ND	
2		5.345				
17 Chlorpyrifos						
1		5.669			ND	
2		5.571				
18 Isodrin						
1		5.755			ND	
2		5.705				
19 Dicofol						
1		5.800			ND	
2		5.671				
20 2,4'-DDE						
1		6.029			ND	
2		6.094				
21 Heptachlor epoxide						
1		6.041			ND	
2		5.883				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
22 trans-Chlordane						
1	6.173				ND	
2	6.080					
28 Toxaphene						
1	6.216				ND	
1	6.821					
1	7.495					
1	7.852					
1	8.169					
2	5.735					
2	7.090					
2	7.231					
2	7.745					
2	8.040					
23 cis-Chlordane						
1	6.314				ND	
2	6.236					
24 4,4'-DDE						
1	6.390				ND	
2	6.420					
25 Endosulfan I						
1	6.462				ND	
2	6.295					
26 2,4'-DDD						
1	6.580				ND	
2	6.640					
27 Dieldrin						
1	6.715				ND	
2	6.585					
29 2,4'-DDT						
1	6.848				ND	
2	6.963					
30 Endrin						
1	6.964				ND	
2	6.907					
31 Kepone						
1	7.011				ND	
2	7.031					
32 4,4'-DDD						
1	7.025				ND	
2	7.035					
33 Chlorobenzilate						
1	7.044				ND	
2	6.909					
34 Endosulfan II						
1	7.200				ND	
2	7.133					
35 4,4'-DDT						
1	7.318				ND	
2	7.365					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
36 Endrin aldehyde						
1		7.644			ND	
2		7.492				
37 Methoxychlor						
1		7.823			ND	
2		8.095				
38 Mirex						
1		7.981			ND	
2		8.286				
39 Endosulfan sulfate						
1		8.102			ND	
2		7.784				
40 Endrin ketone						
1		8.394			ND	
2		8.336				
$ 41 DCB Decachlorobiphenyl						
1	9.407	9.406	0.001	140550668	15.0	
2	9.604	9.605	-0.001	18054792	16.0	
					RPD = 6.72	
42 Tris(2,3-dibromopropyl)phosphate						
1		11.209			ND	
2		11.395				
S 3 Endosulfan, Total						
1		0.000			ND	
2		0.000				

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

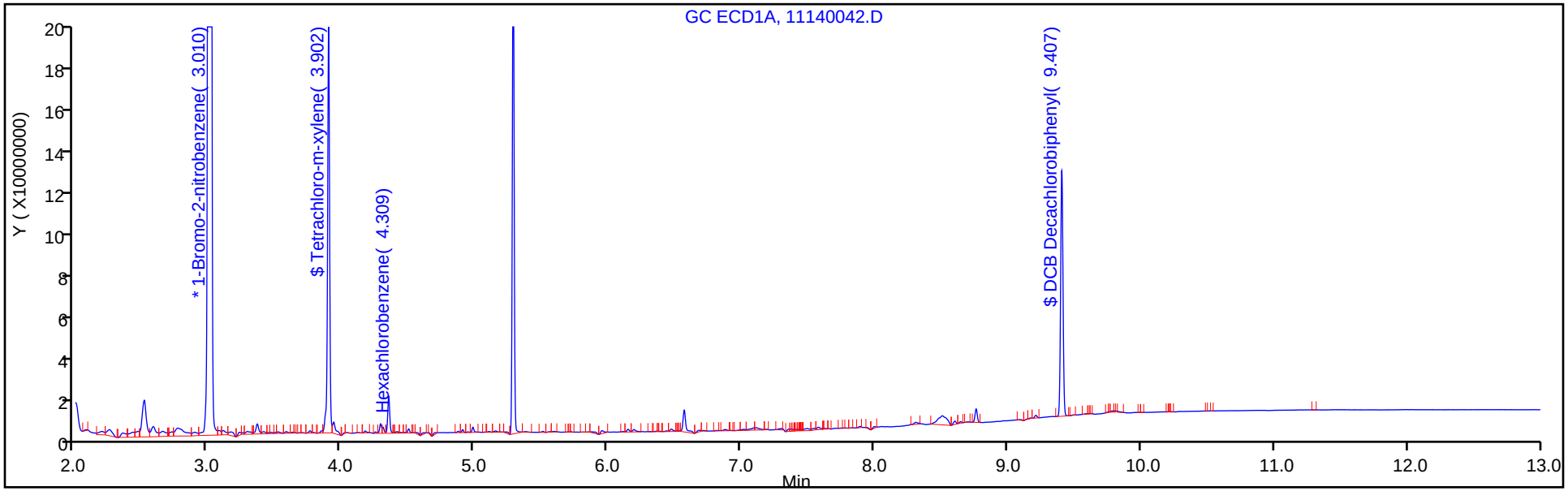
Report Date: 29-Nov-2018 14:13:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

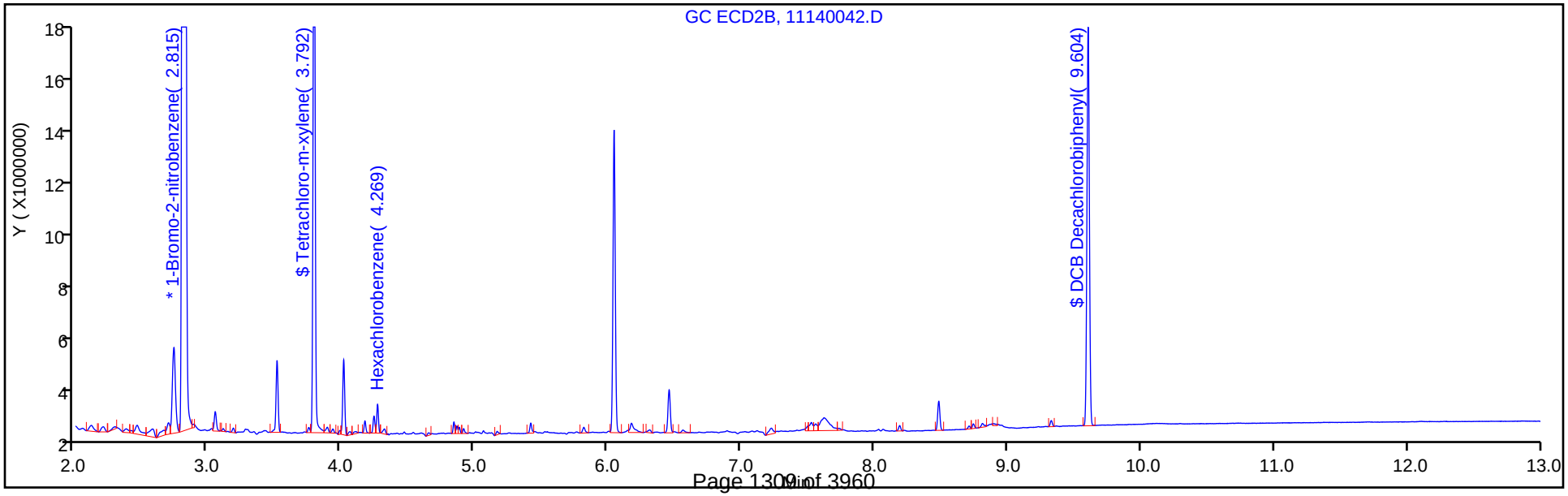
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140042.D

Injection Date:	14-Nov-2018 23:24:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116270-A-12-A	Lab Sample ID:	280-116270-12	Worklist Smp#:	42
Client ID:	LL3mw-244-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140042.D				
Lims ID:	280-116270-A-12-A				
Client ID:	LL3mw-244-181001-GW				
Sample Type:	Client				
Inject. Date:	14-Nov-2018 23:24:15	ALS Bottle#:	24	Worklist Smp#:	42
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-A-12-				
Misc. Info.:	280-0076199-042				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	29-Nov-2018 14:13:42	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0313				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	11.6	57.98
$ 41 DCB Decachlorobiphenyl	20.0	15.0	74.85

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	12.9	64.68
$ 41 DCB Decachlorobiphenyl	20.0	16.0	80.06

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: SCFmw-004-181001-GW | Lab Sample ID: 280-116270-13

Matrix: Water | Lab File ID: 11140041.D

Analysis Method: 8081B | Date Collected: 10/26/2018 13:35

Extraction Method: 3510C | Date Extracted: 11/01/2018 08:30

Sample wt/vol: 1016.2(mL) | Date Analyzed: 11/14/2018 23:06

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437597 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.020	U	0.049	0.020	0.0076
72-55-9	4,4'-DDE	0.020	U	0.049	0.020	0.0074
50-29-3	4,4'-DDT	0.049	U	0.049	0.049	0.015
309-00-2	Aldrin	0.020	U	0.049	0.020	0.0058
319-84-6	alpha-BHC	0.020	U	0.049	0.020	0.0052
5103-71-9	alpha-Chlordane	0.020	U	0.049	0.020	0.0052
319-85-7	beta-BHC	0.020	U	0.049	0.020	0.0086
319-86-8	delta-BHC	0.020	U	0.049	0.020	0.0057
60-57-1	Dieldrin	0.020	U	0.049	0.020	0.0062
959-98-8	Endosulfan I	0.020	U	0.049	0.020	0.0057
33213-65-9	Endosulfan II	0.020	U	0.049	0.020	0.0069
1031-07-8	Endosulfan sulfate	0.020	U	0.049	0.020	0.0056
72-20-8	Endrin	0.020	U	0.049	0.020	0.0078
7421-93-4	Endrin aldehyde	0.020	U	0.049	0.020	0.0087
53494-70-5	Endrin ketone	0.020	U	0.049	0.020	0.0069
58-89-9	gamma-BHC (Lindane)	0.020	U	0.049	0.020	0.0068
5103-74-2	gamma-Chlordane	0.020	U	0.049	0.020	0.0090
76-44-8	Heptachlor	0.020	U	0.049	0.020	0.0076
1024-57-3	Heptachlor epoxide	0.020	U	0.049	0.020	0.0074
72-43-5	Methoxychlor	0.049	U	0.049	0.049	0.013
8001-35-2	Toxaphene	0.79	U	2.0	0.79	0.36

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	78		34-122
877-09-8	Tetrachloro-m-xylene	58		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140041.D
Lims ID: 280-116270-D-13-A
Client ID: SCFmw-004-181001-GW
Sample Type: Client
Inject. Date: 14-Nov-2018 23:06:39 ALS Bottle#: 23 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-D-13-
Misc. Info.: 280-0076199-041
Operator ID: TEM Instrument ID: SGC_P2

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:13:40 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical						
1		1.000			ND	
2		0.000				
* 2 1-Bromo-2-nitrobenzene						
1	3.008	3.005	0.003	2365474120	150.0	
2	2.814	2.812	0.002	220808800	150.0	
$ 4 Tetrachloro-m-xylene						
1	3.901	3.900	0.001	197907609	11.7	
2	3.791	3.792	-0.001	23905650	12.8	
					RPD = 9.49	
5 Hexachlorobenzene						
1		4.307			ND	
2		4.269				
6 Diallate						
1		4.336			ND	
2		4.226				
7 Propachlor						
1		4.477			ND	
2		4.104				
8 alpha-BHC						
1		4.477			ND	
2		4.415				
9 gamma-BHC (Lindane)						
1		4.765			ND	
2		4.728				
10 beta-BHC						
1		4.843			ND	
2		4.805				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
11 2,4,5-Trichlorophenol						
1		4.861			ND	
2		4.772				
12 delta-BHC						
1		4.991			ND	
2		5.037				
14 Chlordane (technical)						
1		5.102			ND	
1		5.568				
1		6.179				
1		6.317				
1		7.132				
2		4.969				
2		5.489				
2		6.087				
2		6.243				
2		7.188				
13 Technical Chlordane						
1		5.102			ND	
1		5.568				
1		6.179				
1		6.317				
1		7.132				
2		4.969				
2		5.489				
2		6.087				
2		6.243				
2		7.188				
15 Heptachlor						
1		5.165			ND	
2		5.078				
16 Aldrin						
1		5.433			ND	
2		5.345				
17 Chlorpyrifos						
1		5.669			ND	
2		5.571				
18 Isodrin						
1		5.755			ND	
2		5.705				
19 Dicofol						
1		5.800			ND	
2		5.671				
20 2,4'-DDE						
1		6.029			ND	
2		6.094				
21 Heptachlor epoxide						
1		6.041			ND	
2		5.883				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
22 trans-Chlordane						
1		6.173			ND	
2		6.080				
28 Toxaphene						
1		6.216			ND	
1		6.821				
1		7.495				
1		7.852				
1		8.169				
2		5.735				
2		7.090				
2		7.231				
2		7.745				
2		8.040				
23 cis-Chlordane						
1		6.314			ND	
2		6.236				
24 4,4'-DDE						
1		6.390			ND	
2		6.420				
25 Endosulfan I						
1		6.462			ND	
2		6.295				
26 2,4'-DDD						
1		6.580			ND	
2		6.640				
27 Dieldrin						
1		6.715			ND	
2		6.585				
29 2,4'-DDT						
1		6.848			ND	
2		6.963				
30 Endrin						
1		6.964			ND	
2		6.907				
31 Kepone						
1		7.011			ND	
2		7.031				
32 4,4'-DDD						
1		7.025			ND	
2		7.035				
33 Chlorobenzilate						
1		7.044			ND	
2		6.909				
34 Endosulfan II						
1		7.200			ND	
2		7.133				
35 4,4'-DDT						
1		7.318			ND	
2		7.365				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
36 Endrin aldehyde						
1		7.644			ND	
2		7.492				
37 Methoxychlor						
1		7.823			ND	
2		8.095				
38 Mirex						
1		7.981			ND	
2		8.286				
39 Endosulfan sulfate						
1		8.102			ND	
2		7.784				
40 Endrin ketone						
1		8.394			ND	
2		8.336				
$ 41 DCB Decachlorobiphenyl						
1	9.406	9.406	0.000	141727215	15.7	
2	9.604	9.605	-0.001	18048798	16.3	
					RPD = 4.05	
42 Tris(2,3-dibromopropyl)phosphate						
1		11.209			ND	
2		11.395				
S 3 Endosulfan, Total						
1		0.000			ND	
2		0.000				

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

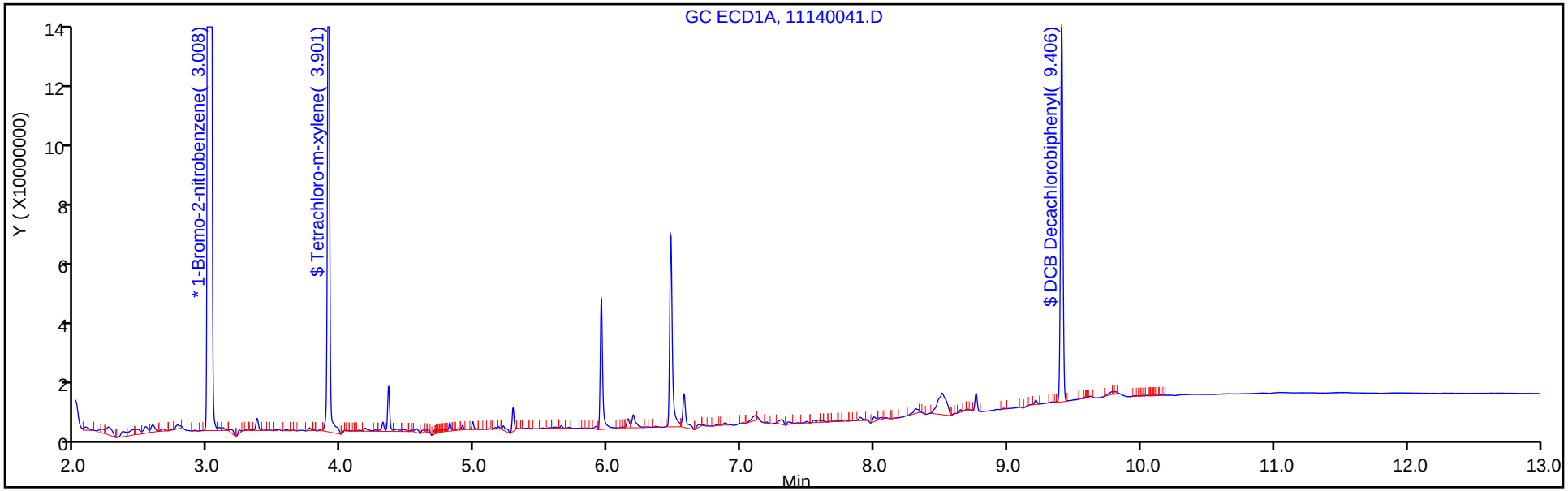
Report Date: 29-Nov-2018 14:13:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

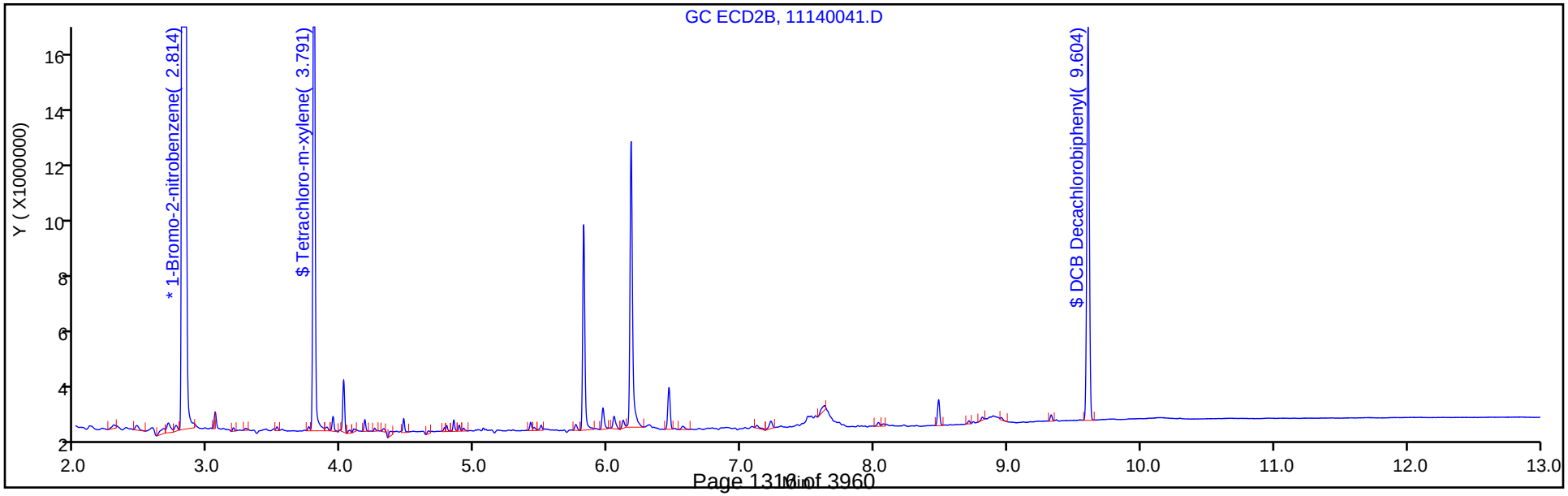
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140041.D

Injection Date:	14-Nov-2018 23:06:39	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116270-D-13-A	Lab Sample ID:	280-116270-13	Worklist Smp#:	41
Client ID:	SCFmw-004-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140041.D				
Lims ID:	280-116270-D-13-A				
Client ID:	SCFmw-004-181001-GW				
Sample Type:	Client				
Inject. Date:	14-Nov-2018 23:06:39	ALS Bottle#:	23	Worklist Smp#:	41
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-D-13-				
Misc. Info.:	280-0076199-041				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	29-Nov-2018 14:13:40	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0313				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	11.7	58.42
$ 41 DCB Decachlorobiphenyl	20.0	15.7	78.43

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	12.8	64.24
$ 41 DCB Decachlorobiphenyl	20.0	16.3	81.67

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33997

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0059 0.0071	0.0062	0.0067	0.0068	0.0071	Lin2	-0.239	0.0070							0.9990		0.9900
Toxaphene Peak 2	0.0143 0.0181	0.0151	0.0166	0.0176	0.0185	Lin2	-0.823	0.0179							0.9980		0.9900
Toxaphene Peak 3	0.0141 0.0205	0.0164	0.0179	0.0201	0.0204	Lin2	-1.318	0.0202							0.9980		0.9900
Toxaphene Peak 4	0.0054 0.0083	0.0062	0.0073	0.0079	0.0083	Lin2	-0.605	0.0081							0.9970		0.9900
Toxaphene Peak 5	0.0045 0.0085	0.0056	0.0071	0.0079	0.0086	Lin2	-0.840	0.0083							0.9930		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33997

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	BNB	Lin2	13484316 984914164	36757841	77218443	157400259	444953077	200 10000	500	1000	2000	5000
Toxaphene Peak 2	BNB	Lin2	32829722 2531832439	89263703	193181281	408359221	1162405972	200 10000	500	1000	2000	5000
Toxaphene Peak 3	BNB	Lin2	32415828 2860362835	96759589	207813969	466543962	1283190101	200 10000	500	1000	2000	5000
Toxaphene Peak 4	BNB	Lin2	12391302 1164606715	36941603	84522297	184785693	519294161	200 10000	500	1000	2000	5000
Toxaphene Peak 5	BNB	Lin2	10296721 1187453780	33168067	82441591	182989462	541962755	200 10000	500	1000	2000	5000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D
Lims ID: STD6 TOX
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 16:10:51 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:12 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:36:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	2093632714	150.0	150.0	
2	2.840	2.839	0.000	210457864	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	984914164	10000	10176	
1	6.853	6.854	-0.001	2531832439	10000	10174	
1	7.528	7.528	0.000	2860362835	10000	10232	
1	7.885	7.886	-0.001	1164606715	10000	10334	
1	8.203	8.204	-0.001	1187453780	10000	10397	
		Average of Peak Amounts =				10263	
2	5.776	5.778	-0.002	60549286	10000	9540.5	M
2	7.143	7.145	-0.002	273869350	10000	9445.5	M
2	7.284	7.286	-0.002	756947570	10000	9410.3	M
2	7.798	7.800	-0.002	219585664	10000	9519.4	M
2	8.094	8.096	-0.002	429283014	10000	9559.5	M
		Average of Peak Amounts =				9495.0	
						RPD = 7.77	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL6_00023 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

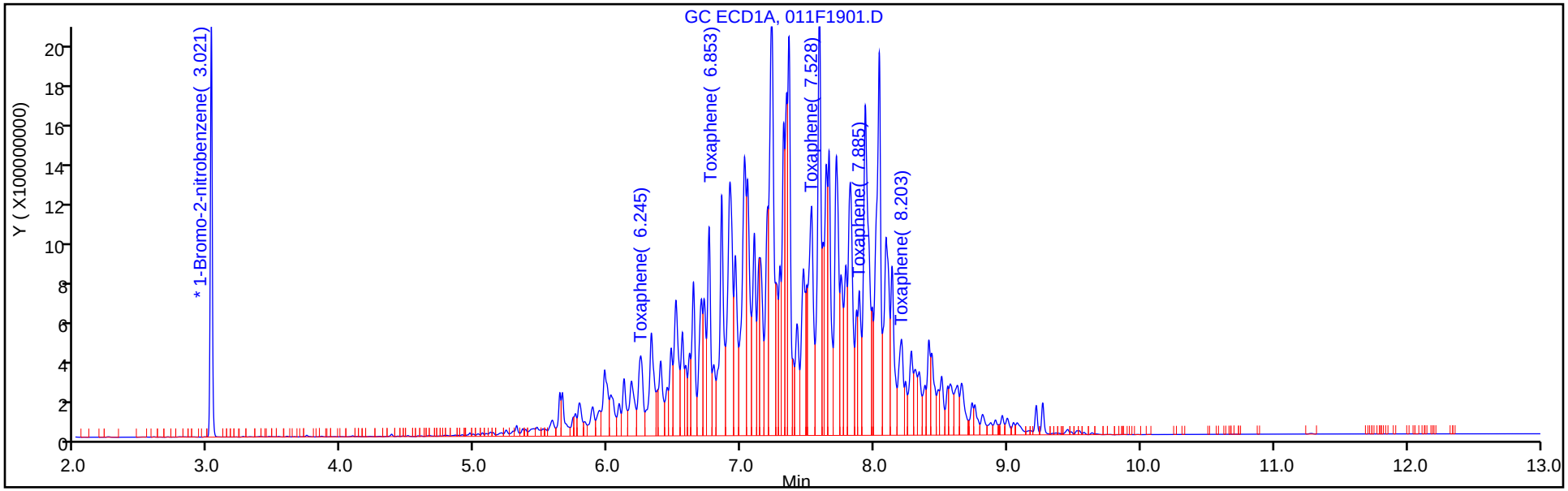
Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

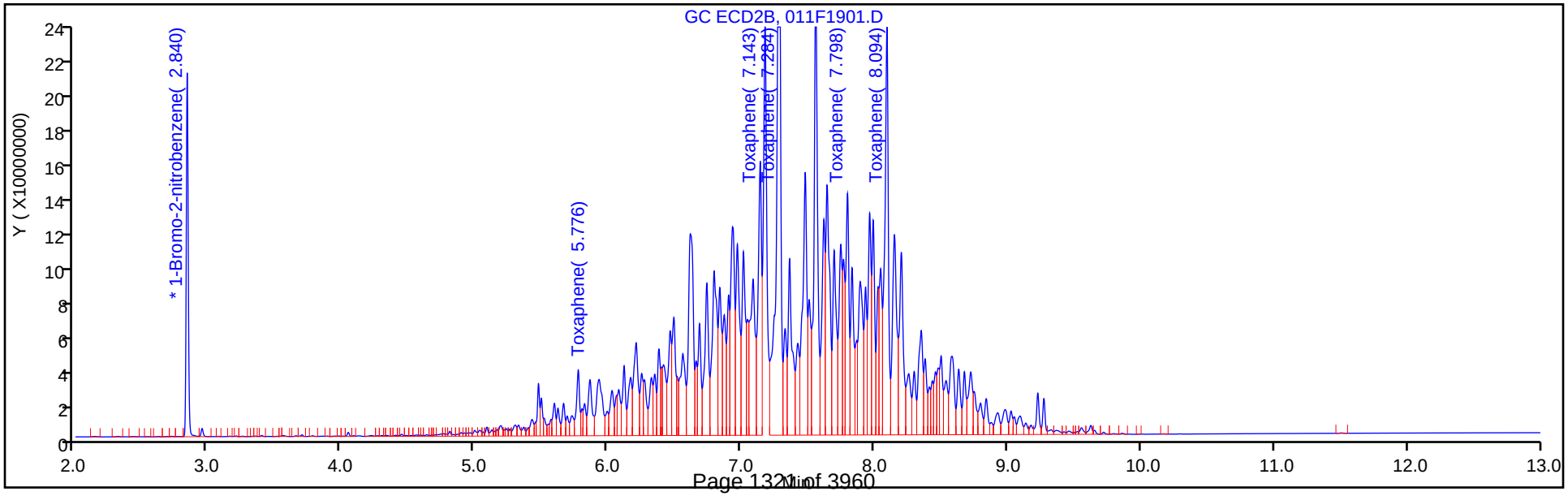
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date:	13-Oct-2018 16:10:51	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 TOX			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D
Lims ID: STD5 TOX
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 16:28:15 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:15 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	1887409806	150.0	150.0	
2	2.840	2.839	0.001	194682264	150.0	150.0	
28 Toxaphene							
1	6.246	6.246	0.000	444953077	5000.0	5116.5	
1	6.853	6.854	-0.001	1162405972	5000.0	5203.9	
1	7.526	7.528	-0.002	1283190101	5000.0	5124.6	
1	7.886	7.886	0.000	519294161	5000.0	5149.2	
1	8.204	8.204	0.000	541962755	5000.0	5314.1	
		Average of Peak Amounts =				5181.6	
2	5.777	5.778	-0.001	30052469	5000.0	5094.6	
2	7.143	7.145	-0.002	136167822	5000.0	5072.1	
2	7.284	7.286	-0.002	377922017	5000.0	5079.7	
2	7.799	7.800	-0.001	110390772	5000.0	5177.3	
2	8.095	8.096	-0.001	210568110	5000.0	5070.0	
		Average of Peak Amounts =				5098.7	
						RPD = 1.61	

Reagents:

8081ToxL5_00021 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

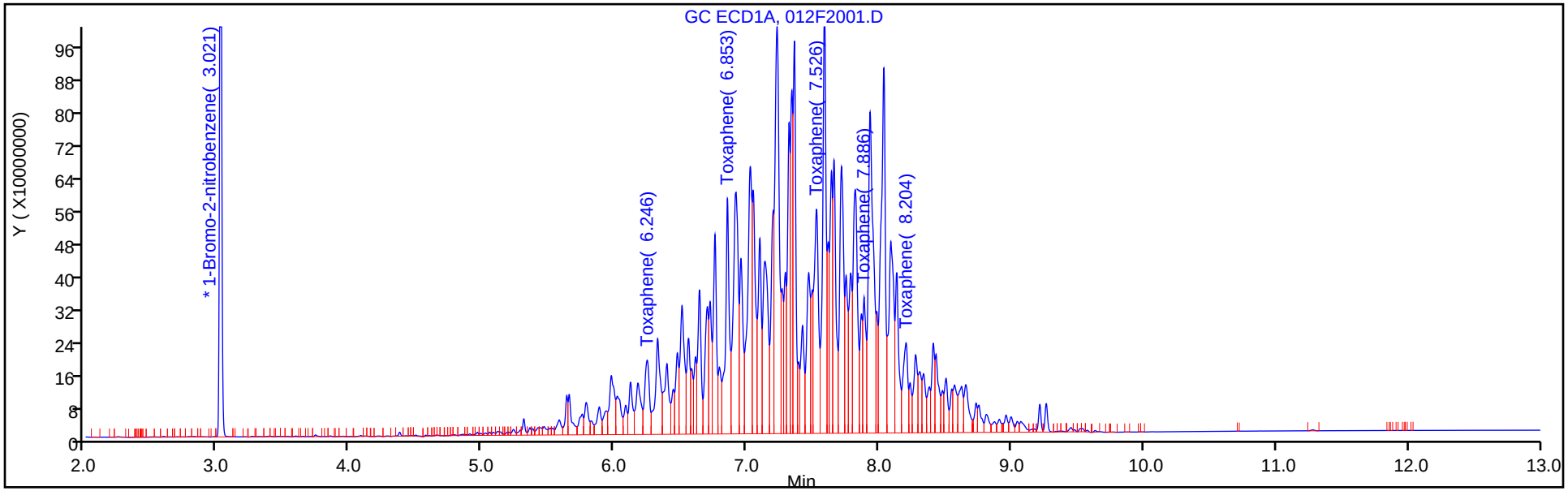
Report Date: 14-Oct-2018 22:11:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

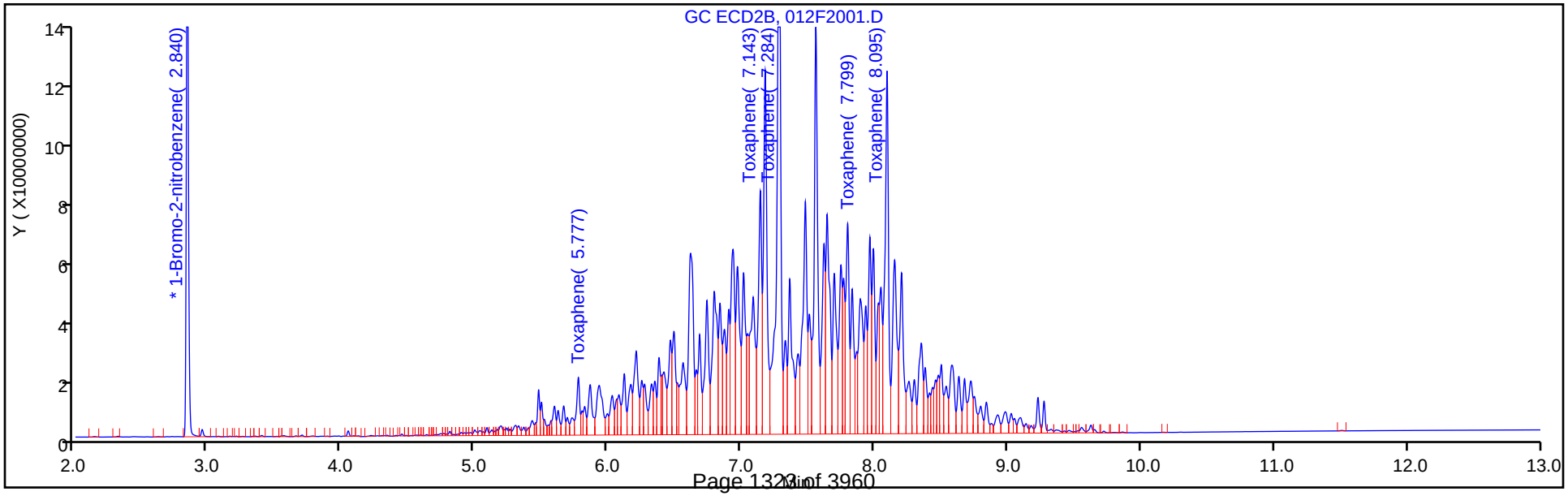
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D

Injection Date:	13-Oct-2018 16:28:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 TOX			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D
Lims ID: STD4 TOX
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 16:45:38 ALS Bottle#: 13 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:18 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	0.000	1744551294	150.0	150.0	
2	2.841	2.841	0.000	183459712	150.0	150.0	
28 Toxaphene							M
1	6.246	6.246	0.000	157400259	2000.0	1979.4	M
1	6.854	6.854	0.000	408359221	2000.0	2006.3	M
1	7.528	7.528	0.000	466543962	2000.0	2055.4	M
1	7.886	7.886	0.000	184785693	2000.0	2028.0	M
1	8.204	8.204	0.000	182989462	2000.0	2005.7	M
		Average of Peak Amounts =				2015.0	
2	5.778	5.778	0.000	12064651	2000.0	2140.2	M
2	7.145	7.145	0.000	52352055	2000.0	2063.3	M
2	7.286	7.286	0.000	145561454	2000.0	2077.1	M
2	7.800	7.800	0.000	41885928	2000.0	2089.7	M
2	8.096	8.096	0.000	80317017	2000.0	2053.4	M
		Average of Peak Amounts =				2084.7	
						RPD = 3.40	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00014 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

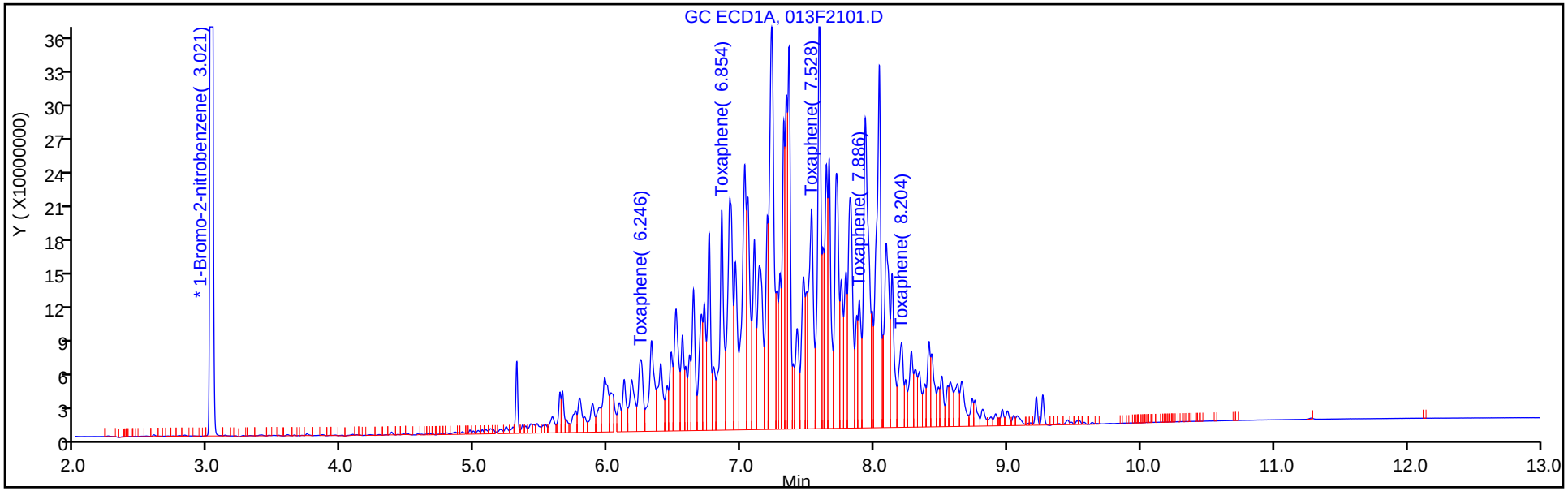
Report Date: 14-Oct-2018 22:11:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

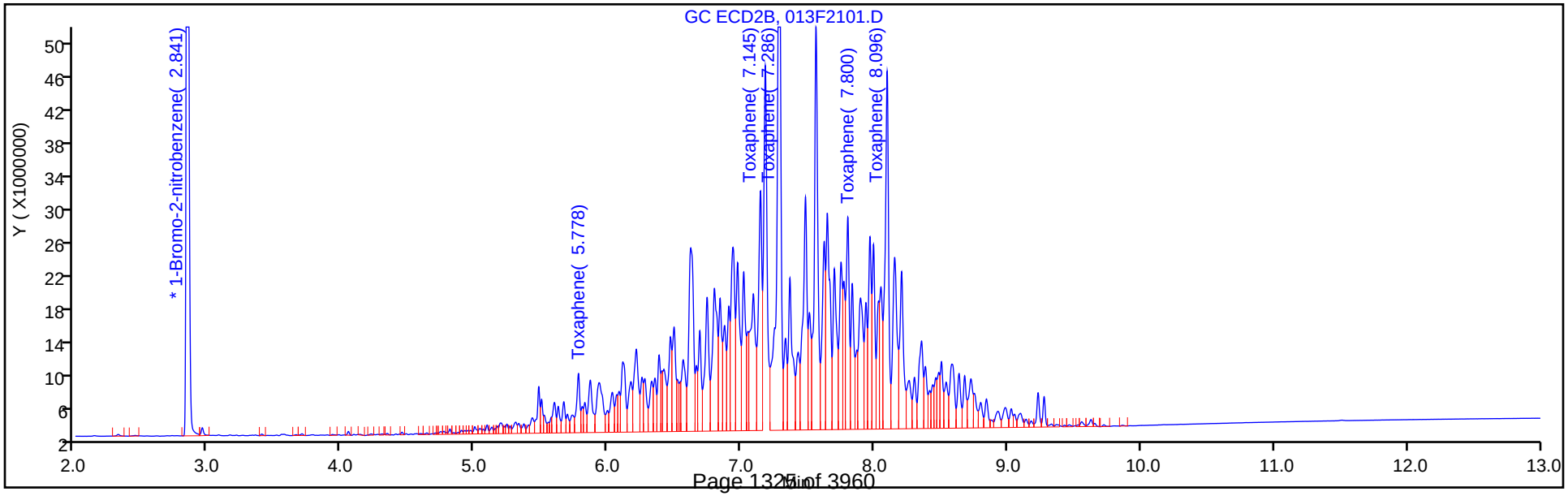
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 TOX			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date: 13-Oct-2018 16:45:38 Instrument ID: SGC_P2

Lims ID: STD4 TOX

Client ID:

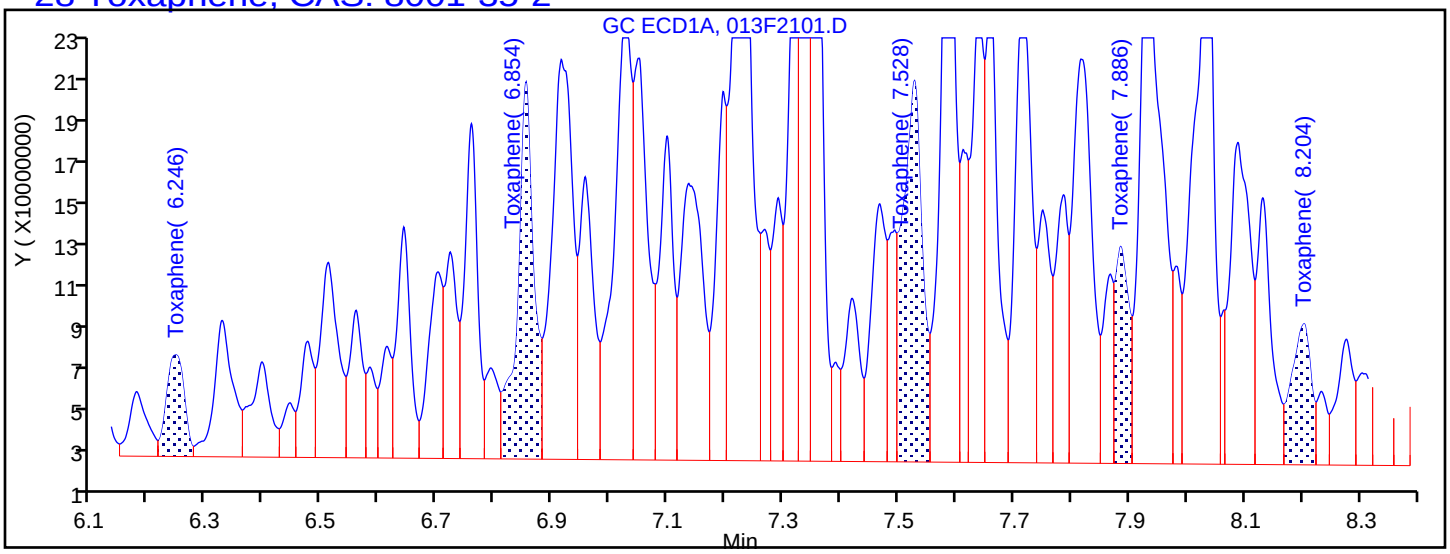
Operator ID: TEM ALS Bottle#: 13 Worklist Smp#: 18

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

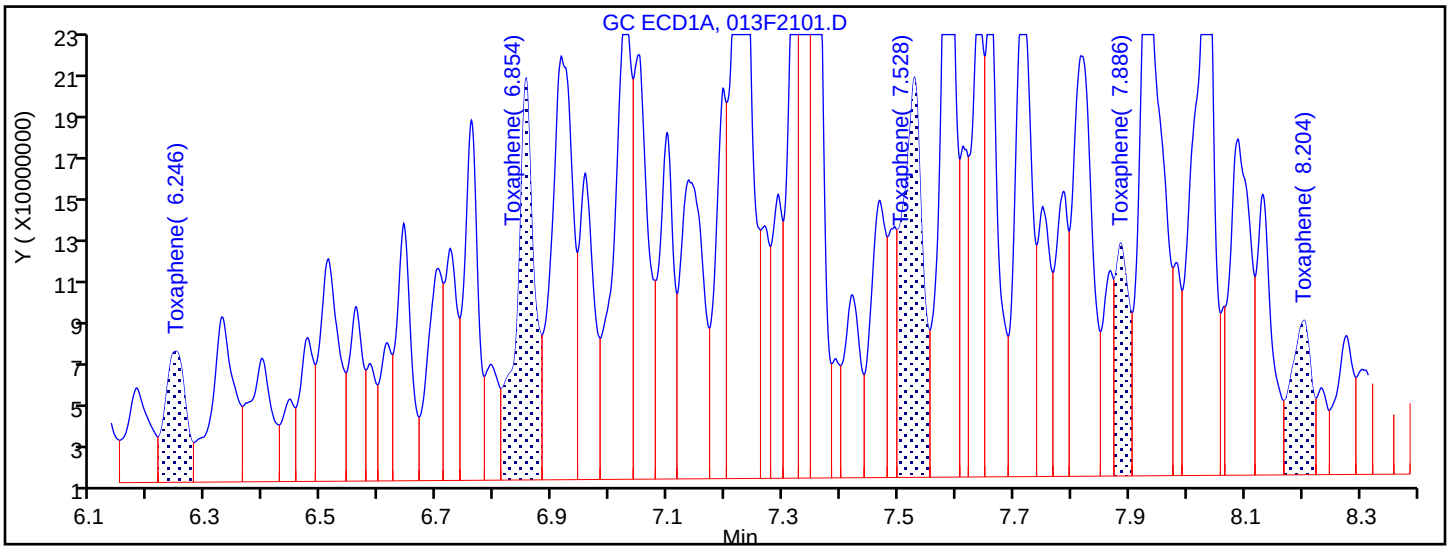
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.246	Response = 105015082
6.854	Response = 357524871
7.528	Response = 434898456
7.886	Response = 170048760
8.204	Response = 161011474



Manual Integration Results

6.246	Response = 157400259	M
6.854	Response = 408359221	M
7.528	Response = 466543962	M
7.886	Response = 184785693	M
8.204	Response = 182989462	M

Reviewer: mooret, 14-Oct-2018 21:37:36

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D
Lims ID: STD3 TOX
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 17:03:01 ALS Bottle#: 14 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:21 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	-0.001	1741058857	150.0	150.0	
2	2.841	2.841	-0.001	184005886	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	77218443	1000.0	990.5	M
1	6.854	6.854	0.000	193181281	1000.0	975.2	M
1	7.527	7.528	-0.001	207813969	1000.0	953.6	M
1	7.887	7.886	0.001	84522297	1000.0	969.8	M
1	8.204	8.204	0.000	82441591	1000.0	961.2	M
		Average of Peak Amounts =				970.0	
2	5.777	5.778	-0.001	5366684	1000.0	919.9	
2	7.143	7.145	-0.002	26089503	1000.0	1020.0	
2	7.285	7.286	-0.001	72036294	1000.0	1025.7	
2	7.800	7.800	0.000	19681560	1000.0	983.5	
2	8.095	8.096	-0.001	40124523	1000.0	1023.9	
		Average of Peak Amounts =				994.6	
						RPD = 2.50	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL3_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

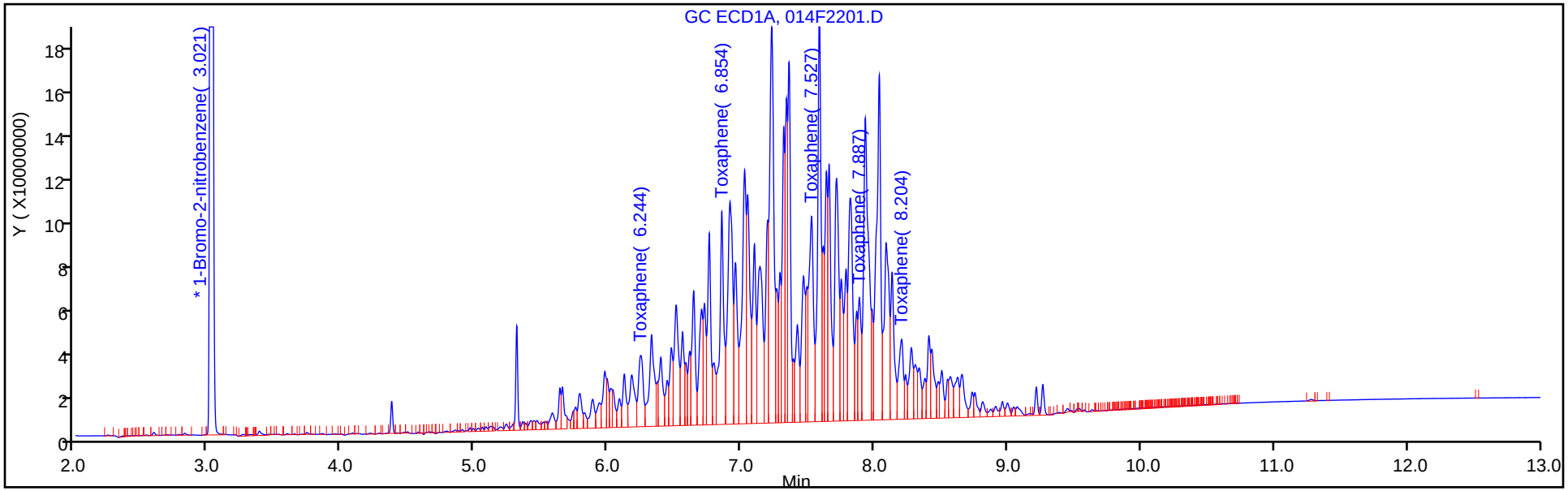
Report Date: 14-Oct-2018 22:11:22 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

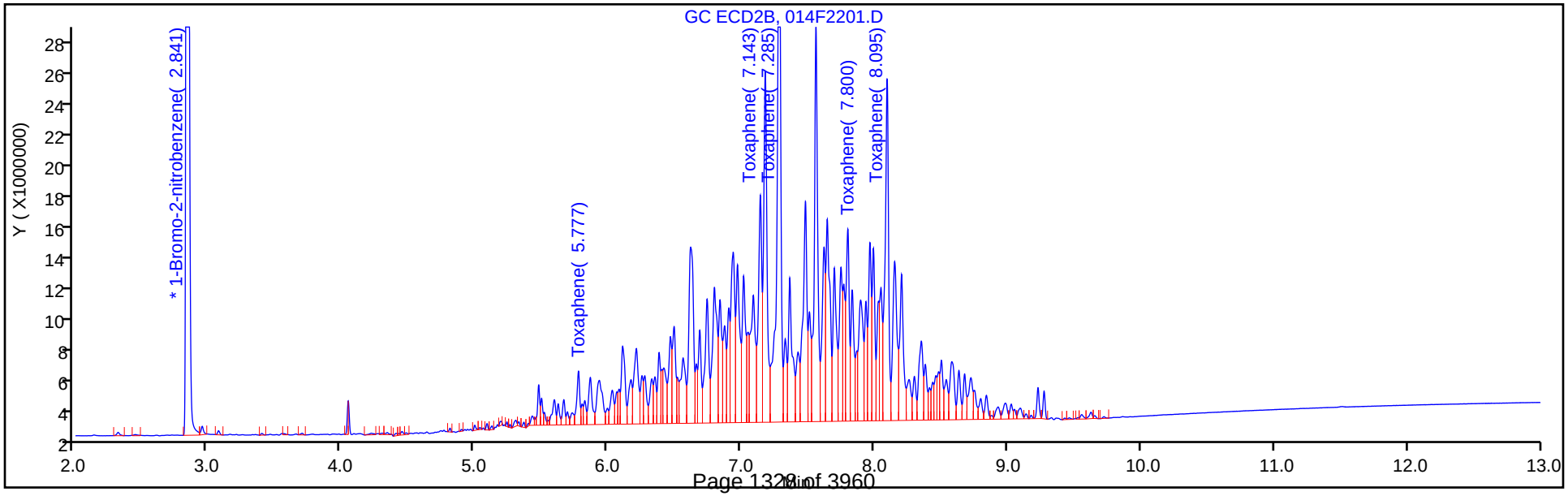
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date:	13-Oct-2018 17:03:01	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 TOX			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:22 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date: 13-Oct-2018 17:03:01 Instrument ID: SGC_P2

Lims ID: STD3 TOX

Client ID:

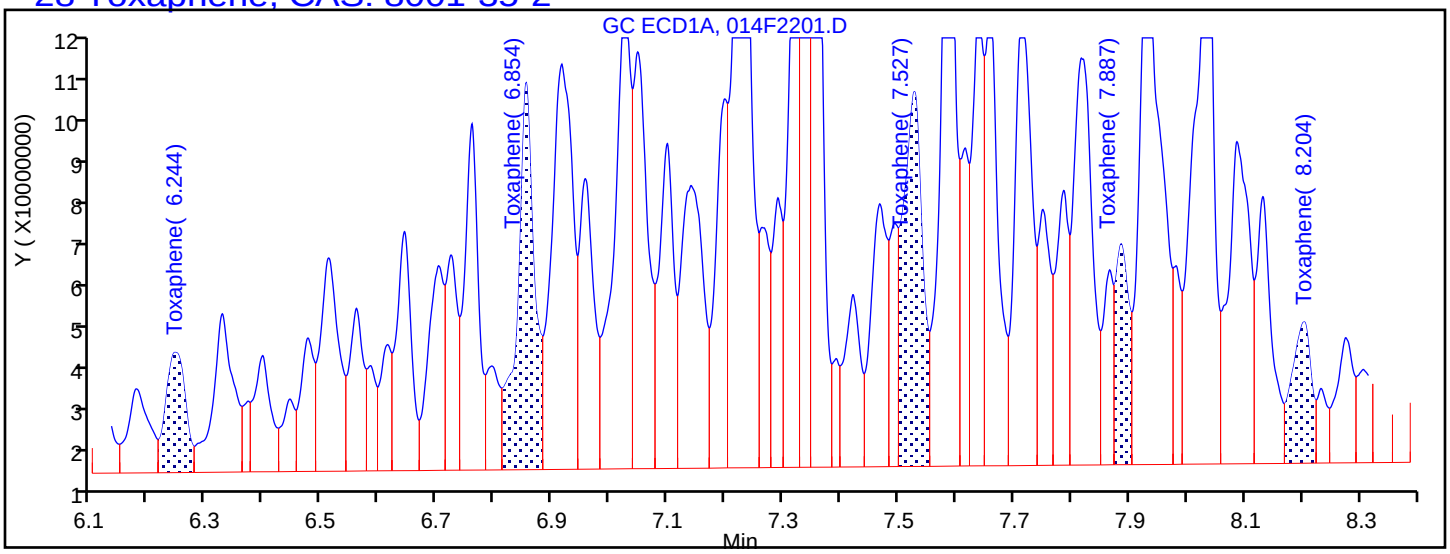
Operator ID: TEM ALS Bottle#: 14 Worklist Smp#: 19

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

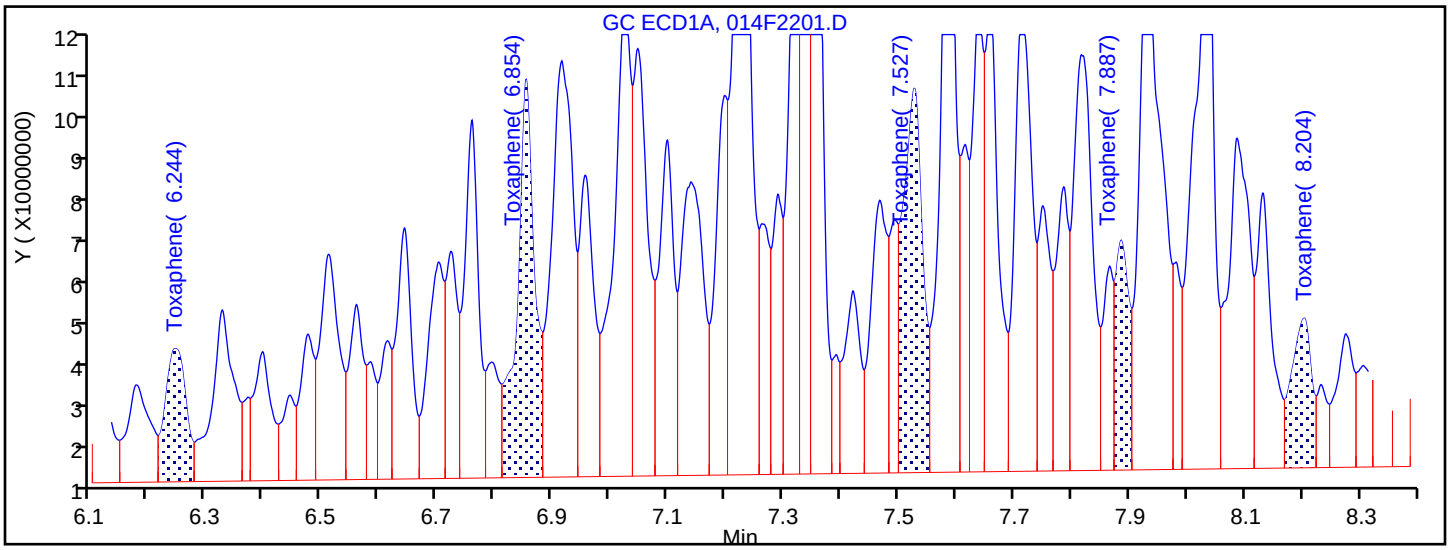
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.244	Response = 65861941
6.854	Response = 181685271
7.527	Response = 200210988
7.887	Response = 80538237
8.204	Response = 75933852



Manual Integration Results

6.244	Response = 77218443	M
6.854	Response = 193181281	M
7.527	Response = 207813969	M
7.887	Response = 84522297	M
8.204	Response = 82441591	M

Reviewer: mooret, 14-Oct-2018 21:33:21

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D
Lims ID: STD2 TOX
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 17:20:32 ALS Bottle#: 15 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:24 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.000	1773925252	150.0	150.0	
2	2.841	2.841	0.000	187588077	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	36757841	500.0	481.1	M
1	6.854	6.854	0.000	89263703	500.0	467.4	M
1	7.528	7.528	0.000	96759589	500.0	471.3	M
1	7.887	7.886	0.001	36941603	500.0	458.5	M
1	8.204	8.204	0.000	33168067	500.0	441.0	M
		Average of Peak Amounts =				463.8	
2	5.778	5.778	0.000	3239492	500.0	523.2	M
2	7.144	7.145	-0.001	13088271	500.0	496.7	M
2	7.284	7.286	-0.002	34980187	500.0	489.4	M
2	7.799	7.800	-0.001	9872826	500.0	488.2	M
2	8.095	8.096	-0.001	19482419	500.0	488.8	M
		Average of Peak Amounts =				497.3	
						RPD = 6.96	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL2_00021	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

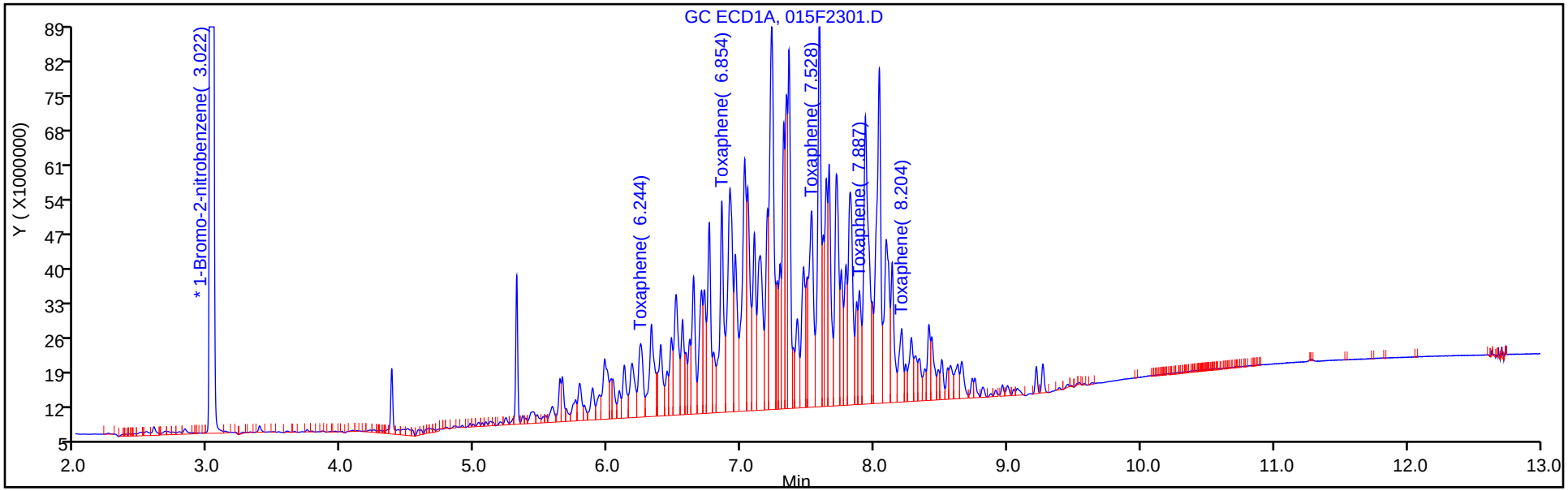
Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

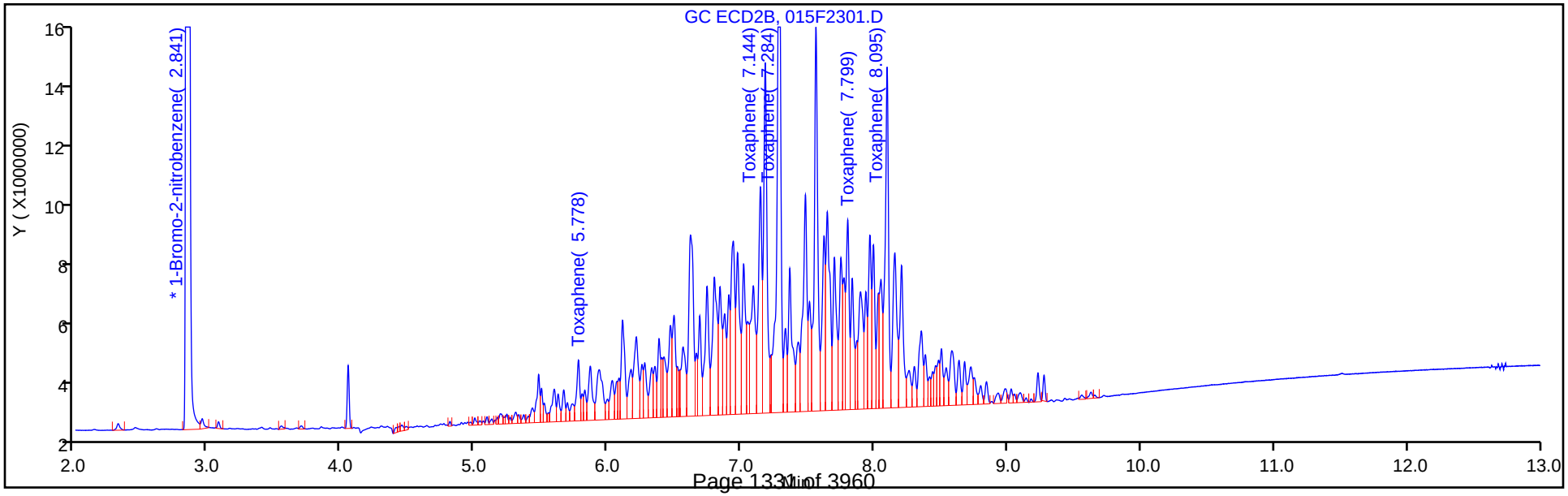
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date:	13-Oct-2018 17:20:32	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 TOX			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date: 13-Oct-2018 17:20:32 Instrument ID: SGC_P2

Lims ID: STD2 TOX

Client ID:

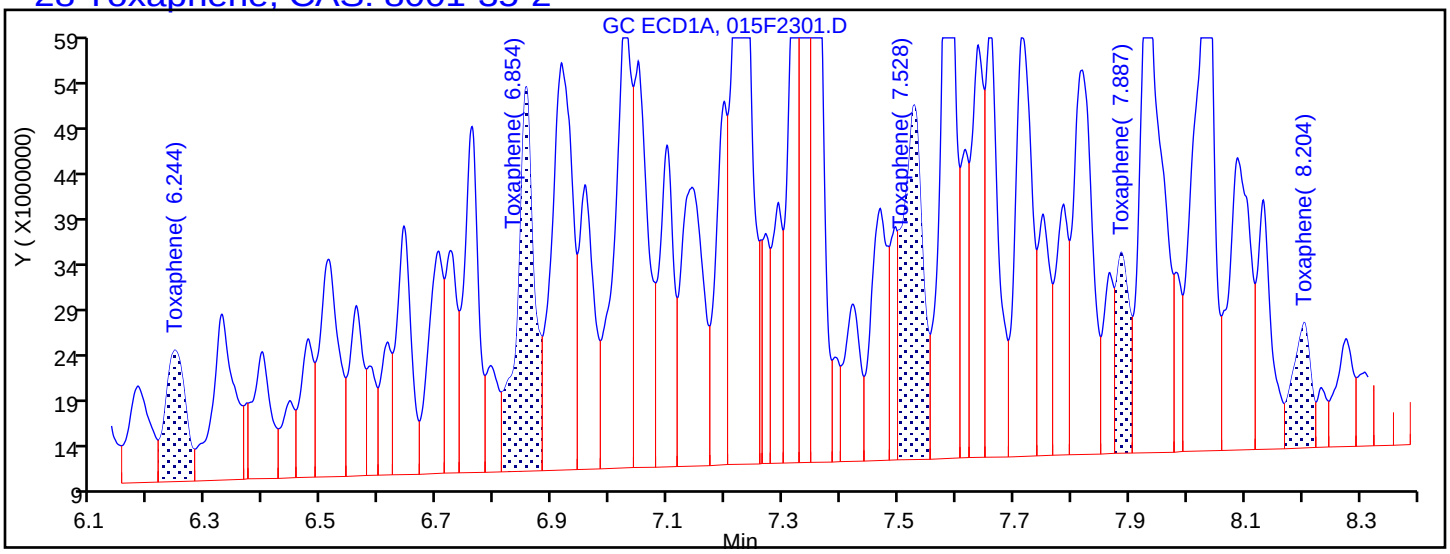
Operator ID: TEM ALS Bottle#: 15 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

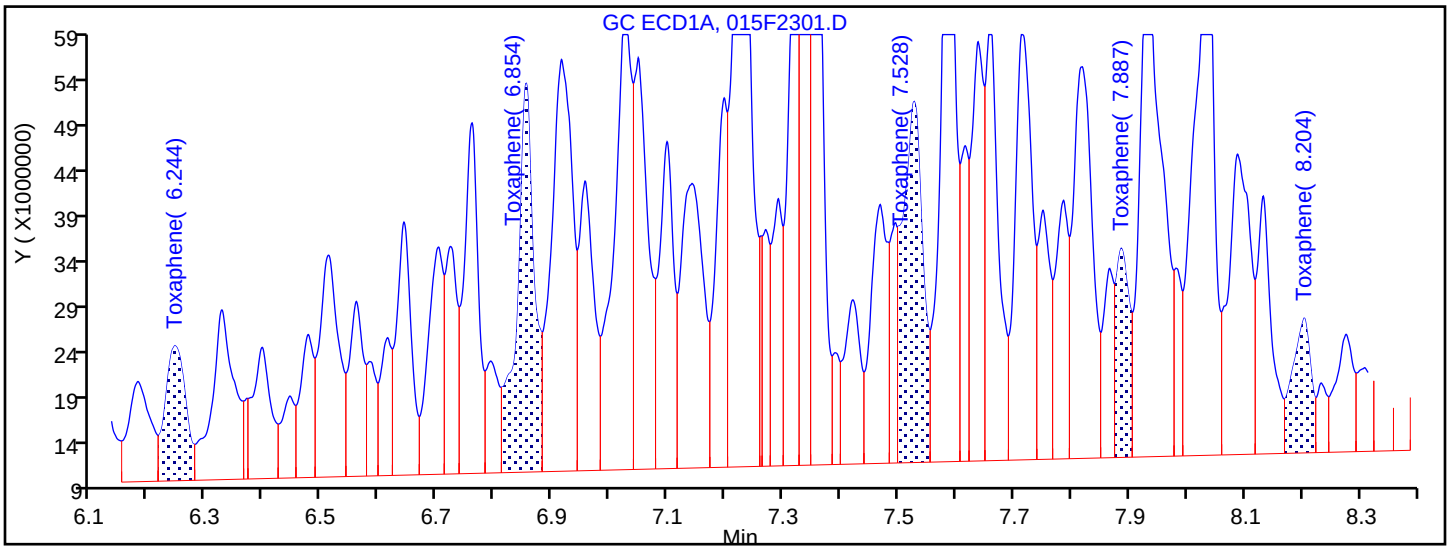
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.244	Response = 35050970
6.854	Response = 86556064
7.528	Response = 93843579
7.887	Response = 35112670
8.204	Response = 29712914



Manual Integration Results

6.244	Response = 36757841	M
6.854	Response = 89263703	M
7.528	Response = 96759589	M
7.887	Response = 36941603	M
8.204	Response = 33168067	M

Reviewer: mooret, 14-Oct-2018 21:33:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D
Lims ID: STD1 TOX
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 17:37:55 ALS Bottle#: 16 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:27 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:34:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.001	1720287810	150.0	150.0	
2	2.842	2.841	0.001	182087225	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	13484316	200.0	203.4	M
1	6.854	6.854	0.000	32829722	200.0	205.8	M
1	7.528	7.528	0.000	32415828	200.0	205.6	M
1	7.887	7.886	0.001	12391302	200.0	207.2	M
1	8.204	8.204	0.000	10296721	200.0	210.3	M
		Average of Peak Amounts =				206.4	
2	5.778	5.778	0.000	1369118	200.0	198.1	M
2	7.144	7.145	-0.001	5249471	200.0	199.2	M
2	7.284	7.286	-0.002	13813356	200.0	200.0	M
2	7.800	7.800	0.000	3856571	200.0	201.6	M
2	8.095	8.096	-0.001	7701963	200.0	200.4	M
		Average of Peak Amounts =				199.8	
						RPD = 3.24	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL1_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

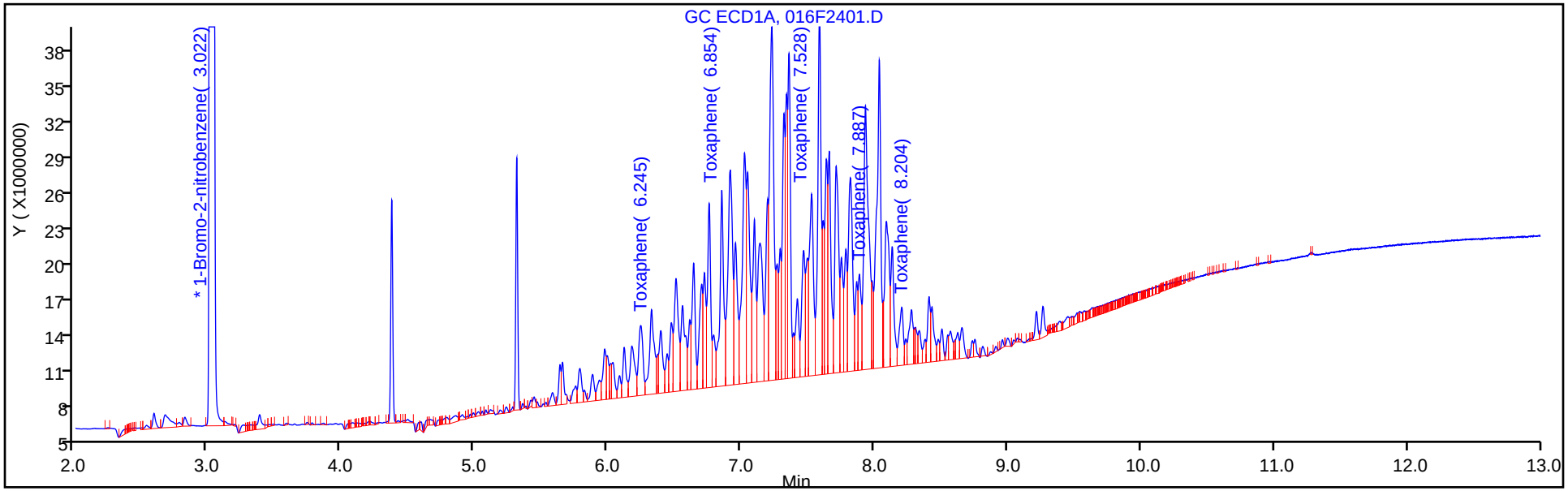
Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

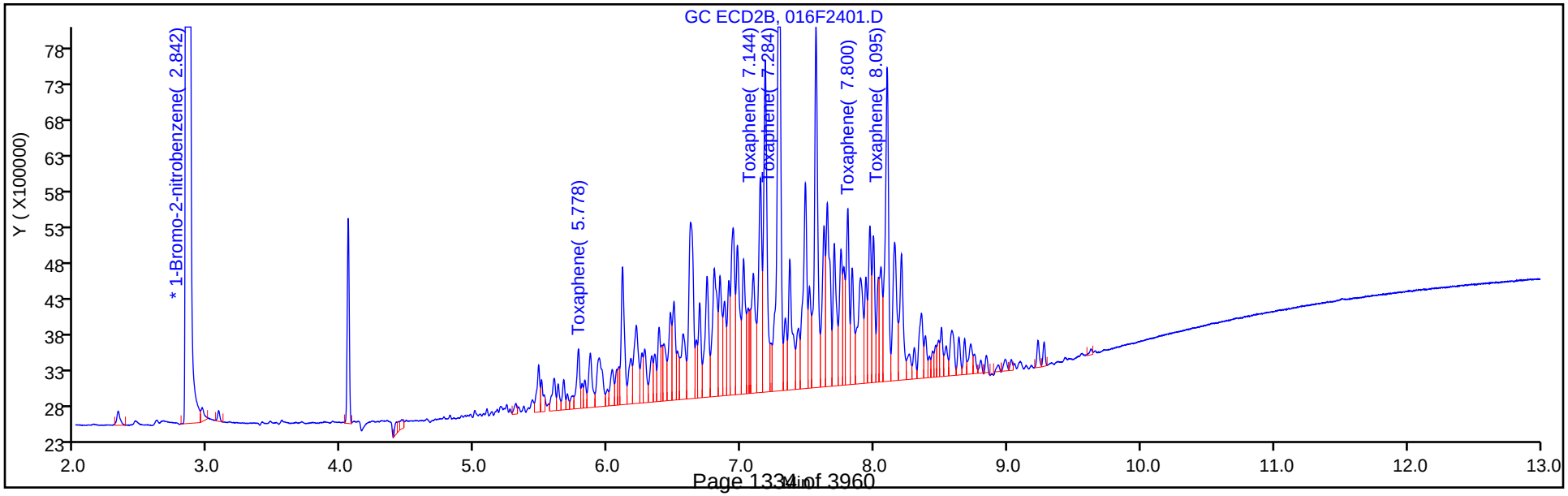
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date:	13-Oct-2018 17:37:55	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 TOX			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date: 13-Oct-2018 17:37:55 Instrument ID: SGC_P2

Lims ID: STD1 TOX

Client ID:

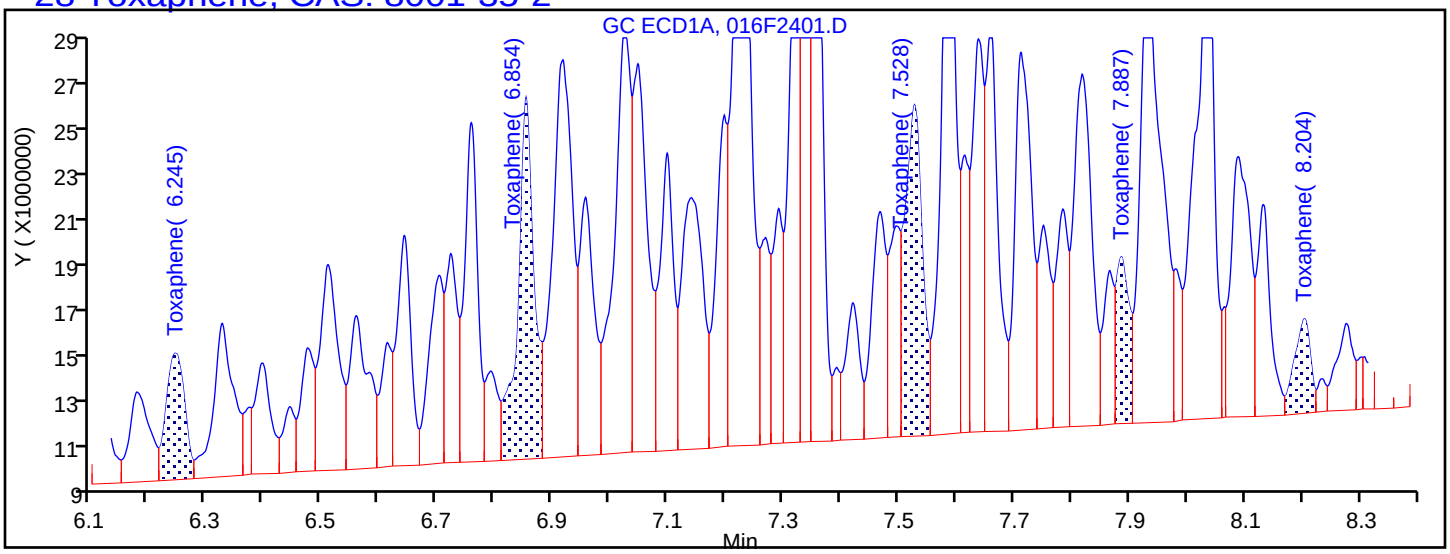
Operator ID: TEM ALS Bottle#: 16 Worklist Smp#: 21

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

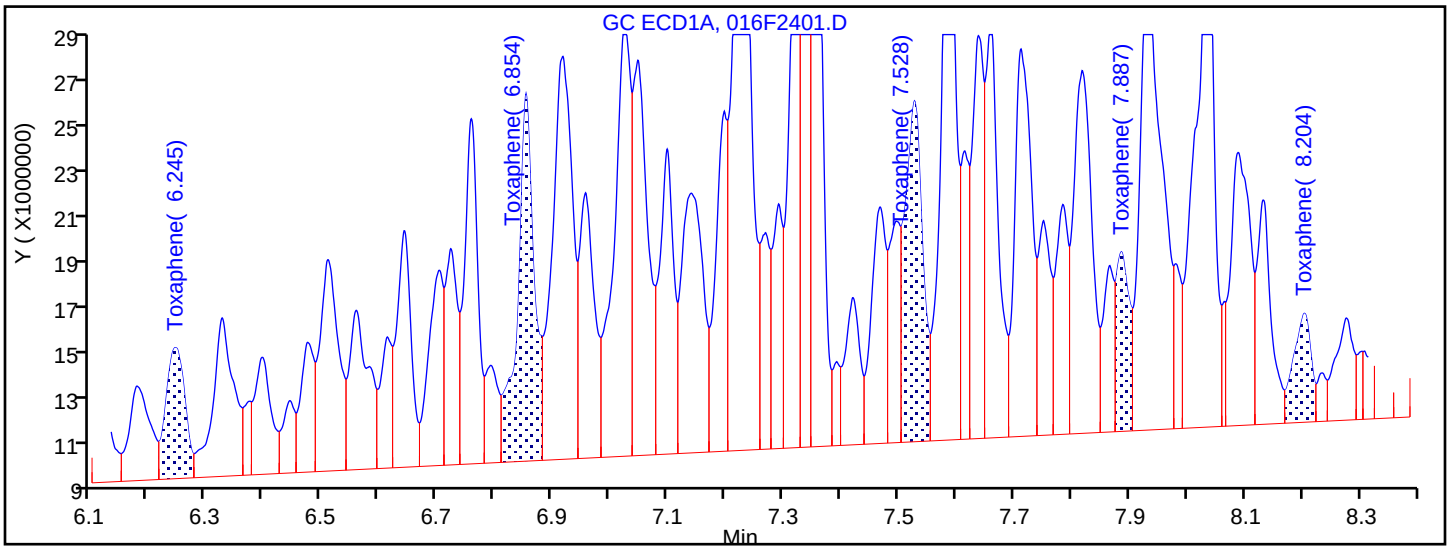
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.245	Response = 12595640
6.854	Response = 31226336
7.528	Response = 30814368
7.887	Response = 11278282
8.204	Response = 8153489



Manual Integration Results

6.245	Response = 13484316	M
6.854	Response = 32829722	M
7.528	Response = 32415828	M
7.887	Response = 12391302	M
8.204	Response = 10296721	M

Reviewer: mooret, 14-Oct-2018 21:34:03

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33998

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0056 0.0043	0.0052	0.0044	0.0049	0.0046	Lin2	0.2366	0.0045							0.9950		0.9900
Toxaphene Peak 2	0.0216 0.0195	0.0209	0.0213	0.0214	0.0210	Lin2	0.2123	0.0206							0.9990		0.9900
Toxaphene Peak 3	0.0569 0.0540	0.0559	0.0587	0.0595	0.0582	Lin2	-0.090	0.0573							0.9980		0.9900
Toxaphene Peak 4	0.0159 0.0157	0.0158	0.0160	0.0171	0.0170	Lin2	-0.140	0.0165							0.9980		0.9900
Toxaphene Peak 5	0.0317 0.0306	0.0312	0.0327	0.0328	0.0324	Lin2	-0.070	0.0320							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33998

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	BNB	Lin2	1369118 60549286	3239492	5366684	12064651	30052469	200 10000	500	1000	2000	5000
Toxaphene Peak 2	BNB	Lin2	5249471 273869350	13088271	26089503	52352055	136167822	200 10000	500	1000	2000	5000
Toxaphene Peak 3	BNB	Lin2	13813356 756947570	34980187	72036294	145561454	377922017	200 10000	500	1000	2000	5000
Toxaphene Peak 4	BNB	Lin2	3856571 219585664	9872826	19681560	41885928	110390772	200 10000	500	1000	2000	5000
Toxaphene Peak 5	BNB	Lin2	7701963 429283014	19482419	40124523	80317017	210568110	200 10000	500	1000	2000	5000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D
Lims ID: STD6 TOX
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 16:10:51 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:12 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:36:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	2093632714	150.0	150.0	
2	2.840	2.839	0.000	210457864	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	984914164	10000	10176	
1	6.853	6.854	-0.001	2531832439	10000	10174	
1	7.528	7.528	0.000	2860362835	10000	10232	
1	7.885	7.886	-0.001	1164606715	10000	10334	
1	8.203	8.204	-0.001	1187453780	10000	10397	
		Average of Peak Amounts =				10263	
2	5.776	5.778	-0.002	60549286	10000	9540.5	M
2	7.143	7.145	-0.002	273869350	10000	9445.5	M
2	7.284	7.286	-0.002	756947570	10000	9410.3	M
2	7.798	7.800	-0.002	219585664	10000	9519.4	M
2	8.094	8.096	-0.002	429283014	10000	9559.5	M
		Average of Peak Amounts =				9495.0	
						RPD = 7.77	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL6_00023 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

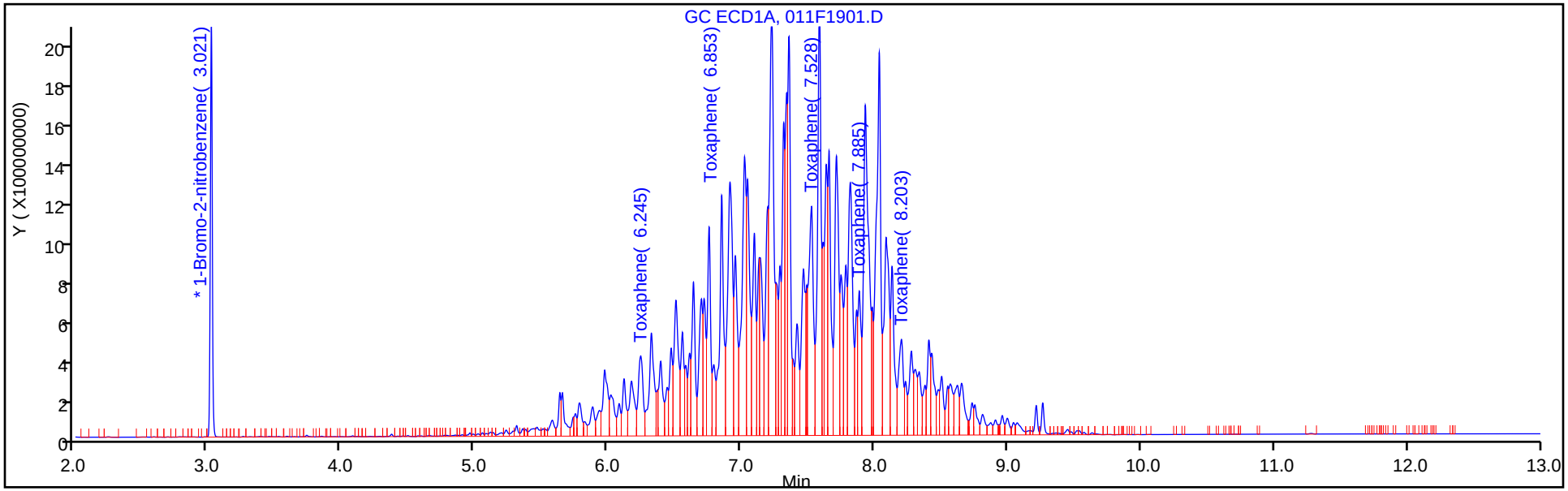
Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

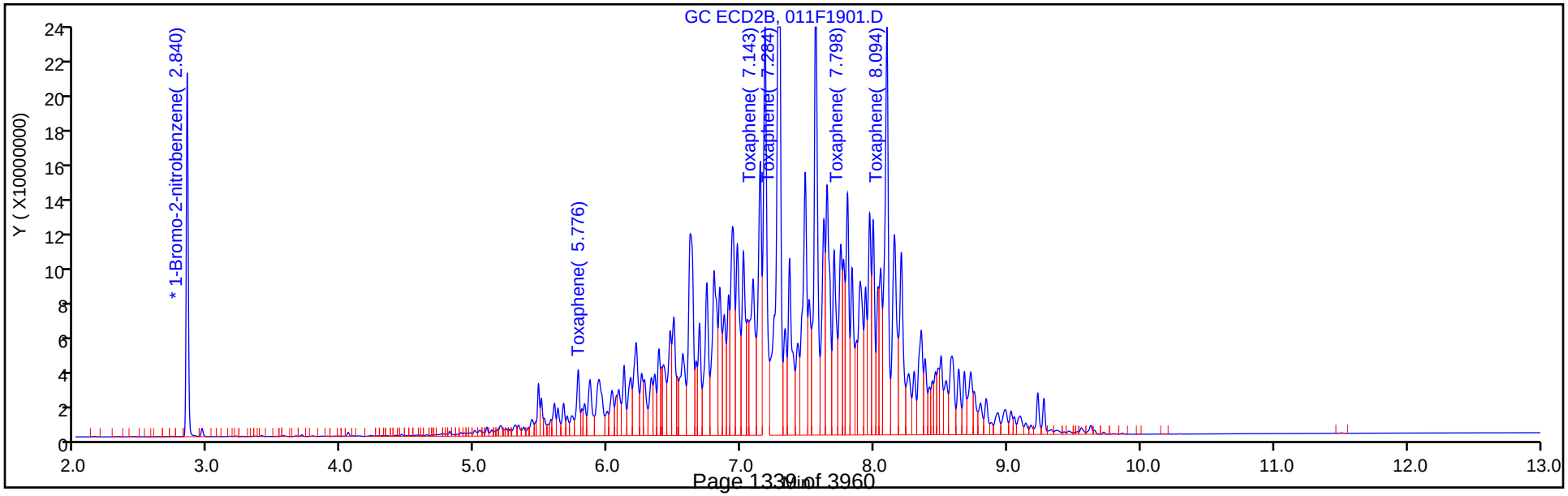
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date:	13-Oct-2018 16:10:51	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 TOX			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date: 13-Oct-2018 16:10:51 Instrument ID: SGC_P2

Lims ID: STD6 TOX

Client ID:

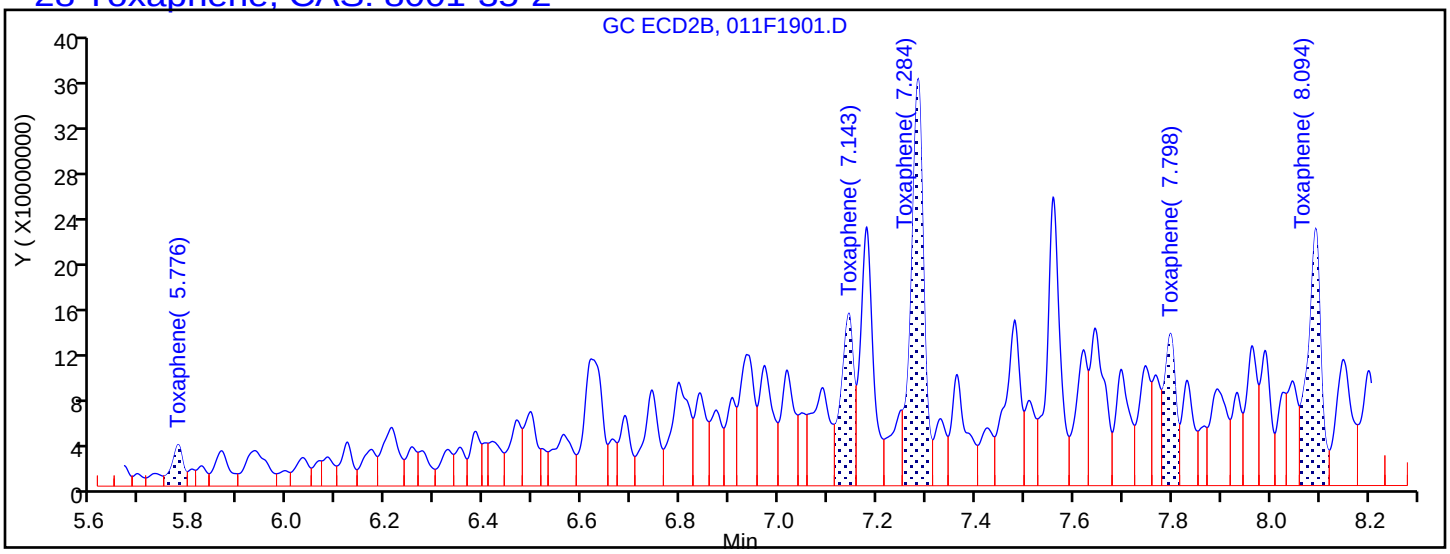
Operator ID: TEM ALS Bottle#: 11 Worklist Smp#: 16

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

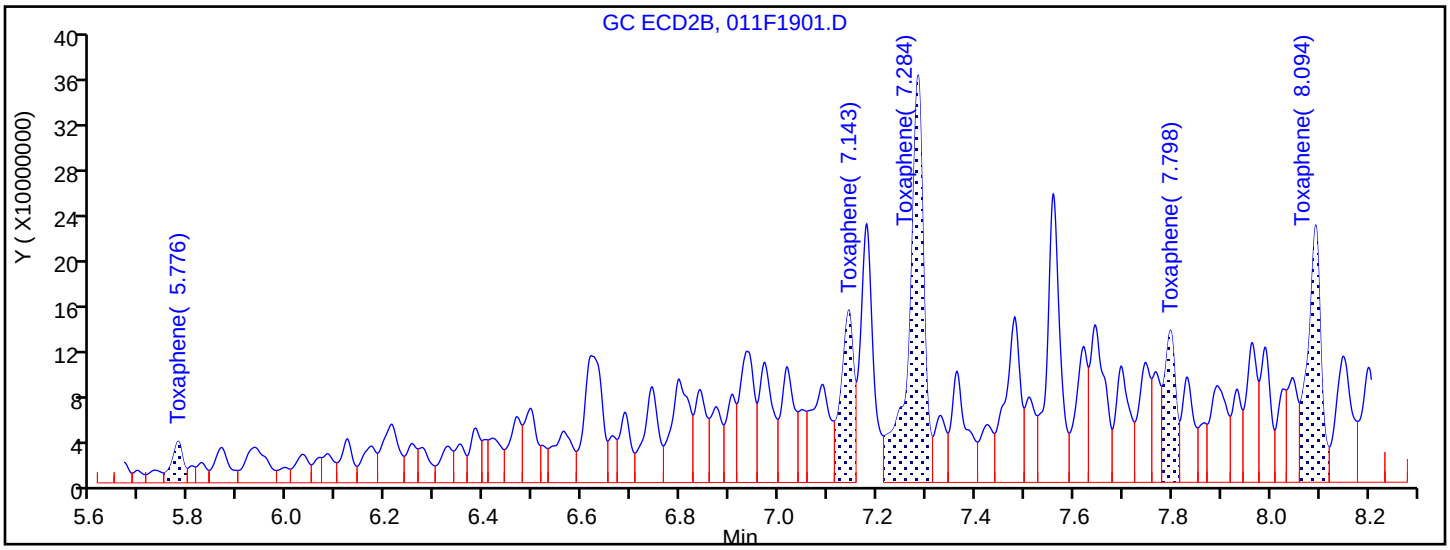
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.776	Response = 60552821
7.143	Response = 273886955
7.284	Response = 640399513
7.798	Response = 219597728
8.094	Response = 429322900



Manual Integration Results

5.776	Response = 60549286	M
7.143	Response = 273869350	M
7.284	Response = 756947570	M
7.798	Response = 219585664	M
8.094	Response = 429283014	M

Reviewer: mooret, 14-Oct-2018 21:36:53

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D
Lims ID: STD5 TOX
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 16:28:15 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:15 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	1887409806	150.0	150.0	
2	2.840	2.839	0.001	194682264	150.0	150.0	
28 Toxaphene							
1	6.246	6.246	0.000	444953077	5000.0	5116.5	
1	6.853	6.854	-0.001	1162405972	5000.0	5203.9	
1	7.526	7.528	-0.002	1283190101	5000.0	5124.6	
1	7.886	7.886	0.000	519294161	5000.0	5149.2	
1	8.204	8.204	0.000	541962755	5000.0	5314.1	
		Average of Peak Amounts =				5181.6	
2	5.777	5.778	-0.001	30052469	5000.0	5094.6	
2	7.143	7.145	-0.002	136167822	5000.0	5072.1	
2	7.284	7.286	-0.002	377922017	5000.0	5079.7	
2	7.799	7.800	-0.001	110390772	5000.0	5177.3	
2	8.095	8.096	-0.001	210568110	5000.0	5070.0	
		Average of Peak Amounts =				5098.7	
						RPD = 1.61	

Reagents:

8081ToxL5_00021 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

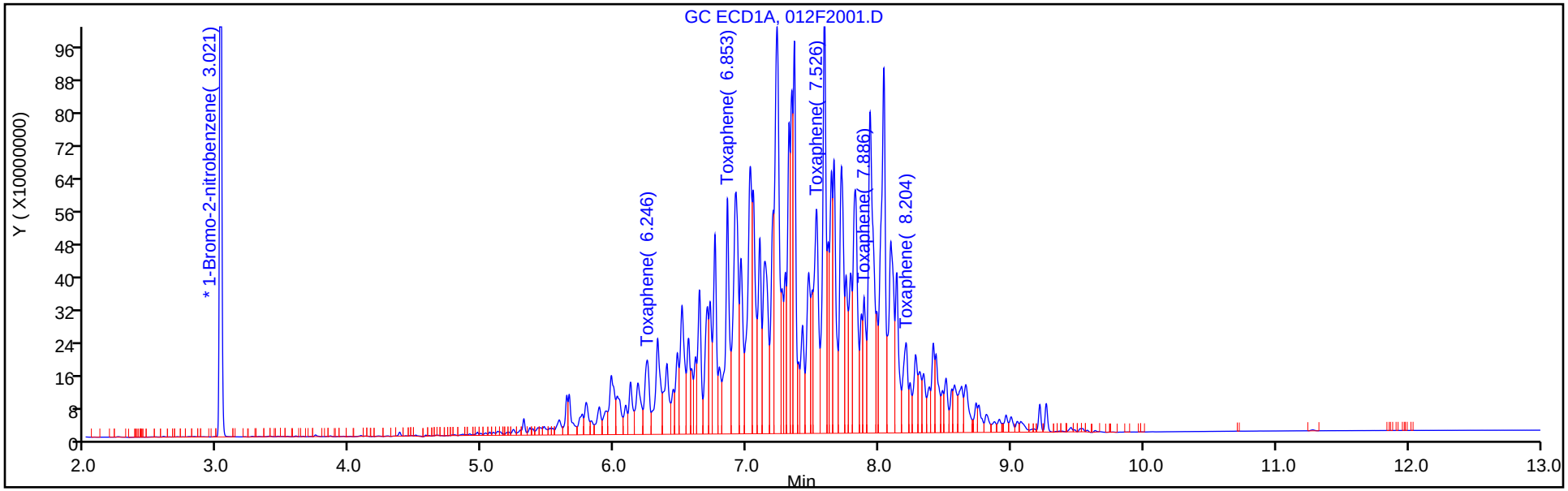
Report Date: 14-Oct-2018 22:11:17 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

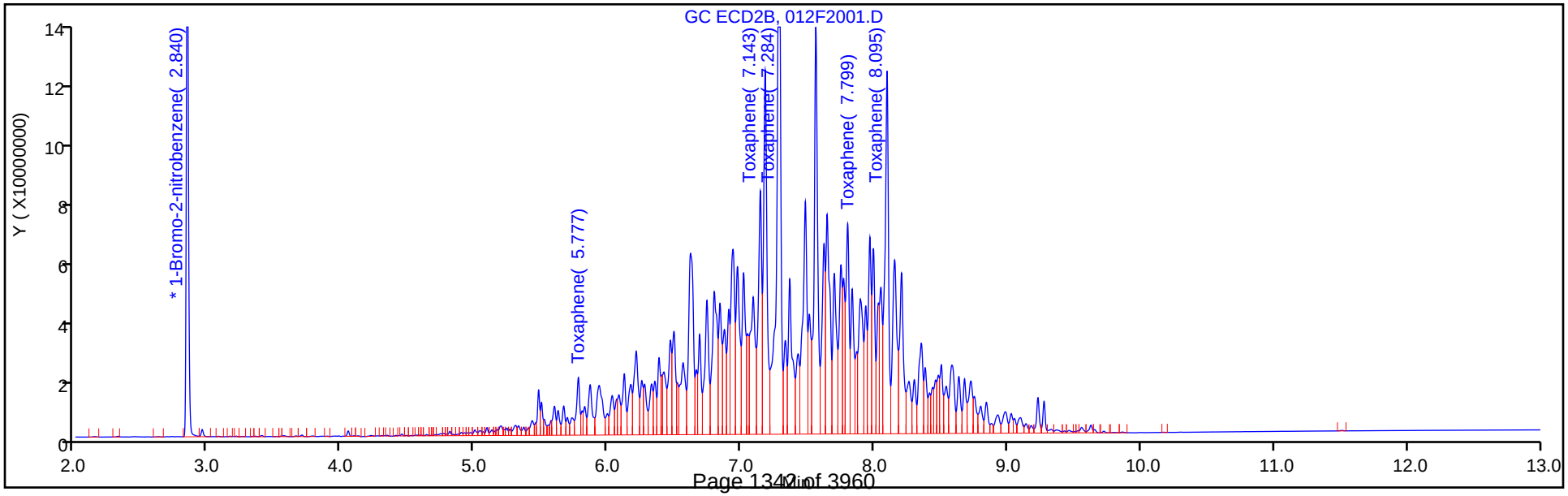
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D

Injection Date:	13-Oct-2018 16:28:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 TOX			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D
Lims ID: STD4 TOX
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 16:45:38 ALS Bottle#: 13 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:18 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	0.000	1744551294	150.0	150.0	
2	2.841	2.841	0.000	183459712	150.0	150.0	
28 Toxaphene							M
1	6.246	6.246	0.000	157400259	2000.0	1979.4	M
1	6.854	6.854	0.000	408359221	2000.0	2006.3	M
1	7.528	7.528	0.000	466543962	2000.0	2055.4	M
1	7.886	7.886	0.000	184785693	2000.0	2028.0	M
1	8.204	8.204	0.000	182989462	2000.0	2005.7	M
		Average of Peak Amounts =				2015.0	
2	5.778	5.778	0.000	12064651	2000.0	2140.2	M
2	7.145	7.145	0.000	52352055	2000.0	2063.3	M
2	7.286	7.286	0.000	145561454	2000.0	2077.1	M
2	7.800	7.800	0.000	41885928	2000.0	2089.7	M
2	8.096	8.096	0.000	80317017	2000.0	2053.4	M
		Average of Peak Amounts =				2084.7	
						RPD = 3.40	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00014 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

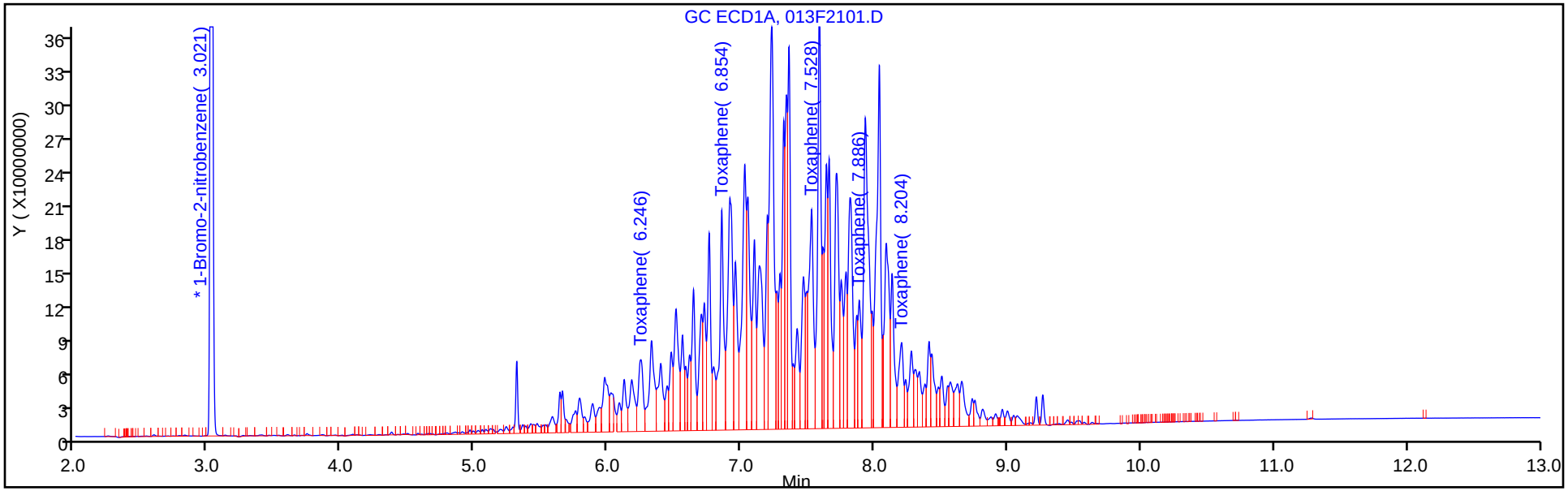
Report Date: 14-Oct-2018 22:11:20 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

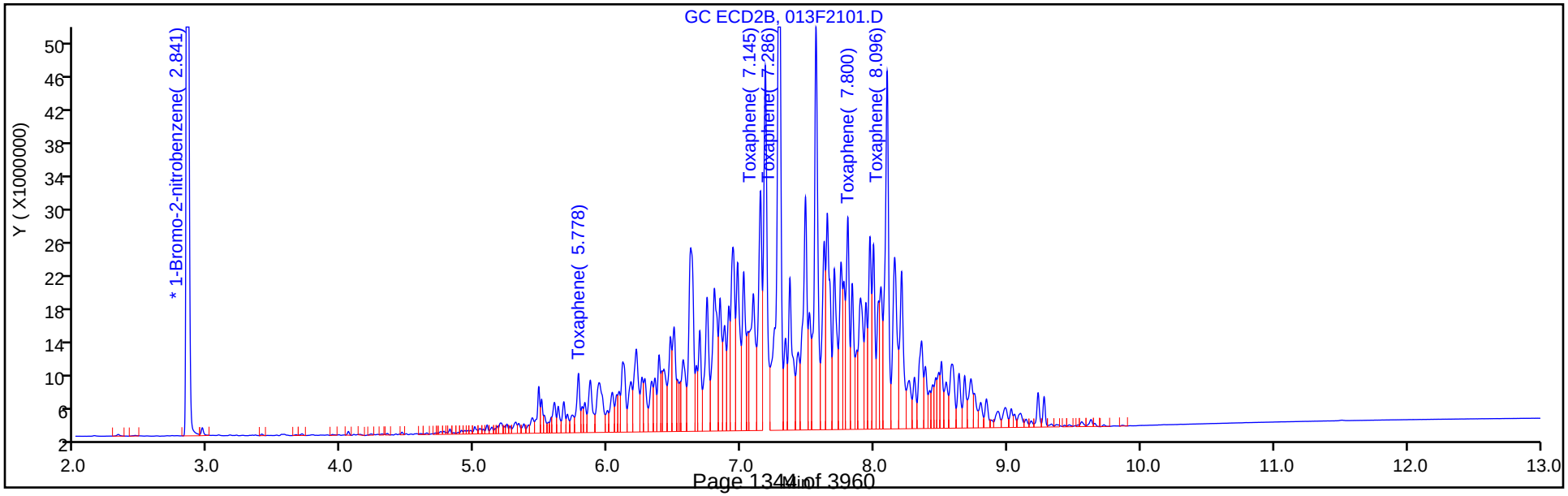
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 TOX			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



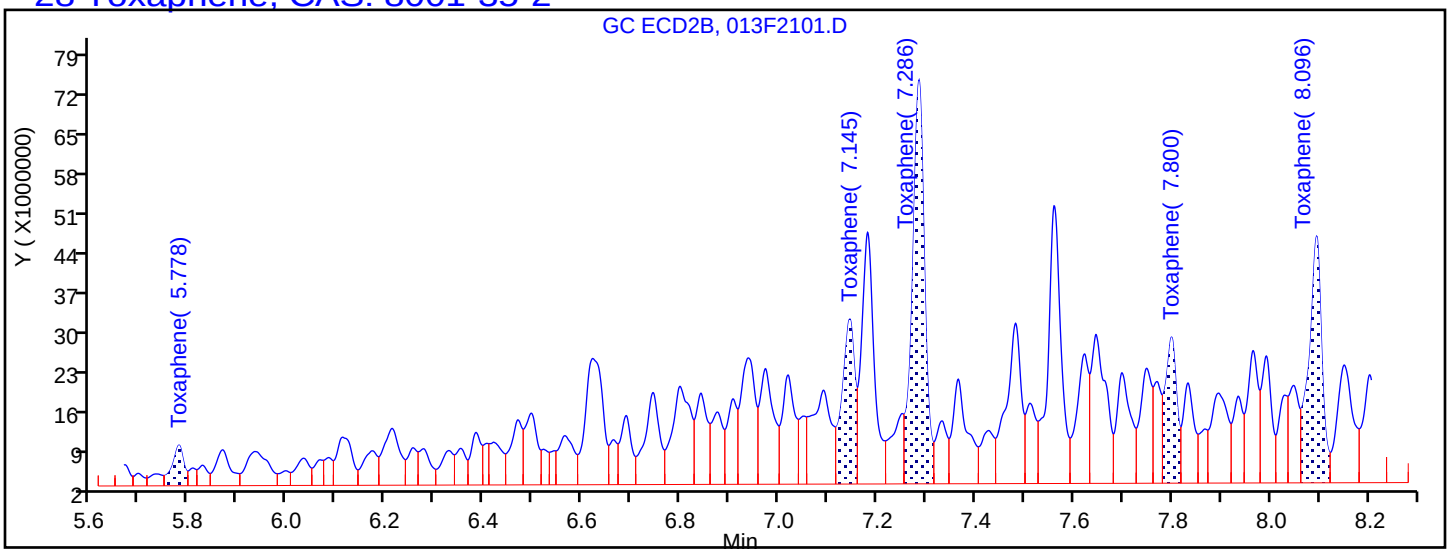
Report Date: 14-Oct-2018 22:11:20 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

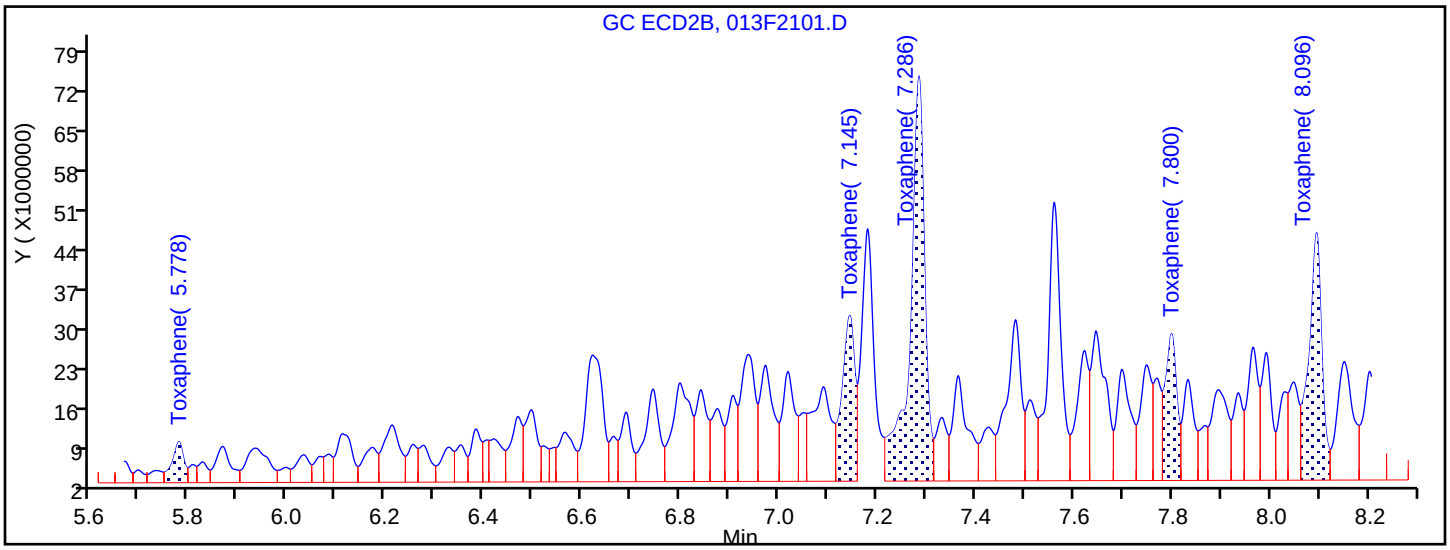
Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2		
Lims ID:	STD4 TOX				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	13	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 11889868
7.145	Response = 52091638
7.286	Response = 122916584
7.800	Response = 41613365
8.096	Response = 79867523



Manual Integration Results

5.778	Response = 12064651	M
7.145	Response = 52352055	M
7.286	Response = 145561454	M
7.800	Response = 41885928	M
8.096	Response = 80317017	M

Reviewer: mooret, 14-Oct-2018 21:37:56

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D
Lims ID: STD3 TOX
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 17:03:01 ALS Bottle#: 14 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:21 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	-0.001	1741058857	150.0	150.0	
2	2.841	2.841	-0.001	184005886	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	77218443	1000.0	990.5	M
1	6.854	6.854	0.000	193181281	1000.0	975.2	M
1	7.527	7.528	-0.001	207813969	1000.0	953.6	M
1	7.887	7.886	0.001	84522297	1000.0	969.8	M
1	8.204	8.204	0.000	82441591	1000.0	961.2	M
		Average of Peak Amounts =				970.0	
2	5.777	5.778	-0.001	5366684	1000.0	919.9	
2	7.143	7.145	-0.002	26089503	1000.0	1020.0	
2	7.285	7.286	-0.001	72036294	1000.0	1025.7	
2	7.800	7.800	0.000	19681560	1000.0	983.5	
2	8.095	8.096	-0.001	40124523	1000.0	1023.9	
		Average of Peak Amounts =				994.6	
						RPD = 2.50	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL3_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

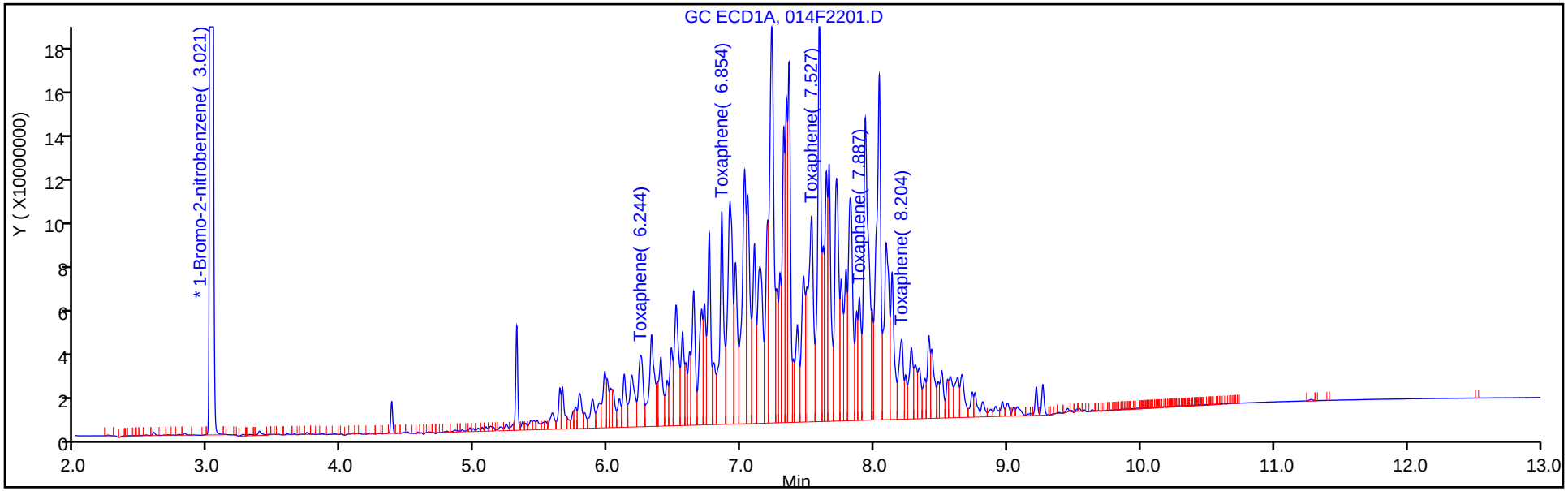
Report Date: 14-Oct-2018 22:11:23 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

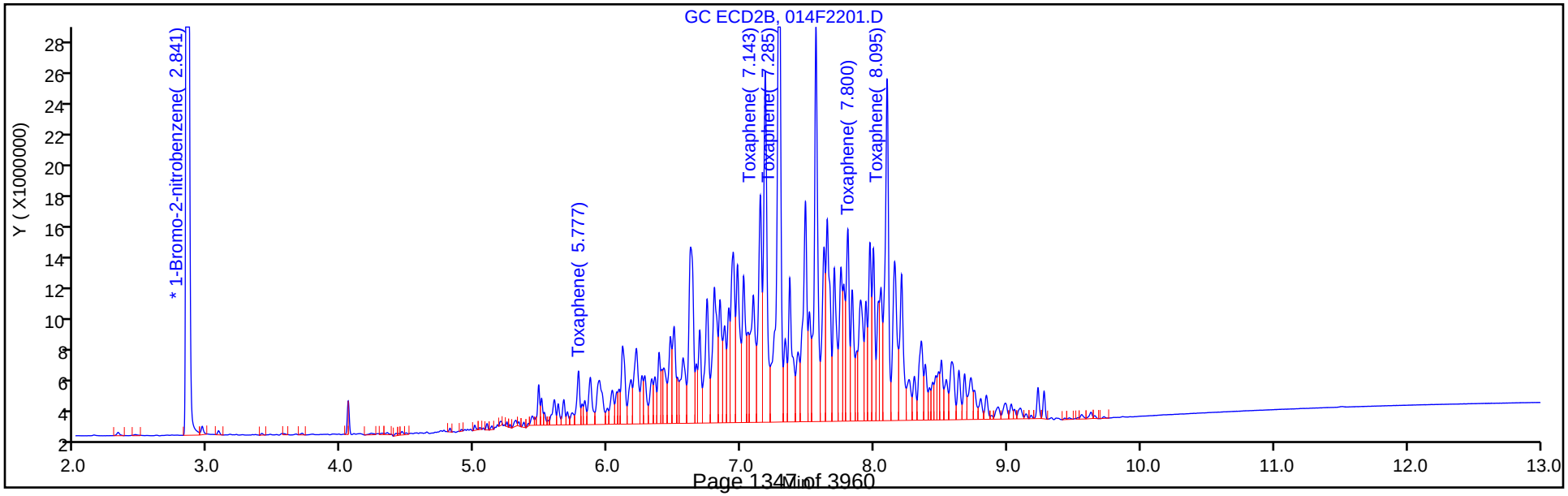
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date:	13-Oct-2018 17:03:01	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 TOX			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D
Lims ID: STD2 TOX
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 17:20:32 ALS Bottle#: 15 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:24 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.000	1773925252	150.0	150.0	
2	2.841	2.841	0.000	187588077	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	36757841	500.0	481.1	M
1	6.854	6.854	0.000	89263703	500.0	467.4	M
1	7.528	7.528	0.000	96759589	500.0	471.3	M
1	7.887	7.886	0.001	36941603	500.0	458.5	M
1	8.204	8.204	0.000	33168067	500.0	441.0	M
		Average of Peak Amounts =				463.8	
2	5.778	5.778	0.000	3239492	500.0	523.2	M
2	7.144	7.145	-0.001	13088271	500.0	496.7	M
2	7.284	7.286	-0.002	34980187	500.0	489.4	M
2	7.799	7.800	-0.001	9872826	500.0	488.2	M
2	8.095	8.096	-0.001	19482419	500.0	488.8	M
		Average of Peak Amounts =				497.3	
						RPD = 6.96	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL2_00021	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

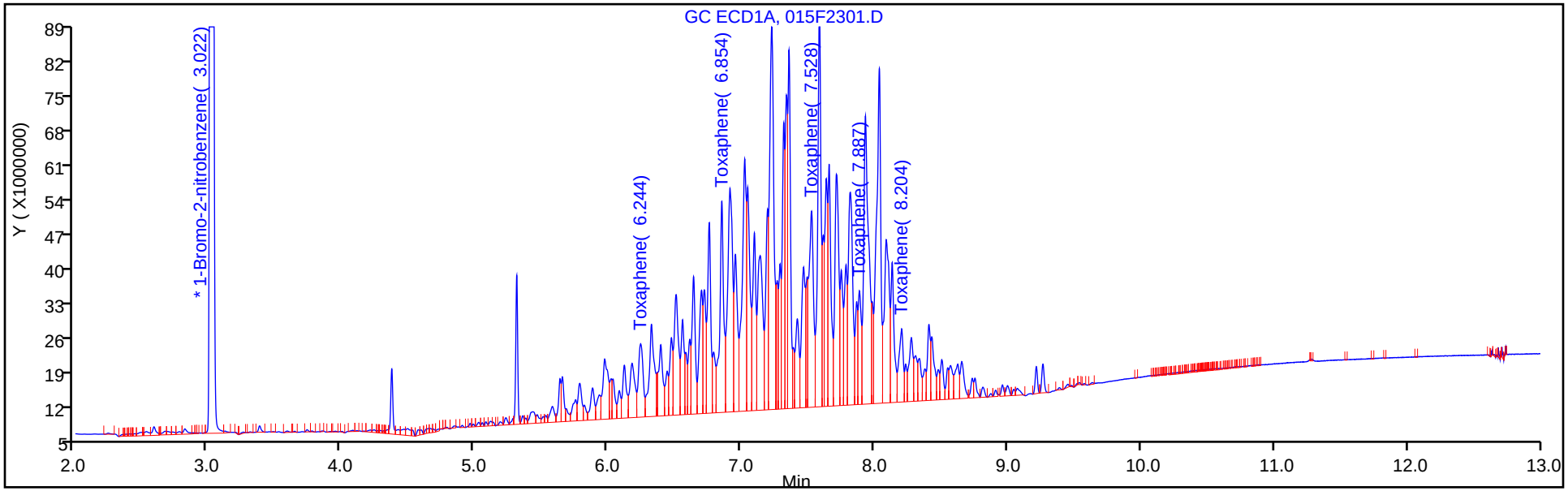
Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

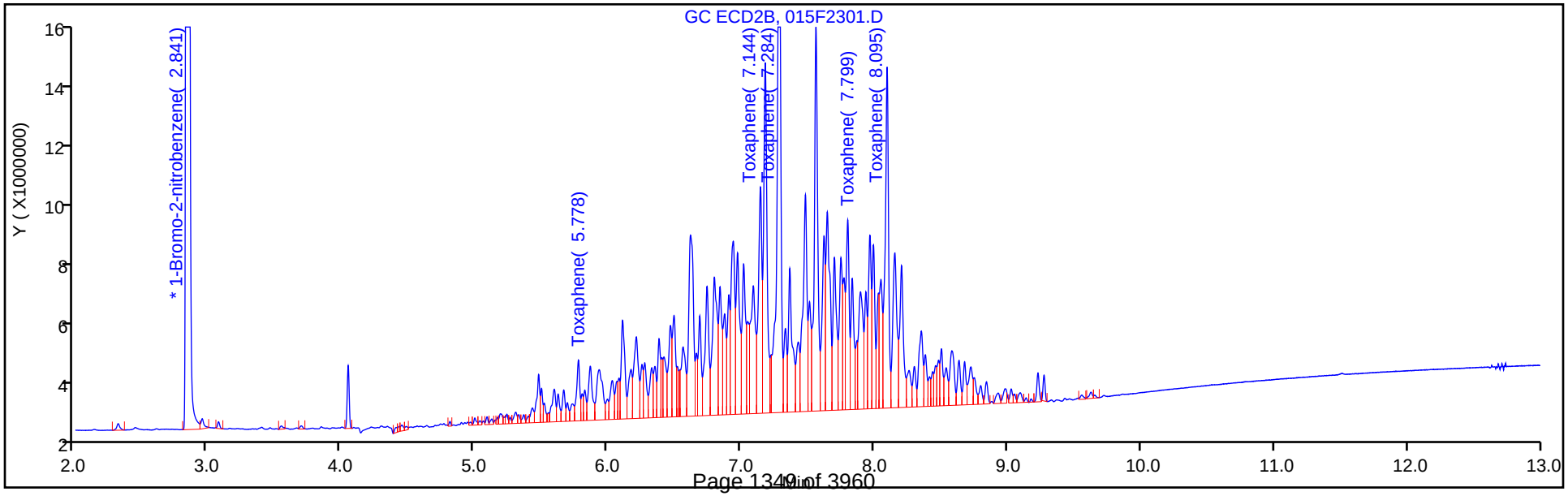
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date:	13-Oct-2018 17:20:32	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 TOX			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date: 13-Oct-2018 17:20:32 Instrument ID: SGC_P2

Lims ID: STD2 TOX

Client ID:

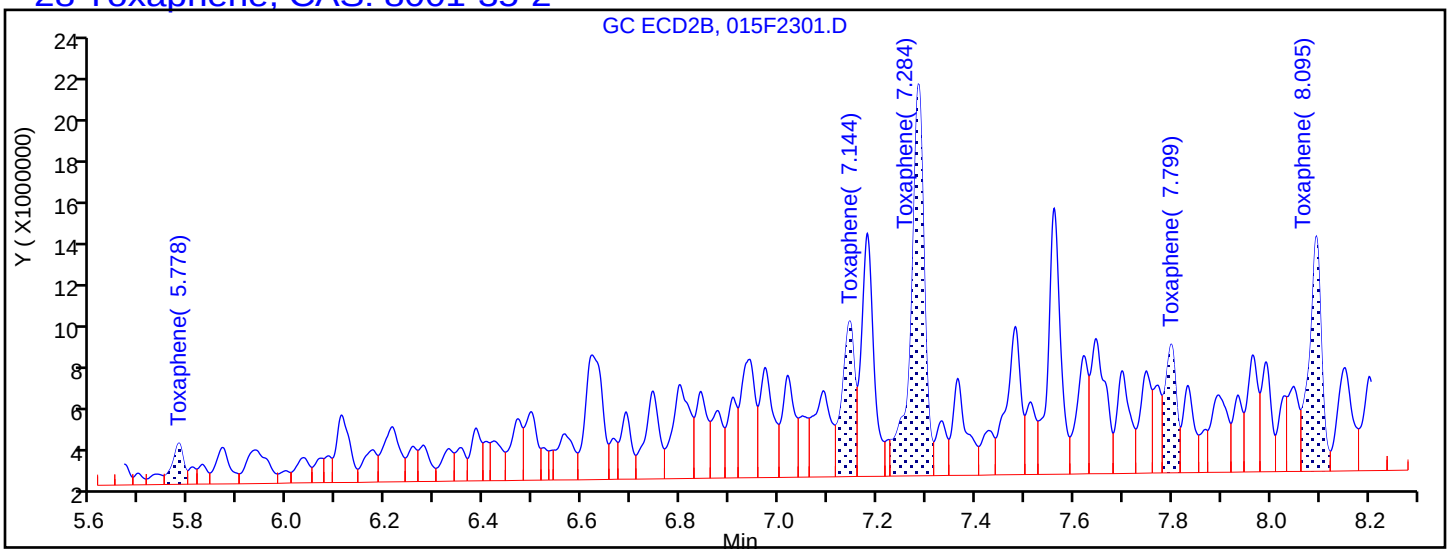
Operator ID: TEM ALS Bottle#: 15 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

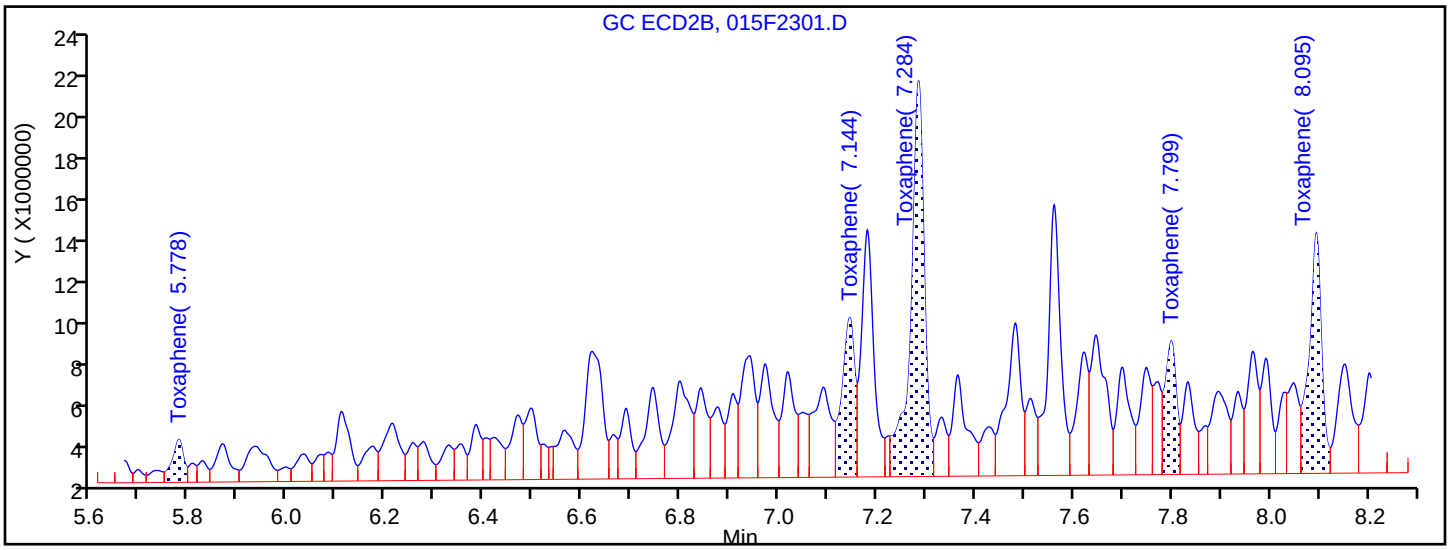
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 3020122
7.144	Response = 12594706
7.284	Response = 33926133
7.799	Response = 9338992
8.095	Response = 18544525



Manual Integration Results

5.778	Response = 3239492	M
7.144	Response = 13088271	M
7.284	Response = 34980187	M
7.799	Response = 9872826	M
8.095	Response = 19482419	M

Reviewer: mooret, 14-Oct-2018 21:33:47

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D
Lims ID: STD1 TOX
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 17:37:55 ALS Bottle#: 16 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:27 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:34:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.001	1720287810	150.0	150.0	
2	2.842	2.841	0.001	182087225	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	13484316	200.0	203.4	M
1	6.854	6.854	0.000	32829722	200.0	205.8	M
1	7.528	7.528	0.000	32415828	200.0	205.6	M
1	7.887	7.886	0.001	12391302	200.0	207.2	M
1	8.204	8.204	0.000	10296721	200.0	210.3	M
		Average of Peak Amounts =				206.4	
2	5.778	5.778	0.000	1369118	200.0	198.1	M
2	7.144	7.145	-0.001	5249471	200.0	199.2	M
2	7.284	7.286	-0.002	13813356	200.0	200.0	M
2	7.800	7.800	0.000	3856571	200.0	201.6	M
2	8.095	8.096	-0.001	7701963	200.0	200.4	M
		Average of Peak Amounts =				199.8	
						RPD = 3.24	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL1_00020 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

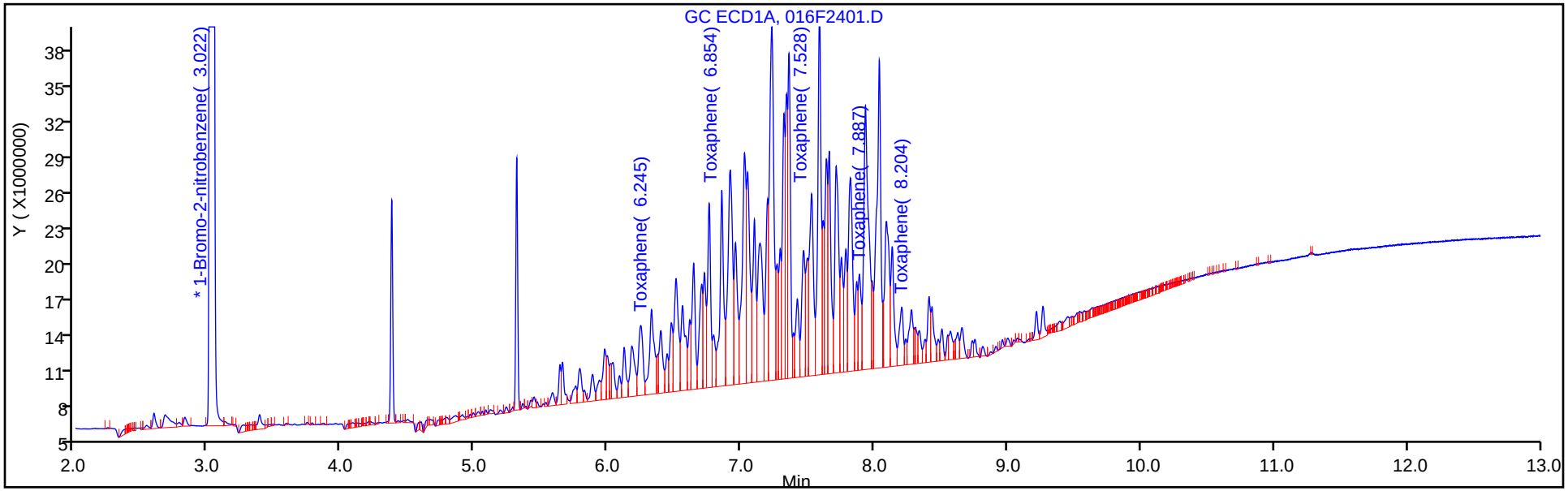
Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

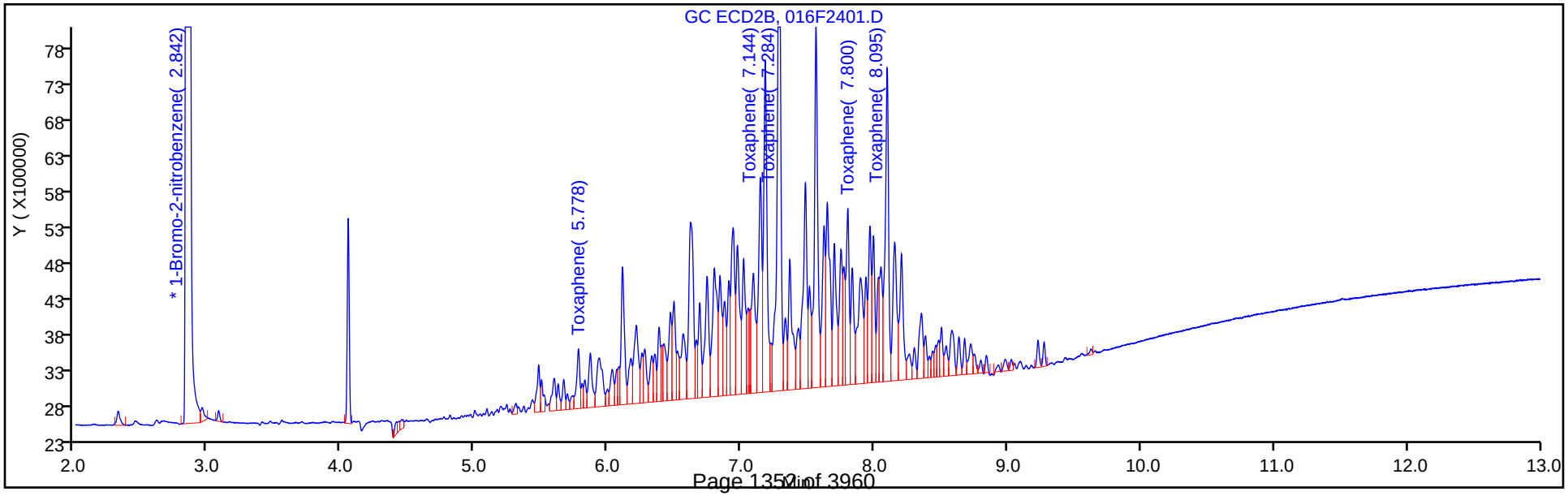
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date:	13-Oct-2018 17:37:55	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 TOX			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date: 13-Oct-2018 17:37:55 Instrument ID: SGC_P2

Lims ID: STD1 TOX

Client ID:

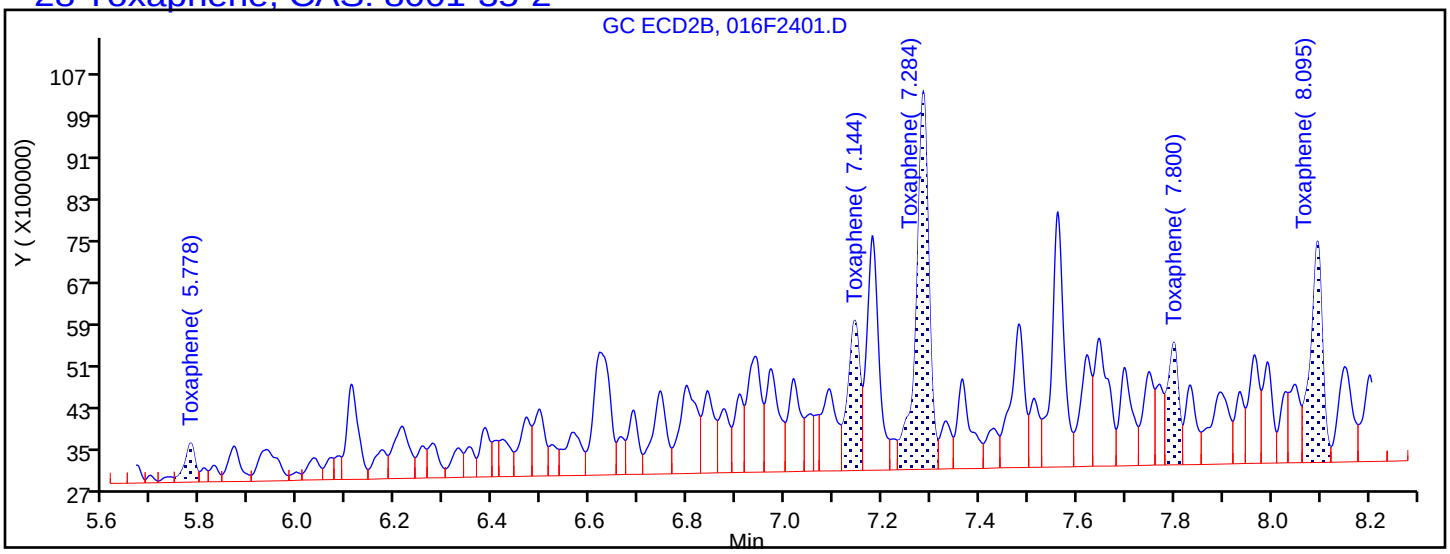
Operator ID: TEM ALS Bottle#: 16 Worklist Smp#: 21

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

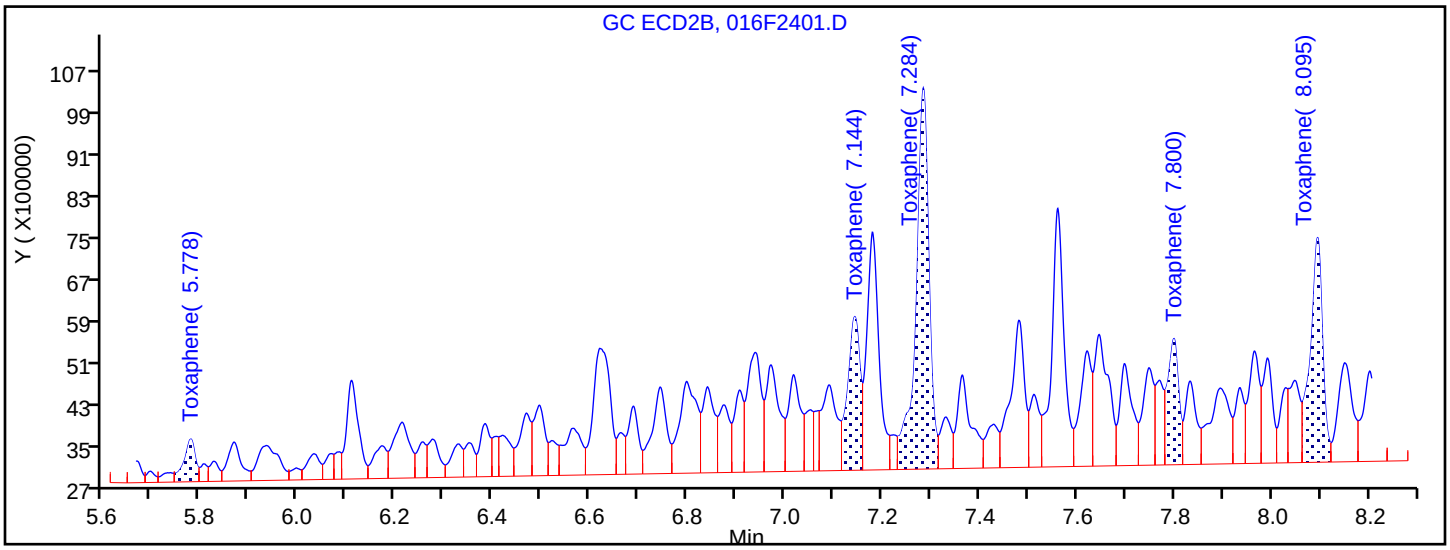
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 1148796
7.144	Response = 5058493
7.284	Response = 13437843
7.800	Response = 3687052
8.095	Response = 7436624



Manual Integration Results

5.778	Response = 1369118	M
7.144	Response = 5249471	M
7.284	Response = 13813356	M
7.800	Response = 3856571	M
8.095	Response = 7701963	M

Reviewer: mooret, 14-Oct-2018 21:34:13

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobenzene	1.0899 1.1788	1.0948	1.1161	1.1873	1.1486	Lin2	-0.340	1.1605							0.9990		0.9900
alpha-BHC	1.4325 1.7413	1.5151	1.5784	1.6732	1.7082	Lin2	-1.160	1.6919							0.9990		0.9900
gamma-BHC (Lindane)	1.2873 1.4841	1.3050	1.3541	1.4304	1.4566	Lin2	-0.721	1.4383							0.9980		0.9900
beta-BHC	0.6083 0.5624	0.5533	0.5269	0.5489	0.5547	Lin2	0.2347	0.5421							0.9990		0.9900
delta-BHC	1.2688 1.5059	1.3116	1.3789	1.4639	1.4777	Lin2	-0.911	1.4669							0.9990		0.9900
Heptachlor	1.1423 1.2700	1.1822	1.2288	1.2809	1.2874	Lin2	-0.584	1.2741							1.0000		0.9900
Aldrin	1.2062 1.3690	1.2570	1.3026	1.3742	1.3613	Lin2	-0.684	1.3611							0.9990		0.9900
Heptachlor epoxide	1.0838 1.1495	1.1012	1.1263	1.1655	1.1463	Lin2	-0.297	1.1502							1.0000		0.9900
gamma-Chlordane	1.1384 1.2781	1.1281	1.1791	1.2485	1.2502	Lin2	-0.520	1.2413							0.9980		0.9900
alpha-Chlordane	1.0735 1.2119	1.0963	1.1287	1.1934	1.1895	Lin2	-0.525	1.1868							0.9990		0.9900
4,4'-DDE	1.1109 1.2600	1.1411	1.1961	1.2683	1.2373	Lin2	-0.618	1.2469							0.9990		0.9900
Endosulfan I	1.0381 1.0827	1.0434	1.0691	1.1110	1.0759	Lin2	-0.222	1.0861							1.0000		0.9900
Dieldrin	1.1146 1.2115	1.1397	1.1784	1.2379	1.1993	Lin2	-0.433	1.2115							1.0000		0.9900
Endrin	0.9402 1.0666	0.9630	1.0117	1.0737	1.0470	Lin2	-0.524	1.0549							0.9990		0.9900
4,4'-DDD	0.8803 1.0077	0.8683	0.9102	0.9844	0.9556	Lin2	-0.439	0.9661							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Endosulfan II	0.9353 0.9815	0.9307	0.9610	1.0302	0.9720	Lin2	-0.252	0.9867							0.9990		0.9900
4,4'-DDT	0.7293 0.8991	0.7495	0.8019	0.8780	0.8772	Lin2	-0.663	0.8704							0.9970		0.9900
Endrin aldehyde	0.7328 0.7638	0.7096	0.7263	0.7800	0.7505	Lin2	-0.135	0.7536							0.9990		0.9900
Methoxychlor	0.3876 0.3901	0.3754	0.3827	0.4082	0.3892	Lin2	-0.035	0.3914							0.9990		0.9900
Endosulfan sulfate	0.8217 0.8872	0.8075	0.8371	0.9081	0.8647	Lin2	-0.276	0.8743							0.9980		0.9900
Endrin ketone	0.8782 0.9231	0.8495	0.8861	0.9671	0.9038	Lin2	-0.230	0.9179							0.9980		0.9900
Tetrachloro-m-xylene	1.0173 1.1251	1.0386	1.0634	1.1370	1.0977	Lin2	-0.428	1.1107							0.9990		0.9900
DCB Decachlorobiphenyl	0.6003 0.5770	0.5495	0.5594	0.5991	0.5570	Lin2	0.0911	0.5671							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobenzene	BNB	Lin2	47816993 1380707359	126156548	317851410	649000706	1019295562	4.00 100	10.0	25.0	50.0	75.0
alpha-BHC	BNB	Lin2	62852215 2039469973	174586944	449507972	914630685	1515867171	4.00 100	10.0	25.0	50.0	75.0
gamma-BHC (Lindane)	BNB	Lin2	56481667 1738294623	150377013	385635283	781888254	1292559350	4.00 100	10.0	25.0	50.0	75.0
beta-BHC	BNB	Lin2	26687989 658730126	63756954	150050051	300049327	492255043	4.00 100	10.0	25.0	50.0	75.0
delta-BHC	BNB	Lin2	55669358 1763800464	151129545	392697114	800211131	1311307456	4.00 100	10.0	25.0	50.0	75.0
Heptachlor	BNB	Lin2	50118465 1487484474	136220069	349955154	700142171	1142416982	4.00 100	10.0	25.0	50.0	75.0
Aldrin	BNB	Lin2	52919960 1603385174	144846582	370973392	751162048	1208042264	4.00 100	10.0	25.0	50.0	75.0
Heptachlor epoxide	BNB	Lin2	47553101 1346353314	126886425	320747071	637075296	1017236841	4.00 100	10.0	25.0	50.0	75.0
gamma-Chlordane	BNB	Lin2	49944652 1496975406	129991480	335790425	682439750	1109387779	4.00 100	10.0	25.0	50.0	75.0
alpha-Chlordane	BNB	Lin2	47100490 1419377556	126327949	321433079	652320568	1055599184	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDE	BNB	Lin2	48738148 1475769541	131488025	340651862	693292530	1097991084	4.00 100	10.0	25.0	50.0	75.0
Endosulfan I	BNB	Lin2	45543940 1268053177	120234528	304465713	607276774	954735604	4.00 100	10.0	25.0	50.0	75.0
Dieldrin	BNB	Lin2	48904591 1418985077	131325618	335595524	676681392	1064216521	4.00 100	10.0	25.0	50.0	75.0
Endrin	BNB	Lin2	41251930 1249259754	110965652	288123020	586918822	929144470	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDD	BNB	Lin2	38622027 1180309263	100049743	259223669	538092520	848012397	4.00 100	10.0	25.0	50.0	75.0
Endosulfan II	BNB	Lin2	41034933 1149629449	107239359	273685389	563151672	862538061	4.00 100	10.0	25.0	50.0	75.0

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4,4'-DDT	BNB	Lin2	31997998 1053113637	86360678	228369137	479927441	778459968	4.00 100	10.0	25.0	50.0	75.0
Endrin aldehyde	BNB	Lin2	32150414 894620553	81761942	206854248	426357889	665966546	4.00 100	10.0	25.0	50.0	75.0
Methoxychlor	BNB	Lin2	17004835 456885819	43260093	108979408	223151920	345420332	4.00 100	10.0	25.0	50.0	75.0
Endosulfan sulfate	BNB	Lin2	36051087 1039104153	93045319	238398480	496366994	767321325	4.00 100	10.0	25.0	50.0	75.0
Endrin ketone	BNB	Lin2	38530653 1081196479	97881347	252349419	528619675	802034011	4.00 100	10.0	25.0	50.0	75.0
Tetrachloro-m-xylene	BNB	Lin2	44633037 1317820866	119672981	302832702	621494359	974117175	4.00 100	10.0	25.0	50.0	75.0
DCB Decachlorobiphenyl	BNB	Lin2	26336210 675825077	63321098	159322167	327463502	494311523	4.00 100	10.0	25.0	50.0	75.0

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D
Lims ID: STD6 AB
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 19:22:28 ALS Bottle#: 22 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:46 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:21:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						413.9	
2						393.8	
						RPD = 4.96	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1756870840	150.0	150.0	
2	2.840	2.842	-0.002	195021437	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.921	3.919	0.002	1317820866	100.0	101.7	
2	3.823	3.823	0.000	151651222	100.0	96.2	
						RPD = 5.52	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	1380707359	100.0	101.9	
2	4.302	4.302	0.000	160717643	100.0	96.5	
						RPD = 5.38	
8 alpha-BHC							
1	4.498	4.497	0.001	2039469973	100.0	103.6	
2	4.447	4.448	-0.001	213039488	100.0	98.9	
						RPD = 4.64	
9 gamma-BHC (Lindane)							
1	4.787	4.785	0.002	1738294623	100.0	103.7	
2	4.762	4.761	0.001	184996515	100.0	98.6	
						RPD = 4.99	
10 beta-BHC							
1	4.863	4.862	0.001	658730126	100.0	103.3	
2	4.837	4.837	0.000	77780555	100.0	97.6	
						RPD = 5.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.012	5.010	0.002	1763800464	100.0	103.3	
2	5.070	5.069	0.001	187730350	100.0	98.7	
						RPD = 4.51	
15 Heptachlor							
1	5.188	5.187	0.001	1487484474	100.0	100.1	
2	5.112	5.112	0.000	157743006	100.0	97.5	
						RPD = 2.69	
16 Aldrin							
1	5.458	5.457	0.001	1603385174	100.0	101.1	
2	5.384	5.383	0.001	171135300	100.0	98.1	
						RPD = 3.03	
18 Isodrin							
1	5.785	5.783	0.002	1276942983	100.0	101.0	
2	5.749	5.749	0.000	144685541	100.0	97.8	
						RPD = 3.17	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	1346353314	100.0	100.2	
2	5.932	5.931	0.001	153345134	100.0	96.9	
						RPD = 3.39	
22 trans-Chlordane							
1	6.204	6.204	0.000	1496975406	100.0	103.4	
2	6.131	6.130	0.001	163709394	100.0	98.3	
						RPD = 5.07	
23 cis-Chlordane							
1	6.346	6.344	0.002	1419377556	100.0	102.6	
2	6.287	6.286	0.001	154077138	100.0	97.9	
						RPD = 4.60	
24 4,4'-DDE							
1	6.422	6.421	0.001	1475769541	100.0	101.5	
2	6.470	6.469	0.001	160552956	100.0	97.9	
						RPD = 3.65	
25 Endosulfan I							
1	6.495	6.494	0.001	1268053177	100.0	99.9	
2	6.347	6.346	0.001	144373306	100.0	96.8	
						RPD = 3.18	
27 Dieldrin							
1	6.750	6.748	0.002	1418985077	100.0	100.4	
2	6.640	6.639	0.001	161178584	100.0	97.7	
						RPD = 2.73	
30 Endrin							
1	6.998	6.997	0.001	1249259754	100.0	101.6	
2	6.964	6.963	0.001	142775347	100.0	97.9	
						RPD = 3.71	
32 4,4'-DDD							
1	7.059	7.058	0.001	1180309263	100.0	104.8	
2	7.089	7.089	0.000	131149227	100.0	98.3	
						RPD = 6.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.235	7.234	0.001	1149629449	100.0	99.7	
2	7.191	7.190	0.001	134900820	100.0	95.9	
						RPD = 3.88	
35 4,4'-DDT							
1	7.353	7.352	0.001	1053113637	100.0	104.1	
2	7.420	7.419	0.001	115525218	100.0	99.4	
						RPD = 4.57	
36 Endrin aldehyde							
1	7.680	7.679	0.001	894620553	100.0	101.5	
2	7.551	7.550	0.001	109276534	100.0	96.9	
						RPD = 4.65	
37 Methoxychlor							
1	7.857	7.857	0.000	456885819	100.0	99.8	
2	8.151	8.150	0.001	54922574	100.0	96.4	
						RPD = 3.44	
38 Mirex							
1	8.017	8.016	0.001	761678556	100.0	103.8	
2	8.346	8.344	0.002	90852521	100.0	95.7	
						RPD = 8.10	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	1039104153	100.0	101.8	
2	7.842	7.841	0.001	124525276	100.0	96.7	
						RPD = 5.17	
40 Endrin ketone							
1	8.431	8.429	0.002	1081196479	100.0	100.8	
2	8.398	8.396	0.002	136381981	100.0	96.1	
						RPD = 4.74	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	675825077	100.0	101.6	
2	9.669	9.668	0.001	88747472	100.0	95.6	
						RPD = 6.08	
S 3 Endosulfan, Total							
1						301.4	
2						289.4	
						RPD = 4.08	

Reagents:

8081IcalL6_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

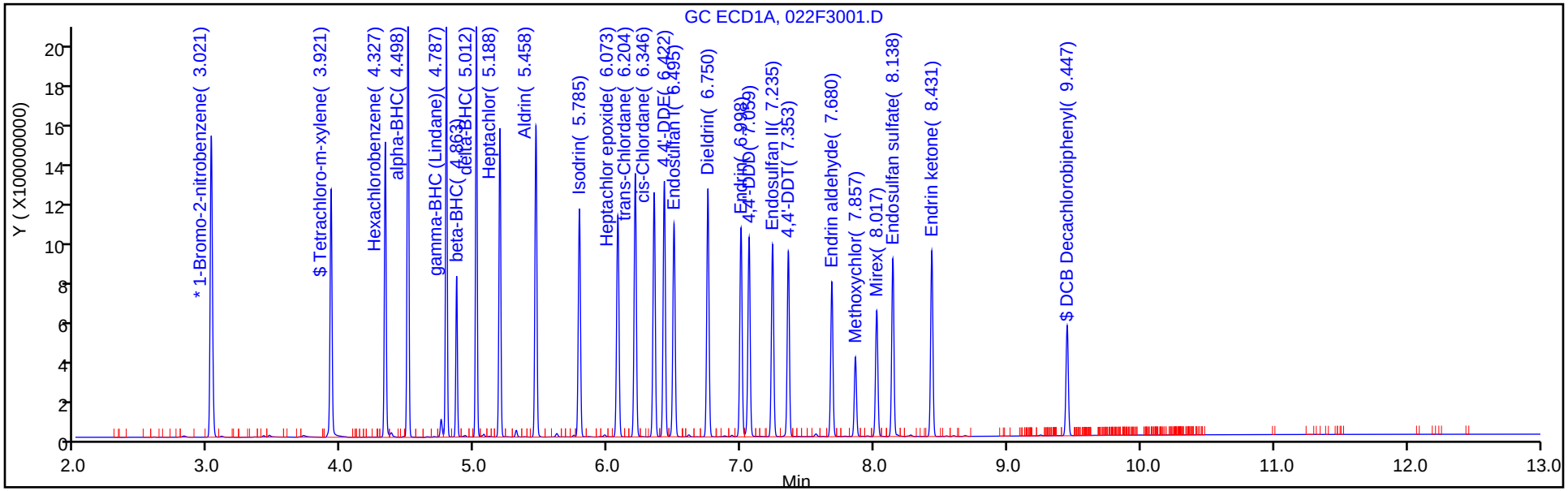
Report Date: 14-Oct-2018 22:11:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

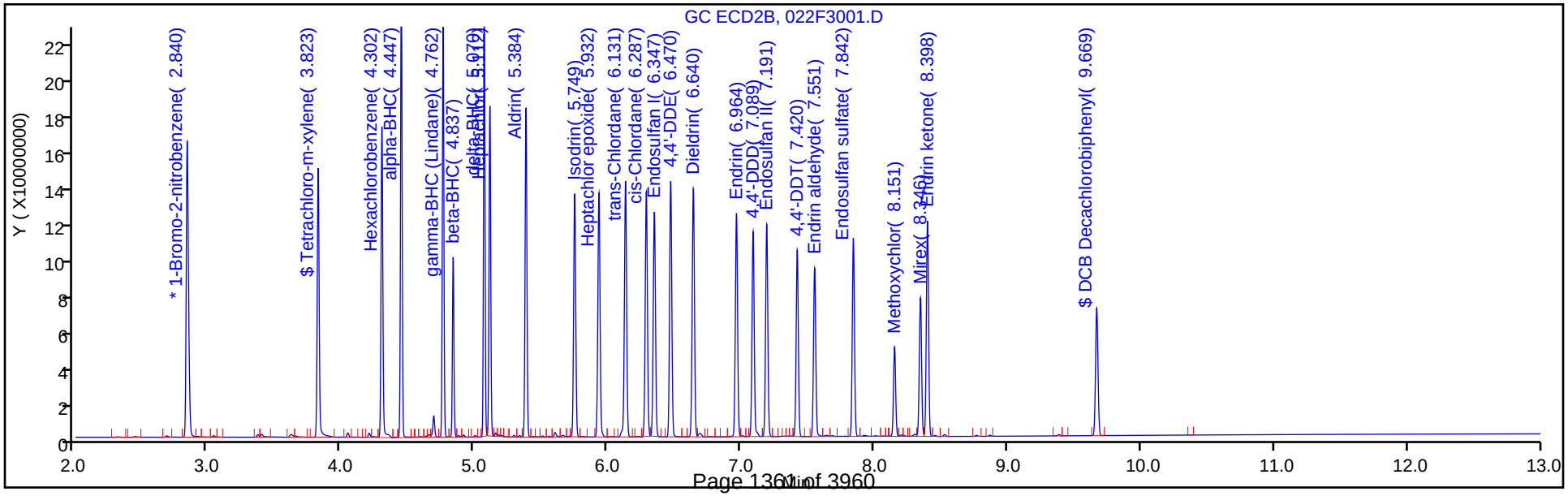
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D

Injection Date:	13-Oct-2018 19:22:28	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 AB			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D
Lims ID: STD5 AB
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 19:39:58 ALS Bottle#: 23 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:49 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						305.3	
2						297.4	
						RPD = 2.65	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.023	-0.002	1774800139	150.0	150.0	
2	2.840	2.842	-0.002	196975139	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.920	3.919	0.001	974117175	75.0	74.5	
2	3.823	3.823	0.000	115355955	75.0	72.3	
						RPD = 2.99	
5 Hexachlorobenzene							
1	4.328	4.326	0.002	1019295562	75.0	74.5	
2	4.302	4.302	0.000	120451736	75.0	71.5	
						RPD = 4.17	
8 alpha-BHC							
1	4.498	4.497	0.001	1515867171	75.0	76.4	
2	4.448	4.448	0.000	162579162	75.0	74.7	
						RPD = 2.33	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	1292559350	75.0	76.5	
2	4.761	4.761	0.000	141300627	75.0	74.5	
						RPD = 2.52	
10 beta-BHC							
1	4.862	4.862	0.000	492255043	75.0	76.3	
2	4.837	4.837	0.000	59596054	75.0	73.8	
						RPD = 3.31	
12 delta-BHC							
1	5.011	5.010	0.001	1311307456	75.0	76.2	
2	5.070	5.069	0.001	142822500	75.0	74.3	
						RPD = 2.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.188	5.187	0.001	1142416982	75.0	76.2	
2	5.113	5.112	0.001	122155556	75.0	74.7	
						RPD = 2.10	
16 Aldrin							
1	5.458	5.457	0.001	1208042264	75.0	75.5	
2	5.384	5.383	0.001	130679943	75.0	74.1	
						RPD = 1.93	
18 Isodrin							
1	5.785	5.783	0.002	961672330	75.0	75.3	
2	5.750	5.749	0.001	109763292	75.0	73.3	
						RPD = 2.72	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	1017236841	75.0	75.0	
2	5.932	5.931	0.001	117794987	75.0	73.5	
						RPD = 1.98	
22 trans-Chlordane							
1	6.205	6.204	0.001	1109387779	75.0	76.0	
2	6.131	6.130	0.001	123500639	75.0	73.3	
						RPD = 3.54	
23 cis-Chlordane							
1	6.346	6.344	0.002	1055599184	75.0	75.6	
2	6.288	6.286	0.002	116906799	75.0	73.4	
						RPD = 2.90	
24 4,4'-DDE							
1	6.422	6.421	0.001	1097991084	75.0	74.9	
2	6.470	6.469	0.001	121439906	75.0	73.3	
						RPD = 2.23	
25 Endosulfan I							
1	6.495	6.494	0.001	954735604	75.0	74.5	
2	6.348	6.346	0.002	110310449	75.0	73.0	
						RPD = 1.99	
27 Dieldrin							
1	6.750	6.748	0.002	1064216521	75.0	74.6	
2	6.640	6.639	0.001	122303746	75.0	73.3	
						RPD = 1.77	
30 Endrin							
1	6.998	6.997	0.001	929144470	75.0	74.9	
2	6.965	6.963	0.002	108615513	75.0	73.7	
						RPD = 1.66	
32 4,4'-DDD							
1	7.059	7.058	0.001	848012397	75.0	74.6	
2	7.090	7.089	0.001	98409444	75.0	73.0	
						RPD = 2.25	
34 Endosulfan II							
1	7.235	7.234	0.001	862538061	75.0	74.1	
2	7.191	7.190	0.001	103131602	75.0	72.4	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.353	7.352	0.001	778459968	75.0	76.4	
2	7.420	7.419	0.001	88104638	75.0	75.1	
						RPD = 1.66	
36 Endrin aldehyde							
1	7.680	7.679	0.001	665966546	75.0	74.9	
2	7.551	7.550	0.001	82965198	75.0	72.7	
						RPD = 2.96	
37 Methoxychlor							
1	7.857	7.857	0.000	345420332	75.0	74.7	
2	8.151	8.150	0.001	42337805	75.0	73.5	
						RPD = 1.63	
38 Mirex							
1	8.016	8.016	0.000	537010702	75.0	72.4	
2	8.345	8.344	0.001	69265800	75.0	71.9	
						RPD = 0.66	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	767321325	75.0	74.5	
2	7.843	7.841	0.002	94443160	75.0	72.4	
						RPD = 2.83	
40 Endrin ketone							
1	8.430	8.429	0.001	802034011	75.0	74.1	
2	8.398	8.396	0.002	103818155	75.0	72.3	
						RPD = 2.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	494311523	75.0	73.5	
2	9.669	9.668	0.001	67193439	75.0	71.4	
						RPD = 2.91	
S 3 Endosulfan, Total							
1						223.1	
2						217.9	
						RPD = 2.38	

Reagents:

8081IcalL5_00026	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

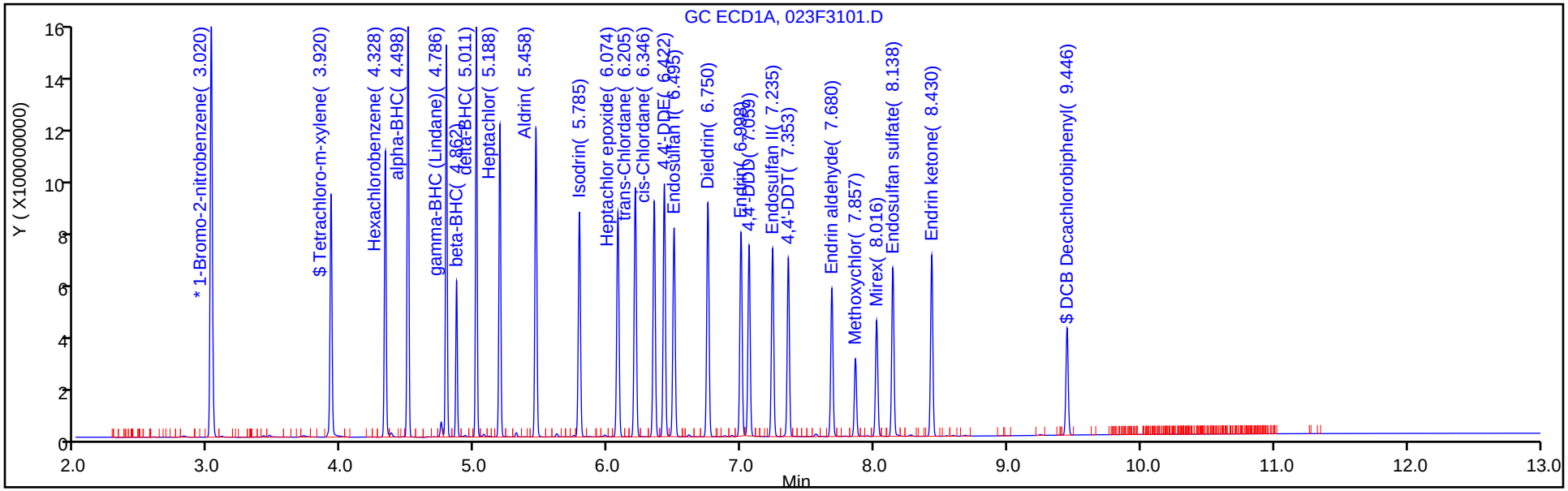
Report Date: 14-Oct-2018 22:11:51 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

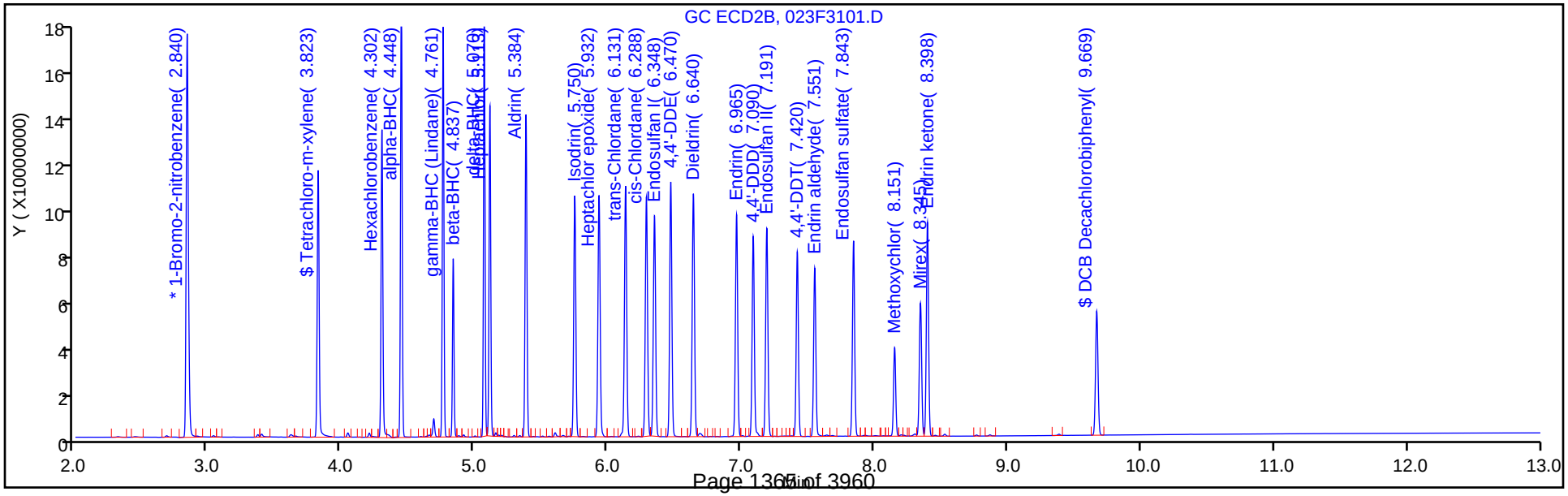
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D

Injection Date:	13-Oct-2018 19:39:58	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 AB			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D
Lims ID: STD4 AB
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 13-Oct-2018 19:57:23 ALS Bottle#: 24 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:53 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:15:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1639866372	150.0	150.0	
2	2.839	2.839	0.000	184249474	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	621494359	50.0	51.6	
2	3.823	3.823	0.000	77802319	50.0	52.0	
						RPD = 0.76	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	649000706	50.0	51.4	
2	4.302	4.302	0.000	82080999	50.0	51.9	
						RPD = 0.91	
8 alpha-BHC							
1	4.497	4.497	0.000	914630685	50.0	50.1	
2	4.448	4.448	0.000	102825287	50.0	50.4	
						RPD = 0.46	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	781888254	50.0	50.2	
2	4.761	4.761	0.000	89108339	50.0	50.2	
						RPD = 0.06	
10 beta-BHC							
1	4.862	4.862	0.000	300049327	50.0	50.2	
2	4.837	4.837	0.000	38193156	50.0	50.3	
						RPD = 0.27	
12 delta-BHC							
1	5.010	5.010	0.000	800211131	50.0	50.5	
2	5.069	5.069	0.000	90510020	50.0	50.3	
						RPD = 0.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.187	5.187	0.000	700142171	50.0	50.7	
2	5.112	5.112	0.000	76652553	50.0	50.0	
						RPD = 1.50	
16 Aldrin							
1	5.457	5.457	0.000	751162048	50.0	51.0	
2	5.383	5.383	0.000	83229214	50.0	50.3	
						RPD = 1.26	
18 Isodrin							
1	5.783	5.783	0.000	601057788	50.0	51.1	
2	5.749	5.749	0.000	70720524	50.0	50.3	
						RPD = 1.47	
21 Heptachlor epoxide							
1	6.072	6.072	0.000	637075296	50.0	50.9	
2	5.931	5.931	0.000	75919068	50.0	50.5	
						RPD = 0.86	
22 trans-Chlordane							
1	6.204	6.204	0.000	682439750	50.0	50.7	
2	6.130	6.130	0.000	79344564	50.0	50.2	
						RPD = 0.91	
23 cis-Chlordane							
1	6.344	6.344	0.000	652320568	50.0	50.7	
2	6.286	6.286	0.000	75318619	50.0	50.4	
						RPD = 0.57	
24 4,4'-DDE							
1	6.421	6.421	0.000	693292530	50.0	51.4	
2	6.469	6.469	0.000	79191054	50.0	51.0	
						RPD = 0.68	
25 Endosulfan I							
1	6.494	6.494	0.000	607276774	50.0	51.4	
2	6.346	6.346	0.000	71761841	50.0	50.6	
						RPD = 1.49	
27 Dieldrin							
1	6.748	6.748	0.000	676681392	50.0	51.4	
2	6.639	6.639	0.000	79630835	50.0	50.9	
						RPD = 1.01	
30 Endrin							
1	6.997	6.997	0.000	586918822	50.0	51.4	
2	6.963	6.963	0.000	70123187	50.0	50.8	
						RPD = 1.13	
32 4,4'-DDD							
1	7.058	7.058	0.000	538092520	50.0	51.4	
2	7.089	7.089	0.000	64688838	50.0	51.2	
						RPD = 0.39	
34 Endosulfan II							
1	7.234	7.234	0.000	563151672	50.0	52.5	
2	7.190	7.190	0.000	69296907	50.0	51.8	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.352	7.352	0.000	479927441	50.0	51.2	
2	7.419	7.419	0.000	55899373	50.0	51.0	
						RPD = 0.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	426357889	50.0	51.9	
2	7.550	7.550	0.000	55206907	50.0	51.5	
						RPD = 0.80	
37 Methoxychlor							
1	7.857	7.857	0.000	223151920	50.0	52.2	
2	8.150	8.150	0.000	27972236	50.0	51.8	
						RPD = 0.89	
38 Mirex							
1	8.016	8.016	0.000	349932979	50.0	51.1	
2	8.344	8.344	0.000	46808816	50.0	51.7	
						RPD = 1.13	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	496366994	50.0	52.2	
2	7.841	7.841	0.000	63414174	50.0	51.8	
						RPD = 0.87	
40 Endrin ketone							
1	8.429	8.429	0.000	528619675	50.0	52.9	
2	8.396	8.396	0.000	70279476	50.0	52.2	
						RPD = 1.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	327463502	50.0	52.7	
2	9.668	9.668	0.000	46374378	50.0	52.4	
						RPD = 0.46	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

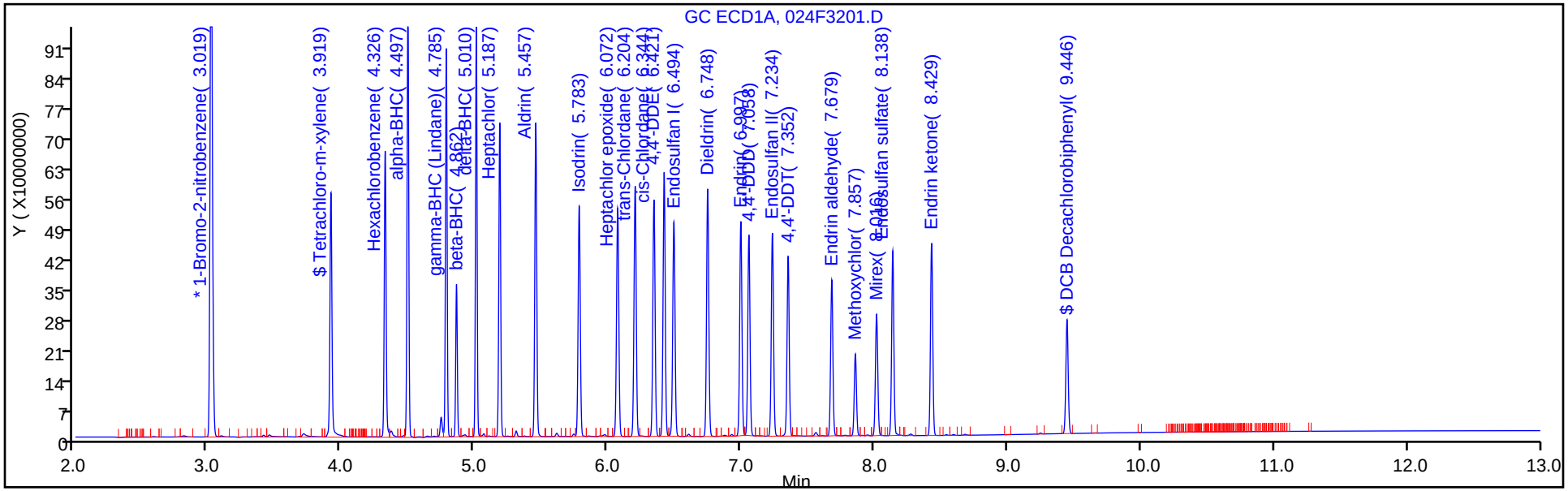
Report Date: 14-Oct-2018 22:11:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

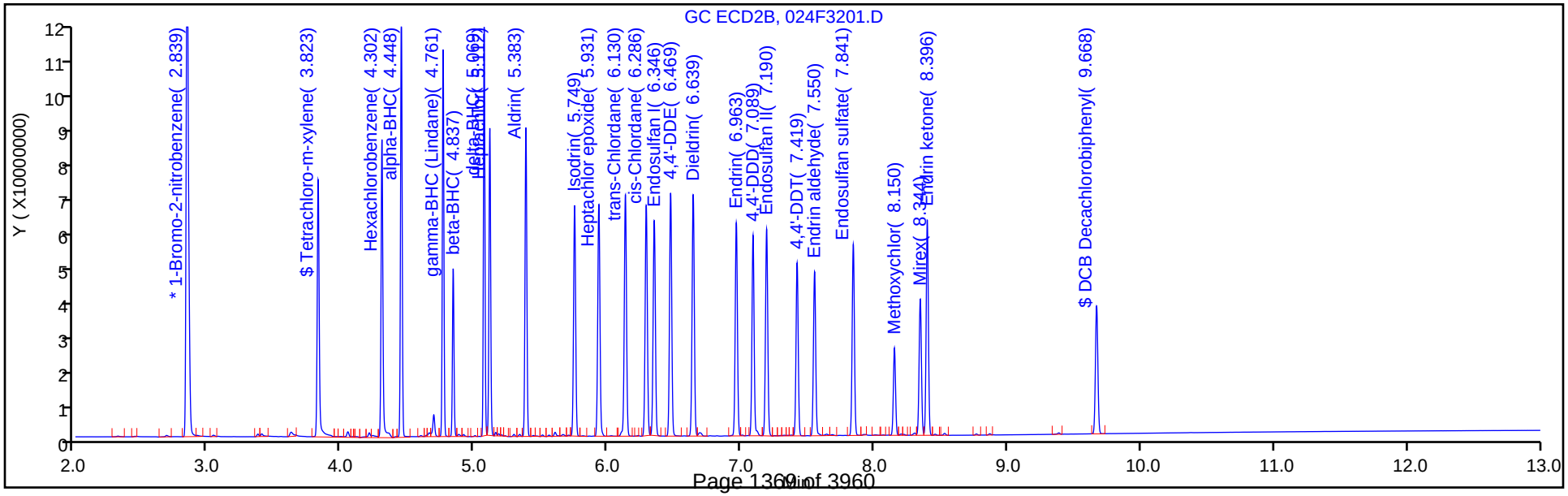
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D

Injection Date:	13-Oct-2018 19:57:23	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 AB			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D
Lims ID: STD3 AB
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 20:14:49 ALS Bottle#: 25 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:56 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						96.0	
2						100.5	
						RPD = 4.51	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1708743357	150.0	150.0	
2	2.839	2.839	0.000	189250238	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	302832702	25.0	24.3	
2	3.823	3.823	0.000	39633690	25.0	25.4	
						RPD = 4.54	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	317851410	25.0	24.3	
2	4.301	4.302	-0.001	42722842	25.0	26.0	
						RPD = 6.71	
8 alpha-BHC							
1	4.497	4.497	0.000	449507972	25.0	24.0	
2	4.447	4.448	-0.001	52885133	25.0	25.1	
						RPD = 4.26	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	385635283	25.0	24.0	
2	4.761	4.761	0.000	45850109	25.0	25.1	
						RPD = 4.13	
10 beta-BHC							
1	4.862	4.862	0.000	150050051	25.0	23.9	
2	4.836	4.837	-0.001	19996794	25.0	25.3	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	392697114	25.0	24.1	
2	5.069	5.069	0.000	46474767	25.0	25.1	
						RPD = 3.96	
15 Heptachlor							
1	5.187	5.187	0.000	349955154	25.0	24.6	
2	5.111	5.112	-0.001	40161455	25.0	25.3	
						RPD = 3.00	
16 Aldrin							
1	5.457	5.457	0.000	370973392	25.0	24.4	
2	5.383	5.383	0.000	42909032	25.0	25.1	
						RPD = 2.83	
18 Isodrin							
1	5.783	5.783	0.000	298789524	25.0	24.5	
2	5.748	5.749	-0.001	36890552	25.0	25.3	
						RPD = 3.01	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	320747071	25.0	24.7	
2	5.930	5.931	-0.001	39660540	25.0	25.4	
						RPD = 2.64	
22 trans-Chlordane							
1	6.203	6.204	-0.001	335790425	25.0	24.2	
2	6.129	6.130	-0.001	41653596	25.0	25.5	
						RPD = 5.41	
23 cis-Chlordane							
1	6.344	6.344	0.000	321433079	25.0	24.2	
2	6.285	6.286	-0.001	39100281	25.0	25.2	
						RPD = 4.13	
24 4,4'-DDE							
1	6.421	6.421	0.000	340651862	25.0	24.5	
2	6.469	6.469	0.000	40427222	25.0	25.2	
						RPD = 3.05	
25 Endosulfan I							
1	6.494	6.494	0.000	304465713	25.0	24.8	
2	6.346	6.346	0.000	37660075	25.0	25.5	
						RPD = 2.80	
27 Dieldrin							
1	6.748	6.748	0.000	335595524	25.0	24.7	
2	6.638	6.639	-0.001	40874216	25.0	25.3	
						RPD = 2.54	
30 Endrin							
1	6.997	6.997	0.000	288123020	25.0	24.5	
2	6.963	6.963	0.000	35861993	25.0	25.2	
						RPD = 2.96	
32 4,4'-DDD							
1	7.058	7.058	0.000	259223669	25.0	24.0	
2	7.088	7.089	-0.001	32918226	25.0	25.2	
						RPD = 4.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	273685389	25.0	24.6	
2	7.190	7.190	0.000	35501572	25.0	25.5	
						RPD = 3.40	
35 4,4'-DDT							
1	7.352	7.352	0.000	228369137	25.0	23.8	
2	7.419	7.419	0.000	27647840	25.0	24.6	
						RPD = 3.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	206854248	25.0	24.3	
2	7.550	7.550	0.000	28263198	25.0	25.3	
						RPD = 4.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	108979408	25.0	24.5	
2	8.150	8.150	0.000	14155118	25.0	25.3	
						RPD = 3.13	
38 Mirex							
1	8.015	8.016	-0.001	172426127	25.0	24.2	
2	8.344	8.344	0.000	24325156	25.0	25.6	
						RPD = 5.67	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	238398480	25.0	24.3	
2	7.841	7.841	0.000	32381376	25.0	25.4	
						RPD = 4.66	
40 Endrin ketone							
1	8.429	8.429	0.000	252349419	25.0	24.4	
2	8.396	8.396	0.000	35593065	25.0	25.4	
						RPD = 4.25	
$ 41 DCB Decachlorobiphenyl							
1	9.445	9.446	-0.001	159322167	25.0	24.5	
2	9.668	9.668	0.000	23709545	25.0	25.6	
						RPD = 4.30	
S 3 Endosulfan, Total							
1						73.7	
2						76.4	
						RPD = 3.61	

Reagents:

8081IcalL3_00028	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

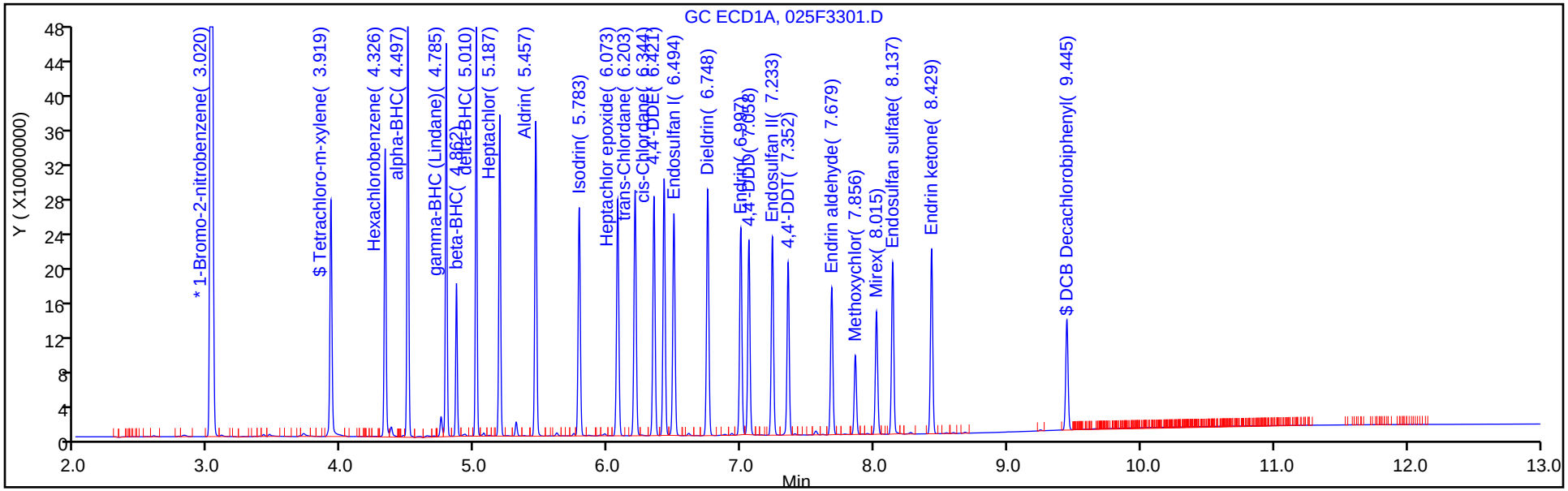
Report Date: 14-Oct-2018 22:11:58 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

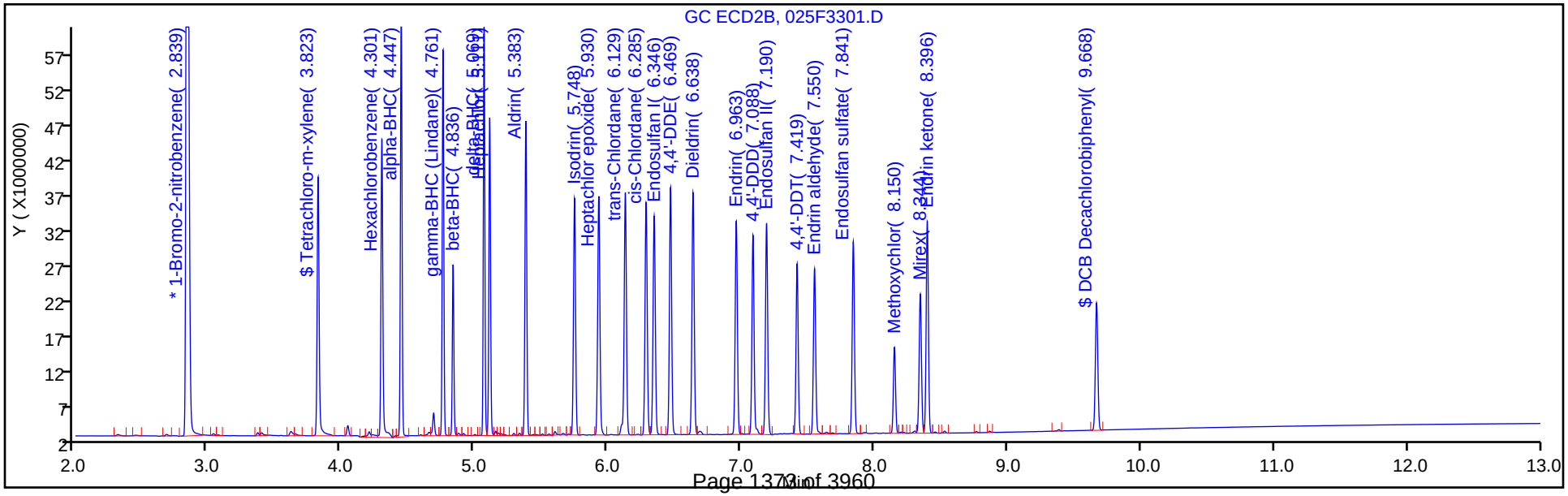
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D

Injection Date:	13-Oct-2018 20:14:49	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 AB			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Lims ID: STD2 AB
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 20:32:15 ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:00 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						38.6	
2						40.9	
						RPD = 5.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1728425275	150.0	150.0	
2	2.839	2.839	0.000	187345459	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	119672981	10.0	9.74	
2	3.822	3.823	-0.001	16477394	10.0	10.3	
						RPD = 5.80	
5 Hexachlorobenzene							
1	4.325	4.326	-0.001	126156548	10.0	9.73	
2	4.301	4.302	-0.001	17019247	10.0	10.1	
						RPD = 4.06	
8 alpha-BHC							
1	4.496	4.497	-0.001	174586944	10.0	9.64	
2	4.446	4.448	-0.002	21525266	10.0	10.1	
						RPD = 4.69	
9 gamma-BHC (Lindane)							
1	4.784	4.785	-0.001	150377013	10.0	9.57	
2	4.760	4.761	-0.001	18724325	10.0	10.2	
						RPD = 6.55	
10 beta-BHC							
1	4.861	4.862	-0.001	63756954	10.0	9.77	
2	4.836	4.837	-0.001	8495816	10.0	10.4	
						RPD = 6.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	151129545	10.0	9.56	
2	5.068	5.069	-0.001	18818212	10.0	10.2	
						RPD = 6.40	
15 Heptachlor							
1	5.186	5.187	-0.001	136220069	10.0	9.74	
2	5.111	5.112	-0.001	16505122	10.0	10.3	
						RPD = 5.70	
16 Aldrin							
1	5.456	5.457	-0.001	144846582	10.0	9.74	
2	5.382	5.383	-0.001	17731926	10.0	10.3	
						RPD = 5.89	
18 Isodrin							
1	5.783	5.783	0.000	117749615	10.0	9.72	
2	5.748	5.749	-0.001	15625487	10.0	10.5	
						RPD = 7.33	
21 Heptachlor epoxide							M
1	6.071	6.072	-0.001	126886425	10.0	9.83	
2	5.929	5.931	-0.002	16641254	10.0	10.4	M
						RPD = 5.98	
22 trans-Chlordane							
1	6.202	6.204	-0.002	129991480	10.0	9.51	
2	6.129	6.130	-0.001	16929113	10.0	10.3	
						RPD = 7.70	
23 cis-Chlordane							
1	6.344	6.344	0.000	126327949	10.0	9.68	
2	6.286	6.286	0.000	16380093	10.0	10.4	
						RPD = 7.07	
24 4,4'-DDE							
1	6.420	6.421	-0.001	131488025	10.0	9.65	
2	6.468	6.469	-0.001	16485248	10.0	10.3	
						RPD = 6.16	
25 Endosulfan I							
1	6.493	6.494	-0.001	120234528	10.0	9.81	
2	6.346	6.346	0.000	15849043	10.0	10.5	
						RPD = 6.40	
27 Dieldrin							
1	6.747	6.748	-0.001	131325618	10.0	9.76	
2	6.638	6.639	-0.001	16696805	10.0	10.3	
						RPD = 5.11	
30 Endrin							
1	6.996	6.997	-0.001	110965652	10.0	9.63	
2	6.962	6.963	-0.001	14572762	10.0	10.2	
						RPD = 6.20	
32 4,4'-DDD							
1	7.057	7.058	-0.001	100049743	10.0	9.44	
2	7.088	7.089	-0.001	13387732	10.0	10.2	
						RPD = 7.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	107239359	10.0	9.69	
2	7.189	7.190	-0.001	14939909	10.0	10.4	
						RPD = 6.87	
35 4,4'-DDT							
1	7.352	7.352	0.000	86360678	10.0	9.37	
2	7.418	7.419	-0.001	11005760	10.0	9.98	
						RPD = 6.32	
36 Endrin aldehyde							
1	7.679	7.679	0.000	81761942	10.0	9.60	
2	7.550	7.550	0.000	11820141	10.0	10.3	
						RPD = 7.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	43260093	10.0	9.68	
2	8.149	8.150	-0.001	5763013	10.0	10.2	
						RPD = 5.03	
38 Mirex							
1	8.015	8.016	-0.001	69898898	10.0	9.68	
2	8.343	8.344	-0.001	10513875	10.0	10.5	
						RPD = 8.20	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	93045319	10.0	9.55	
2	7.840	7.841	-0.001	13487473	10.0	10.3	
						RPD = 7.54	
40 Endrin ketone							
1	8.428	8.429	-0.001	97881347	10.0	9.50	
2	8.396	8.396	0.000	14668648	10.0	10.3	
						RPD = 7.65	
$ 41 DCB Decachlorobiphenyl							
1	9.443	9.446	-0.003	63321098	10.0	9.53	
2	9.668	9.668	0.000	10078459	10.0	10.4	
						RPD = 8.76	
S 3 Endosulfan, Total							
1						29.1	
2						31.1	
						RPD = 6.93	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081IcalL2_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

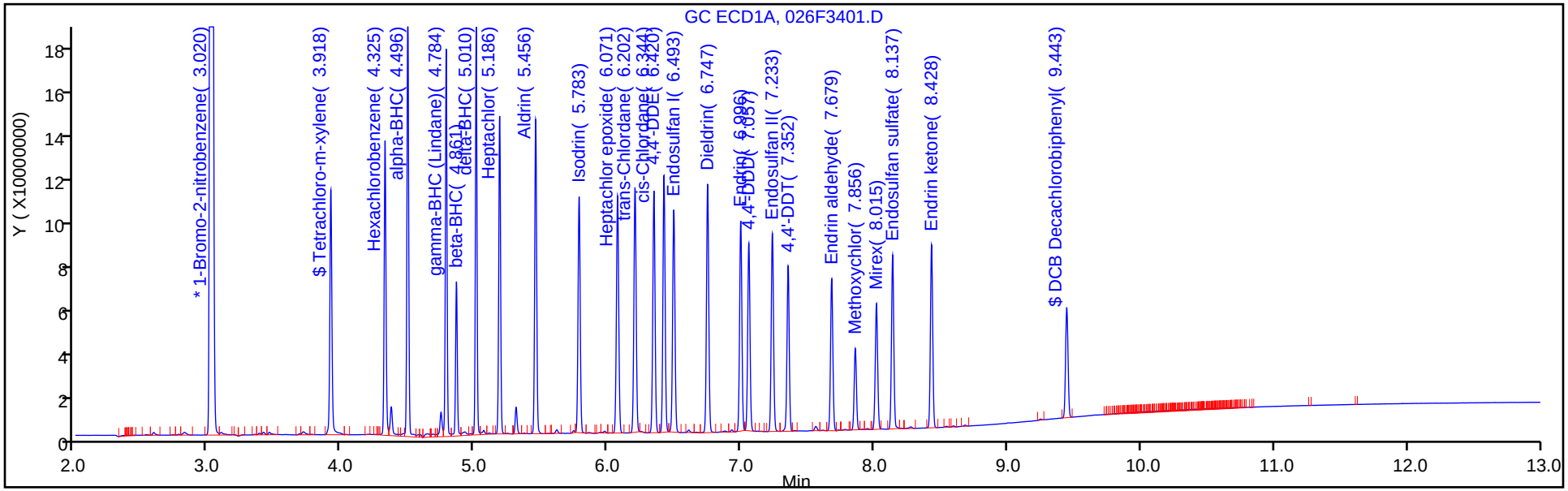
Report Date: 14-Oct-2018 22:12:01 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

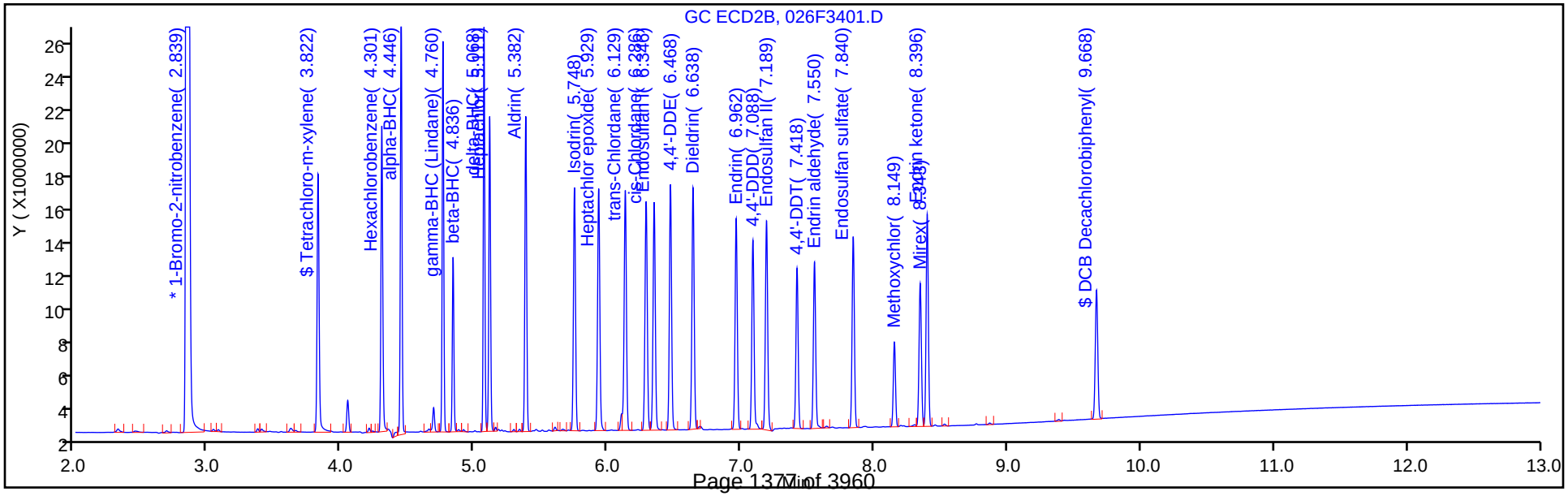
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D

Injection Date:	13-Oct-2018 20:32:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 AB			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D
Lims ID: STD1 AB
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:49:46 ALS Bottle#: 27 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						16.3	
2						15.9	
						RPD = 2.72	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.019	0.002	1645292180	150.0	150.0	
2	2.839	2.839	0.000	186440198	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	44633037	4.00	4.05	
2	3.823	3.823	0.000	6851543	4.00	3.94	
						RPD = 2.74	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	47816993	4.00	4.05	
2	4.302	4.302	0.000	7168590	4.00	3.96	
						RPD = 2.34	
8 alpha-BHC							
1	4.497	4.497	0.000	62852215	4.00	4.07	
2	4.447	4.448	-0.001	8858523	4.00	3.98	
						RPD = 2.23	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	56481667	4.00	4.08	
2	4.761	4.761	0.000	7435354	4.00	3.97	
						RPD = 2.89	
10 beta-BHC							
1	4.862	4.862	0.000	26687989	4.00	4.06	
2	4.837	4.837	0.000	3576692	4.00	3.94	
						RPD = 2.98	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	55669358	4.00	4.08	
2	5.069	5.069	0.000	7424235	4.00	3.97	
						RPD = 2.79	
15 Heptachlor							
1	5.187	5.187	0.000	50118465	4.00	4.04	
2	5.112	5.112	0.000	6621110	4.00	3.95	
						RPD = 2.42	
16 Aldrin							
1	5.457	5.457	0.000	52919960	4.00	4.05	
2	5.383	5.383	0.000	7030048	4.00	3.95	
						RPD = 2.49	
18 Isodrin							
1	5.784	5.783	0.001	44705372	4.00	4.05	
2	5.748	5.749	-0.001	6366004	4.00	3.93	
						RPD = 3.06	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	47553101	4.00	4.03	
2	5.930	5.931	-0.001	6762032	4.00	3.93	
						RPD = 2.56	
22 trans-Chlordane							
1	6.203	6.204	-0.001	49944652	4.00	4.09	
2	6.130	6.130	0.000	6819666	4.00	3.95	
						RPD = 3.42	
23 cis-Chlordane							
1	6.344	6.344	0.000	47100490	4.00	4.06	
2	6.286	6.286	0.000	6646251	4.00	3.94	
						RPD = 3.11	
24 4,4'-DDE							
1	6.421	6.421	0.000	48738148	4.00	4.06	
2	6.469	6.469	0.000	6542674	4.00	3.95	
						RPD = 2.61	
25 Endosulfan I							
1	6.494	6.494	0.000	45543940	4.00	4.03	
2	6.347	6.346	0.001	6507441	4.00	3.92	
						RPD = 2.71	
27 Dieldrin							
1	6.748	6.748	0.000	48904591	4.00	4.04	
2	6.638	6.639	-0.001	6664239	4.00	3.95	
						RPD = 2.17	
30 Endrin							
1	6.997	6.997	0.000	41251930	4.00	4.06	
2	6.963	6.963	0.000	5757882	4.00	3.96	
						RPD = 2.60	
32 4,4'-DDD							
1	7.058	7.058	0.000	38622027	4.00	4.10	
2	7.088	7.089	-0.001	5391187	4.00	3.96	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.234	7.234	0.000	41034933	4.00	4.05	
2	7.191	7.190	0.001	6270548	4.00	3.93	
						RPD = 2.93	
35 4,4'-DDT							
1	7.352	7.352	0.000	31997998	4.00	4.11	
2	7.419	7.419	0.000	4302693	4.00	4.01	
						RPD = 2.63	
36 Endrin aldehyde							
1	7.678	7.679	-0.001	32150414	4.00	4.07	
2	7.551	7.550	0.001	4932964	4.00	3.94	
						RPD = 3.18	
37 Methoxychlor							
1	7.857	7.857	0.000	17004835	4.00	4.05	
2	8.150	8.150	0.000	2361021	4.00	3.96	
						RPD = 2.20	
38 Mirex							
1	8.016	8.016	0.000	28621709	4.00	4.16	
2	8.344	8.344	0.000	4546008	4.00	3.91	
						RPD = 6.31	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	36051087	4.00	4.08	
2	7.841	7.841	0.000	5646467	4.00	3.94	
						RPD = 3.30	
40 Endrin ketone							
1	8.429	8.429	0.000	38530653	4.00	4.08	
2	8.397	8.396	0.001	6086476	4.00	3.95	
						RPD = 3.26	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	26336210	4.00	4.07	
2	9.668	9.668	0.000	4339575	4.00	3.92	
						RPD = 3.76	
S 3 Endosulfan, Total							
1						12.1	
2						11.8	
						RPD = 2.98	

Reagents:

8081IcalL1_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

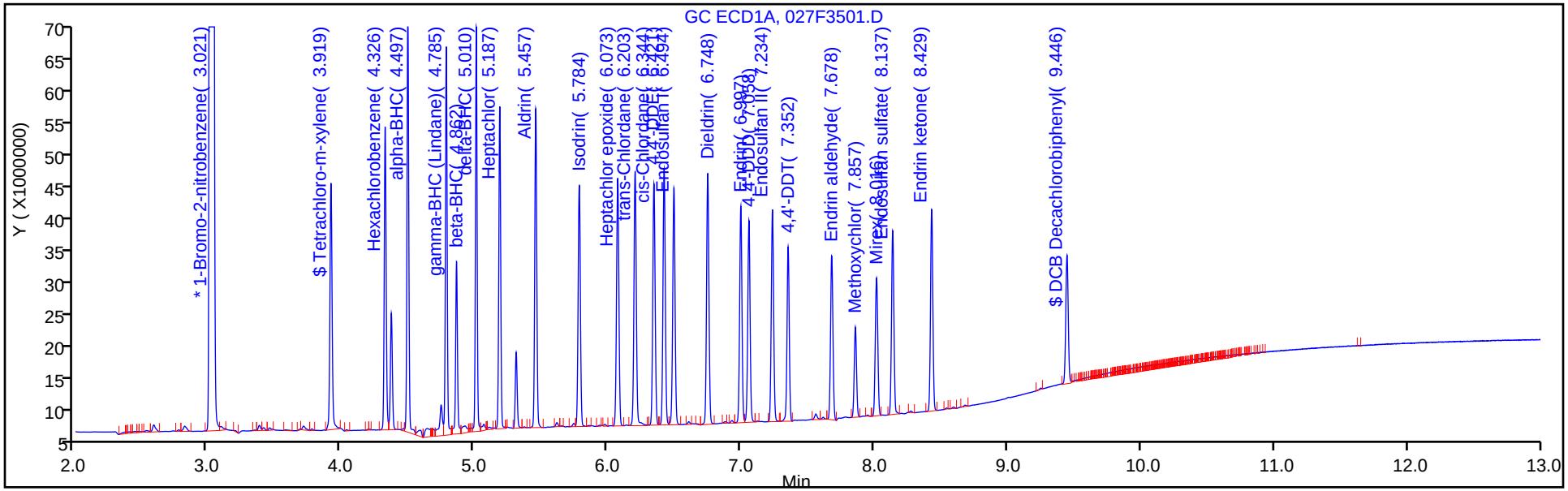
Report Date: 14-Oct-2018 22:12:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

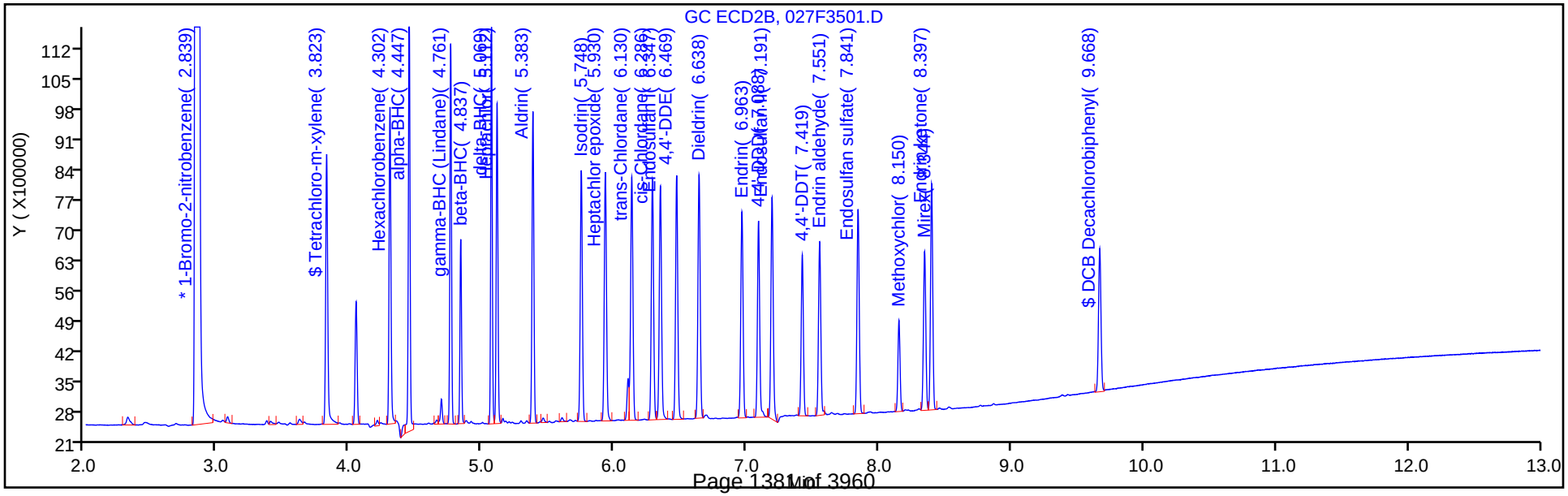
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Injection Date:	13-Oct-2018 20:49:46	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 AB			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobenzene	1.4419 1.2362	1.3627	1.3545	1.3365	1.2230	Lin2	0.7315	1.2729							0.9980		0.9900
alpha-BHC	1.7818 1.6386	1.7234	1.6767	1.6742	1.6508	Lin2	0.5521	1.6510							1.0000		0.9900
gamma-BHC (Lindane)	1.4955 1.4229	1.4992	1.4536	1.4509	1.4347	Lin2	0.2733	1.4397							1.0000		0.9900
beta-BHC	0.7194 0.5982	0.6802	0.6340	0.6219	0.6051	Lin2	0.4836	0.6082							0.9990		0.9900
delta-BHC	1.4933 1.4439	1.5067	1.4734	1.4737	1.4502	Lin2	0.1758	1.4608							1.0000		0.9900
Heptachlor	1.3317 1.2133	1.3215	1.2733	1.2481	1.2403	Lin2	0.4306	1.2403							0.9990		0.9900
Aldrin	1.4140 1.3163	1.4197	1.3604	1.3552	1.3269	Lin2	0.3719	1.3385							0.9990		0.9900
Heptachlor epoxide	1.3601 1.1794	1.3324	1.2574	1.2361	1.1960	Lin2	0.6880	1.2106							0.9990		0.9900
gamma-Chlordane	1.3717 1.2592	1.3554	1.3206	1.2919	1.2540	Lin2	0.4438	1.2767							0.9990		0.9900
alpha-Chlordane	1.3368 1.1851	1.3115	1.2396	1.2264	1.1870	Lin2	0.6085	1.2038							0.9990		0.9900
Endosulfan I	1.3089 1.1104	1.2690	1.1940	1.1684	1.1200	Lin2	0.7681	1.1397							0.9990		0.9900
4,4'-DDE	1.3160 1.2349	1.3199	1.2817	1.2894	1.2330	Lin2	0.2882	1.2583							0.9990		0.9900
Dieldrin	1.3404 1.2397	1.3368	1.2959	1.2966	1.2418	Lin2	0.3611	1.2658							0.9990		0.9900
Endrin	1.1581 1.0982	1.1668	1.1370	1.1418	1.1028	Lin2	0.2016	1.1195							0.9990		0.9900
4,4'-DDD	1.0844 1.0087	1.0719	1.0436	1.0533	0.9992	Lin2	0.2831	1.0231							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Endosulfan II	1.2612 1.0376	1.1962	1.1255	1.1283	1.0472	Lin2	0.8286	1.0728							0.9980		0.9900
4,4'-DDT	0.8654 0.8886	0.8812	0.8765	0.9102	0.8946	Lin2	-0.124	0.8951							1.0000		0.9900
Endrin aldehyde	0.9922 0.8405	0.9464	0.8961	0.8989	0.8424	Lin2	0.5740	0.8613							0.9990		0.9900
Endosulfan sulfate	1.1357 0.9578	1.0799	1.0266	1.0325	0.9589	Lin2	0.6631	0.9840							0.9990		0.9900
Methoxychlor	0.4749 0.4224	0.4614	0.4488	0.4555	0.4299	Lin2	0.1701	0.4365							0.9990		0.9900
Endrin ketone	1.2242 1.0490	1.1745	1.1284	1.1443	1.0541	Lin2	0.6163	1.0846							0.9980		0.9900
Tetrachloro-m-xylene	1.3781 1.1664	1.3193	1.2565	1.2668	1.1713	Lin2	0.7692	1.2042							0.9980		0.9900
DCB Decachlorobiphenyl	0.8728 0.6826	0.8069	0.7517	0.7551	0.6823	Lin2	0.7195	0.7066							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobenzene	BNB	Lin2	7168590 160717643	17019247	42722842	82080999	120451736	4.00 100	10.0	25.0	50.0	75.0
alpha-BHC	BNB	Lin2	8858523 213039488	21525266	52885133	102825287	162579162	4.00 100	10.0	25.0	50.0	75.0
gamma-BHC (Lindane)	BNB	Lin2	7435354 184996515	18724325	45850109	89108339	141300627	4.00 100	10.0	25.0	50.0	75.0
beta-BHC	BNB	Lin2	3576692 77780555	8495816	19996794	38193156	59596054	4.00 100	10.0	25.0	50.0	75.0
delta-BHC	BNB	Lin2	7424235 187730350	18818212	46474767	90510020	142822500	4.00 100	10.0	25.0	50.0	75.0
Heptachlor	BNB	Lin2	6621110 157743006	16505122	40161455	76652553	122155556	4.00 100	10.0	25.0	50.0	75.0
Aldrin	BNB	Lin2	7030048 171135300	17731926	42909032	83229214	130679943	4.00 100	10.0	25.0	50.0	75.0
Heptachlor epoxide	BNB	Lin2	6762032 153345134	16641254	39660540	75919068	117794987	4.00 100	10.0	25.0	50.0	75.0
gamma-Chlordane	BNB	Lin2	6819666 163709394	16929113	41653596	79344564	123500639	4.00 100	10.0	25.0	50.0	75.0
alpha-Chlordane	BNB	Lin2	6646251 154077138	16380093	39100281	75318619	116906799	4.00 100	10.0	25.0	50.0	75.0
Endosulfan I	BNB	Lin2	6507441 144373306	15849043	37660075	71761841	110310449	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDE	BNB	Lin2	6542674 160552956	16485248	40427222	79191054	121439906	4.00 100	10.0	25.0	50.0	75.0
Dieldrin	BNB	Lin2	6664239 161178584	16696805	40874216	79630835	122303746	4.00 100	10.0	25.0	50.0	75.0
Endrin	BNB	Lin2	5757882 142775347	14572762	35861993	70123187	108615513	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDD	BNB	Lin2	5391187 131149227	13387732	32918226	64688838	98409444	4.00 100	10.0	25.0	50.0	75.0
Endosulfan II	BNB	Lin2	6270548 134900820	14939909	35501572	69296907	103131602	4.00 100	10.0	25.0	50.0	75.0

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4,4'-DDT	BNB	Lin2	4302693 115525218	11005760	27647840	55899373	88104638	4.00 100	10.0	25.0	50.0	75.0
Endrin aldehyde	BNB	Lin2	4932964 109276534	11820141	28263198	55206907	82965198	4.00 100	10.0	25.0	50.0	75.0
Endosulfan sulfate	BNB	Lin2	5646467 124525276	13487473	32381376	63414174	94443160	4.00 100	10.0	25.0	50.0	75.0
Methoxychlor	BNB	Lin2	2361021 54922574	5763013	14155118	27972236	42337805	4.00 100	10.0	25.0	50.0	75.0
Endrin ketone	BNB	Lin2	6086476 136381981	14668648	35593065	70279476	103818155	4.00 100	10.0	25.0	50.0	75.0
Tetrachloro-m-xylene	BNB	Lin2	6851543 151651222	16477394	39633690	77802319	115355955	4.00 100	10.0	25.0	50.0	75.0
DCB Decachlorobiphenyl	BNB	Lin2	4339575 88747472	10078459	23709545	46374378	67193439	4.00 100	10.0	25.0	50.0	75.0

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D
Lims ID: STD6 AB
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 19:22:28 ALS Bottle#: 22 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:46 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:21:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						413.9	
2						393.8	
						RPD = 4.96	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1756870840	150.0	150.0	
2	2.840	2.842	-0.002	195021437	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.921	3.919	0.002	1317820866	100.0	101.7	
2	3.823	3.823	0.000	151651222	100.0	96.2	
						RPD = 5.52	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	1380707359	100.0	101.9	
2	4.302	4.302	0.000	160717643	100.0	96.5	
						RPD = 5.38	
8 alpha-BHC							
1	4.498	4.497	0.001	2039469973	100.0	103.6	
2	4.447	4.448	-0.001	213039488	100.0	98.9	
						RPD = 4.64	
9 gamma-BHC (Lindane)							
1	4.787	4.785	0.002	1738294623	100.0	103.7	
2	4.762	4.761	0.001	184996515	100.0	98.6	
						RPD = 4.99	
10 beta-BHC							
1	4.863	4.862	0.001	658730126	100.0	103.3	
2	4.837	4.837	0.000	77780555	100.0	97.6	
						RPD = 5.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.012	5.010	0.002	1763800464	100.0	103.3	
2	5.070	5.069	0.001	187730350	100.0	98.7	
						RPD = 4.51	
15 Heptachlor							
1	5.188	5.187	0.001	1487484474	100.0	100.1	
2	5.112	5.112	0.000	157743006	100.0	97.5	
						RPD = 2.69	
16 Aldrin							
1	5.458	5.457	0.001	1603385174	100.0	101.1	
2	5.384	5.383	0.001	171135300	100.0	98.1	
						RPD = 3.03	
18 Isodrin							
1	5.785	5.783	0.002	1276942983	100.0	101.0	
2	5.749	5.749	0.000	144685541	100.0	97.8	
						RPD = 3.17	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	1346353314	100.0	100.2	
2	5.932	5.931	0.001	153345134	100.0	96.9	
						RPD = 3.39	
22 trans-Chlordane							
1	6.204	6.204	0.000	1496975406	100.0	103.4	
2	6.131	6.130	0.001	163709394	100.0	98.3	
						RPD = 5.07	
23 cis-Chlordane							
1	6.346	6.344	0.002	1419377556	100.0	102.6	
2	6.287	6.286	0.001	154077138	100.0	97.9	
						RPD = 4.60	
24 4,4'-DDE							
1	6.422	6.421	0.001	1475769541	100.0	101.5	
2	6.470	6.469	0.001	160552956	100.0	97.9	
						RPD = 3.65	
25 Endosulfan I							
1	6.495	6.494	0.001	1268053177	100.0	99.9	
2	6.347	6.346	0.001	144373306	100.0	96.8	
						RPD = 3.18	
27 Dieldrin							
1	6.750	6.748	0.002	1418985077	100.0	100.4	
2	6.640	6.639	0.001	161178584	100.0	97.7	
						RPD = 2.73	
30 Endrin							
1	6.998	6.997	0.001	1249259754	100.0	101.6	
2	6.964	6.963	0.001	142775347	100.0	97.9	
						RPD = 3.71	
32 4,4'-DDD							
1	7.059	7.058	0.001	1180309263	100.0	104.8	
2	7.089	7.089	0.000	131149227	100.0	98.3	
						RPD = 6.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.235	7.234	0.001	1149629449	100.0	99.7	
2	7.191	7.190	0.001	134900820	100.0	95.9	
						RPD = 3.88	
35 4,4'-DDT							
1	7.353	7.352	0.001	1053113637	100.0	104.1	
2	7.420	7.419	0.001	115525218	100.0	99.4	
						RPD = 4.57	
36 Endrin aldehyde							
1	7.680	7.679	0.001	894620553	100.0	101.5	
2	7.551	7.550	0.001	109276534	100.0	96.9	
						RPD = 4.65	
37 Methoxychlor							
1	7.857	7.857	0.000	456885819	100.0	99.8	
2	8.151	8.150	0.001	54922574	100.0	96.4	
						RPD = 3.44	
38 Mirex							
1	8.017	8.016	0.001	761678556	100.0	103.8	
2	8.346	8.344	0.002	90852521	100.0	95.7	
						RPD = 8.10	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	1039104153	100.0	101.8	
2	7.842	7.841	0.001	124525276	100.0	96.7	
						RPD = 5.17	
40 Endrin ketone							
1	8.431	8.429	0.002	1081196479	100.0	100.8	
2	8.398	8.396	0.002	136381981	100.0	96.1	
						RPD = 4.74	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	675825077	100.0	101.6	
2	9.669	9.668	0.001	88747472	100.0	95.6	
						RPD = 6.08	
S 3 Endosulfan, Total							
1						301.4	
2						289.4	
						RPD = 4.08	

Reagents:

8081IcalL6_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

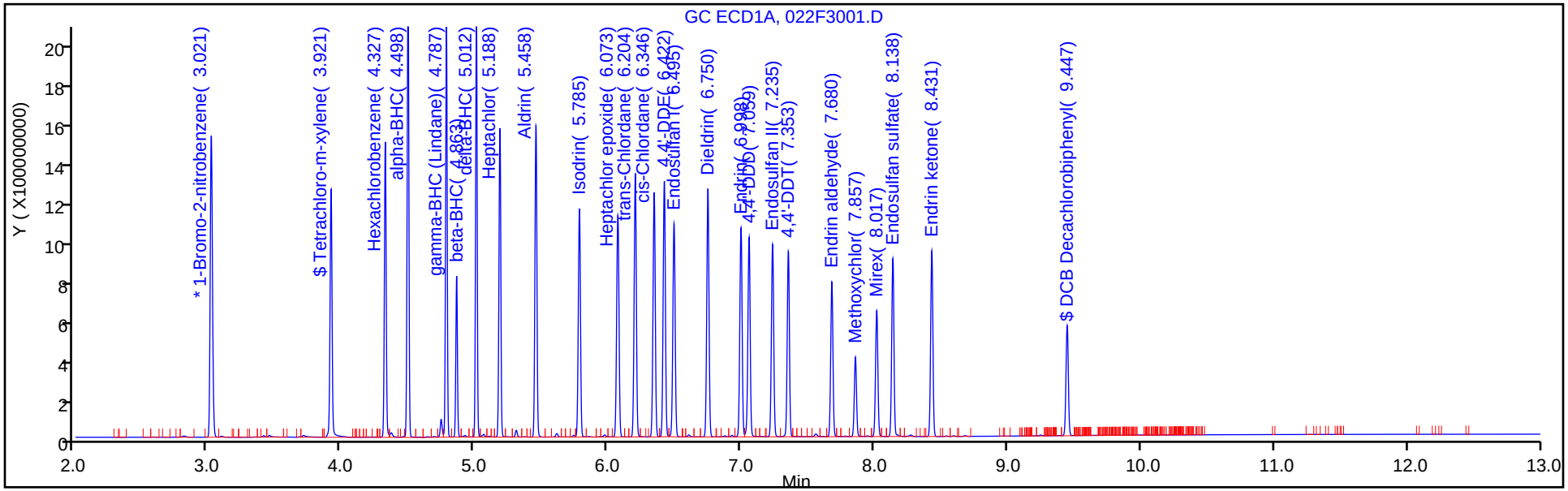
Report Date: 14-Oct-2018 22:11:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

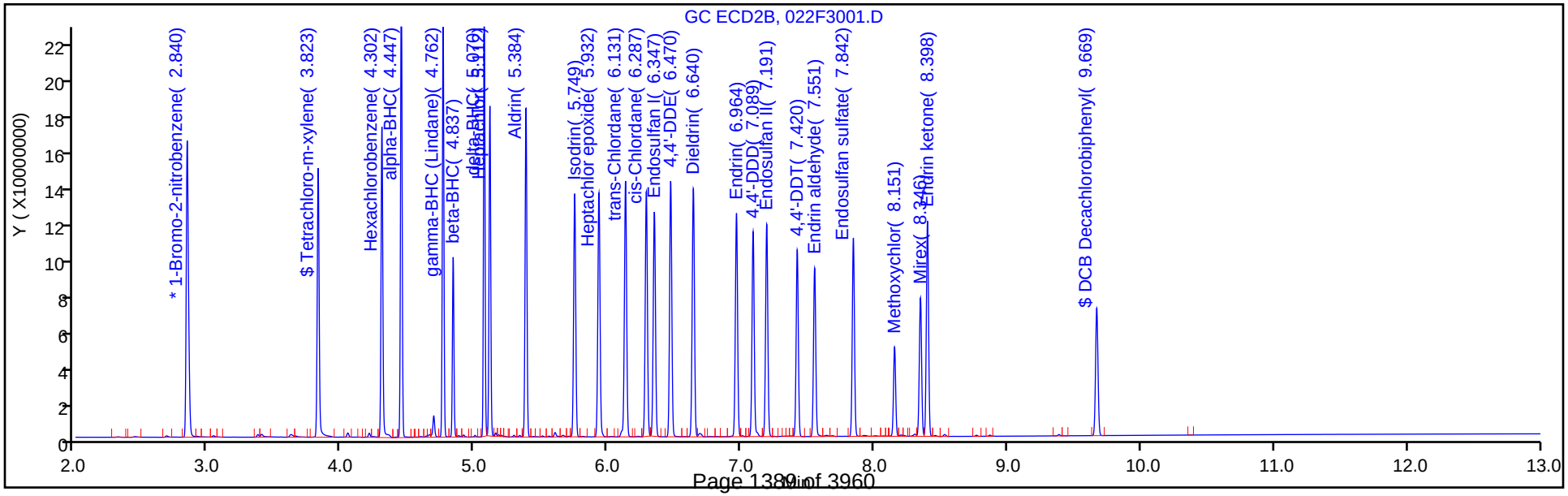
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D

Injection Date:	13-Oct-2018 19:22:28	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 AB			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D
Lims ID: STD5 AB
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 19:39:58 ALS Bottle#: 23 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:49 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						305.3	
2						297.4	
						RPD = 2.65	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.023	-0.002	1774800139	150.0	150.0	
2	2.840	2.842	-0.002	196975139	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.920	3.919	0.001	974117175	75.0	74.5	
2	3.823	3.823	0.000	115355955	75.0	72.3	
						RPD = 2.99	
5 Hexachlorobenzene							
1	4.328	4.326	0.002	1019295562	75.0	74.5	
2	4.302	4.302	0.000	120451736	75.0	71.5	
						RPD = 4.17	
8 alpha-BHC							
1	4.498	4.497	0.001	1515867171	75.0	76.4	
2	4.448	4.448	0.000	162579162	75.0	74.7	
						RPD = 2.33	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	1292559350	75.0	76.5	
2	4.761	4.761	0.000	141300627	75.0	74.5	
						RPD = 2.52	
10 beta-BHC							
1	4.862	4.862	0.000	492255043	75.0	76.3	
2	4.837	4.837	0.000	59596054	75.0	73.8	
						RPD = 3.31	
12 delta-BHC							
1	5.011	5.010	0.001	1311307456	75.0	76.2	
2	5.070	5.069	0.001	142822500	75.0	74.3	
						RPD = 2.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.188	5.187	0.001	1142416982	75.0	76.2	
2	5.113	5.112	0.001	122155556	75.0	74.7	
						RPD = 2.10	
16 Aldrin							
1	5.458	5.457	0.001	1208042264	75.0	75.5	
2	5.384	5.383	0.001	130679943	75.0	74.1	
						RPD = 1.93	
18 Isodrin							
1	5.785	5.783	0.002	961672330	75.0	75.3	
2	5.750	5.749	0.001	109763292	75.0	73.3	
						RPD = 2.72	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	1017236841	75.0	75.0	
2	5.932	5.931	0.001	117794987	75.0	73.5	
						RPD = 1.98	
22 trans-Chlordane							
1	6.205	6.204	0.001	1109387779	75.0	76.0	
2	6.131	6.130	0.001	123500639	75.0	73.3	
						RPD = 3.54	
23 cis-Chlordane							
1	6.346	6.344	0.002	1055599184	75.0	75.6	
2	6.288	6.286	0.002	116906799	75.0	73.4	
						RPD = 2.90	
24 4,4'-DDE							
1	6.422	6.421	0.001	1097991084	75.0	74.9	
2	6.470	6.469	0.001	121439906	75.0	73.3	
						RPD = 2.23	
25 Endosulfan I							
1	6.495	6.494	0.001	954735604	75.0	74.5	
2	6.348	6.346	0.002	110310449	75.0	73.0	
						RPD = 1.99	
27 Dieldrin							
1	6.750	6.748	0.002	1064216521	75.0	74.6	
2	6.640	6.639	0.001	122303746	75.0	73.3	
						RPD = 1.77	
30 Endrin							
1	6.998	6.997	0.001	929144470	75.0	74.9	
2	6.965	6.963	0.002	108615513	75.0	73.7	
						RPD = 1.66	
32 4,4'-DDD							
1	7.059	7.058	0.001	848012397	75.0	74.6	
2	7.090	7.089	0.001	98409444	75.0	73.0	
						RPD = 2.25	
34 Endosulfan II							
1	7.235	7.234	0.001	862538061	75.0	74.1	
2	7.191	7.190	0.001	103131602	75.0	72.4	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.353	7.352	0.001	778459968	75.0	76.4	
2	7.420	7.419	0.001	88104638	75.0	75.1	
						RPD = 1.66	
36 Endrin aldehyde							
1	7.680	7.679	0.001	665966546	75.0	74.9	
2	7.551	7.550	0.001	82965198	75.0	72.7	
						RPD = 2.96	
37 Methoxychlor							
1	7.857	7.857	0.000	345420332	75.0	74.7	
2	8.151	8.150	0.001	42337805	75.0	73.5	
						RPD = 1.63	
38 Mirex							
1	8.016	8.016	0.000	537010702	75.0	72.4	
2	8.345	8.344	0.001	69265800	75.0	71.9	
						RPD = 0.66	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	767321325	75.0	74.5	
2	7.843	7.841	0.002	94443160	75.0	72.4	
						RPD = 2.83	
40 Endrin ketone							
1	8.430	8.429	0.001	802034011	75.0	74.1	
2	8.398	8.396	0.002	103818155	75.0	72.3	
						RPD = 2.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	494311523	75.0	73.5	
2	9.669	9.668	0.001	67193439	75.0	71.4	
						RPD = 2.91	
S 3 Endosulfan, Total							
1						223.1	
2						217.9	
						RPD = 2.38	

Reagents:

8081IcalL5_00026	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

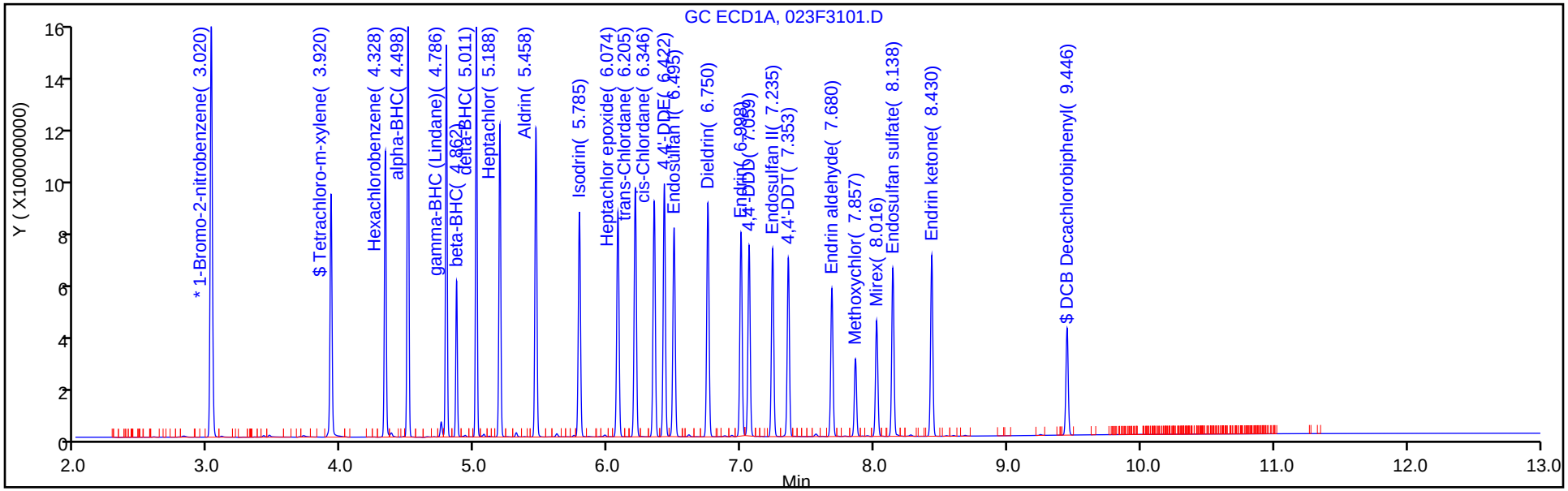
Report Date: 14-Oct-2018 22:11:52 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

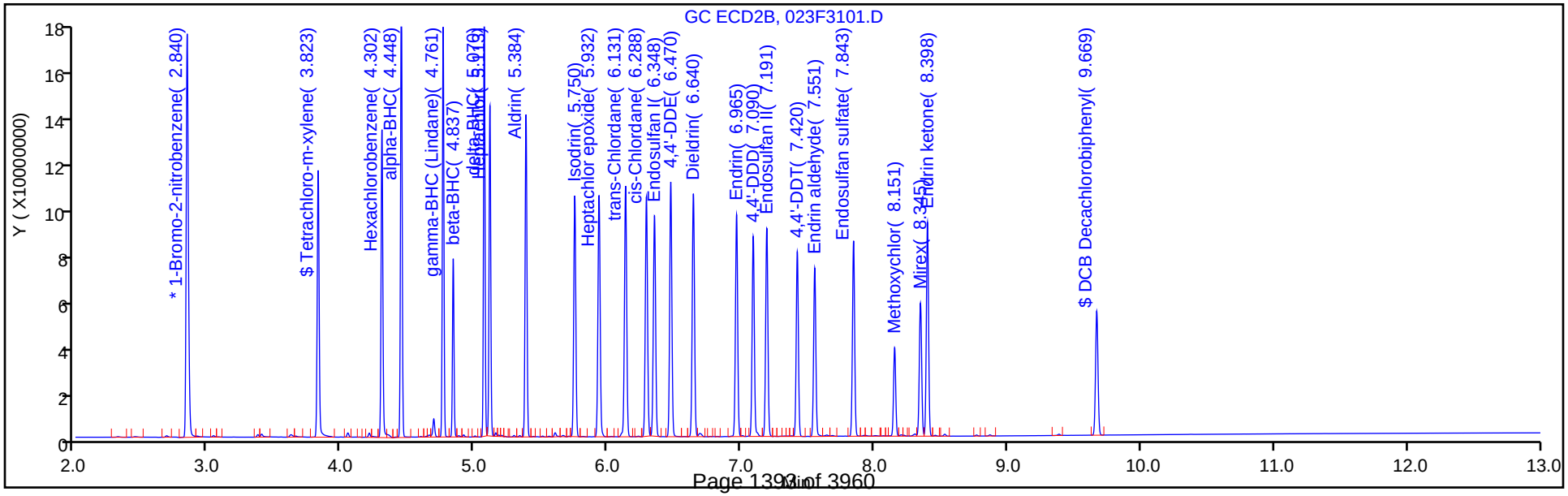
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D

Injection Date:	13-Oct-2018 19:39:58	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 AB			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D
Lims ID: STD4 AB
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 13-Oct-2018 19:57:23 ALS Bottle#: 24 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:53 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:15:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1639866372	150.0	150.0	
2	2.839	2.839	0.000	184249474	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	621494359	50.0	51.6	
2	3.823	3.823	0.000	77802319	50.0	52.0	
						RPD = 0.76	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	649000706	50.0	51.4	
2	4.302	4.302	0.000	82080999	50.0	51.9	
						RPD = 0.91	
8 alpha-BHC							
1	4.497	4.497	0.000	914630685	50.0	50.1	
2	4.448	4.448	0.000	102825287	50.0	50.4	
						RPD = 0.46	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	781888254	50.0	50.2	
2	4.761	4.761	0.000	89108339	50.0	50.2	
						RPD = 0.06	
10 beta-BHC							
1	4.862	4.862	0.000	300049327	50.0	50.2	
2	4.837	4.837	0.000	38193156	50.0	50.3	
						RPD = 0.27	
12 delta-BHC							
1	5.010	5.010	0.000	800211131	50.0	50.5	
2	5.069	5.069	0.000	90510020	50.0	50.3	
						RPD = 0.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.187	5.187	0.000	700142171	50.0	50.7	
2	5.112	5.112	0.000	76652553	50.0	50.0	
						RPD = 1.50	
16 Aldrin							
1	5.457	5.457	0.000	751162048	50.0	51.0	
2	5.383	5.383	0.000	83229214	50.0	50.3	
						RPD = 1.26	
18 Isodrin							
1	5.783	5.783	0.000	601057788	50.0	51.1	
2	5.749	5.749	0.000	70720524	50.0	50.3	
						RPD = 1.47	
21 Heptachlor epoxide							
1	6.072	6.072	0.000	637075296	50.0	50.9	
2	5.931	5.931	0.000	75919068	50.0	50.5	
						RPD = 0.86	
22 trans-Chlordane							
1	6.204	6.204	0.000	682439750	50.0	50.7	
2	6.130	6.130	0.000	79344564	50.0	50.2	
						RPD = 0.91	
23 cis-Chlordane							
1	6.344	6.344	0.000	652320568	50.0	50.7	
2	6.286	6.286	0.000	75318619	50.0	50.4	
						RPD = 0.57	
24 4,4'-DDE							
1	6.421	6.421	0.000	693292530	50.0	51.4	
2	6.469	6.469	0.000	79191054	50.0	51.0	
						RPD = 0.68	
25 Endosulfan I							
1	6.494	6.494	0.000	607276774	50.0	51.4	
2	6.346	6.346	0.000	71761841	50.0	50.6	
						RPD = 1.49	
27 Dieldrin							
1	6.748	6.748	0.000	676681392	50.0	51.4	
2	6.639	6.639	0.000	79630835	50.0	50.9	
						RPD = 1.01	
30 Endrin							
1	6.997	6.997	0.000	586918822	50.0	51.4	
2	6.963	6.963	0.000	70123187	50.0	50.8	
						RPD = 1.13	
32 4,4'-DDD							
1	7.058	7.058	0.000	538092520	50.0	51.4	
2	7.089	7.089	0.000	64688838	50.0	51.2	
						RPD = 0.39	
34 Endosulfan II							
1	7.234	7.234	0.000	563151672	50.0	52.5	
2	7.190	7.190	0.000	69296907	50.0	51.8	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.352	7.352	0.000	479927441	50.0	51.2	
2	7.419	7.419	0.000	55899373	50.0	51.0	
						RPD = 0.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	426357889	50.0	51.9	
2	7.550	7.550	0.000	55206907	50.0	51.5	
						RPD = 0.80	
37 Methoxychlor							
1	7.857	7.857	0.000	223151920	50.0	52.2	
2	8.150	8.150	0.000	27972236	50.0	51.8	
						RPD = 0.89	
38 Mirex							
1	8.016	8.016	0.000	349932979	50.0	51.1	
2	8.344	8.344	0.000	46808816	50.0	51.7	
						RPD = 1.13	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	496366994	50.0	52.2	
2	7.841	7.841	0.000	63414174	50.0	51.8	
						RPD = 0.87	
40 Endrin ketone							
1	8.429	8.429	0.000	528619675	50.0	52.9	
2	8.396	8.396	0.000	70279476	50.0	52.2	
						RPD = 1.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	327463502	50.0	52.7	
2	9.668	9.668	0.000	46374378	50.0	52.4	
						RPD = 0.46	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

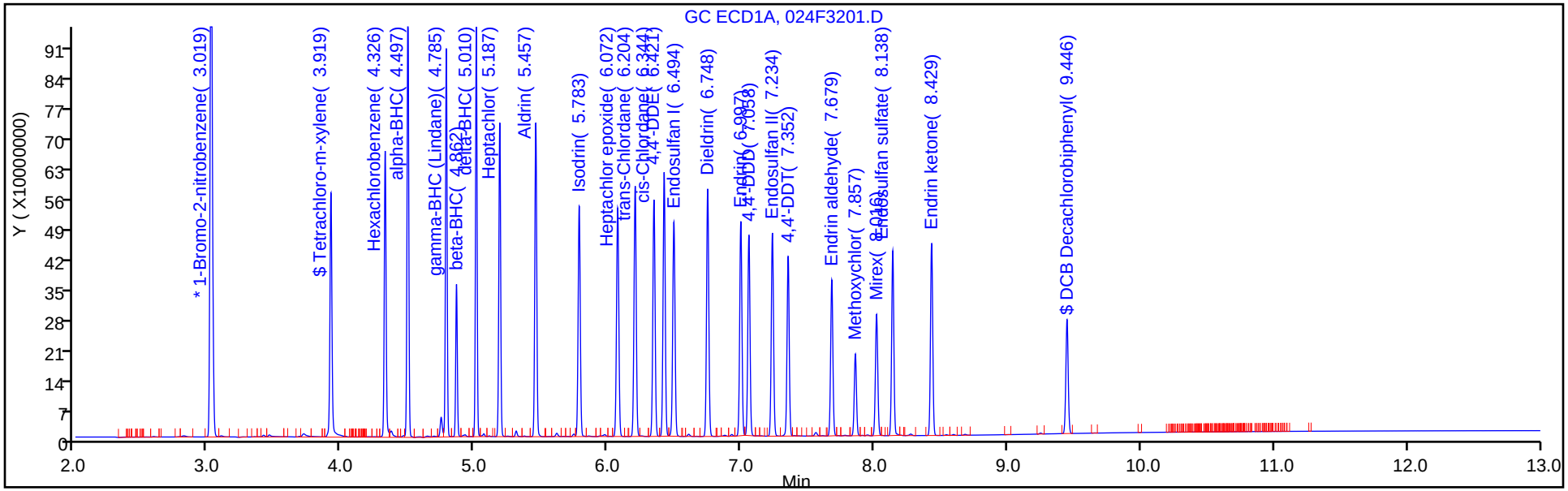
Report Date: 14-Oct-2018 22:11:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

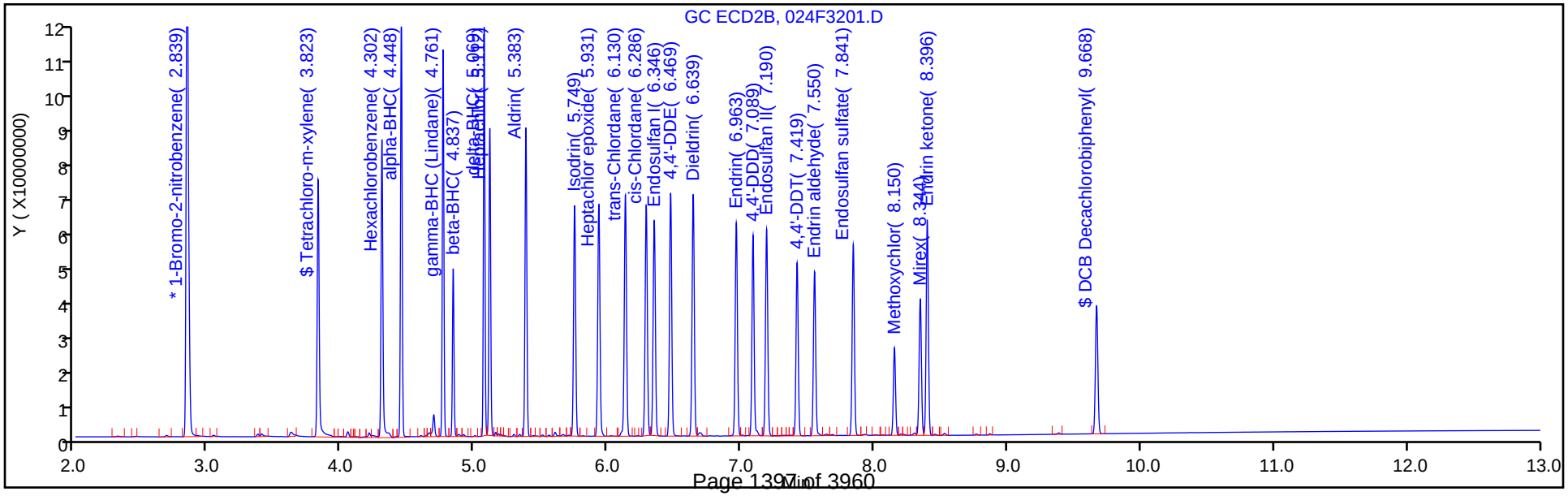
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D

Injection Date:	13-Oct-2018 19:57:23	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 AB			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D
Lims ID: STD3 AB
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 20:14:49 ALS Bottle#: 25 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:56 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						96.0	
2						100.5	
						RPD = 4.51	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1708743357	150.0	150.0	
2	2.839	2.839	0.000	189250238	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	302832702	25.0	24.3	
2	3.823	3.823	0.000	39633690	25.0	25.4	
						RPD = 4.54	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	317851410	25.0	24.3	
2	4.301	4.302	-0.001	42722842	25.0	26.0	
						RPD = 6.71	
8 alpha-BHC							
1	4.497	4.497	0.000	449507972	25.0	24.0	
2	4.447	4.448	-0.001	52885133	25.0	25.1	
						RPD = 4.26	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	385635283	25.0	24.0	
2	4.761	4.761	0.000	45850109	25.0	25.1	
						RPD = 4.13	
10 beta-BHC							
1	4.862	4.862	0.000	150050051	25.0	23.9	
2	4.836	4.837	-0.001	19996794	25.0	25.3	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	392697114	25.0	24.1	
2	5.069	5.069	0.000	46474767	25.0	25.1	
						RPD = 3.96	
15 Heptachlor							
1	5.187	5.187	0.000	349955154	25.0	24.6	
2	5.111	5.112	-0.001	40161455	25.0	25.3	
						RPD = 3.00	
16 Aldrin							
1	5.457	5.457	0.000	370973392	25.0	24.4	
2	5.383	5.383	0.000	42909032	25.0	25.1	
						RPD = 2.83	
18 Isodrin							
1	5.783	5.783	0.000	298789524	25.0	24.5	
2	5.748	5.749	-0.001	36890552	25.0	25.3	
						RPD = 3.01	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	320747071	25.0	24.7	
2	5.930	5.931	-0.001	39660540	25.0	25.4	
						RPD = 2.64	
22 trans-Chlordane							
1	6.203	6.204	-0.001	335790425	25.0	24.2	
2	6.129	6.130	-0.001	41653596	25.0	25.5	
						RPD = 5.41	
23 cis-Chlordane							
1	6.344	6.344	0.000	321433079	25.0	24.2	
2	6.285	6.286	-0.001	39100281	25.0	25.2	
						RPD = 4.13	
24 4,4'-DDE							
1	6.421	6.421	0.000	340651862	25.0	24.5	
2	6.469	6.469	0.000	40427222	25.0	25.2	
						RPD = 3.05	
25 Endosulfan I							
1	6.494	6.494	0.000	304465713	25.0	24.8	
2	6.346	6.346	0.000	37660075	25.0	25.5	
						RPD = 2.80	
27 Dieldrin							
1	6.748	6.748	0.000	335595524	25.0	24.7	
2	6.638	6.639	-0.001	40874216	25.0	25.3	
						RPD = 2.54	
30 Endrin							
1	6.997	6.997	0.000	288123020	25.0	24.5	
2	6.963	6.963	0.000	35861993	25.0	25.2	
						RPD = 2.96	
32 4,4'-DDD							
1	7.058	7.058	0.000	259223669	25.0	24.0	
2	7.088	7.089	-0.001	32918226	25.0	25.2	
						RPD = 4.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	273685389	25.0	24.6	
2	7.190	7.190	0.000	35501572	25.0	25.5	
						RPD = 3.40	
35 4,4'-DDT							
1	7.352	7.352	0.000	228369137	25.0	23.8	
2	7.419	7.419	0.000	27647840	25.0	24.6	
						RPD = 3.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	206854248	25.0	24.3	
2	7.550	7.550	0.000	28263198	25.0	25.3	
						RPD = 4.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	108979408	25.0	24.5	
2	8.150	8.150	0.000	14155118	25.0	25.3	
						RPD = 3.13	
38 Mirex							
1	8.015	8.016	-0.001	172426127	25.0	24.2	
2	8.344	8.344	0.000	24325156	25.0	25.6	
						RPD = 5.67	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	238398480	25.0	24.3	
2	7.841	7.841	0.000	32381376	25.0	25.4	
						RPD = 4.66	
40 Endrin ketone							
1	8.429	8.429	0.000	252349419	25.0	24.4	
2	8.396	8.396	0.000	35593065	25.0	25.4	
						RPD = 4.25	
$ 41 DCB Decachlorobiphenyl							
1	9.445	9.446	-0.001	159322167	25.0	24.5	
2	9.668	9.668	0.000	23709545	25.0	25.6	
						RPD = 4.30	
S 3 Endosulfan, Total							
1						73.7	
2						76.4	
						RPD = 3.61	

Reagents:

8081IcalL3_00028	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

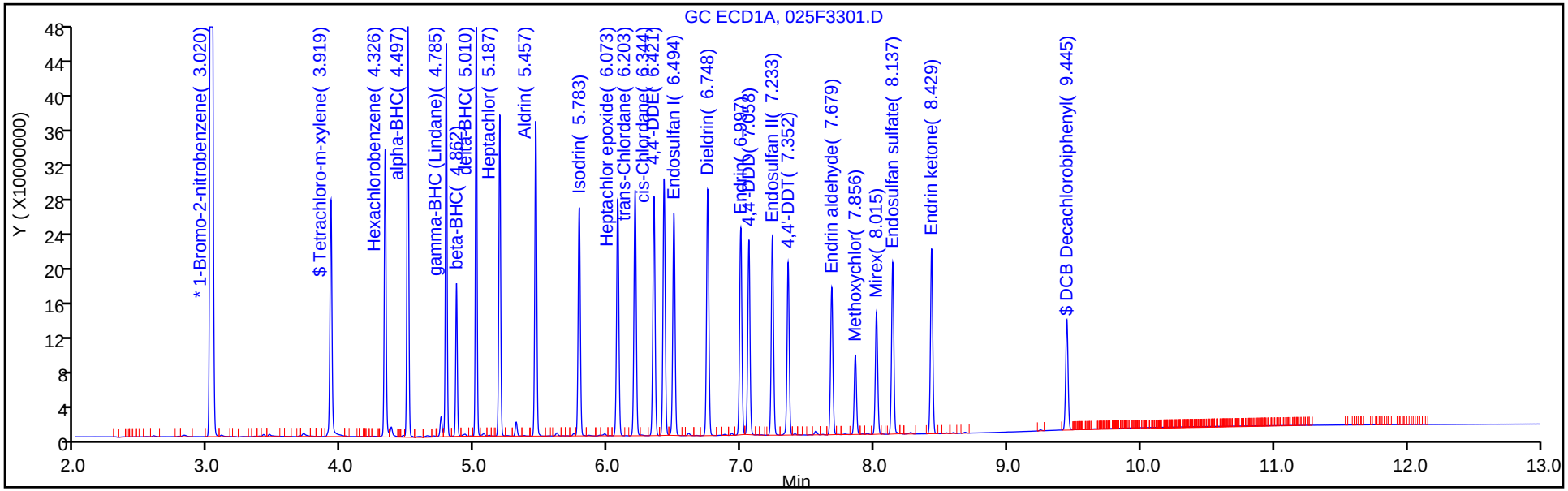
Report Date: 14-Oct-2018 22:11:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

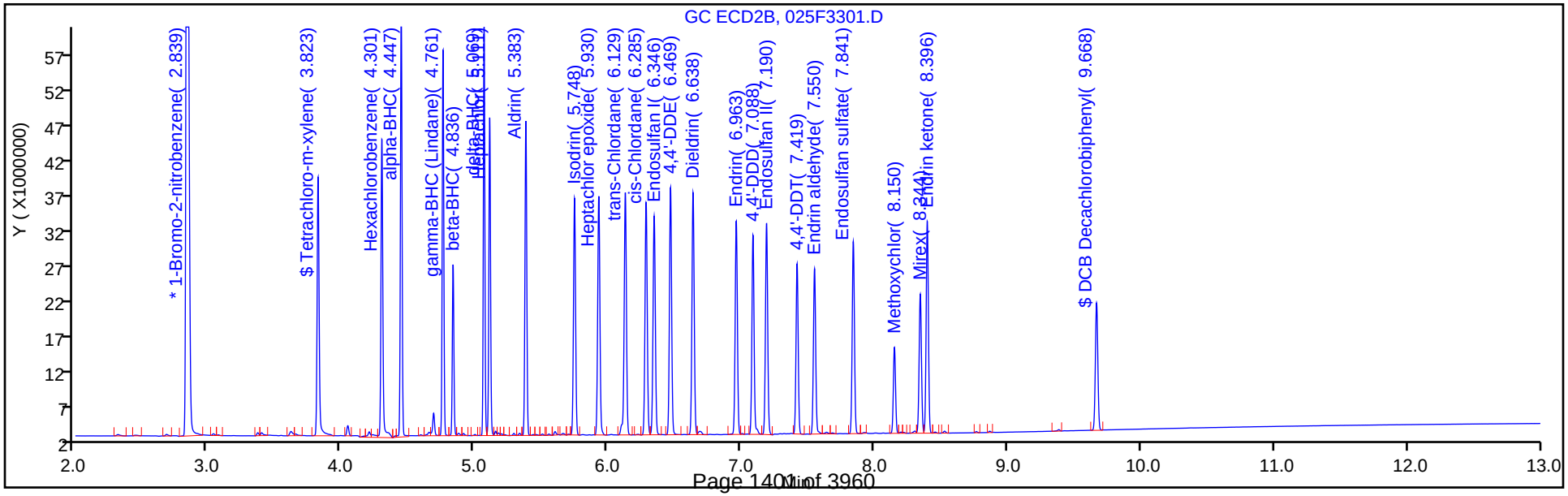
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D

Injection Date:	13-Oct-2018 20:14:49	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 AB			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Lims ID: STD2 AB
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 20:32:15 ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:00 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						38.6	
2						40.9	
						RPD = 5.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1728425275	150.0	150.0	
2	2.839	2.839	0.000	187345459	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	119672981	10.0	9.74	
2	3.822	3.823	-0.001	16477394	10.0	10.3	
						RPD = 5.80	
5 Hexachlorobenzene							
1	4.325	4.326	-0.001	126156548	10.0	9.73	
2	4.301	4.302	-0.001	17019247	10.0	10.1	
						RPD = 4.06	
8 alpha-BHC							
1	4.496	4.497	-0.001	174586944	10.0	9.64	
2	4.446	4.448	-0.002	21525266	10.0	10.1	
						RPD = 4.69	
9 gamma-BHC (Lindane)							
1	4.784	4.785	-0.001	150377013	10.0	9.57	
2	4.760	4.761	-0.001	18724325	10.0	10.2	
						RPD = 6.55	
10 beta-BHC							
1	4.861	4.862	-0.001	63756954	10.0	9.77	
2	4.836	4.837	-0.001	8495816	10.0	10.4	
						RPD = 6.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	151129545	10.0	9.56	
2	5.068	5.069	-0.001	18818212	10.0	10.2	
						RPD = 6.40	
15 Heptachlor							
1	5.186	5.187	-0.001	136220069	10.0	9.74	
2	5.111	5.112	-0.001	16505122	10.0	10.3	
						RPD = 5.70	
16 Aldrin							
1	5.456	5.457	-0.001	144846582	10.0	9.74	
2	5.382	5.383	-0.001	17731926	10.0	10.3	
						RPD = 5.89	
18 Isodrin							
1	5.783	5.783	0.000	117749615	10.0	9.72	
2	5.748	5.749	-0.001	15625487	10.0	10.5	
						RPD = 7.33	
21 Heptachlor epoxide							M
1	6.071	6.072	-0.001	126886425	10.0	9.83	
2	5.929	5.931	-0.002	16641254	10.0	10.4	M
						RPD = 5.98	
22 trans-Chlordane							
1	6.202	6.204	-0.002	129991480	10.0	9.51	
2	6.129	6.130	-0.001	16929113	10.0	10.3	
						RPD = 7.70	
23 cis-Chlordane							
1	6.344	6.344	0.000	126327949	10.0	9.68	
2	6.286	6.286	0.000	16380093	10.0	10.4	
						RPD = 7.07	
24 4,4'-DDE							
1	6.420	6.421	-0.001	131488025	10.0	9.65	
2	6.468	6.469	-0.001	16485248	10.0	10.3	
						RPD = 6.16	
25 Endosulfan I							
1	6.493	6.494	-0.001	120234528	10.0	9.81	
2	6.346	6.346	0.000	15849043	10.0	10.5	
						RPD = 6.40	
27 Dieldrin							
1	6.747	6.748	-0.001	131325618	10.0	9.76	
2	6.638	6.639	-0.001	16696805	10.0	10.3	
						RPD = 5.11	
30 Endrin							
1	6.996	6.997	-0.001	110965652	10.0	9.63	
2	6.962	6.963	-0.001	14572762	10.0	10.2	
						RPD = 6.20	
32 4,4'-DDD							
1	7.057	7.058	-0.001	100049743	10.0	9.44	
2	7.088	7.089	-0.001	13387732	10.0	10.2	
						RPD = 7.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	107239359	10.0	9.69	
2	7.189	7.190	-0.001	14939909	10.0	10.4	
						RPD = 6.87	
35 4,4'-DDT							
1	7.352	7.352	0.000	86360678	10.0	9.37	
2	7.418	7.419	-0.001	11005760	10.0	9.98	
						RPD = 6.32	
36 Endrin aldehyde							
1	7.679	7.679	0.000	81761942	10.0	9.60	
2	7.550	7.550	0.000	11820141	10.0	10.3	
						RPD = 7.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	43260093	10.0	9.68	
2	8.149	8.150	-0.001	5763013	10.0	10.2	
						RPD = 5.03	
38 Mirex							
1	8.015	8.016	-0.001	69898898	10.0	9.68	
2	8.343	8.344	-0.001	10513875	10.0	10.5	
						RPD = 8.20	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	93045319	10.0	9.55	
2	7.840	7.841	-0.001	13487473	10.0	10.3	
						RPD = 7.54	
40 Endrin ketone							
1	8.428	8.429	-0.001	97881347	10.0	9.50	
2	8.396	8.396	0.000	14668648	10.0	10.3	
						RPD = 7.65	
$ 41 DCB Decachlorobiphenyl							
1	9.443	9.446	-0.003	63321098	10.0	9.53	
2	9.668	9.668	0.000	10078459	10.0	10.4	
						RPD = 8.76	
S 3 Endosulfan, Total							
1						29.1	
2						31.1	
						RPD = 6.93	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081IcalL2_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

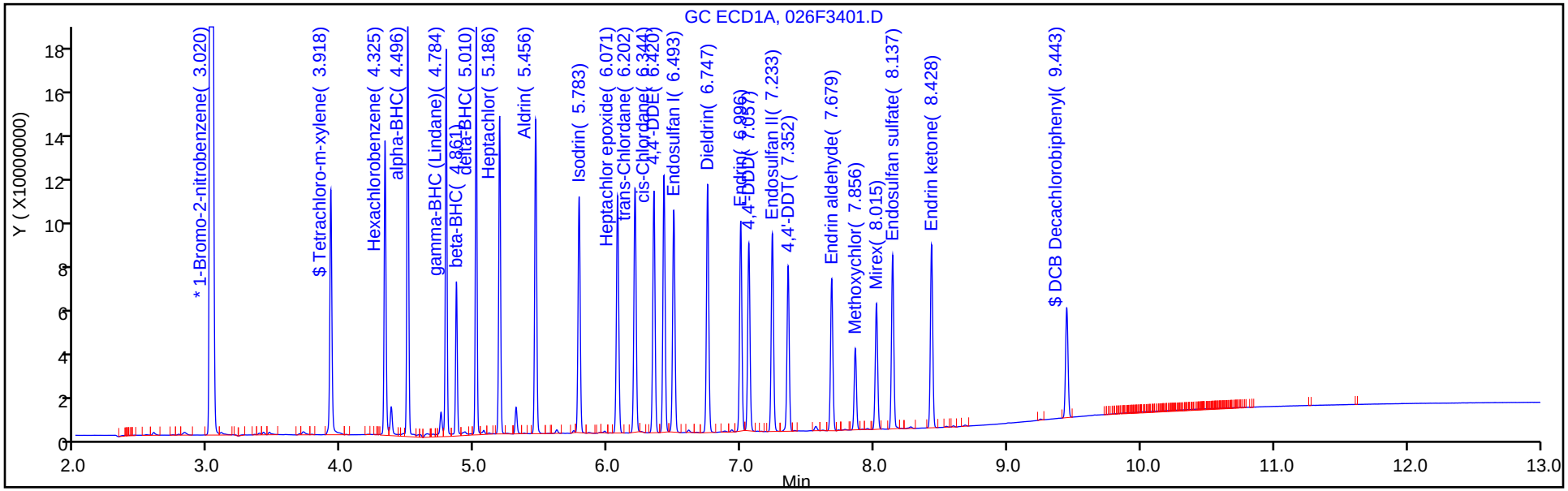
Report Date: 14-Oct-2018 22:12:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

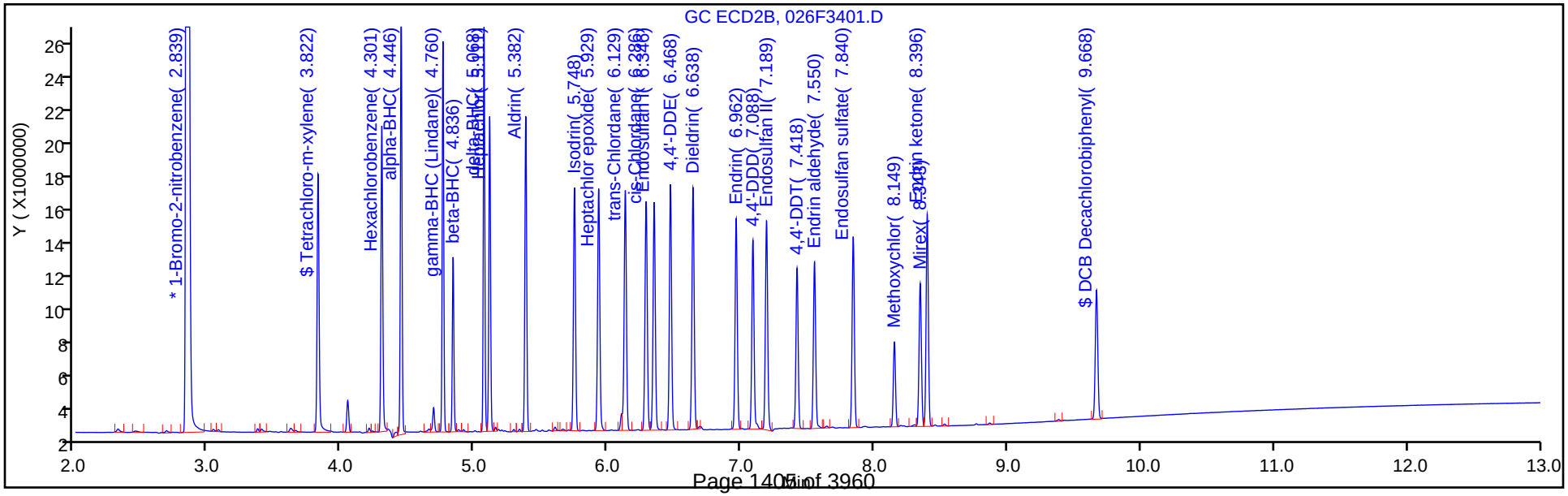
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D

Injection Date:	13-Oct-2018 20:32:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 AB			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Manual Integration/User Assign Peak Report

TestAmerica Denver

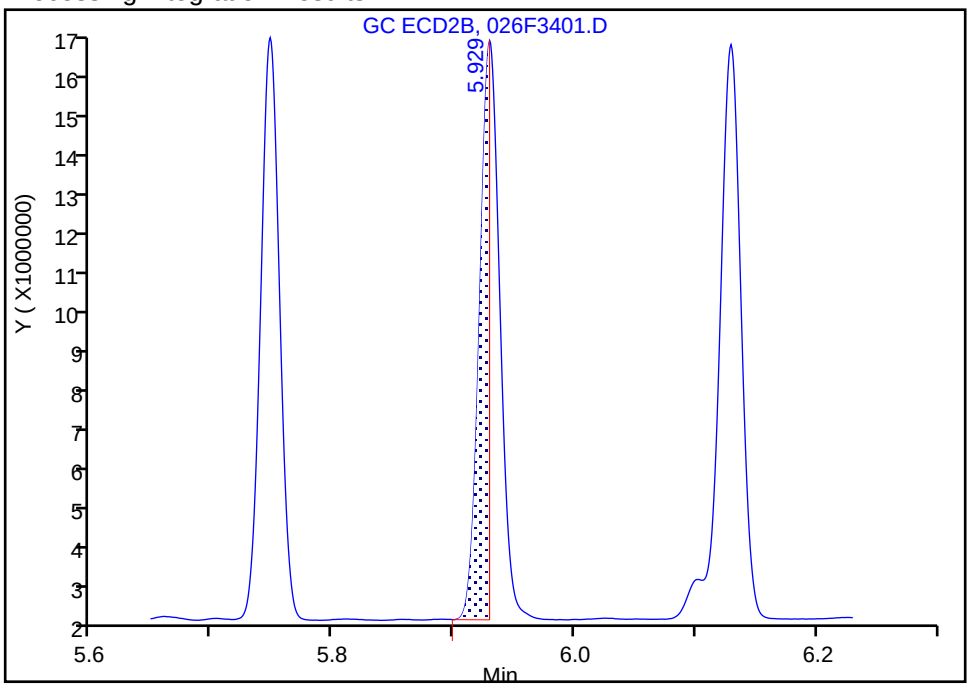
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Injection Date: 13-Oct-2018 20:32:15 Instrument ID: SGC_P2
Lims ID: STD2 AB
Client ID:
Operator ID: TEM ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: P2 8081 IS Limit Group: GCSV - 8081A - IS
Column: CLP2 (0.32 mm) Detector GC ECD2B

21 Heptachlor epoxide, CAS: 1024-57-3

Signal: 2

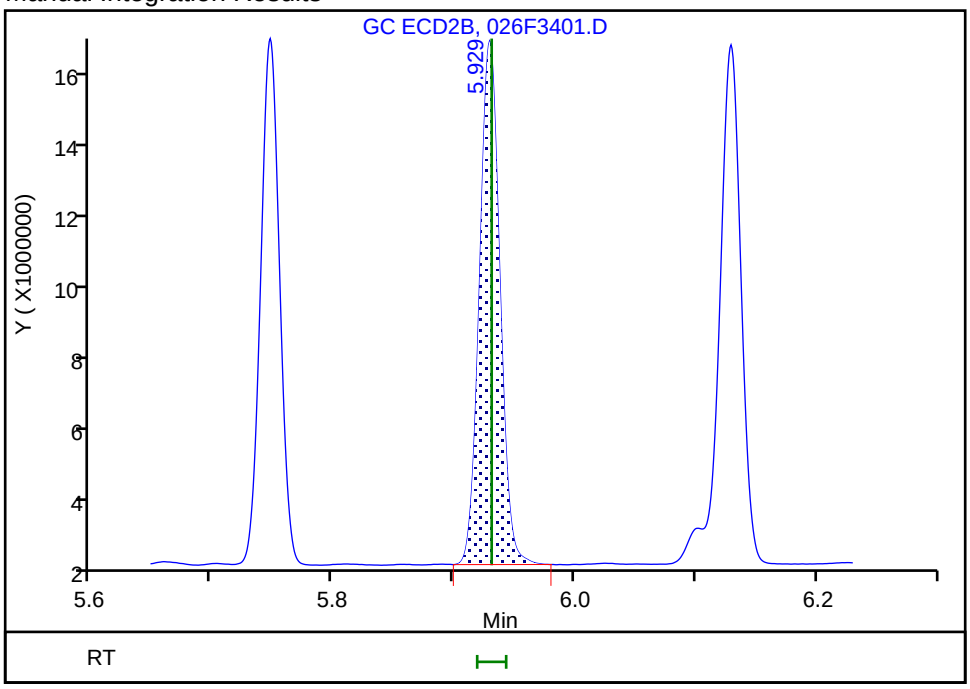
Processing Integration Results

RT: 5.93
Area: 8040349
Amount: 6.830396
Amount Units: ng/mL



Manual Integration Results

RT: 5.93
Area: 16641254
Amount: 10.438106
Amount Units: ng/mL



Reviewer: mooret, 14-Oct-2018 09:17:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D
Lims ID: STD1 AB
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:49:46 ALS Bottle#: 27 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						16.3	
2						15.9	
						RPD = 2.72	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.019	0.002	1645292180	150.0	150.0	
2	2.839	2.839	0.000	186440198	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	44633037	4.00	4.05	
2	3.823	3.823	0.000	6851543	4.00	3.94	
						RPD = 2.74	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	47816993	4.00	4.05	
2	4.302	4.302	0.000	7168590	4.00	3.96	
						RPD = 2.34	
8 alpha-BHC							
1	4.497	4.497	0.000	62852215	4.00	4.07	
2	4.447	4.448	-0.001	8858523	4.00	3.98	
						RPD = 2.23	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	56481667	4.00	4.08	
2	4.761	4.761	0.000	7435354	4.00	3.97	
						RPD = 2.89	
10 beta-BHC							
1	4.862	4.862	0.000	26687989	4.00	4.06	
2	4.837	4.837	0.000	3576692	4.00	3.94	
						RPD = 2.98	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	55669358	4.00	4.08	
2	5.069	5.069	0.000	7424235	4.00	3.97	
						RPD = 2.79	
15 Heptachlor							
1	5.187	5.187	0.000	50118465	4.00	4.04	
2	5.112	5.112	0.000	6621110	4.00	3.95	
						RPD = 2.42	
16 Aldrin							
1	5.457	5.457	0.000	52919960	4.00	4.05	
2	5.383	5.383	0.000	7030048	4.00	3.95	
						RPD = 2.49	
18 Isodrin							
1	5.784	5.783	0.001	44705372	4.00	4.05	
2	5.748	5.749	-0.001	6366004	4.00	3.93	
						RPD = 3.06	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	47553101	4.00	4.03	
2	5.930	5.931	-0.001	6762032	4.00	3.93	
						RPD = 2.56	
22 trans-Chlordane							
1	6.203	6.204	-0.001	49944652	4.00	4.09	
2	6.130	6.130	0.000	6819666	4.00	3.95	
						RPD = 3.42	
23 cis-Chlordane							
1	6.344	6.344	0.000	47100490	4.00	4.06	
2	6.286	6.286	0.000	6646251	4.00	3.94	
						RPD = 3.11	
24 4,4'-DDE							
1	6.421	6.421	0.000	48738148	4.00	4.06	
2	6.469	6.469	0.000	6542674	4.00	3.95	
						RPD = 2.61	
25 Endosulfan I							
1	6.494	6.494	0.000	45543940	4.00	4.03	
2	6.347	6.346	0.001	6507441	4.00	3.92	
						RPD = 2.71	
27 Dieldrin							
1	6.748	6.748	0.000	48904591	4.00	4.04	
2	6.638	6.639	-0.001	6664239	4.00	3.95	
						RPD = 2.17	
30 Endrin							
1	6.997	6.997	0.000	41251930	4.00	4.06	
2	6.963	6.963	0.000	5757882	4.00	3.96	
						RPD = 2.60	
32 4,4'-DDD							
1	7.058	7.058	0.000	38622027	4.00	4.10	
2	7.088	7.089	-0.001	5391187	4.00	3.96	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.234	7.234	0.000	41034933	4.00	4.05	
2	7.191	7.190	0.001	6270548	4.00	3.93	
						RPD = 2.93	
35 4,4'-DDT							
1	7.352	7.352	0.000	31997998	4.00	4.11	
2	7.419	7.419	0.000	4302693	4.00	4.01	
						RPD = 2.63	
36 Endrin aldehyde							
1	7.678	7.679	-0.001	32150414	4.00	4.07	
2	7.551	7.550	0.001	4932964	4.00	3.94	
						RPD = 3.18	
37 Methoxychlor							
1	7.857	7.857	0.000	17004835	4.00	4.05	
2	8.150	8.150	0.000	2361021	4.00	3.96	
						RPD = 2.20	
38 Mirex							
1	8.016	8.016	0.000	28621709	4.00	4.16	
2	8.344	8.344	0.000	4546008	4.00	3.91	
						RPD = 6.31	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	36051087	4.00	4.08	
2	7.841	7.841	0.000	5646467	4.00	3.94	
						RPD = 3.30	
40 Endrin ketone							
1	8.429	8.429	0.000	38530653	4.00	4.08	
2	8.397	8.396	0.001	6086476	4.00	3.95	
						RPD = 3.26	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	26336210	4.00	4.07	
2	9.668	9.668	0.000	4339575	4.00	3.92	
						RPD = 3.76	
S 3 Endosulfan, Total							
1						12.1	
2						11.8	
						RPD = 2.98	

Reagents:

8081IcalL1_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

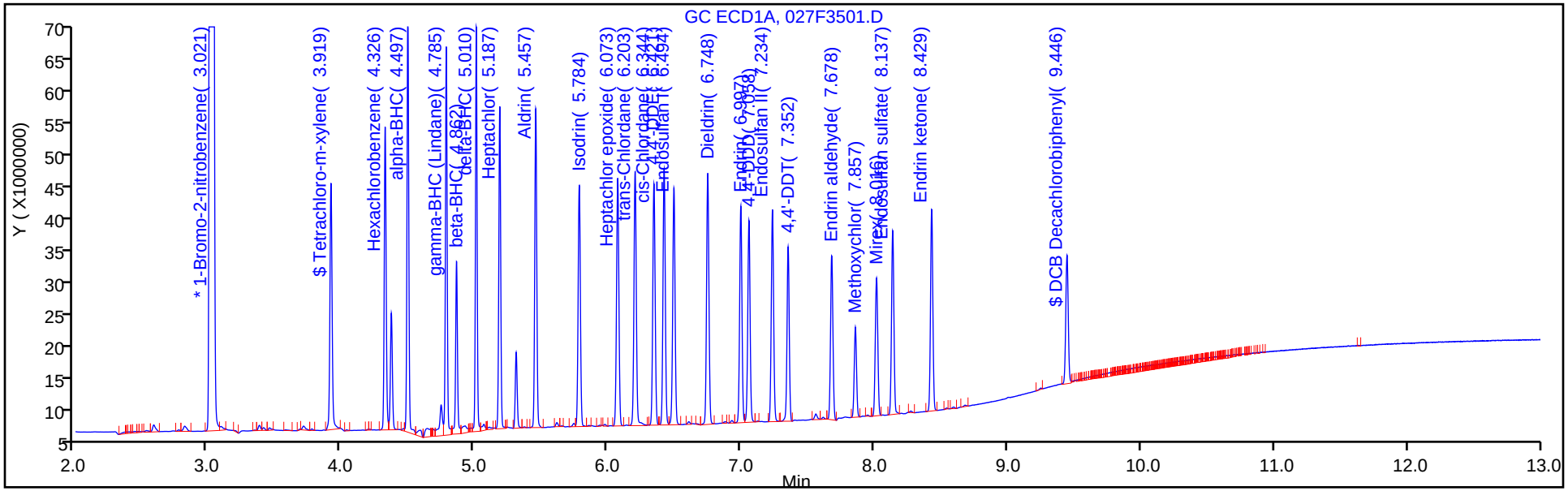
Report Date: 14-Oct-2018 22:12:07 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

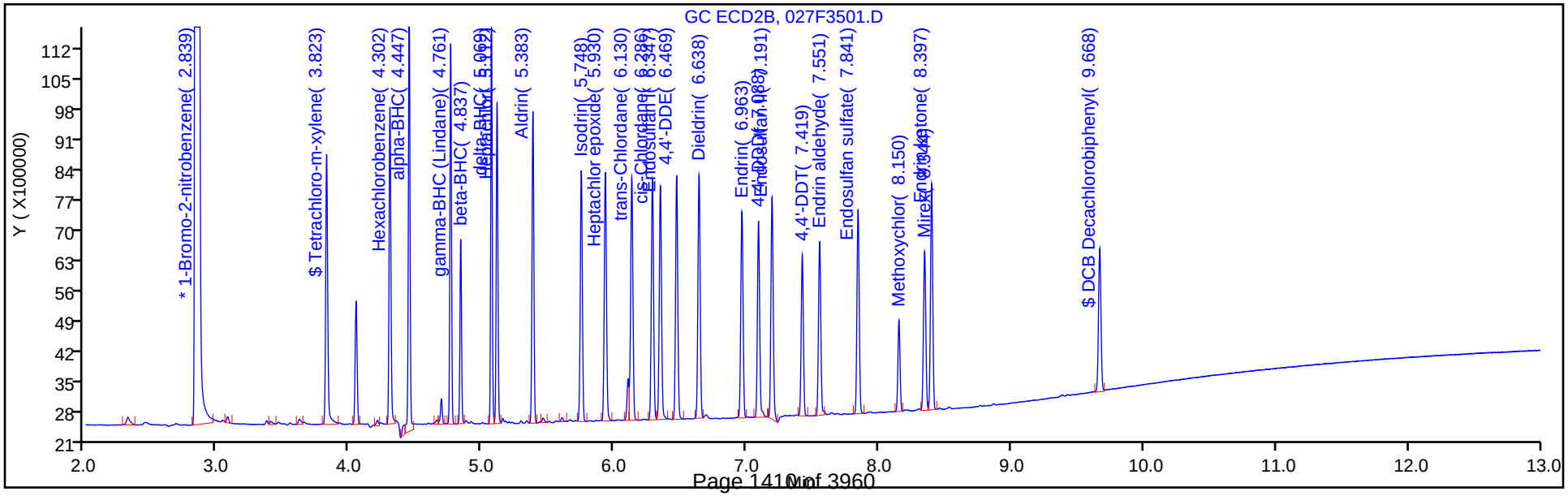
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Injection Date:	13-Oct-2018 20:49:46	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 AB			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: PEM 280-437597/7 Calibration Date: 11/14/2018 16:40

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140007.D Conc. Units: ug/L

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	6.96	665530335	1.78	15	
Endrin aldehyde	7.65	5029782			
Endrin ketone	8.40	7003900			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.32	538881906	1.07	15	
4,4'-DDD	7.03	5222427			
4,4'-DDE	6.39	594802			

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140007.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 14-Nov-2018 16:40:56 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Misc. Info.: 280-0076199-007
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:29 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.008	-0.003	2108269256	150.0	150.0	
2	2.810	2.815	-0.005	197647012	150.0	150.0	
24 4,4'-DDE							
1	6.391	6.396	-0.005	594802		0.5293	
2	6.417	6.426	-0.009	114428		-0.1600	
						RPD = 373.26	
30 Endrin							
1	6.963	6.969	-0.006	665530335	40.0	45.4	
2	6.906	6.915	-0.009	66155435	40.0	44.7	
						RPD = 1.59	
32 4,4'-DDD							
1	7.025	7.031	-0.006	5222427		0.8393	
2	7.033	7.042	-0.009	2094106		1.28	
						RPD = 41.34	
35 4,4'-DDT							
1	7.320	7.325	-0.005	538881906	40.0	44.8	
2	7.365	7.372	-0.007	54851819	40.0	46.6	
						RPD = 4.01	
36 Endrin aldehyde							
1	7.645	7.650	-0.005	5029782		0.6542	
2	7.493	7.500	-0.007	685322		-0.0626	
						RPD = 242.33	
40 Endrin ketone							
1	8.395	8.400	-0.005	7003900		0.7933	
2	8.337	8.345	-0.008	1030767		0.1531	
						RPD = 135.31	

Reagents:

8081_EvalBPEM_00013	Amount Added:	1.00	Units: ml	
8081_IS_00008	Amount Added:	75.00	Units: uL	Run Reagent

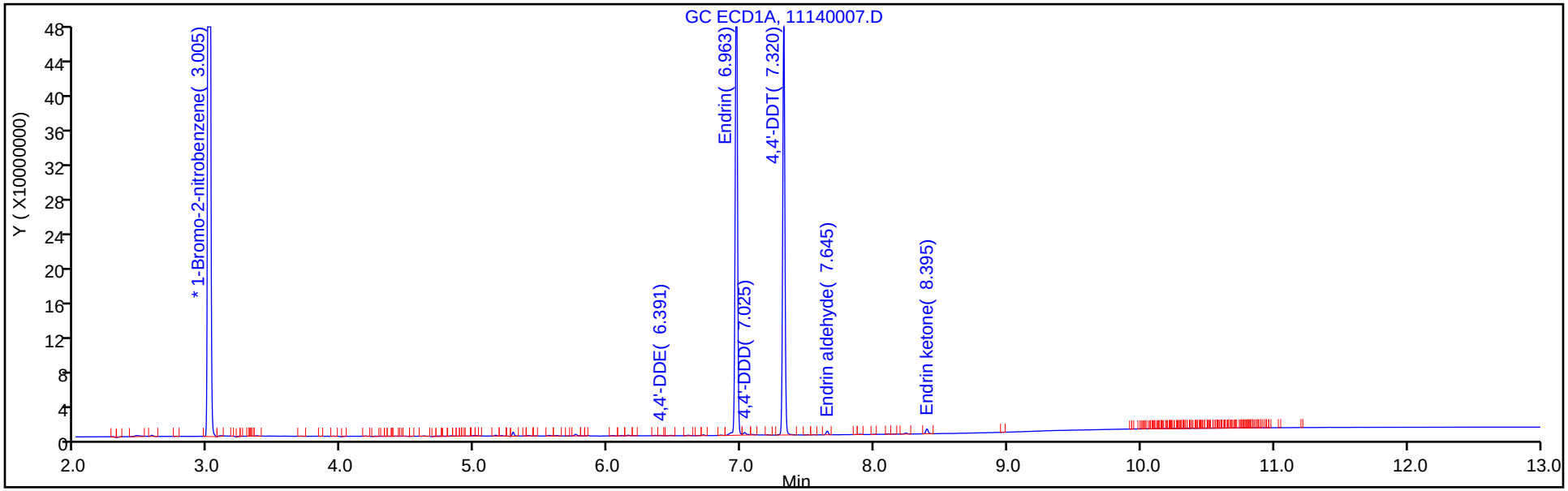
Report Date: 29-Nov-2018 14:12:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

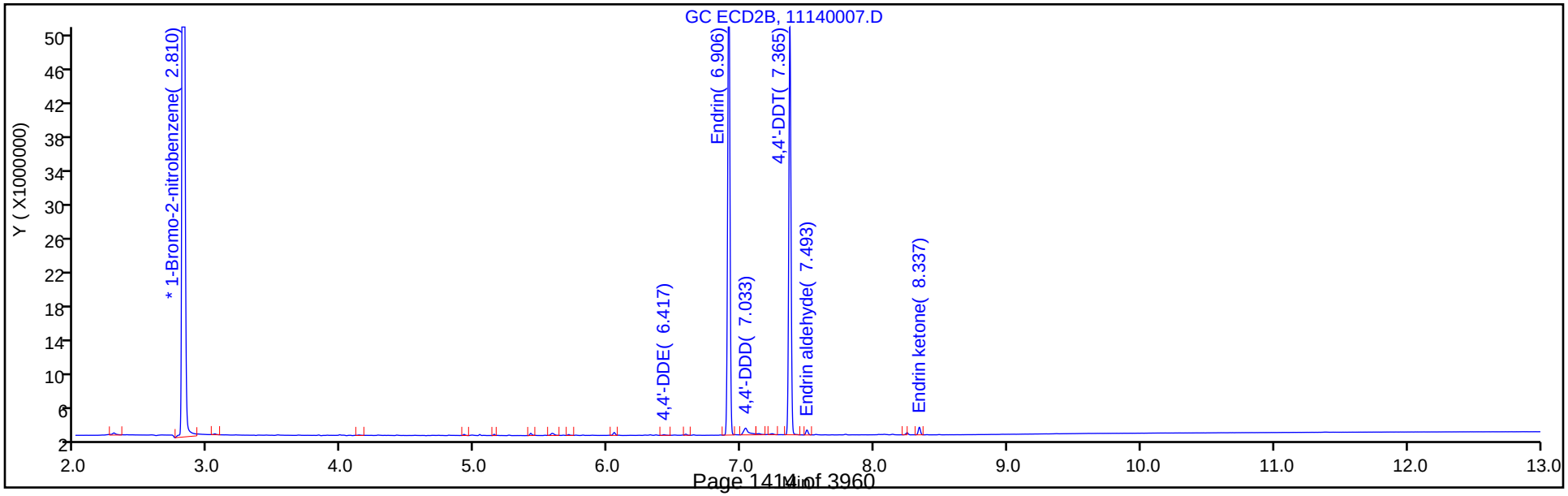
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140007.D

Injection Date:	14-Nov-2018 16:40:56	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	PEM			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: PEM 280-437597/7 Calibration Date: 11/14/2018 16:40

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140007.D Conc. Units: ug/L

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	6.91	66155435	2.53	15	
Endrin aldehyde	7.49	685322			
Endrin ketone	8.34	1030767			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.37	54851819	3.87	15	
4,4'-DDD	7.03	2094106			
4,4'-DDE	6.42	114428			

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140007.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 14-Nov-2018 16:40:56 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Misc. Info.: 280-0076199-007
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:29 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.008	-0.003	2108269256	150.0	150.0	
2	2.810	2.815	-0.005	197647012	150.0	150.0	
24 4,4'-DDE							
1	6.391	6.396	-0.005	594802		0.5293	
2	6.417	6.426	-0.009	114428		-0.1600	
						RPD = 373.26	
30 Endrin							
1	6.963	6.969	-0.006	665530335	40.0	45.4	
2	6.906	6.915	-0.009	66155435	40.0	44.7	
						RPD = 1.59	
32 4,4'-DDD							
1	7.025	7.031	-0.006	5222427		0.8393	
2	7.033	7.042	-0.009	2094106		1.28	
						RPD = 41.34	
35 4,4'-DDT							
1	7.320	7.325	-0.005	538881906	40.0	44.8	
2	7.365	7.372	-0.007	54851819	40.0	46.6	
						RPD = 4.01	
36 Endrin aldehyde							
1	7.645	7.650	-0.005	5029782		0.6542	
2	7.493	7.500	-0.007	685322		-0.0626	
						RPD = 242.33	
40 Endrin ketone							
1	8.395	8.400	-0.005	7003900		0.7933	
2	8.337	8.345	-0.008	1030767		0.1531	
						RPD = 135.31	

Reagents:

8081_EvalBPEM_00013	Amount Added: 1.00	Units: ml	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

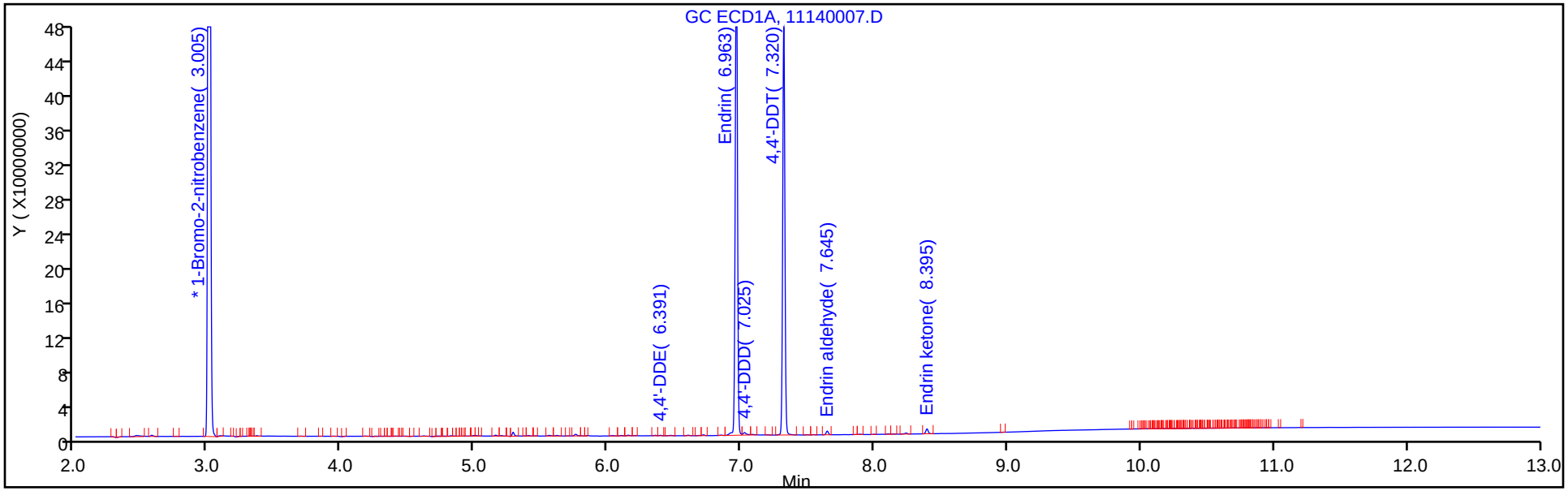
Report Date: 29-Nov-2018 14:12:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

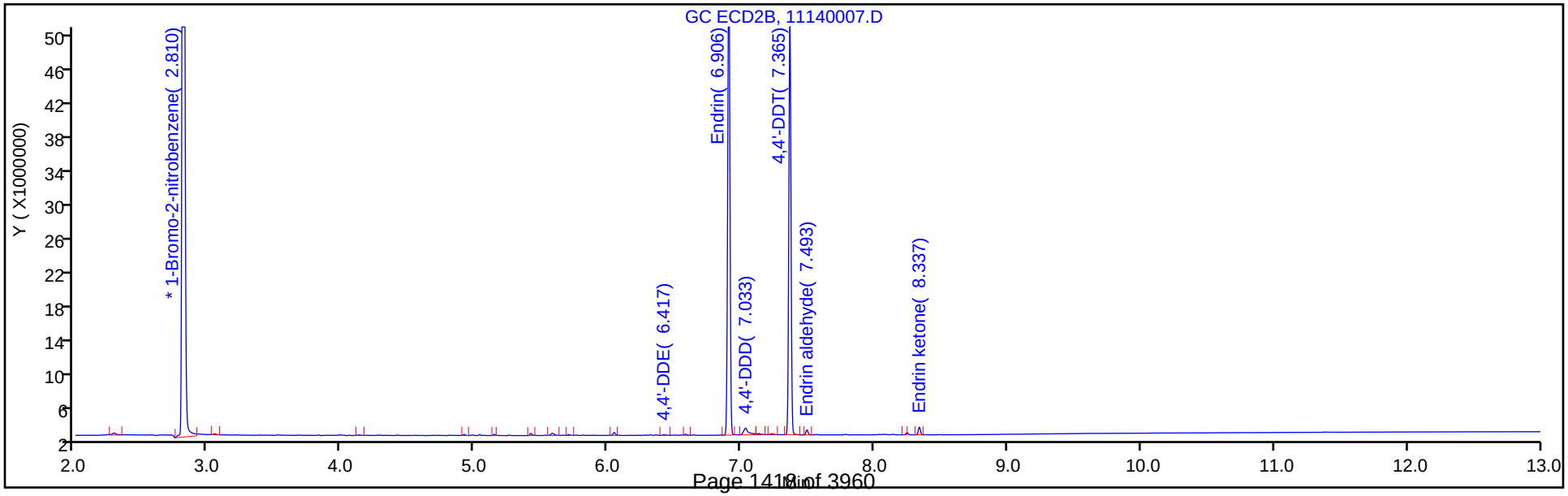
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140007.D

Injection Date:	14-Nov-2018 16:40:56	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	PEM			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0030		464	1000	-53.6*	20.0
Toxaphene Peak 2	Lin2		0.0110		660	1000	-34.0*	20.0
Toxaphene Peak 3	Lin2		0.0151		815	1000	-18.5	20.0
Toxaphene Peak 4	Lin2		0.0082		1080	1000	8.3	20.0
Toxaphene Peak 5	Lin2		0.0114		1480	1000	48.4*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.23	6.23	6.26
Toxaphene Peak 2	6.85	6.84	6.87
Toxaphene Peak 3	7.52	7.52	7.54
Toxaphene Peak 4	7.89	7.87	7.90
Toxaphene Peak 5	8.20	8.19	8.22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D
Lims ID: ICV TOX
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:24:35 ALS Bottle#: 29 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.018	3.019	-0.001	1963980017	150.0	150.0	
2	2.838	2.839	-0.002	209759075	150.0	150.0	
28 Toxaphene							Ma
1	6.230	6.246	-0.016	39169071	1000.0	464.3	M
1	6.848	6.854	-0.006	144072882	1000.0	660.3	M
1	7.516	7.528	-0.012	197948260	1000.0	815.4	M
1	7.886	7.886	0.000	107438429	1000.0	1083.4	M
1	8.203	8.204	-0.001	149524851	1000.0	1483.7	M
		Average of Peak Amounts =				901.4	
2	5.774	5.778	-0.004	6074445	1000.0	913.0	M
2	7.136	7.145	-0.009	18826032	1000.0	641.9	M
2	7.278	7.286	-0.008	62348552	1000.0	779.1	M
2	7.783	7.800	-0.017	34844907	1000.0	1522.8	M
2	8.088	8.096	-0.008	50429097	1000.0	1128.6	M
		Average of Peak Amounts =				997.1	
					RPD =	10.08	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8081ToxICVL3_00013 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

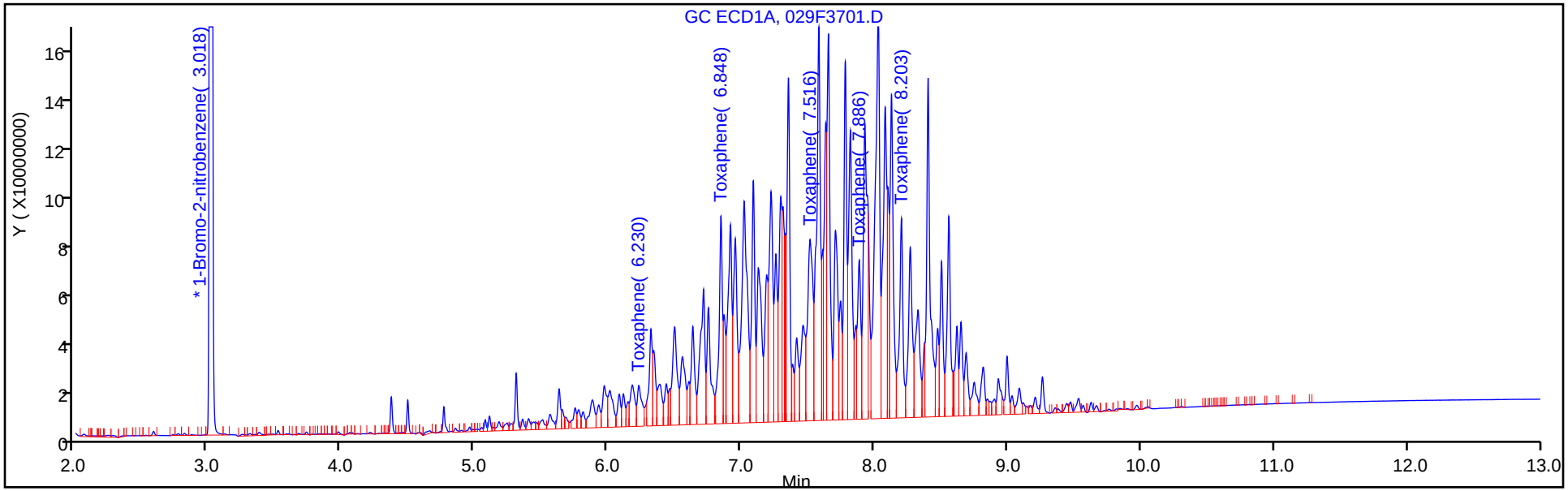
Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

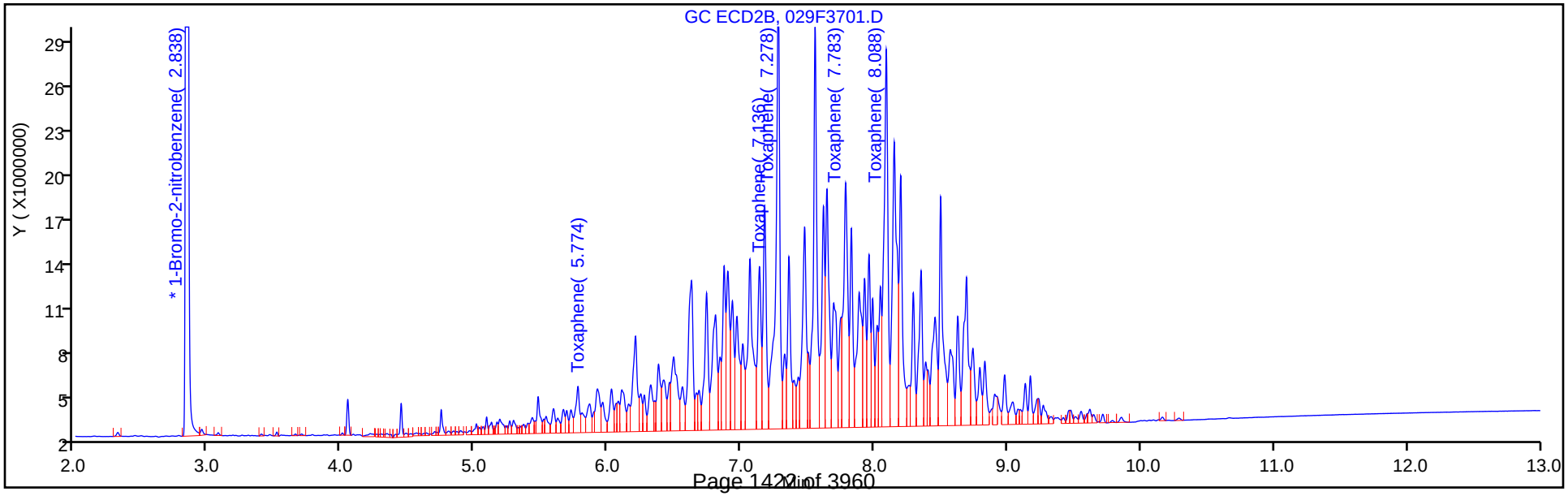
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date:	13-Oct-2018 21:24:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date: 13-Oct-2018 21:24:35 Instrument ID: SGC_P2

Lims ID: ICV TOX

Client ID:

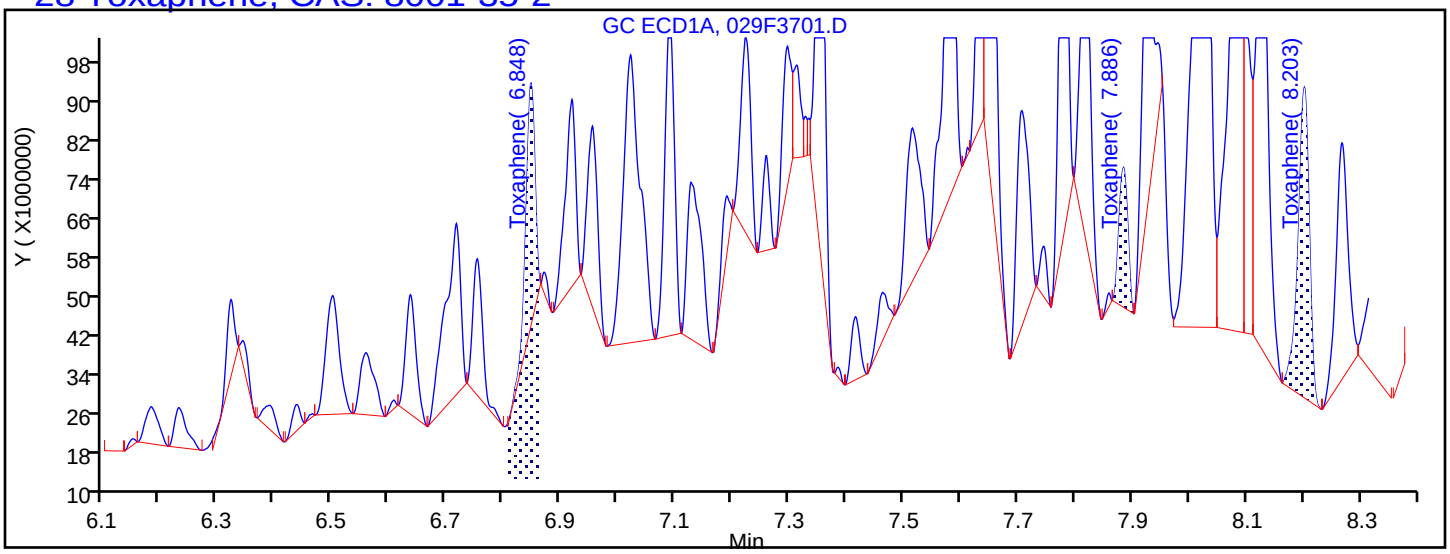
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

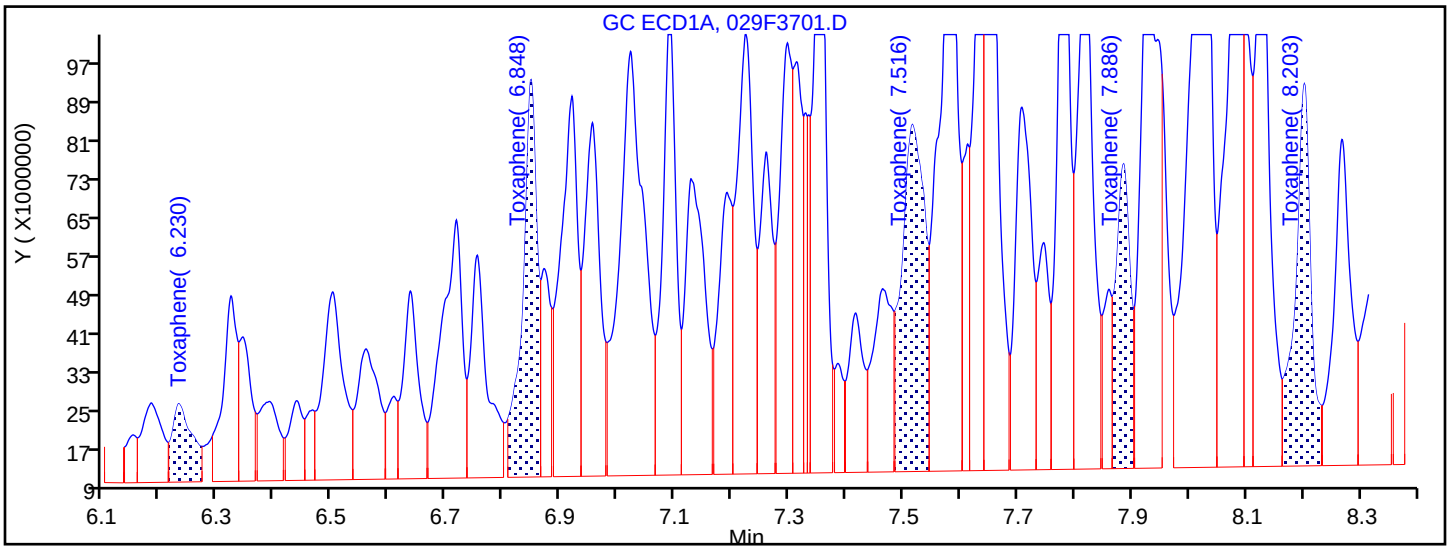
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.246	Response = 0
6.848	Response = 54735220
7.528	Response = 0
7.886	Response = 30855926
8.203	Response = 87461515



Manual Integration Results

6.230	Response = 39169071	M
6.848	Response = 144072882	M
7.516	Response = 197948260	M
7.886	Response = 107438429	M
8.203	Response = 149524851	M

Reviewer: mooret, 14-Oct-2018 21:40:44

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0043		913	1000	-8.7	20.0
Toxaphene Peak 2	Lin2		0.0135		642	1000	-35.8*	20.0
Toxaphene Peak 3	Lin2		0.0446		779	1000	-22.1*	20.0
Toxaphene Peak 4	Lin2		0.0249		1520	1000	52.3*	20.0
Toxaphene Peak 5	Lin2		0.0361		1130	1000	12.9	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.77	5.77	5.79
Toxaphene Peak 2	7.14	7.13	7.16
Toxaphene Peak 3	7.28	7.27	7.30
Toxaphene Peak 4	7.78	7.79	7.81
Toxaphene Peak 5	8.09	8.08	8.11

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D
Lims ID: ICV TOX
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:24:35 ALS Bottle#: 29 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.018	3.019	-0.001	1963980017	150.0	150.0	
2	2.838	2.839	-0.002	209759075	150.0	150.0	
28 Toxaphene							Ma
1	6.230	6.246	-0.016	39169071	1000.0	464.3	M
1	6.848	6.854	-0.006	144072882	1000.0	660.3	M
1	7.516	7.528	-0.012	197948260	1000.0	815.4	M
1	7.886	7.886	0.000	107438429	1000.0	1083.4	M
1	8.203	8.204	-0.001	149524851	1000.0	1483.7	M
		Average of Peak Amounts =				901.4	
2	5.774	5.778	-0.004	6074445	1000.0	913.0	M
2	7.136	7.145	-0.009	18826032	1000.0	641.9	M
2	7.278	7.286	-0.008	62348552	1000.0	779.1	M
2	7.783	7.800	-0.017	34844907	1000.0	1522.8	M
2	8.088	8.096	-0.008	50429097	1000.0	1128.6	M
		Average of Peak Amounts =				997.1	
					RPD =	10.08	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8081ToxICVL3_00013 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

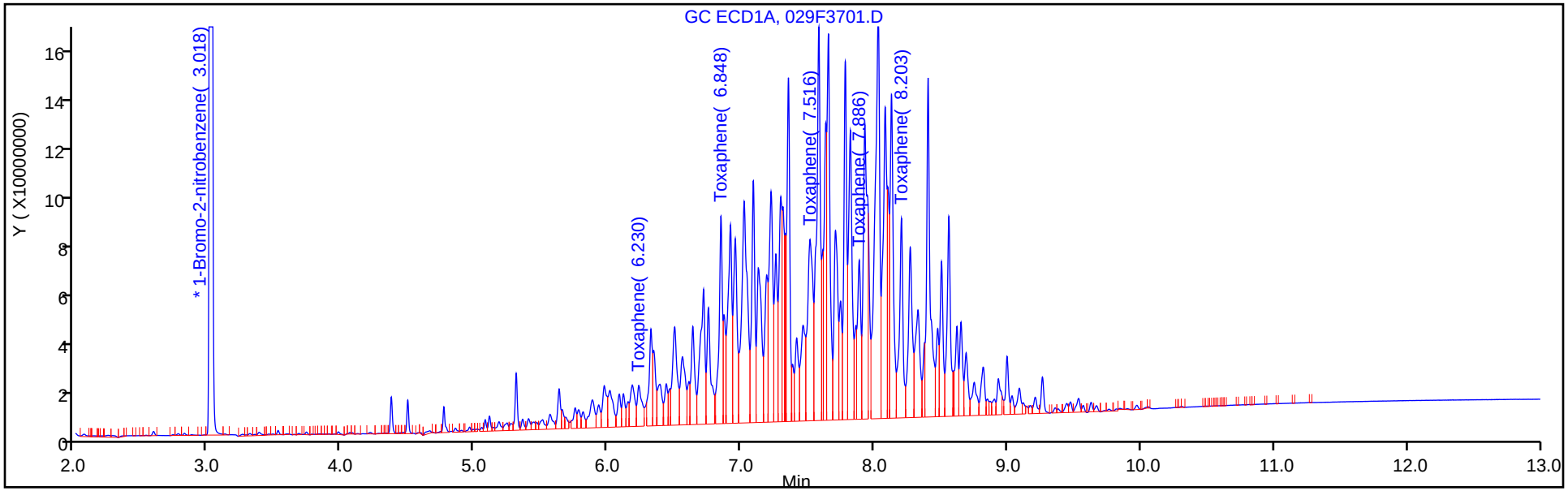
Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

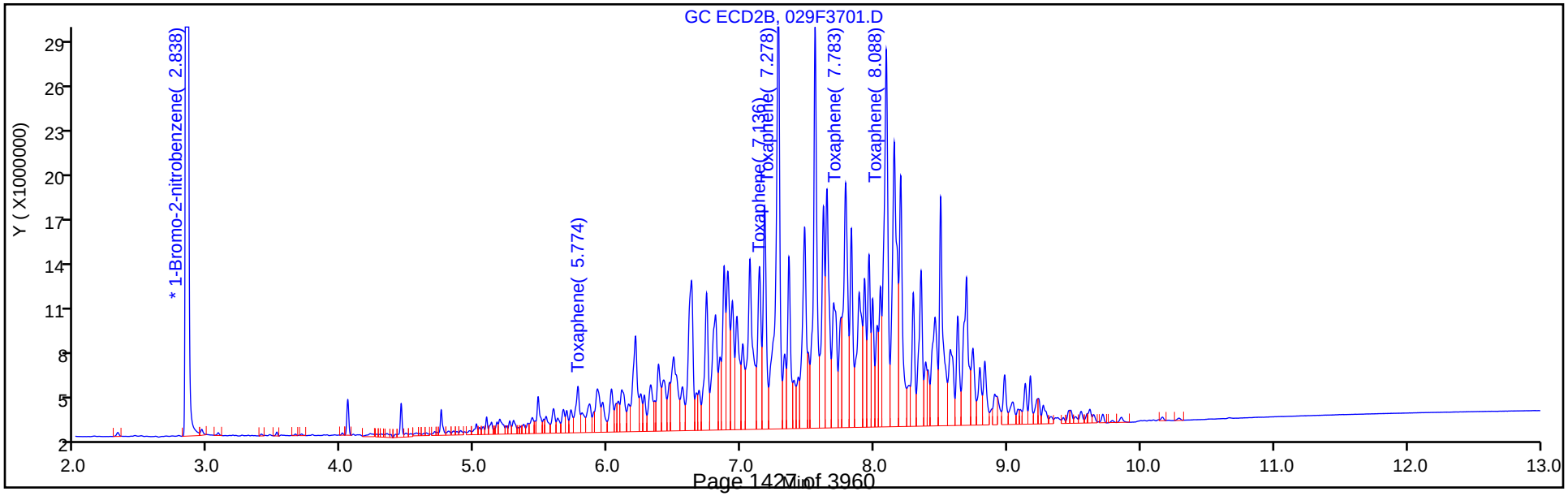
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date:	13-Oct-2018 21:24:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:12:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date: 13-Oct-2018 21:24:35 Instrument ID: SGC_P2

Lims ID: ICV TOX

Client ID:

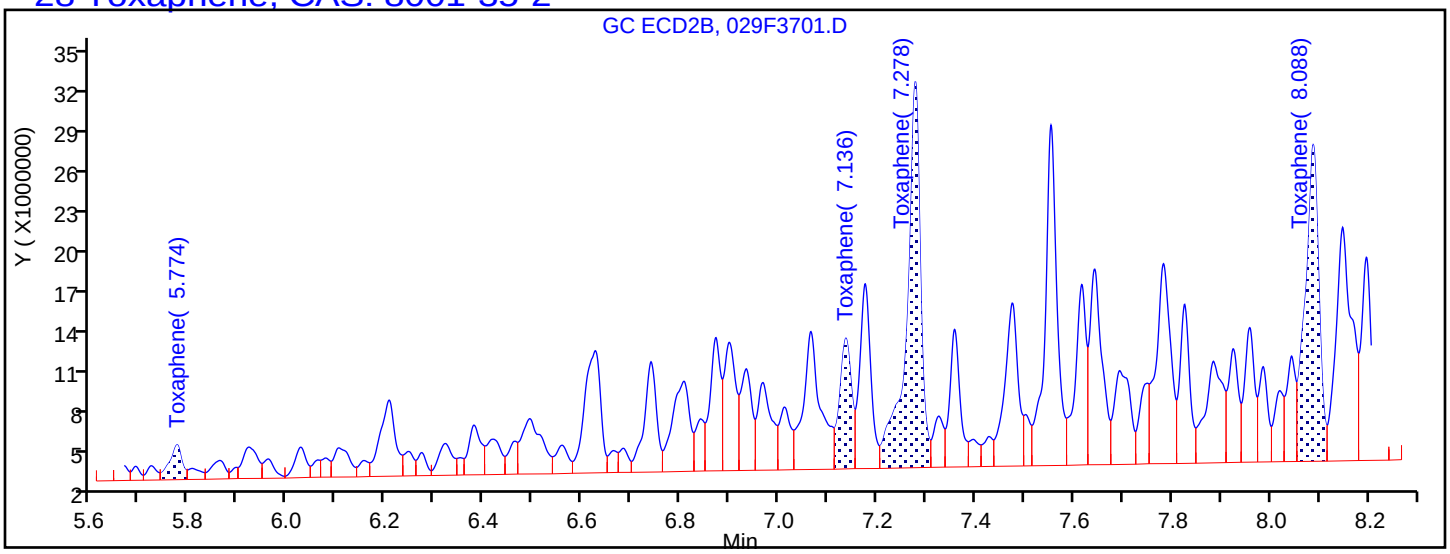
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

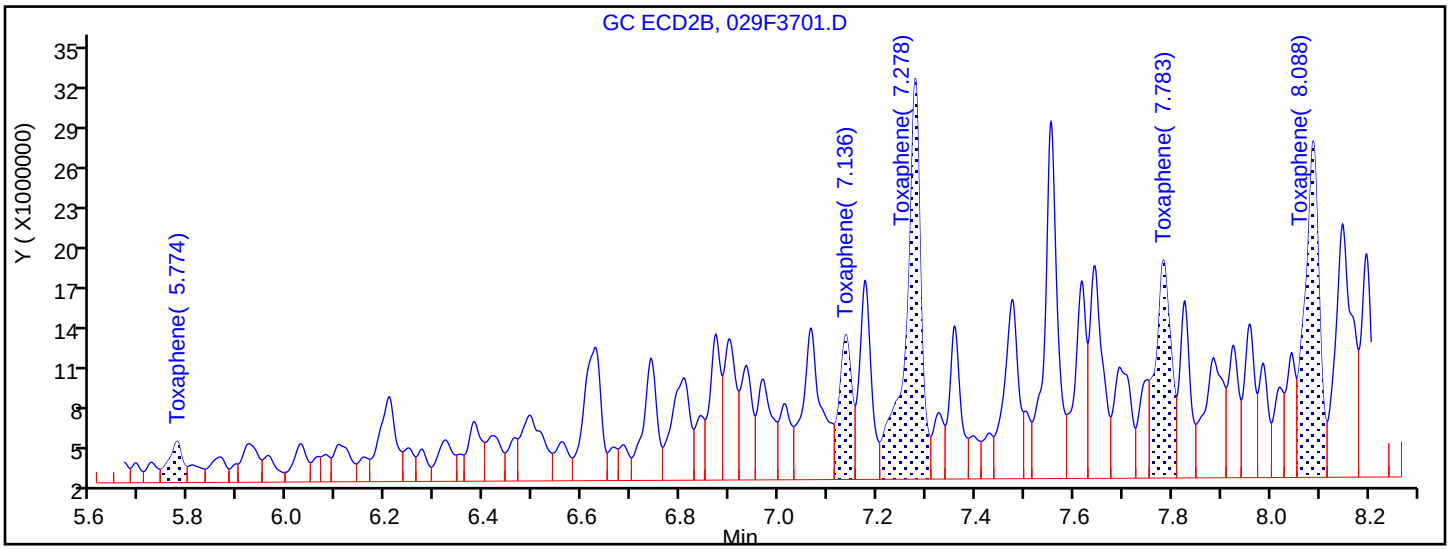
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.774	Response = 4545269
7.136	Response = 16204546
7.278	Response = 55594865
7.800	Response = 0
8.088	Response = 45157495



Manual Integration Results

5.774	Response = 6074445	M
7.136	Response = 18826032	M
7.278	Response = 62348552	M
7.783	Response = 34844907	M
8.088	Response = 50429097	M

Reviewer: mooret, 14-Oct-2018 21:40:53

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.128		24.6	25.0	-1.6	20.0
alpha-BHC	Lin2		1.602		24.4	25.0	-2.6	20.0
gamma-BHC (Lindane)	Lin2		1.376		24.4	25.0	-2.4	20.0
beta-BHC	Lin2		0.5291		24.0	25.0	-4.1	20.0
delta-BHC	Lin2		1.370		24.0	25.0	-4.1	20.0
Heptachlor	Lin2		1.251		25.0	25.0	0.0	20.0
Aldrin	Lin2		1.323		24.8	25.0	-0.8	20.0
Heptachlor epoxide	Lin2		1.117		24.5	25.0	-1.8	20.0
gamma-Chlordane	Lin2		1.168		24.0	25.0	-4.2	20.0
alpha-Chlordane	Lin2		1.114		23.9	25.0	-4.4	20.0
4,4'-DDE	Lin2		1.153		23.6	25.0	-5.6	20.0
Endosulfan I	Lin2		1.049		24.3	25.0	-2.6	20.0
Dieldrin	Lin2		1.192		25.0	25.0	-0.2	20.0
Endrin	Lin2		0.9895		23.9	25.0	-4.2	20.0
4,4'-DDD	Lin2		0.8973		23.7	25.0	-5.3	20.0
Endosulfan II	Lin2		0.9210		23.6	25.0	-5.6	20.0
4,4'-DDT	Lin2		0.7862		23.3	25.0	-6.6	20.0
Endrin aldehyde	Lin2		0.7035		23.5	25.0	-5.9	20.0
Methoxychlor	Lin2		0.3555		22.8	25.0	-8.8	20.0
Endosulfan sulfate	Lin2		0.8083		23.4	25.0	-6.3	20.0
Endrin ketone	Lin2		0.8377		23.1	25.0	-7.7	20.0
Tetrachloro-m-xylene	Lin2		1.029		23.5	25.0	-5.9	20.0
DCB Decachlorobiphenyl	Lin2		0.5203		22.8	25.0	-8.9	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.33	4.31	4.34
alpha-BHC	4.50	4.49	4.51
gamma-BHC (Lindane)	4.79	4.77	4.80
beta-BHC	4.86	4.85	4.87
delta-BHC	5.01	5.00	5.02
Heptachlor	5.19	5.18	5.20
Aldrin	5.46	5.45	5.47
Heptachlor epoxide	6.07	6.06	6.08
gamma-Chlordane	6.20	6.19	6.22
alpha-Chlordane	6.35	6.33	6.36
4,4'-DDE	6.42	6.41	6.43
Endosulfan I	6.50	6.48	6.51
Dieldrin	6.75	6.74	6.76
Endrin	7.00	6.99	7.01
4,4'-DDD	7.06	7.05	7.07
Endosulfan II	7.24	7.22	7.25
4,4'-DDT	7.35	7.34	7.36
Endrin aldehyde	7.68	7.67	7.69
Methoxychlor	7.86	7.85	7.87
Endosulfan sulfate	8.14	8.13	8.15
Endrin ketone	8.43	8.42	8.44
Tetrachloro-m-xylene	3.92	3.91	3.93
DCB Decachlorobiphenyl	9.45	9.43	9.46

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D
Lims ID: ICV AB
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:59:26 ALS Bottle#: 31 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1					100.0	96.7	
2					100.0	103.8	
						RPD = 7.09	
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1833818877	150.0	150.0	
2	2.837	2.839	-0.002	196779319	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	314378706	25.0	23.5	
2	3.822	3.823	-0.001	40975324	25.0	25.3	
						RPD = 7.22	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	344758382	25.0	24.6	
2	4.302	4.302	0.000	43428441	25.0	25.4	
						RPD = 3.35	
8 alpha-BHC							
1	4.497	4.497	0.000	489570974	25.0	24.4	
2	4.447	4.448	-0.001	57087109	25.0	26.0	
						RPD = 6.62	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	420459219	25.0	24.4	
2	4.762	4.761	0.001	50008117	25.0	26.3	
						RPD = 7.40	
10 beta-BHC							
1	4.862	4.862	0.000	161705438	25.0	24.0	
2	4.837	4.837	0.000	21403256	25.0	26.0	
						RPD = 8.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.011	5.010	0.001	418721510	25.0	24.0	
2	5.070	5.069	0.001	49051008	25.0	25.5	
						RPD = 6.09	
15 Heptachlor							
1	5.187	5.187	0.000	382406575	25.0	25.0	
2	5.112	5.112	0.000	43506261	25.0	26.4	
						RPD = 5.38	
16 Aldrin							
1	5.458	5.457	0.001	404243124	25.0	24.8	
2	5.384	5.383	0.001	46807354	25.0	26.4	
						RPD = 6.18	
18 Isodrin							
1	5.785	5.783	0.002	312070496	25.0	23.9	
2	5.750	5.749	0.001	38025211	25.0	25.0	
						RPD = 4.80	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	341495179	25.0	24.5	
2	5.932	5.931	0.001	42252977	25.0	26.0	
						RPD = 5.91	
22 trans-Chlordane							
1	6.204	6.204	0.000	357105555	25.0	24.0	
2	6.132	6.130	0.002	43276821	25.0	25.5	
						RPD = 6.23	
23 cis-Chlordane							
1	6.347	6.344	0.003	340403751	25.0	23.9	
2	6.287	6.286	0.001	41538812	25.0	25.8	
						RPD = 7.62	
24 4,4'-DDE							
1	6.422	6.421	0.001	352295573	25.0	23.6	
2	6.471	6.469	0.002	42170047	25.0	25.3	
						RPD = 6.99	
25 Endosulfan I							
1	6.496	6.494	0.002	320496682	25.0	24.3	
2	6.348	6.346	0.002	39747580	25.0	25.9	
						RPD = 6.24	
27 Dieldrin							
1	6.750	6.748	0.002	364318480	25.0	25.0	
2	6.641	6.639	0.002	44056375	25.0	26.2	
						RPD = 5.04	
30 Endrin							
1	6.998	6.997	0.001	302410533	25.0	23.9	
2	6.964	6.963	0.001	37475292	25.0	25.3	
						RPD = 5.64	
32 4,4'-DDD							
1	7.058	7.058	0.000	274241112	25.0	23.7	
2	7.089	7.089	0.000	33960824	25.0	25.0	
						RPD = 5.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.236	7.234	0.002	281476331	25.0	23.6	
2	7.192	7.190	0.002	36361969	25.0	25.1	
						RPD = 6.06	
35 4,4'-DDT							
1	7.353	7.352	0.001	240280393	25.0	23.3	
2	7.421	7.419	0.002	30504127	25.0	26.1	
						RPD = 11.22	
36 Endrin aldehyde							
1	7.681	7.679	0.002	215019147	25.0	23.5	
2	7.552	7.550	0.002	29378162	25.0	25.3	
						RPD = 7.44	
37 Methoxychlor							
1	7.857	7.857	0.000	108660913	25.0	22.8	
2	8.152	8.150	0.002	14100142	25.0	24.2	
						RPD = 6.10	
38 Mirex							
1	8.017	8.016	0.001	154479193	25.0	20.2	
2	8.346	8.344	0.002	24486294	25.0	24.7	
						RPD = 20.27	
39 Endosulfan sulfate							
1	8.139	8.138	0.001	247058157	25.0	23.4	
2	7.843	7.841	0.002	33389158	25.0	25.2	
						RPD = 7.25	
40 Endrin ketone							
1	8.432	8.429	0.003	256015167	25.0	23.1	
2	8.398	8.396	0.002	36099125	25.0	24.8	
						RPD = 7.26	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	159008498	25.0	22.8	
2	9.669	9.668	0.001	23458218	25.0	24.3	
						RPD = 6.44	
S 3 Endosulfan, Total							
1					75.0	71.4	
2					75.0	76.2	
						RPD = 6.51	

Reagents:

8081ABICVL3_00035	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

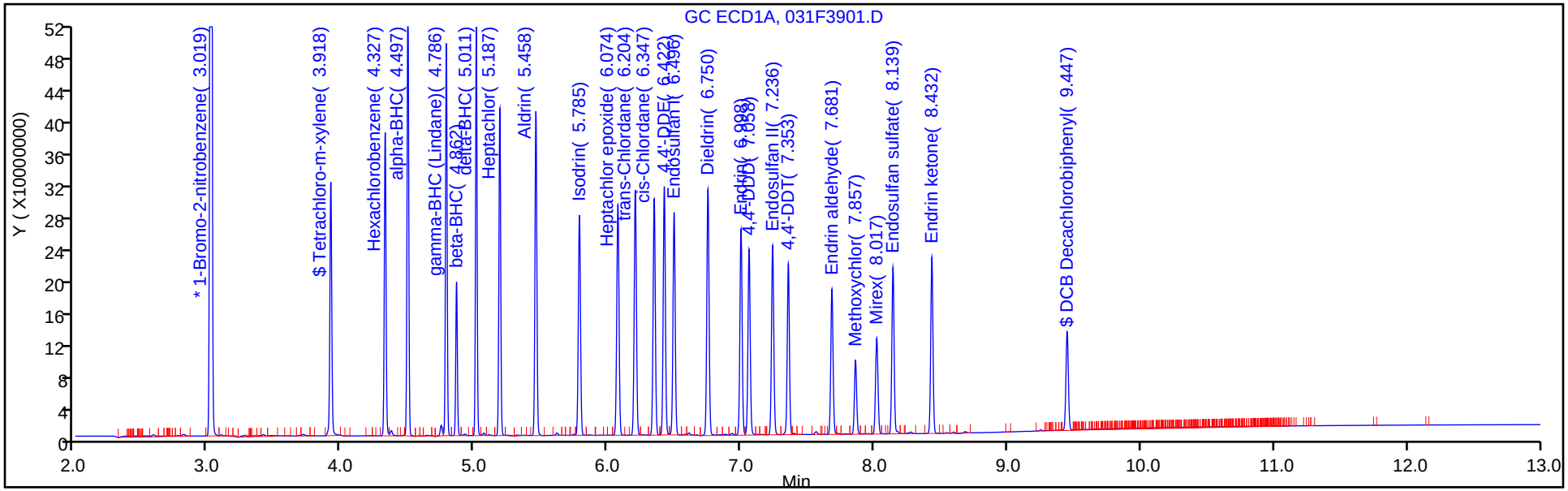
Report Date: 14-Oct-2018 22:12:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

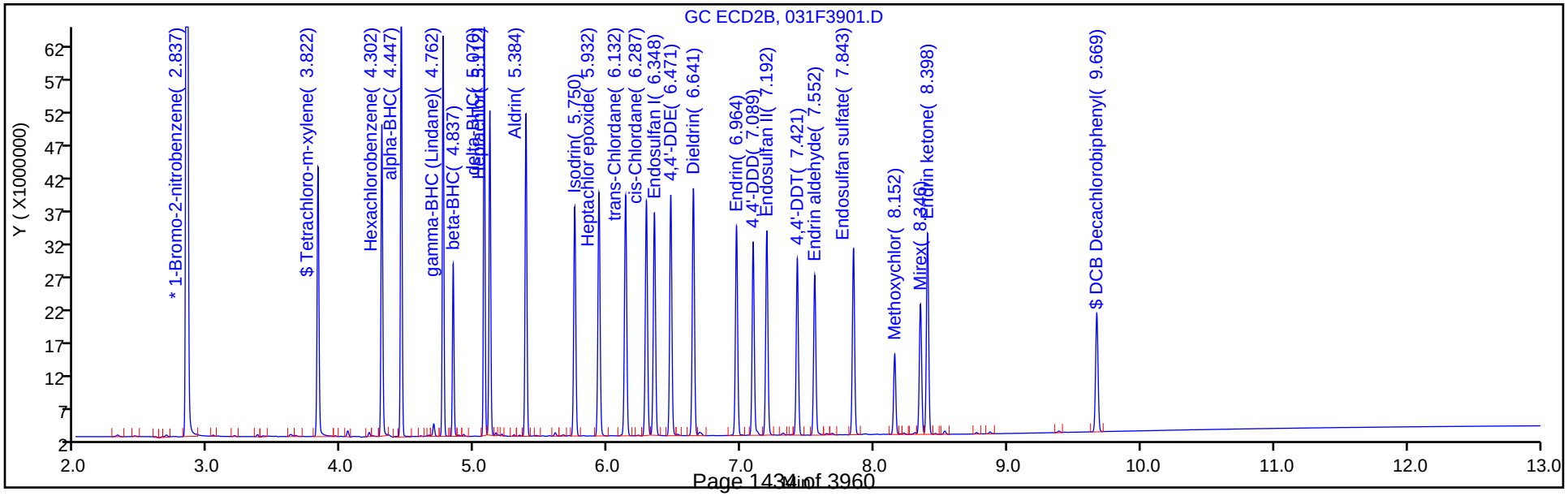
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D

Injection Date:	13-Oct-2018 21:59:26	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.324		25.4	25.0	1.7	20.0
alpha-BHC	Lin2		1.741		26.0	25.0	4.1	20.0
gamma-BHC (Lindane)	Lin2		1.525		26.3	25.0	5.1	20.0
beta-BHC	Lin2		0.6526		26.0	25.0	4.1	20.0
delta-BHC	Lin2		1.496		25.5	25.0	1.9	20.0
Heptachlor	Lin2		1.327		26.4	25.0	5.6	20.0
Aldrin	Lin2		1.427		26.4	25.0	5.5	20.0
Heptachlor epoxide	Lin2		1.288		26.0	25.0	4.2	20.0
gamma-Chlordane	Lin2		1.320		25.5	25.0	2.0	20.0
alpha-Chlordane	Lin2		1.267		25.8	25.0	3.2	20.0
Endosulfan I	Lin2		1.212		25.9	25.0	3.6	20.0
4,4'-DDE	Lin2		1.286		25.3	25.0	1.3	20.0
Dieldrin	Lin2		1.343		26.2	25.0	5.0	20.0
Endrin	Lin2		1.143		25.3	25.0	1.3	20.0
4,4'-DDD	Lin2		1.036		25.0	25.0	0.1	20.0
Endosulfan II	Lin2		1.109		25.1	25.0	0.3	20.0
4,4'-DDT	Lin2		0.9301		26.1	25.0	4.5	20.0
Endrin aldehyde	Lin2		0.8958		25.3	25.0	1.3	20.0
Endosulfan sulfate	Lin2		1.018		25.2	25.0	0.8	20.0
Methoxychlor	Lin2		0.4299		24.2	25.0	-3.1	20.0
Endrin ketone	Lin2		1.101		24.8	25.0	-0.8	20.0
Tetrachloro-m-xylene	Lin2		1.249		25.3	25.0	1.2	20.0
DCB Decachlorobiphenyl	Lin2		0.7153		24.3	25.0	-2.8	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.30	4.29	4.31
alpha-BHC	4.45	4.44	4.46
gamma-BHC (Lindane)	4.76	4.75	4.77
beta-BHC	4.84	4.83	4.85
delta-BHC	5.07	5.06	5.08
Heptachlor	5.11	5.10	5.12
Aldrin	5.38	5.37	5.40
Heptachlor epoxide	5.93	5.92	5.94
gamma-Chlordane	6.13	6.12	6.14
alpha-Chlordane	6.29	6.27	6.30
Endosulfan I	6.35	6.33	6.36
4,4'-DDE	6.47	6.46	6.48
Dieldrin	6.64	6.63	6.65
Endrin	6.96	6.95	6.98
4,4'-DDD	7.09	7.08	7.10
Endosulfan II	7.19	7.18	7.20
4,4'-DDT	7.42	7.41	7.43
Endrin aldehyde	7.55	7.54	7.56
Endosulfan sulfate	7.84	7.83	7.85
Methoxychlor	8.15	8.14	8.16
Endrin ketone	8.40	8.38	8.41
Tetrachloro-m-xylene	3.82	3.81	3.84
DCB Decachlorobiphenyl	9.67	9.66	9.68

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D
Lims ID: ICV AB
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:59:26 ALS Bottle#: 31 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1					100.0	96.7	
2					100.0	103.8	
						RPD = 7.09	
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1833818877	150.0	150.0	
2	2.837	2.839	-0.002	196779319	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	314378706	25.0	23.5	
2	3.822	3.823	-0.001	40975324	25.0	25.3	
						RPD = 7.22	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	344758382	25.0	24.6	
2	4.302	4.302	0.000	43428441	25.0	25.4	
						RPD = 3.35	
8 alpha-BHC							
1	4.497	4.497	0.000	489570974	25.0	24.4	
2	4.447	4.448	-0.001	57087109	25.0	26.0	
						RPD = 6.62	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	420459219	25.0	24.4	
2	4.762	4.761	0.001	50008117	25.0	26.3	
						RPD = 7.40	
10 beta-BHC							
1	4.862	4.862	0.000	161705438	25.0	24.0	
2	4.837	4.837	0.000	21403256	25.0	26.0	
						RPD = 8.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.011	5.010	0.001	418721510	25.0	24.0	
2	5.070	5.069	0.001	49051008	25.0	25.5	
						RPD = 6.09	
15 Heptachlor							
1	5.187	5.187	0.000	382406575	25.0	25.0	
2	5.112	5.112	0.000	43506261	25.0	26.4	
						RPD = 5.38	
16 Aldrin							
1	5.458	5.457	0.001	404243124	25.0	24.8	
2	5.384	5.383	0.001	46807354	25.0	26.4	
						RPD = 6.18	
18 Isodrin							
1	5.785	5.783	0.002	312070496	25.0	23.9	
2	5.750	5.749	0.001	38025211	25.0	25.0	
						RPD = 4.80	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	341495179	25.0	24.5	
2	5.932	5.931	0.001	42252977	25.0	26.0	
						RPD = 5.91	
22 trans-Chlordane							
1	6.204	6.204	0.000	357105555	25.0	24.0	
2	6.132	6.130	0.002	43276821	25.0	25.5	
						RPD = 6.23	
23 cis-Chlordane							
1	6.347	6.344	0.003	340403751	25.0	23.9	
2	6.287	6.286	0.001	41538812	25.0	25.8	
						RPD = 7.62	
24 4,4'-DDE							
1	6.422	6.421	0.001	352295573	25.0	23.6	
2	6.471	6.469	0.002	42170047	25.0	25.3	
						RPD = 6.99	
25 Endosulfan I							
1	6.496	6.494	0.002	320496682	25.0	24.3	
2	6.348	6.346	0.002	39747580	25.0	25.9	
						RPD = 6.24	
27 Dieldrin							
1	6.750	6.748	0.002	364318480	25.0	25.0	
2	6.641	6.639	0.002	44056375	25.0	26.2	
						RPD = 5.04	
30 Endrin							
1	6.998	6.997	0.001	302410533	25.0	23.9	
2	6.964	6.963	0.001	37475292	25.0	25.3	
						RPD = 5.64	
32 4,4'-DDD							
1	7.058	7.058	0.000	274241112	25.0	23.7	
2	7.089	7.089	0.000	33960824	25.0	25.0	
						RPD = 5.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.236	7.234	0.002	281476331	25.0	23.6	
2	7.192	7.190	0.002	36361969	25.0	25.1	
						RPD = 6.06	
35 4,4'-DDT							
1	7.353	7.352	0.001	240280393	25.0	23.3	
2	7.421	7.419	0.002	30504127	25.0	26.1	
						RPD = 11.22	
36 Endrin aldehyde							
1	7.681	7.679	0.002	215019147	25.0	23.5	
2	7.552	7.550	0.002	29378162	25.0	25.3	
						RPD = 7.44	
37 Methoxychlor							
1	7.857	7.857	0.000	108660913	25.0	22.8	
2	8.152	8.150	0.002	14100142	25.0	24.2	
						RPD = 6.10	
38 Mirex							
1	8.017	8.016	0.001	154479193	25.0	20.2	
2	8.346	8.344	0.002	24486294	25.0	24.7	
						RPD = 20.27	
39 Endosulfan sulfate							
1	8.139	8.138	0.001	247058157	25.0	23.4	
2	7.843	7.841	0.002	33389158	25.0	25.2	
						RPD = 7.25	
40 Endrin ketone							
1	8.432	8.429	0.003	256015167	25.0	23.1	
2	8.398	8.396	0.002	36099125	25.0	24.8	
						RPD = 7.26	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	159008498	25.0	22.8	
2	9.669	9.668	0.001	23458218	25.0	24.3	
						RPD = 6.44	
S 3 Endosulfan, Total							
1					75.0	71.4	
2					75.0	76.2	
						RPD = 6.51	

Reagents:

8081ABICVL3_00035	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

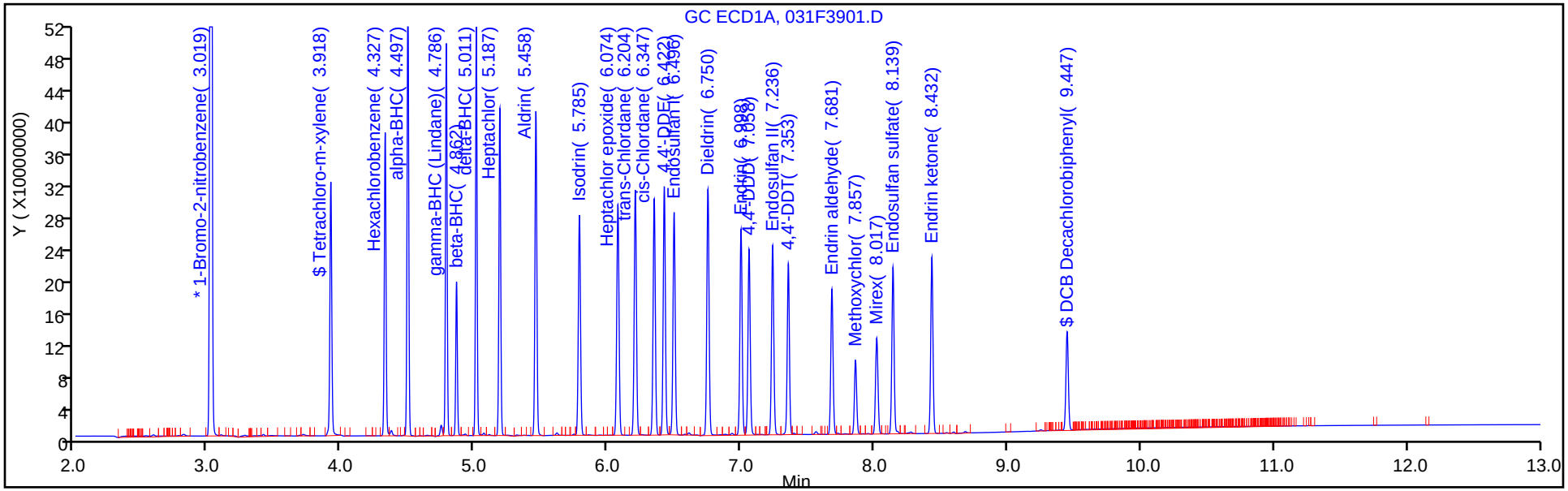
Report Date: 14-Oct-2018 22:12:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

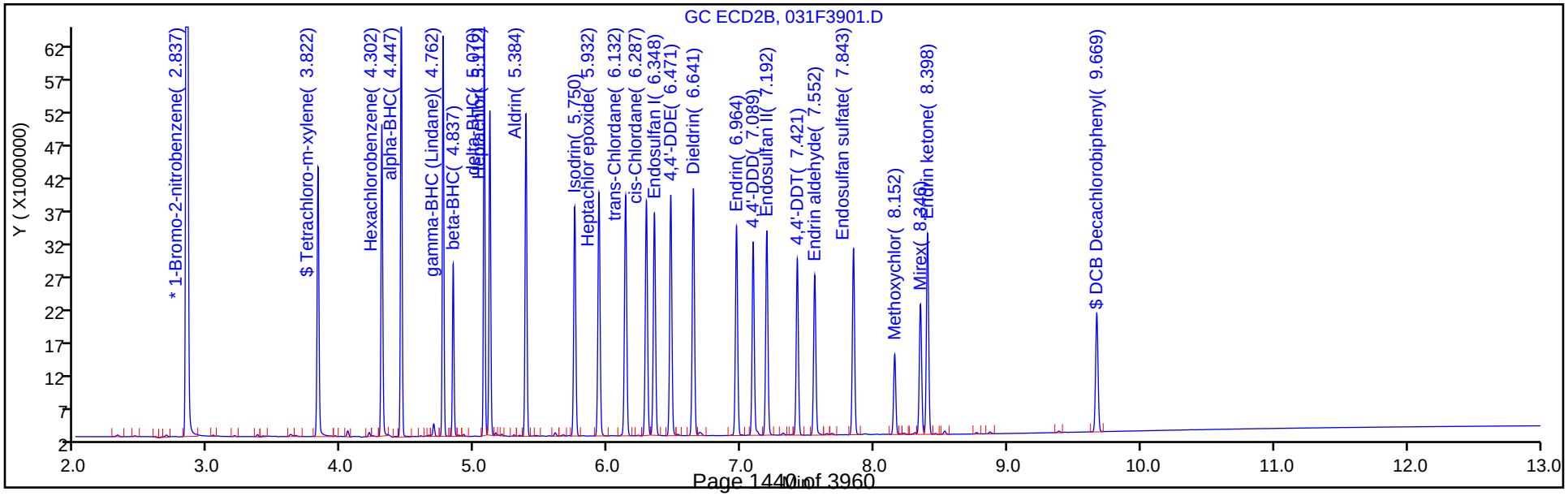
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D

Injection Date:	13-Oct-2018 21:59:26	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/11 Calibration Date: 11/14/2018 17:51

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140011.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0065		1910	2000	-4.7	20.0
Toxaphene Peak 2	Lin2		0.0174		1990	2000	-0.5	20.0
Toxaphene Peak 3	Lin2		0.0211		2160	2000	8.1	20.0
Toxaphene Peak 4	Lin2		0.0075		1930	2000	-3.6	20.0
Toxaphene Peak 5	Lin2		0.0084		2130	2000	6.7	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/11 Calibration Date: 11/14/2018 17:51

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.21	6.20	6.22
Toxaphene Peak 2	6.82	6.80	6.83
Toxaphene Peak 3	7.49	7.48	7.50
Toxaphene Peak 4	7.85	7.84	7.86
Toxaphene Peak 5	8.16	8.15	8.18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140011.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 14-Nov-2018 17:51:06 ALS Bottle#: 5 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076199-011
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:35 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.003	3.003	0.000	2358130114	150.0	150.0	
2	2.810	2.810	0.000	218396737	150.0	150.0	
28 Toxaphene							
1	6.209	6.209	0.000	204787373	2000.0	1906.5	
1	6.815	6.815	0.000	547147143	2000.0	1989.1	
1	7.488	7.488	0.000	664331111	2000.0	2161.8	
1	7.847	7.847	0.000	237007275	2000.0	1928.2	
1	8.164	8.164	0.000	264087624	2000.0	2134.6	
		Average of Peak Amounts =				2024.0	
2	5.728	5.728	0.000	13802698	2000.0	2054.7	
2	7.083	7.083	0.000	61940981	2000.0	2050.6	
2	7.223	7.223	0.000	169584572	2000.0	2032.8	
2	7.738	7.738	0.000	46663159	2000.0	1956.1	
2	8.032	8.032	0.000	91325280	2000.0	1961.5	
		Average of Peak Amounts =				2011.2	
					RPD =	0.64	

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

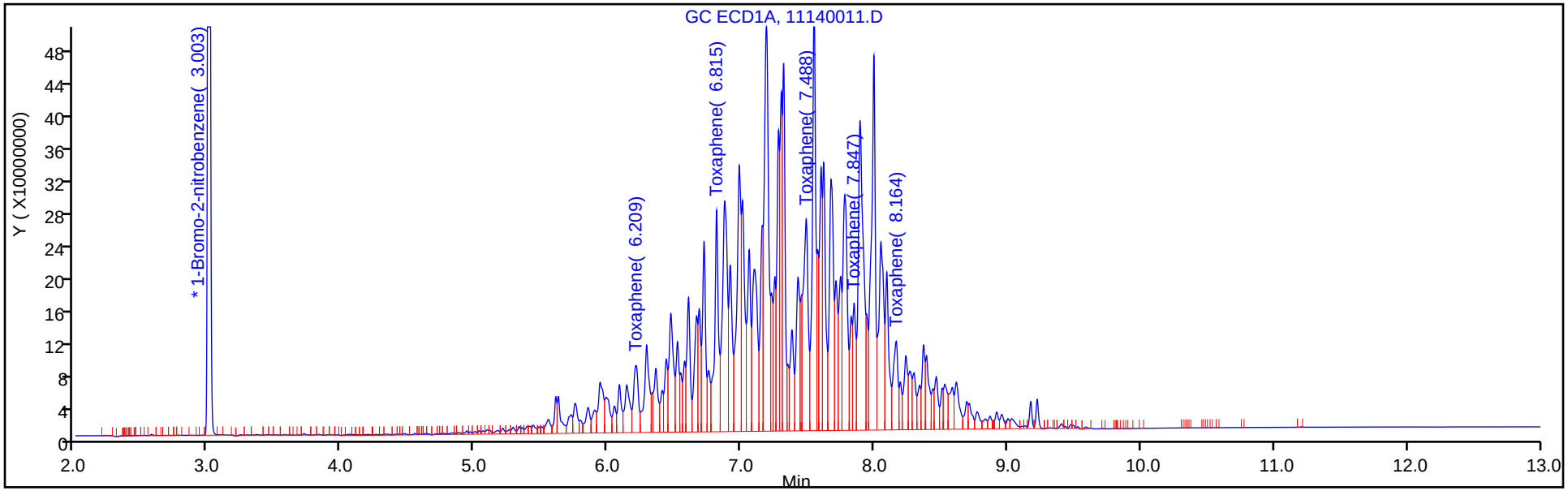
Report Date: 29-Nov-2018 14:12:35 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

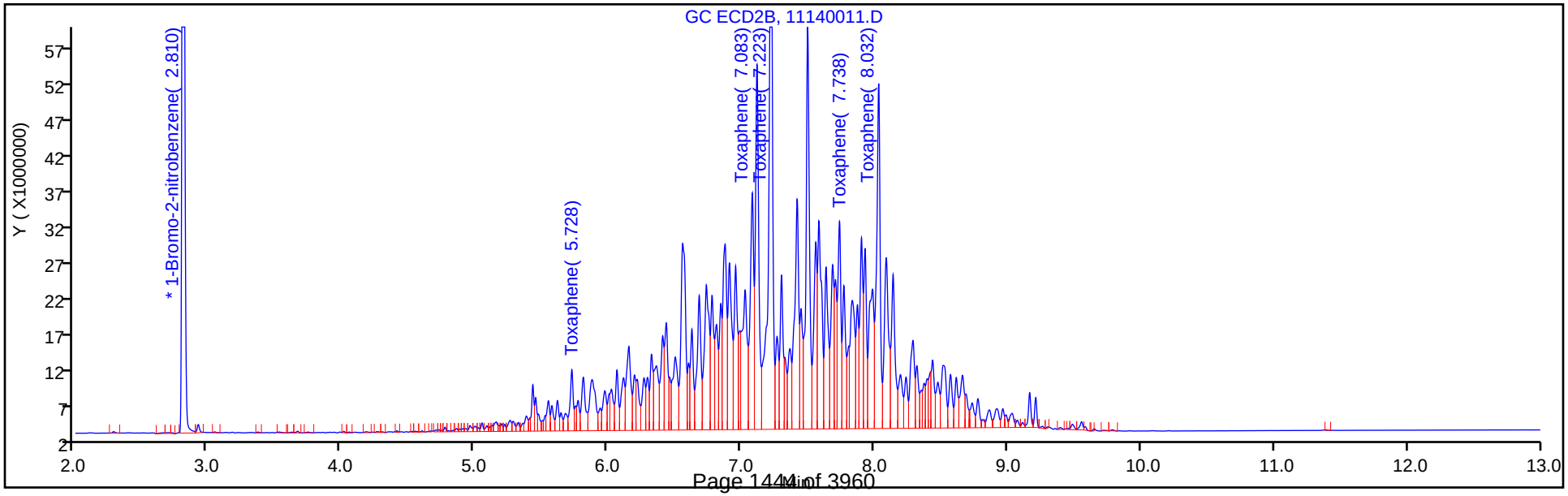
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140011.D

Injection Date:	14-Nov-2018 17:51:06	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/11 Calibration Date: 11/14/2018 17:51

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140011.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0047		2050	2000	2.7	20.0
Toxaphene Peak 2	Lin2		0.0213		2050	2000	2.5	20.0
Toxaphene Peak 3	Lin2		0.0582		2030	2000	1.6	20.0
Toxaphene Peak 4	Lin2		0.0160		1960	2000	-2.2	20.0
Toxaphene Peak 5	Lin2		0.0314		1960	2000	-1.9	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/11 Calibration Date: 11/14/2018 17:51

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.73	5.72	5.74
Toxaphene Peak 2	7.08	7.07	7.10
Toxaphene Peak 3	7.22	7.21	7.24
Toxaphene Peak 4	7.74	7.73	7.75
Toxaphene Peak 5	8.03	8.02	8.04

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140011.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 14-Nov-2018 17:51:06 ALS Bottle#: 5 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076199-011
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:35 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.003	3.003	0.000	2358130114	150.0	150.0	
2	2.810	2.810	0.000	218396737	150.0	150.0	
28 Toxaphene							
1	6.209	6.209	0.000	204787373	2000.0	1906.5	
1	6.815	6.815	0.000	547147143	2000.0	1989.1	
1	7.488	7.488	0.000	664331111	2000.0	2161.8	
1	7.847	7.847	0.000	237007275	2000.0	1928.2	
1	8.164	8.164	0.000	264087624	2000.0	2134.6	
		Average of Peak Amounts =				2024.0	
2	5.728	5.728	0.000	13802698	2000.0	2054.7	
2	7.083	7.083	0.000	61940981	2000.0	2050.6	
2	7.223	7.223	0.000	169584572	2000.0	2032.8	
2	7.738	7.738	0.000	46663159	2000.0	1956.1	
2	8.032	8.032	0.000	91325280	2000.0	1961.5	
		Average of Peak Amounts =				2011.2	
						RPD = 0.64	

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

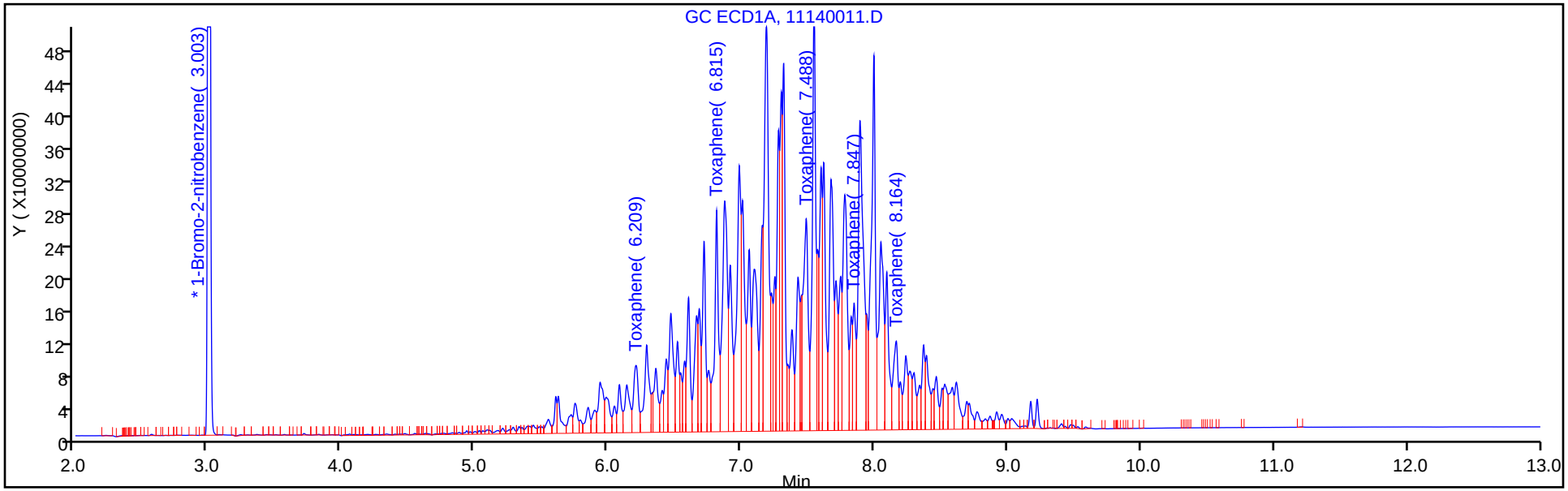
Report Date: 29-Nov-2018 14:12:36 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

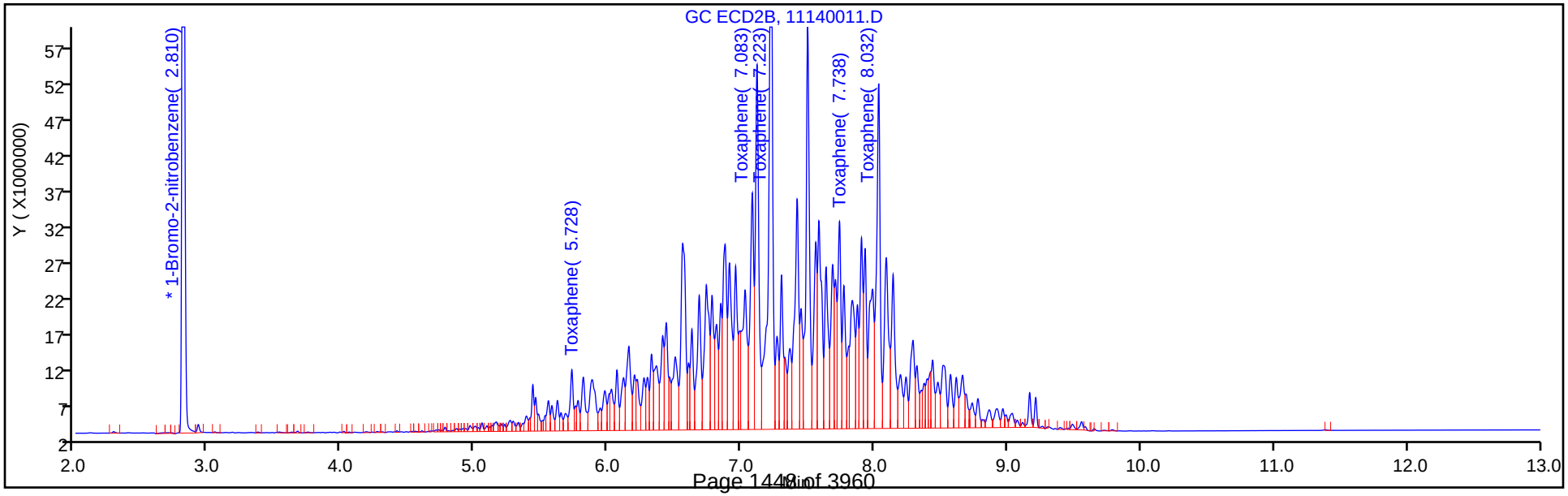
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140011.D

Injection Date:	14-Nov-2018 17:51:06	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/13 Calibration Date: 11/14/2018 18:26

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140013.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.064		46.1	50.0	-7.8	20.0
alpha-BHC	Lin2		1.617		48.5	50.0	-3.0	20.0
gamma-BHC (Lindane)	Lin2		1.390		48.8	50.0	-2.3	20.0
beta-BHC	Lin2		0.5213		47.6	50.0	-4.7	20.0
delta-BHC	Lin2		1.426		49.2	50.0	-1.5	20.0
Heptachlor	Lin2		1.237		49.0	50.0	-2.0	20.0
Aldrin	Lin2		1.337		49.6	50.0	-0.8	20.0
Heptachlor epoxide	Lin2		1.133		49.5	50.0	-1.0	20.0
gamma-Chlordane	Lin2		1.212		49.2	50.0	-1.5	20.0
alpha-Chlordane	Lin2		1.151		48.9	50.0	-2.2	20.0
4,4'-DDE	Lin2		1.169		47.4	50.0	-5.2	20.0
Endosulfan I	Lin2		1.077		49.8	50.0	-0.5	20.0
Dieldrin	Lin2		1.190		49.5	50.0	-1.1	20.0
Endrin	Lin2		1.084		51.9	50.0	3.7	20.0
4,4'-DDD	Lin2		0.9235		48.2	50.0	-3.5	20.0
Endosulfan II	Lin2		0.9789		49.9	50.0	-0.3	20.0
4,4'-DDT	Lin2		0.8730		50.9	50.0	1.8	20.0
Endrin aldehyde	Lin2		0.7382		49.2	50.0	-1.7	20.0
Methoxychlor	Lin2		0.4015		51.4	50.0	2.8	20.0
Endosulfan sulfate	Lin2		0.8893		51.2	50.0	2.3	20.0
Endrin ketone	Lin2		0.8985		49.2	50.0	-1.6	20.0
Tetrachloro-m-xylene	Lin2		0.998		45.3	50.0	-9.4	20.0
DCB Decachlorobiphenyl	Lin2		0.5452		47.9	50.0	-4.2	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/13 Calibration Date: 11/14/2018 18:26

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.31	4.30	4.32
alpha-BHC	4.48	4.47	4.49
gamma-BHC (Lindane)	4.77	4.75	4.78
beta-BHC	4.84	4.83	4.86
delta-BHC	4.99	4.98	5.00
Heptachlor	5.17	5.15	5.18
Aldrin	5.43	5.42	5.45
Heptachlor epoxide	6.04	6.03	6.05
gamma-Chlordane	6.17	6.16	6.19
alpha-Chlordane	6.31	6.30	6.33
4,4'-DDE	6.39	6.38	6.40
Endosulfan I	6.46	6.45	6.47
Dieldrin	6.72	6.70	6.73
Endrin	6.96	6.95	6.98
4,4'-DDD	7.03	7.01	7.04
Endosulfan II	7.20	7.19	7.21
4,4'-DDT	7.32	7.31	7.33
Endrin aldehyde	7.64	7.63	7.66
Methoxychlor	7.82	7.81	7.84
Endosulfan sulfate	8.10	8.09	8.11
Endrin ketone	8.39	8.38	8.41
Tetrachloro-m-xylene	3.90	3.89	3.91
DCB Decachlorobiphenyl	9.41	9.39	9.42

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Nov-2018 18:26:04 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076199-013
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:40 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	2400162034	150.0	150.0	
2	2.812	2.812	0.000	222733655	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.900	3.900	0.000	798247354	50.0	45.3	
2	3.792	3.792	0.000	85999736	50.0	47.5	
						RPD = 4.65	
5 Hexachlorobenzene							
1	4.307	4.307	0.000	851030613	50.0	46.1	
2	4.269	4.269	0.000	93062680	50.0	48.7	
						RPD = 5.35	
8 alpha-BHC							
1	4.477	4.477	0.000	1293943852	50.0	48.5	
2	4.415	4.415	0.000	125372852	50.0	50.8	
						RPD = 4.68	
9 gamma-BHC (Lindane)							
1	4.765	4.765	0.000	1112190165	50.0	48.8	
2	4.728	4.728	0.000	106320633	50.0	49.5	
						RPD = 1.46	
10 beta-BHC							
1	4.843	4.843	0.000	417086313	50.0	47.6	
2	4.805	4.805	0.000	44777137	50.0	48.8	
						RPD = 2.36	
12 delta-BHC							
1	4.991	4.991	0.000	1141097223	50.0	49.2	
2	5.037	5.037	0.000	106911777	50.0	49.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.165	5.165	0.000	989795942	50.0	49.0	
2	5.078	5.078	0.000	91986268	50.0	49.6	
						RPD = 1.20	
16 Aldrin							
1	5.433	5.433	0.000	1069802136	50.0	49.6	
2	5.345	5.345	0.000	99022968	50.0	49.5	
						RPD = 0.16	
18 Isodrin							
1	5.755	5.755	0.000	864796957	50.0	50.2	
2	5.705	5.705	0.000	83474101	50.0	49.1	
						RPD = 2.18	
21 Heptachlor epoxide							
1	6.041	6.041	0.000	906589320	50.0	49.5	
2	5.883	5.883	0.000	90265708	50.0	49.6	
						RPD = 0.26	
22 trans-Chlordane							
1	6.173	6.173	0.000	969425905	50.0	49.2	
2	6.080	6.080	0.000	92981424	50.0	48.7	
						RPD = 1.08	
23 cis-Chlordane							
1	6.314	6.314	0.000	920622318	50.0	48.9	
2	6.236	6.236	0.000	88422753	50.0	49.0	
						RPD = 0.08	
24 4,4'-DDE							
1	6.390	6.390	0.000	935423022	50.0	47.4	
2	6.420	6.420	0.000	90216857	50.0	48.1	
						RPD = 1.41	
25 Endosulfan I							
1	6.462	6.462	0.000	861406603	50.0	49.8	
2	6.295	6.295	0.000	84287513	50.0	49.1	
						RPD = 1.29	
27 Dieldrin							
1	6.715	6.715	0.000	951793380	50.0	49.5	
2	6.585	6.585	0.000	93189270	50.0	49.3	
						RPD = 0.33	
30 Endrin							
1	6.964	6.964	0.000	866891517	50.0	51.9	
2	6.907	6.907	0.000	86665294	50.0	52.0	
						RPD = 0.19	
32 4,4'-DDD							
1	7.025	7.025	0.000	738848198	50.0	48.2	
2	7.035	7.035	0.000	73628374	50.0	48.2	
						RPD = 0.12	
34 Endosulfan II							
1	7.200	7.200	0.000	783203171	50.0	49.9	
2	7.133	7.133	0.000	78794716	50.0	48.7	
						RPD = 2.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.318	7.318	0.000	698480984	50.0	50.9	
2	7.365	7.365	0.000	68899717	50.0	52.0	
						RPD = 2.07	
36 Endrin aldehyde							
1	7.644	7.644	0.000	590624631	50.0	49.2	
2	7.492	7.492	0.000	62635338	50.0	48.3	
						RPD = 1.75	
37 Methoxychlor							
1	7.823	7.823	0.000	321197378	50.0	51.4	
2	8.095	8.095	0.000	34945904	50.0	53.5	
						RPD = 4.09	
38 Mirex							
1	7.981	7.981	0.000	491510076	50.0	49.0	
2	8.286	8.286	0.000	51877591	50.0	47.3	
						RPD = 3.64	
39 Endosulfan sulfate							
1	8.102	8.102	0.000	711480407	50.0	51.2	
2	7.784	7.784	0.000	72229352	50.0	48.8	
						RPD = 4.83	
40 Endrin ketone							
1	8.394	8.394	0.000	718876328	50.0	49.2	
2	8.336	8.336	0.000	77225899	50.0	47.4	
						RPD = 3.75	
$ 41 DCB Decachlorobiphenyl							
1	9.406	9.406	0.000	436217639	50.0	47.9	
2	9.605	9.605	0.000	50174232	50.0	46.8	
						RPD = 2.34	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

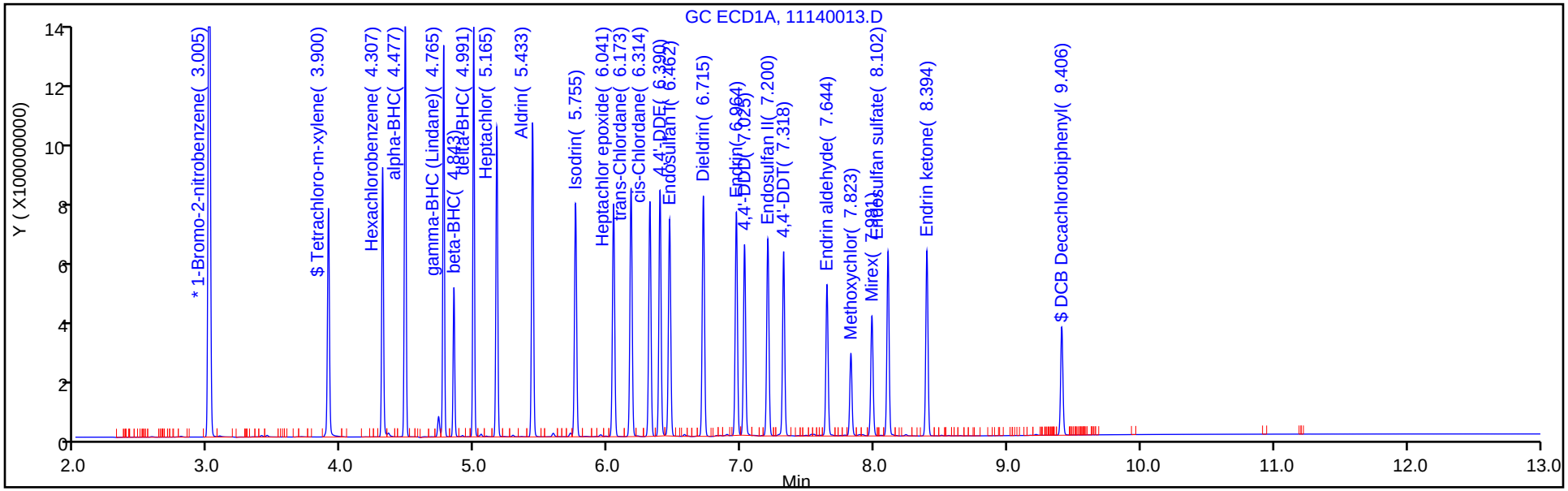
Report Date: 29-Nov-2018 14:12:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

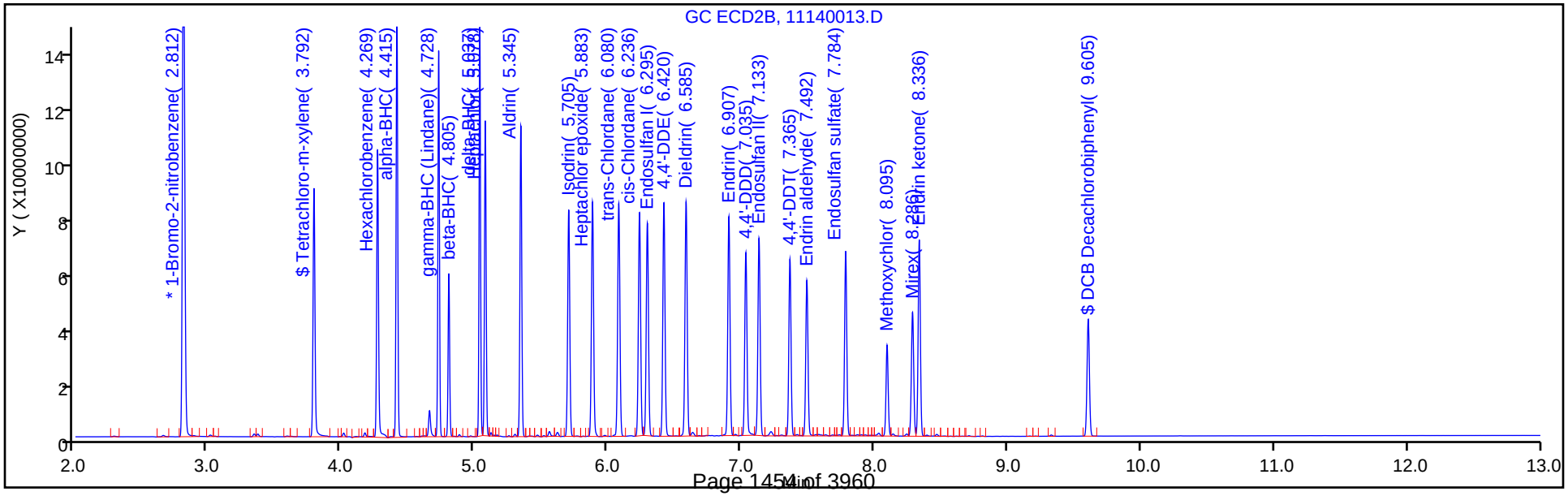
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140013.D

Injection Date:	14-Nov-2018 18:26:04	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/13 Calibration Date: 11/14/2018 18:26

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140013.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.253		48.7	50.0	-2.7	20.0
alpha-BHC	Lin2		1.689		50.8	50.0	1.6	20.0
gamma-BHC (Lindane)	Lin2		1.432		49.5	50.0	-0.9	20.0
beta-BHC	Lin2		0.6031		48.8	50.0	-2.4	20.0
delta-BHC	Lin2		1.440		49.2	50.0	-1.7	20.0
Heptachlor	Lin2		1.239		49.6	50.0	-0.8	20.0
Aldrin	Lin2		1.334		49.5	50.0	-0.9	20.0
Heptachlor epoxide	Lin2		1.216		49.6	50.0	-0.7	20.0
gamma-Chlordane	Lin2		1.252		48.7	50.0	-2.6	20.0
alpha-Chlordane	Lin2		1.191		49.0	50.0	-2.1	20.0
Endosulfan I	Lin2		1.135		49.1	50.0	-1.7	20.0
4,4'-DDE	Lin2		1.215		48.1	50.0	-3.9	20.0
Dieldrin	Lin2		1.255		49.3	50.0	-1.4	20.0
Endrin	Lin2		1.167		52.0	50.0	3.9	20.0
4,4'-DDD	Lin2		0.9917		48.2	50.0	-3.6	20.0
Endosulfan II	Lin2		1.061		48.7	50.0	-2.6	20.0
4,4'-DDT	Lin2		0.9280		52.0	50.0	4.0	20.0
Endrin aldehyde	Lin2		0.8436		48.3	50.0	-3.4	20.0
Endosulfan sulfate	Lin2		0.9729		48.8	50.0	-2.5	20.0
Methoxychlor	Lin2		0.4707		53.5	50.0	7.0	20.0
Endrin ketone	Lin2		1.040		47.4	50.0	-5.2	20.0
Tetrachloro-m-xylene	Lin2		1.158		47.5	50.0	-5.1	20.0
DCB Decachlorobiphenyl	Lin2		0.6758		46.8	50.0	-6.4	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/13 Calibration Date: 11/14/2018 18:26

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.27	4.26	4.28
alpha-BHC	4.42	4.40	4.43
gamma-BHC (Lindane)	4.73	4.72	4.74
beta-BHC	4.81	4.79	4.82
delta-BHC	5.04	5.03	5.05
Heptachlor	5.08	5.07	5.09
Aldrin	5.35	5.33	5.36
Heptachlor epoxide	5.88	5.87	5.90
gamma-Chlordane	6.08	6.07	6.09
alpha-Chlordane	6.24	6.22	6.25
Endosulfan I	6.30	6.28	6.31
4,4'-DDE	6.42	6.41	6.43
Dieldrin	6.59	6.57	6.60
Endrin	6.91	6.90	6.92
4,4'-DDD	7.04	7.02	7.05
Endosulfan II	7.13	7.12	7.15
4,4'-DDT	7.37	7.35	7.38
Endrin aldehyde	7.49	7.48	7.50
Endosulfan sulfate	7.78	7.77	7.80
Methoxychlor	8.10	8.08	8.11
Endrin ketone	8.34	8.32	8.35
Tetrachloro-m-xylene	3.79	3.78	3.80
DCB Decachlorobiphenyl	9.61	9.59	9.62

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Nov-2018 18:26:04 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076199-013
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:40 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	2400162034	150.0	150.0	
2	2.812	2.812	0.000	222733655	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.900	3.900	0.000	798247354	50.0	45.3	
2	3.792	3.792	0.000	85999736	50.0	47.5	
						RPD = 4.65	
5 Hexachlorobenzene							
1	4.307	4.307	0.000	851030613	50.0	46.1	
2	4.269	4.269	0.000	93062680	50.0	48.7	
						RPD = 5.35	
8 alpha-BHC							
1	4.477	4.477	0.000	1293943852	50.0	48.5	
2	4.415	4.415	0.000	125372852	50.0	50.8	
						RPD = 4.68	
9 gamma-BHC (Lindane)							
1	4.765	4.765	0.000	1112190165	50.0	48.8	
2	4.728	4.728	0.000	106320633	50.0	49.5	
						RPD = 1.46	
10 beta-BHC							
1	4.843	4.843	0.000	417086313	50.0	47.6	
2	4.805	4.805	0.000	44777137	50.0	48.8	
						RPD = 2.36	
12 delta-BHC							
1	4.991	4.991	0.000	1141097223	50.0	49.2	
2	5.037	5.037	0.000	106911777	50.0	49.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.165	5.165	0.000	989795942	50.0	49.0	
2	5.078	5.078	0.000	91986268	50.0	49.6	
						RPD = 1.20	
16 Aldrin							
1	5.433	5.433	0.000	1069802136	50.0	49.6	
2	5.345	5.345	0.000	99022968	50.0	49.5	
						RPD = 0.16	
18 Isodrin							
1	5.755	5.755	0.000	864796957	50.0	50.2	
2	5.705	5.705	0.000	83474101	50.0	49.1	
						RPD = 2.18	
21 Heptachlor epoxide							
1	6.041	6.041	0.000	906589320	50.0	49.5	
2	5.883	5.883	0.000	90265708	50.0	49.6	
						RPD = 0.26	
22 trans-Chlordane							
1	6.173	6.173	0.000	969425905	50.0	49.2	
2	6.080	6.080	0.000	92981424	50.0	48.7	
						RPD = 1.08	
23 cis-Chlordane							
1	6.314	6.314	0.000	920622318	50.0	48.9	
2	6.236	6.236	0.000	88422753	50.0	49.0	
						RPD = 0.08	
24 4,4'-DDE							
1	6.390	6.390	0.000	935423022	50.0	47.4	
2	6.420	6.420	0.000	90216857	50.0	48.1	
						RPD = 1.41	
25 Endosulfan I							
1	6.462	6.462	0.000	861406603	50.0	49.8	
2	6.295	6.295	0.000	84287513	50.0	49.1	
						RPD = 1.29	
27 Dieldrin							
1	6.715	6.715	0.000	951793380	50.0	49.5	
2	6.585	6.585	0.000	93189270	50.0	49.3	
						RPD = 0.33	
30 Endrin							
1	6.964	6.964	0.000	866891517	50.0	51.9	
2	6.907	6.907	0.000	86665294	50.0	52.0	
						RPD = 0.19	
32 4,4'-DDD							
1	7.025	7.025	0.000	738848198	50.0	48.2	
2	7.035	7.035	0.000	73628374	50.0	48.2	
						RPD = 0.12	
34 Endosulfan II							
1	7.200	7.200	0.000	783203171	50.0	49.9	
2	7.133	7.133	0.000	78794716	50.0	48.7	
						RPD = 2.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.318	7.318	0.000	698480984	50.0	50.9	
2	7.365	7.365	0.000	68899717	50.0	52.0	
						RPD = 2.07	
36 Endrin aldehyde							
1	7.644	7.644	0.000	590624631	50.0	49.2	
2	7.492	7.492	0.000	62635338	50.0	48.3	
						RPD = 1.75	
37 Methoxychlor							
1	7.823	7.823	0.000	321197378	50.0	51.4	
2	8.095	8.095	0.000	34945904	50.0	53.5	
						RPD = 4.09	
38 Mirex							
1	7.981	7.981	0.000	491510076	50.0	49.0	
2	8.286	8.286	0.000	51877591	50.0	47.3	
						RPD = 3.64	
39 Endosulfan sulfate							
1	8.102	8.102	0.000	711480407	50.0	51.2	
2	7.784	7.784	0.000	72229352	50.0	48.8	
						RPD = 4.83	
40 Endrin ketone							
1	8.394	8.394	0.000	718876328	50.0	49.2	
2	8.336	8.336	0.000	77225899	50.0	47.4	
						RPD = 3.75	
$ 41 DCB Decachlorobiphenyl							
1	9.406	9.406	0.000	436217639	50.0	47.9	
2	9.605	9.605	0.000	50174232	50.0	46.8	
						RPD = 2.34	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

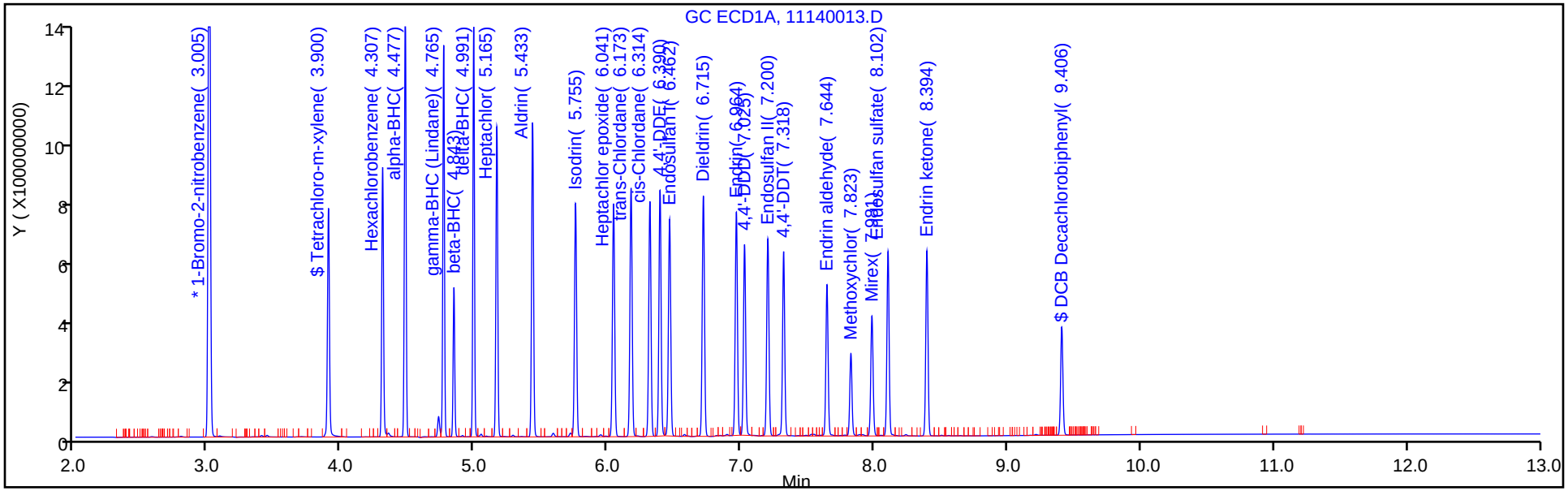
Report Date: 29-Nov-2018 14:12:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

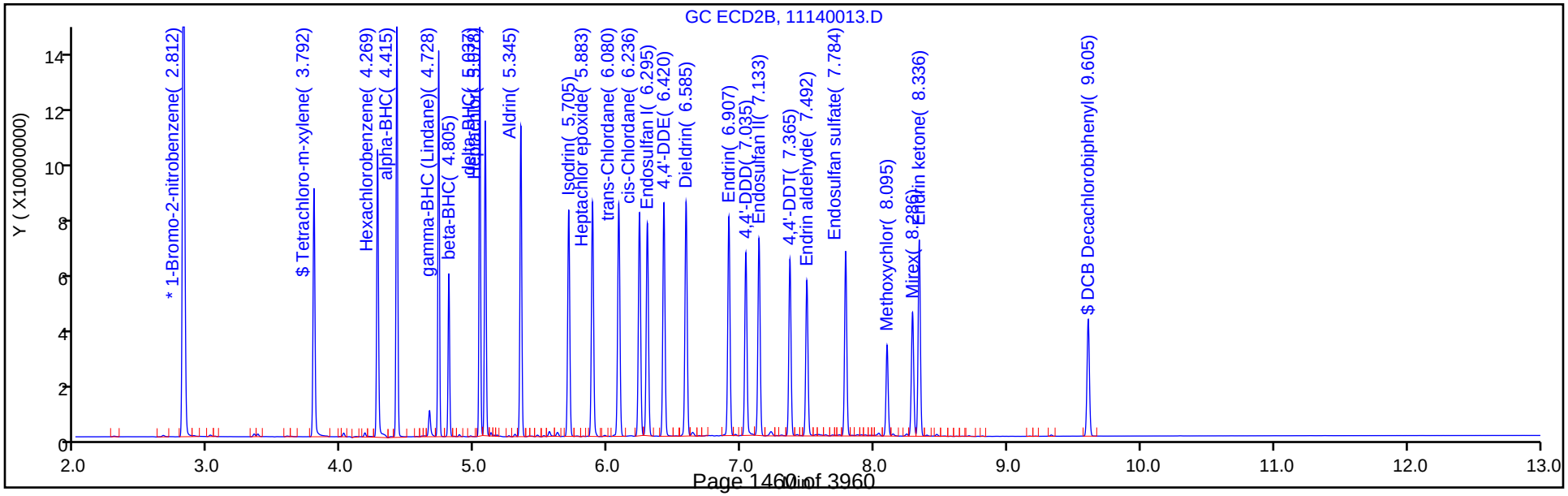
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140013.D

Injection Date:	14-Nov-2018 18:26:04	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/34 Calibration Date: 11/14/2018 23:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140034.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0067		1960	2000	-2.0	20.0
Toxaphene Peak 2	Lin2		0.0172		1960	2000	-2.0	20.0
Toxaphene Peak 3	Lin2		0.0184		1890	2000	-5.5	20.0
Toxaphene Peak 4	Lin2		0.0075		1920	2000	-3.8	20.0
Toxaphene Peak 5	Lin2		0.0071		1810	2000	-9.3	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/34 Calibration Date: 11/14/2018 23:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140034.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.21	6.20	6.22
Toxaphene Peak 2	6.82	6.80	6.83
Toxaphene Peak 3	7.49	7.48	7.50
Toxaphene Peak 4	7.85	7.84	7.86
Toxaphene Peak 5	8.17	8.15	8.18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140034.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 14-Nov-2018 23:59:13 ALS Bottle#: 26 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076199-034
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 04-Dec-2018 14:38:34 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0325

First Level Reviewer: bacat Date: 15-Nov-2018 10:28:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.009	3.003	0.005	2326924871	150.0	150.0	
2	2.814	2.810	0.004	218570872	150.0	150.0	
28 Toxaphene							M
1	6.209	6.209	0.000	207896077	2000.0	1960.4	
1	6.816	6.815	0.001	531962990	2000.0	1960.6	
1	7.488	7.488	0.000	570749399	2000.0	1890.6	
1	7.847	7.847	0.000	233421511	2000.0	1924.6	
1	8.166	8.164	0.002	219383233	2000.0	1813.1	
		Average of Peak Amounts =				1909.8	
2	5.729	5.728	0.001	14699166	2000.0	2189.8	M
2	7.082	7.083	-0.001	58733548	2000.0	1942.3	M
2	7.223	7.223	0.000	161942628	2000.0	1939.8	M
2	7.738	7.738	0.000	44542930	2000.0	1866.2	M
2	8.032	8.032	0.000	85042925	2000.0	1825.2	M
		Average of Peak Amounts =				1952.7	
						RPD = 2.22	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

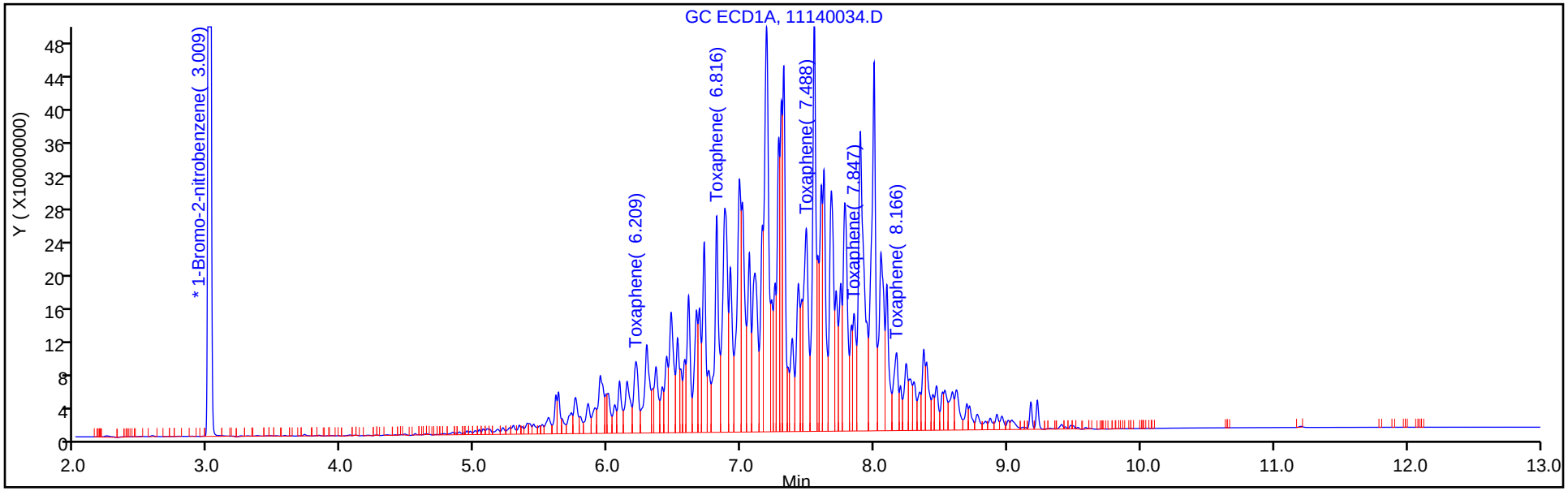
Report Date: 04-Dec-2018 14:38:35 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

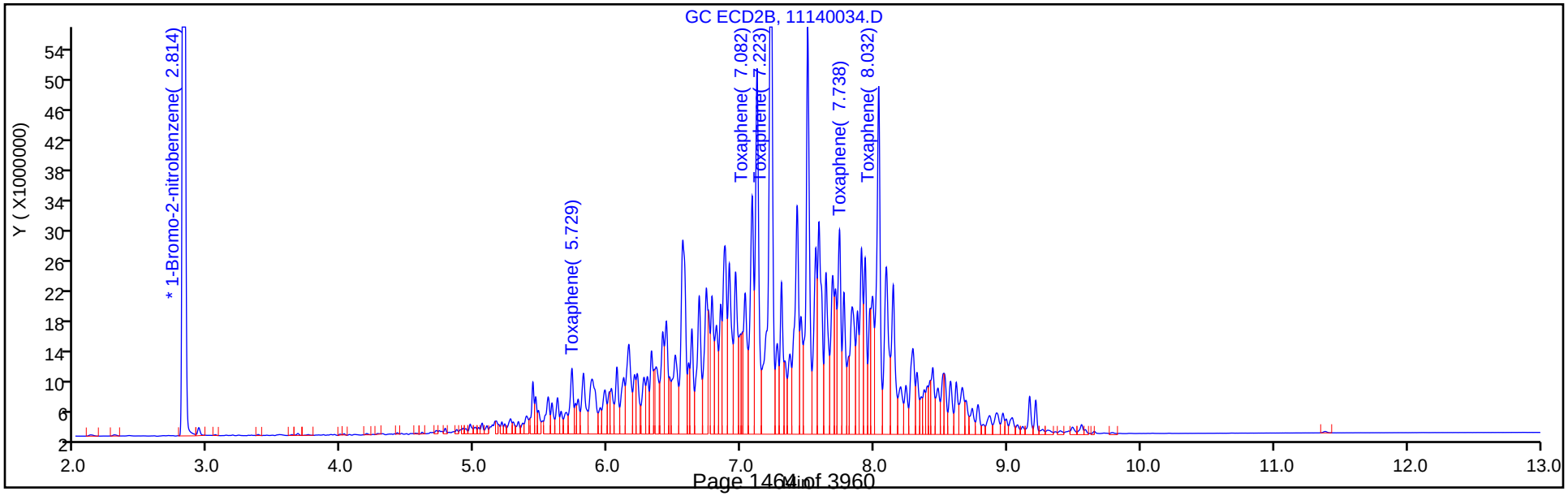
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140034.D

Injection Date:	14-Nov-2018 23:59:13	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/34 Calibration Date: 11/14/2018 23:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140034.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0050		2190	2000	9.5	20.0
Toxaphene Peak 2	Lin2		0.0202		1940	2000	-2.9	20.0
Toxaphene Peak 3	Lin2		0.0556		1940	2000	-3.0	20.0
Toxaphene Peak 4	Lin2		0.0153		1870	2000	-6.7	20.0
Toxaphene Peak 5	Lin2		0.0292		1830	2000	-8.7	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-437597/34 Calibration Date: 11/14/2018 23:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11140034.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.73	5.72	5.74
Toxaphene Peak 2	7.08	7.07	7.10
Toxaphene Peak 3	7.22	7.21	7.24
Toxaphene Peak 4	7.74	7.73	7.75
Toxaphene Peak 5	8.03	8.02	8.04

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140034.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 14-Nov-2018 23:59:13 ALS Bottle#: 26 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076199-034
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 04-Dec-2018 14:38:34 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0325

First Level Reviewer: bacat Date: 15-Nov-2018 10:28:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.009	3.003	0.005	2326924871	150.0	150.0	
2	2.814	2.810	0.004	218570872	150.0	150.0	
28 Toxaphene							M
1	6.209	6.209	0.000	207896077	2000.0	1960.4	
1	6.816	6.815	0.001	531962990	2000.0	1960.6	
1	7.488	7.488	0.000	570749399	2000.0	1890.6	
1	7.847	7.847	0.000	233421511	2000.0	1924.6	
1	8.166	8.164	0.002	219383233	2000.0	1813.1	
		Average of Peak Amounts =				1909.8	
2	5.729	5.728	0.001	14699166	2000.0	2189.8	M
2	7.082	7.083	-0.001	58733548	2000.0	1942.3	M
2	7.223	7.223	0.000	161942628	2000.0	1939.8	M
2	7.738	7.738	0.000	44542930	2000.0	1866.2	M
2	8.032	8.032	0.000	85042925	2000.0	1825.2	M
		Average of Peak Amounts =				1952.7	
						RPD = 2.22	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

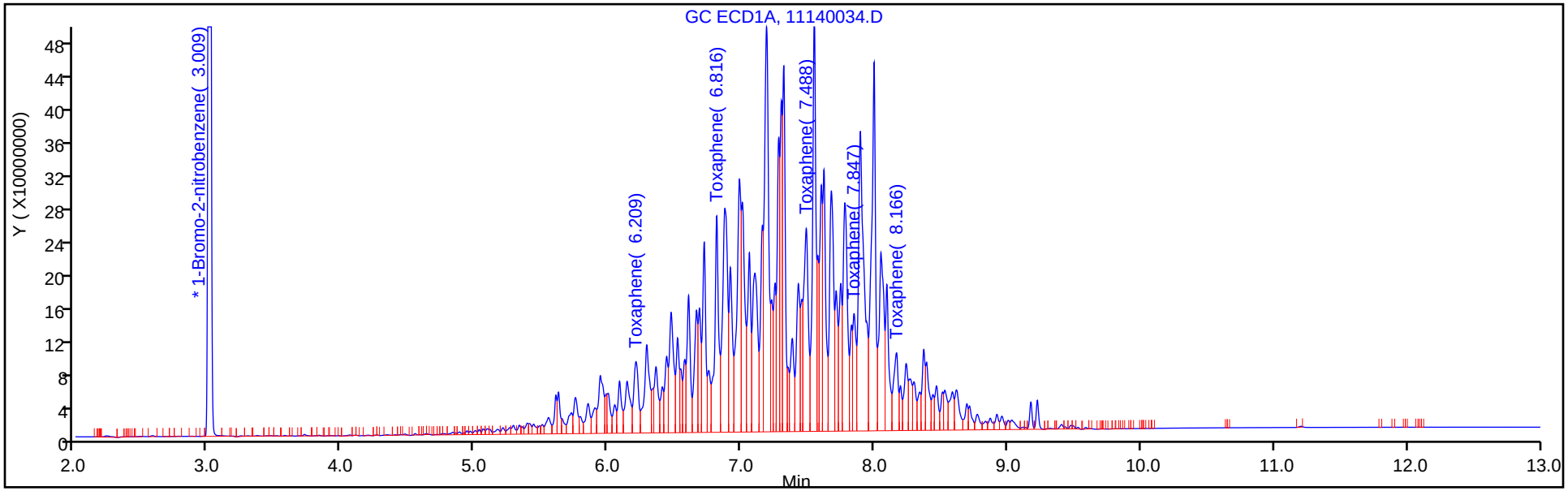
Report Date: 04-Dec-2018 14:38:35 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

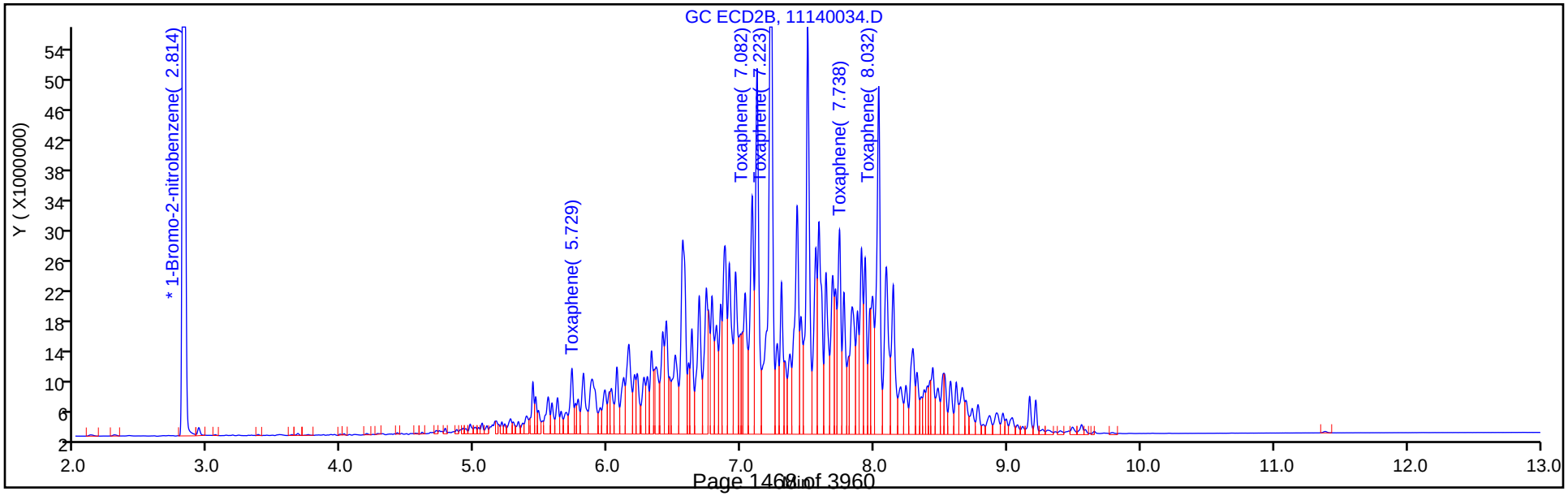
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140034.D

Injection Date:	14-Nov-2018 23:59:13	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 04-Dec-2018 14:38:35 Chrom Revision: 2.3 03-Dec-2018 18:32:22

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140034.D

Injection Date: 14-Nov-2018 23:59:13 Instrument ID: SGC_P2

Lims ID: CCV TOX

Client ID:

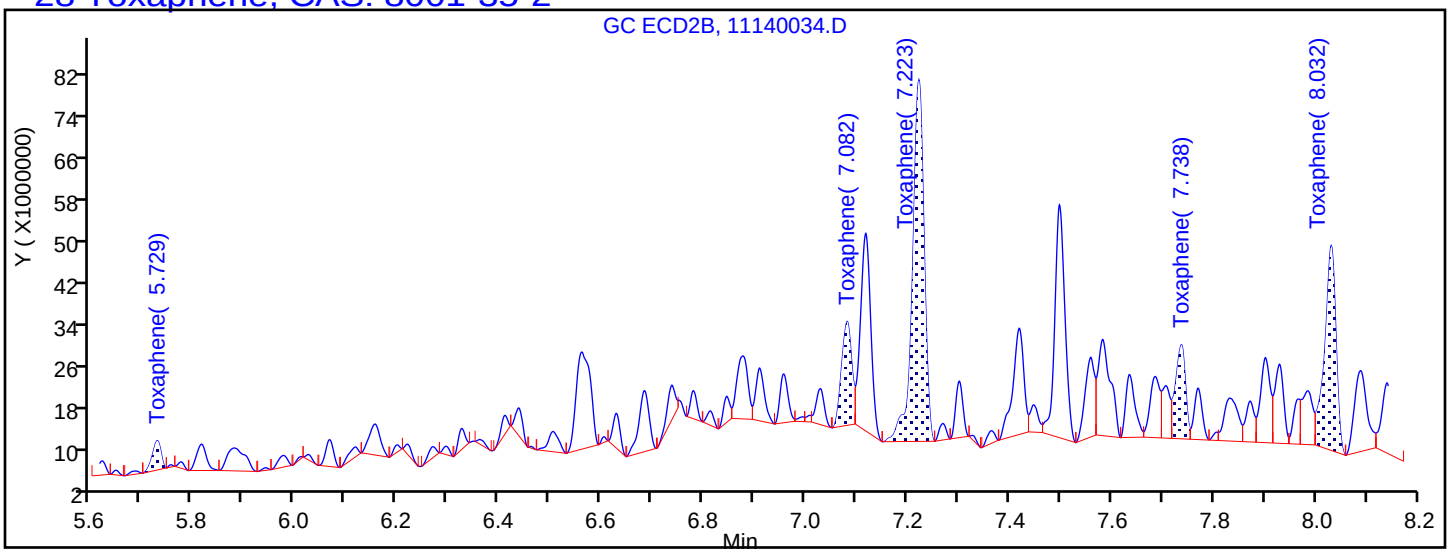
Operator ID: TEM ALS Bottle#: 26 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

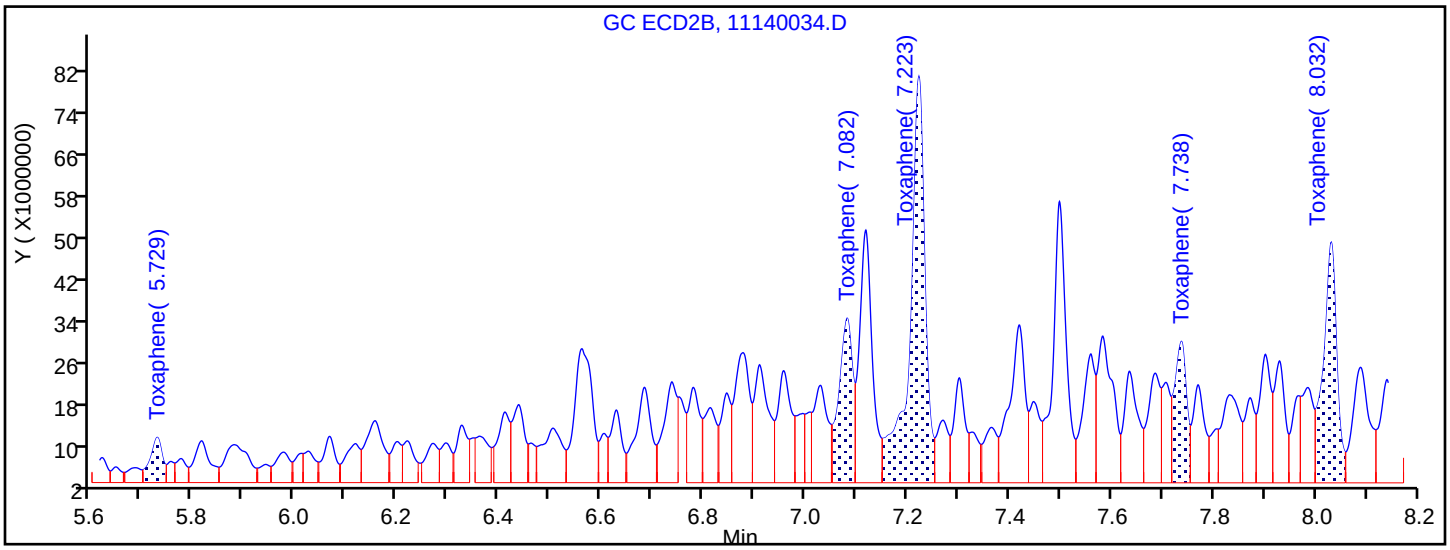
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.729	Response = 6617948
7.082	Response = 27585341
7.223	Response = 109362545
7.738	Response = 24573850
8.032	Response = 60488967



Manual Integration Results

5.729	Response = 14699166	M
7.082	Response = 58733548	M
7.223	Response = 161942628	M
7.738	Response = 44542930	M
8.032	Response = 85042925	M

Reviewer: bacat, 04-Dec-2018 14:34:51

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/36 Calibration Date: 11/15/2018 00:34

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140036.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.110		48.1	50.0	-3.8	20.0
alpha-BHC	Lin2		1.709		51.2	50.0	2.4	20.0
gamma-BHC (Lindane)	Lin2		1.457		51.2	50.0	2.3	20.0
beta-BHC	Lin2		0.5492		50.2	50.0	0.4	20.0
delta-BHC	Lin2		1.501		51.8	50.0	3.6	20.0
Heptachlor	Lin2		1.300		51.5	50.0	2.9	20.0
Aldrin	Lin2		1.406		52.1	50.0	4.3	20.0
Heptachlor epoxide	Lin2		1.192		52.1	50.0	4.1	20.0
gamma-Chlordane	Lin2		1.281		52.0	50.0	4.0	20.0
alpha-Chlordane	Lin2		1.216		51.7	50.0	3.4	20.0
4,4'-DDE	Lin2		1.238		50.1	50.0	0.3	20.0
Endosulfan I	Lin2		1.139		52.6	50.0	5.3	20.0
Dieldrin	Lin2		1.263		52.5	50.0	5.0	20.0
Endrin	Lin2		1.160		55.5	50.0	11.0	20.0
4,4'-DDD	Lin2		1.016		53.1	50.0	6.1	20.0
Endosulfan II	Lin2		1.051		53.5	50.0	7.0	20.0
4,4'-DDT	Lin2		0.9617		56.0	50.0	12.0	20.0
Endrin aldehyde	Lin2		0.8004		53.3	50.0	6.6	20.0
Methoxychlor	Lin2		0.4373		56.0	50.0	11.9	20.0
Endosulfan sulfate	Lin2		0.9501		54.7	50.0	9.3	20.0
Endrin ketone	Lin2		0.9660		52.9	50.0	5.7	20.0
Tetrachloro-m-xylene	Lin2		1.038		47.1	50.0	-5.8	20.0
DCB Decachlorobiphenyl	Lin2		0.5706		50.1	50.0	0.3	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/36 Calibration Date: 11/15/2018 00:34

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140036.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.31	4.30	4.32
alpha-BHC	4.48	4.47	4.49
gamma-BHC (Lindane)	4.77	4.75	4.78
beta-BHC	4.84	4.83	4.86
delta-BHC	4.99	4.98	5.00
Heptachlor	5.17	5.15	5.18
Aldrin	5.43	5.42	5.45
Heptachlor epoxide	6.04	6.03	6.05
gamma-Chlordane	6.17	6.16	6.19
alpha-Chlordane	6.32	6.30	6.33
4,4'-DDE	6.39	6.38	6.40
Endosulfan I	6.46	6.45	6.48
Dieldrin	6.72	6.70	6.73
Endrin	6.96	6.95	6.98
4,4'-DDD	7.03	7.01	7.04
Endosulfan II	7.20	7.19	7.21
4,4'-DDT	7.32	7.31	7.33
Endrin aldehyde	7.65	7.63	7.66
Methoxychlor	7.82	7.81	7.84
Endosulfan sulfate	8.10	8.09	8.11
Endrin ketone	8.40	8.38	8.41
Tetrachloro-m-xylene	3.90	3.89	3.91
DCB Decachlorobiphenyl	9.41	9.40	9.42

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140036.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 15-Nov-2018 00:34:18 ALS Bottle#: 28 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076199-036
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:13:30 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.004	3.004	0.000	2353768572	150.0	150.0	
2	2.810	2.810	0.000	219992500	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.901	3.901	0.000	814222064	50.0	47.1	
2	3.791	3.791	0.000	87960145	50.0	49.2	
						RPD = 4.29	
5 Hexachlorobenzene							
1	4.308	4.308	0.000	870624926	50.0	48.1	
2	4.268	4.268	0.000	93885211	50.0	49.7	
						RPD = 3.29	
8 alpha-BHC							
1	4.477	4.477	0.000	1340820663	50.0	51.2	
2	4.414	4.414	0.000	128872664	50.0	52.9	
						RPD = 3.26	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	1143487710	50.0	51.2	
2	4.727	4.727	0.000	109322372	50.0	51.6	
						RPD = 0.81	
10 beta-BHC							
1	4.843	4.843	0.000	430900194	50.0	50.2	
2	4.804	4.804	0.000	46041919	50.0	50.8	
						RPD = 1.19	
12 delta-BHC							
1	4.991	4.991	0.000	1177975812	50.0	51.8	
2	5.036	5.036	0.000	110296171	50.0	51.4	
						RPD = 0.85	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.166	5.166	0.000	1019948250	50.0	51.5	
2	5.077	5.077	0.000	94561826	50.0	51.6	
						RPD = 0.32	
16 Aldrin							
1	5.434	5.434	0.000	1102929757	50.0	52.1	
2	5.344	5.344	0.000	102247635	50.0	51.8	
						RPD = 0.65	
18 Isodrin							
1	5.756	5.756	0.000	890687309	50.0	52.7	
2	5.703	5.703	0.000	86884494	50.0	51.8	
						RPD = 1.75	
21 Heptachlor epoxide							
1	6.042	6.042	0.000	934910348	50.0	52.1	
2	5.882	5.882	0.000	93234128	50.0	51.9	
						RPD = 0.22	
22 trans-Chlordane							
1	6.173	6.173	0.000	1005051268	50.0	52.0	
2	6.080	6.080	0.000	95788960	50.0	50.8	
						RPD = 2.35	
23 cis-Chlordane							
1	6.315	6.315	0.000	954284839	50.0	51.7	
2	6.236	6.236	0.000	91052314	50.0	51.1	
						RPD = 1.20	
24 4,4'-DDE							
1	6.391	6.391	0.000	971166333	50.0	50.1	
2	6.419	6.419	0.000	92891506	50.0	50.1	
						RPD = 0.05	
25 Endosulfan I							
1	6.463	6.463	0.000	893535691	50.0	52.6	
2	6.295	6.295	0.000	86894002	50.0	51.3	
						RPD = 2.54	
27 Dieldrin							
1	6.716	6.716	0.000	990867407	50.0	52.5	
2	6.585	6.585	0.000	96720532	50.0	51.8	
						RPD = 1.28	
30 Endrin							
1	6.964	6.964	0.000	910359053	50.0	55.5	
2	6.906	6.906	0.000	90436590	50.0	54.9	
						RPD = 1.07	
32 4,4'-DDD							
1	7.026	7.026	0.000	797461913	50.0	53.1	
2	7.034	7.034	0.000	76716924	50.0	50.9	
						RPD = 4.24	
34 Endosulfan II							
1	7.201	7.201	0.000	824436063	50.0	53.5	
2	7.132	7.132	0.000	82767385	50.0	51.8	
						RPD = 3.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.320	7.320	0.000	754572579	50.0	56.0	
2	7.365	7.365	0.000	71175613	50.0	54.4	
						RPD = 2.99	
36 Endrin aldehyde							
1	7.645	7.645	0.000	627969605	50.0	53.3	
2	7.491	7.491	0.000	66054092	50.0	51.6	
						RPD = 3.16	
37 Methoxychlor							
1	7.824	7.824	0.000	343120456	50.0	56.0	
2	8.095	8.095	0.000	36958056	50.0	57.3	
						RPD = 2.44	
38 Mirex							
1	7.981	7.981	0.000	530457243	50.0	53.9	
2	8.286	8.286	0.000	53132170	50.0	49.1	
						RPD = 9.50	
39 Endosulfan sulfate							
1	8.102	8.102	0.000	745466915	50.0	54.7	
2	7.783	7.783	0.000	75088460	50.0	51.4	
						RPD = 6.22	
40 Endrin ketone							
1	8.395	8.395	0.000	757941915	50.0	52.9	
2	8.337	8.337	0.000	80262496	50.0	49.9	
						RPD = 5.81	
$ 41 DCB Decachlorobiphenyl							
1	9.408	9.408	0.000	447710139	50.0	50.1	
2	9.606	9.606	0.000	51056936	50.0	48.2	
						RPD = 3.86	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

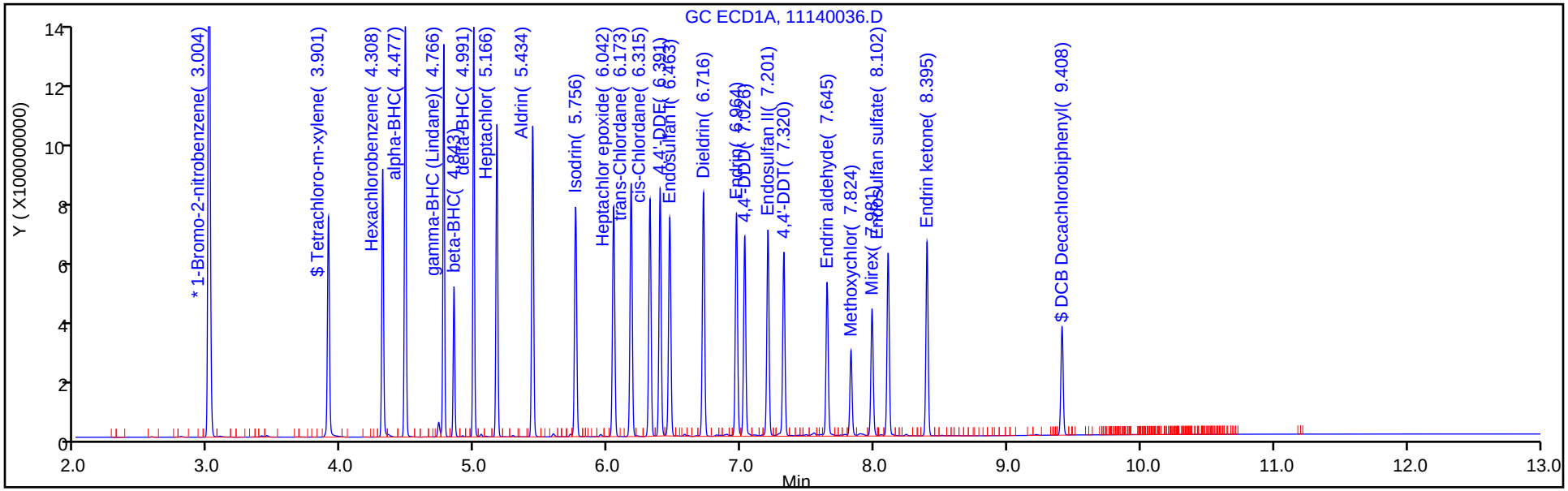
Report Date: 29-Nov-2018 14:13:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

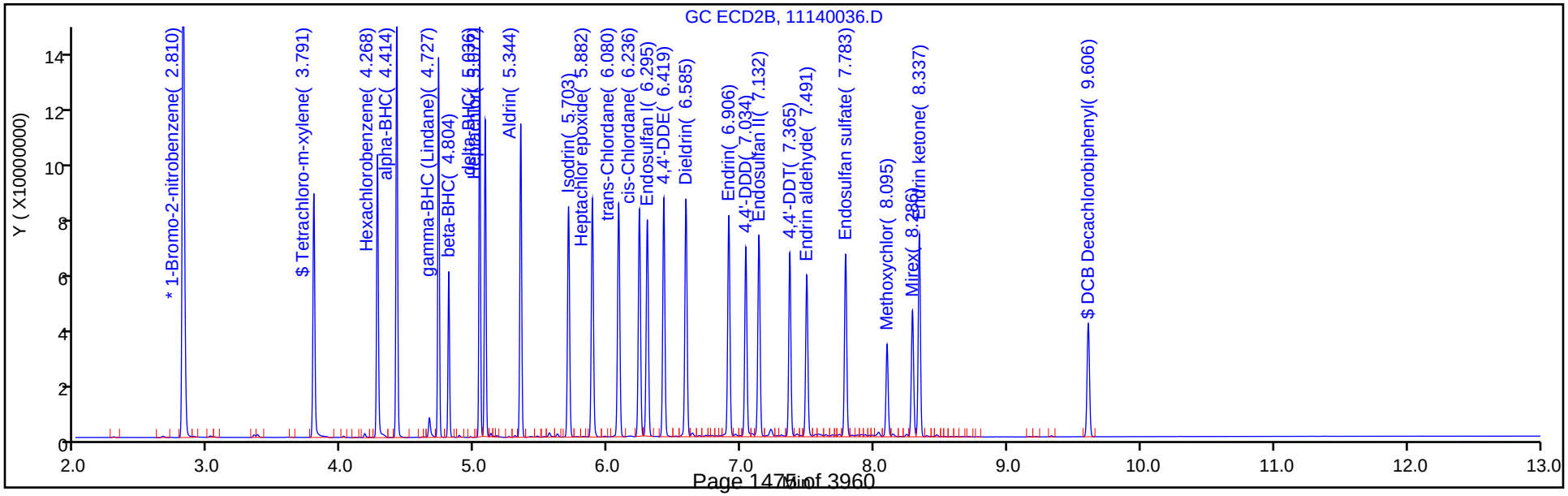
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140036.D

Injection Date:	15-Nov-2018 00:34:18	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/36 Calibration Date: 11/15/2018 00:34

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140036.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.280		49.7	50.0	-0.6	20.0
alpha-BHC	Lin2		1.757		52.9	50.0	5.8	20.0
gamma-BHC (Lindane)	Lin2		1.491		51.6	50.0	3.2	20.0
beta-BHC	Lin2		0.6279		50.8	50.0	1.6	20.0
delta-BHC	Lin2		1.504		51.4	50.0	2.7	20.0
Heptachlor	Lin2		1.290		51.6	50.0	3.3	20.0
Aldrin	Lin2		1.394		51.8	50.0	3.6	20.0
Heptachlor epoxide	Lin2		1.271		51.9	50.0	3.9	20.0
gamma-Chlordane	Lin2		1.306		50.8	50.0	1.6	20.0
alpha-Chlordane	Lin2		1.242		51.1	50.0	2.1	20.0
Endosulfan I	Lin2		1.185		51.3	50.0	2.6	20.0
4,4'-DDE	Lin2		1.267		50.1	50.0	0.2	20.0
Dieldrin	Lin2		1.319		51.8	50.0	3.6	20.0
Endrin	Lin2		1.233		54.9	50.0	9.8	20.0
4,4'-DDD	Lin2		1.046		50.9	50.0	1.7	20.0
Endosulfan II	Lin2		1.129		51.8	50.0	3.7	20.0
4,4'-DDT	Lin2		0.9706		54.4	50.0	8.7	20.0
Endrin aldehyde	Lin2		0.9008		51.6	50.0	3.3	20.0
Endosulfan sulfate	Lin2		1.024		51.4	50.0	2.7	20.0
Methoxychlor	Lin2		0.5040		57.3	50.0	14.7	20.0
Endrin ketone	Lin2		1.095		49.9	50.0	-0.2	20.0
Tetrachloro-m-xylene	Lin2		1.200		49.2	50.0	-1.7	20.0
DCB Decachlorobiphenyl	Lin2		0.6963		48.2	50.0	-3.5	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-437597/36 Calibration Date: 11/15/2018 00:34

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11140036.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.27	4.26	4.28
alpha-BHC	4.41	4.40	4.43
gamma-BHC (Lindane)	4.73	4.72	4.74
beta-BHC	4.80	4.79	4.82
delta-BHC	5.04	5.02	5.05
Heptachlor	5.08	5.07	5.09
Aldrin	5.34	5.33	5.36
Heptachlor epoxide	5.88	5.87	5.89
gamma-Chlordane	6.08	6.07	6.09
alpha-Chlordane	6.24	6.22	6.25
Endosulfan I	6.30	6.28	6.31
4,4'-DDE	6.42	6.41	6.43
Dieldrin	6.59	6.57	6.60
Endrin	6.91	6.89	6.92
4,4'-DDD	7.03	7.02	7.05
Endosulfan II	7.13	7.12	7.14
4,4'-DDT	7.37	7.35	7.38
Endrin aldehyde	7.49	7.48	7.50
Endosulfan sulfate	7.78	7.77	7.80
Methoxychlor	8.10	8.08	8.11
Endrin ketone	8.34	8.33	8.35
Tetrachloro-m-xylene	3.79	3.78	3.80
DCB Decachlorobiphenyl	9.61	9.59	9.62

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140036.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 15-Nov-2018 00:34:18 ALS Bottle#: 28 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076199-036
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:13:30 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.004	3.004	0.000	2353768572	150.0	150.0	
2	2.810	2.810	0.000	219992500	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.901	3.901	0.000	814222064	50.0	47.1	
2	3.791	3.791	0.000	87960145	50.0	49.2	
						RPD = 4.29	
5 Hexachlorobenzene							
1	4.308	4.308	0.000	870624926	50.0	48.1	
2	4.268	4.268	0.000	93885211	50.0	49.7	
						RPD = 3.29	
8 alpha-BHC							
1	4.477	4.477	0.000	1340820663	50.0	51.2	
2	4.414	4.414	0.000	128872664	50.0	52.9	
						RPD = 3.26	
9 gamma-BHC (Lindane)							
1	4.766	4.766	0.000	1143487710	50.0	51.2	
2	4.727	4.727	0.000	109322372	50.0	51.6	
						RPD = 0.81	
10 beta-BHC							
1	4.843	4.843	0.000	430900194	50.0	50.2	
2	4.804	4.804	0.000	46041919	50.0	50.8	
						RPD = 1.19	
12 delta-BHC							
1	4.991	4.991	0.000	1177975812	50.0	51.8	
2	5.036	5.036	0.000	110296171	50.0	51.4	
						RPD = 0.85	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.166	5.166	0.000	1019948250	50.0	51.5	
2	5.077	5.077	0.000	94561826	50.0	51.6	
						RPD = 0.32	
16 Aldrin							
1	5.434	5.434	0.000	1102929757	50.0	52.1	
2	5.344	5.344	0.000	102247635	50.0	51.8	
						RPD = 0.65	
18 Isodrin							
1	5.756	5.756	0.000	890687309	50.0	52.7	
2	5.703	5.703	0.000	86884494	50.0	51.8	
						RPD = 1.75	
21 Heptachlor epoxide							
1	6.042	6.042	0.000	934910348	50.0	52.1	
2	5.882	5.882	0.000	93234128	50.0	51.9	
						RPD = 0.22	
22 trans-Chlordane							
1	6.173	6.173	0.000	1005051268	50.0	52.0	
2	6.080	6.080	0.000	95788960	50.0	50.8	
						RPD = 2.35	
23 cis-Chlordane							
1	6.315	6.315	0.000	954284839	50.0	51.7	
2	6.236	6.236	0.000	91052314	50.0	51.1	
						RPD = 1.20	
24 4,4'-DDE							
1	6.391	6.391	0.000	971166333	50.0	50.1	
2	6.419	6.419	0.000	92891506	50.0	50.1	
						RPD = 0.05	
25 Endosulfan I							
1	6.463	6.463	0.000	893535691	50.0	52.6	
2	6.295	6.295	0.000	86894002	50.0	51.3	
						RPD = 2.54	
27 Dieldrin							
1	6.716	6.716	0.000	990867407	50.0	52.5	
2	6.585	6.585	0.000	96720532	50.0	51.8	
						RPD = 1.28	
30 Endrin							
1	6.964	6.964	0.000	910359053	50.0	55.5	
2	6.906	6.906	0.000	90436590	50.0	54.9	
						RPD = 1.07	
32 4,4'-DDD							
1	7.026	7.026	0.000	797461913	50.0	53.1	
2	7.034	7.034	0.000	76716924	50.0	50.9	
						RPD = 4.24	
34 Endosulfan II							
1	7.201	7.201	0.000	824436063	50.0	53.5	
2	7.132	7.132	0.000	82767385	50.0	51.8	
						RPD = 3.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.320	7.320	0.000	754572579	50.0	56.0	
2	7.365	7.365	0.000	71175613	50.0	54.4	
						RPD = 2.99	
36 Endrin aldehyde							
1	7.645	7.645	0.000	627969605	50.0	53.3	
2	7.491	7.491	0.000	66054092	50.0	51.6	
						RPD = 3.16	
37 Methoxychlor							
1	7.824	7.824	0.000	343120456	50.0	56.0	
2	8.095	8.095	0.000	36958056	50.0	57.3	
						RPD = 2.44	
38 Mirex							
1	7.981	7.981	0.000	530457243	50.0	53.9	
2	8.286	8.286	0.000	53132170	50.0	49.1	
						RPD = 9.50	
39 Endosulfan sulfate							
1	8.102	8.102	0.000	745466915	50.0	54.7	
2	7.783	7.783	0.000	75088460	50.0	51.4	
						RPD = 6.22	
40 Endrin ketone							
1	8.395	8.395	0.000	757941915	50.0	52.9	
2	8.337	8.337	0.000	80262496	50.0	49.9	
						RPD = 5.81	
$ 41 DCB Decachlorobiphenyl							
1	9.408	9.408	0.000	447710139	50.0	50.1	
2	9.606	9.606	0.000	51056936	50.0	48.2	
						RPD = 3.86	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

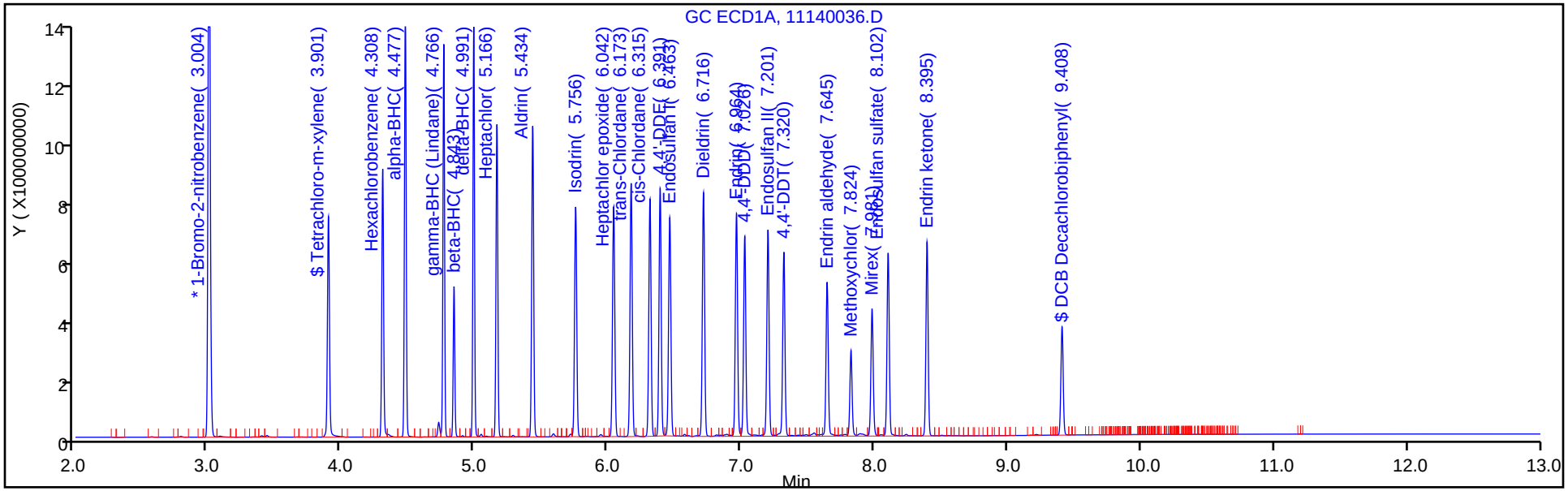
Report Date: 29-Nov-2018 14:13:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

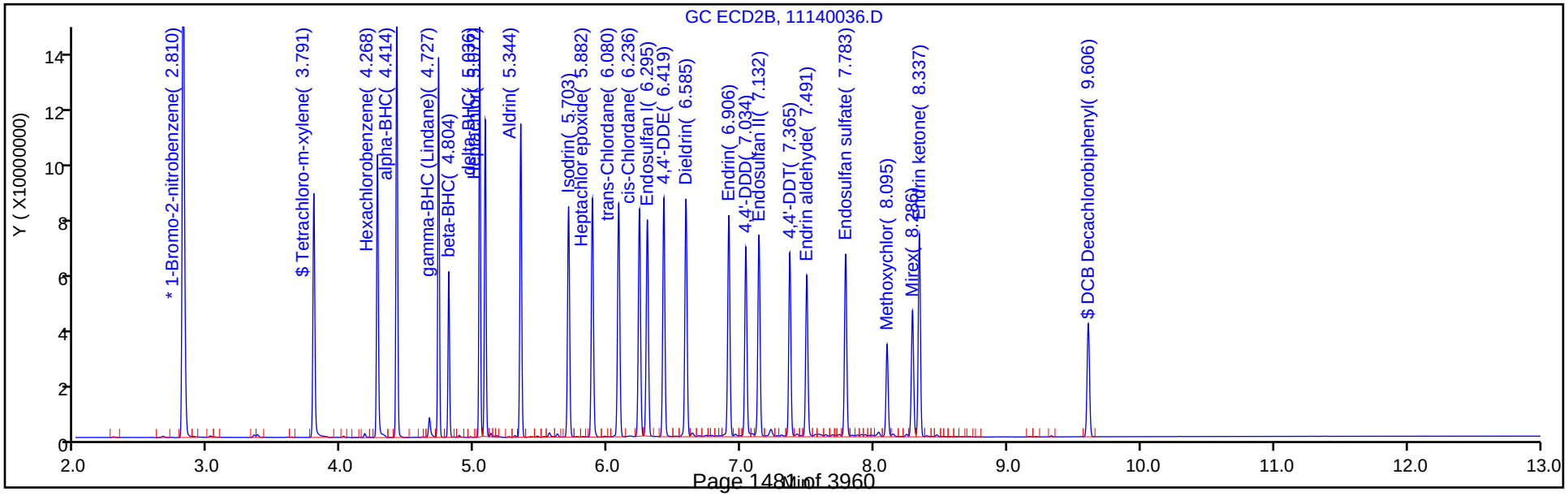
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140036.D

Injection Date:	15-Nov-2018 00:34:18	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-435801/1-A

Matrix: Water | Lab File ID: 11140015.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/01/2018 08:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 19:18

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437597 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.020	U	0.050	0.020	0.0077
72-55-9	4,4'-DDE	0.020	U	0.050	0.020	0.0075
50-29-3	4,4'-DDT	0.050	U	0.050	0.050	0.015
309-00-2	Aldrin	0.020	U	0.050	0.020	0.0059
319-84-6	alpha-BHC	0.020	U	0.050	0.020	0.0053
5103-71-9	alpha-Chlordane	0.020	U	0.050	0.020	0.0053
319-85-7	beta-BHC	0.020	U	0.050	0.020	0.0087
60-57-1	Dieldrin	0.020	U	0.050	0.020	0.0063
959-98-8	Endosulfan I	0.020	U	0.050	0.020	0.0058
33213-65-9	Endosulfan II	0.020	U	0.050	0.020	0.0070
1031-07-8	Endosulfan sulfate	0.020	U	0.050	0.020	0.0057
72-20-8	Endrin	0.020	U	0.050	0.020	0.0079
7421-93-4	Endrin aldehyde	0.020	U	0.050	0.020	0.0088
53494-70-5	Endrin ketone	0.020	U	0.050	0.020	0.0070
5103-74-2	gamma-Chlordane	0.020	U	0.050	0.020	0.0091
76-44-8	Heptachlor	0.020	U	0.050	0.020	0.0077
1024-57-3	Heptachlor epoxide	0.020	U	0.050	0.020	0.0075
72-43-5	Methoxychlor	0.050	U	0.050	0.050	0.013
8001-35-2	Toxaphene	0.80	U	2.0	0.80	0.37

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	71		34-122
877-09-8	Tetrachloro-m-xylene	58		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140015.D
Lims ID: MB 280-435801/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Nov-2018 19:18:42 ALS Bottle#: 10 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-435801/1-
Misc. Info.: 280-0076199-015
Operator ID: TEM Instrument ID: SGC_P2

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:44 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						1.92	
2						0.0148	
						RPD = 196.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.004	3.005	-0.001	2303108317	150.0	150.0	
2	2.811	2.811	0.000	214122130	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.901	3.903	-0.002	190046872	20.0	11.5	
2	3.791	3.795	-0.004	25960834	20.0	14.5	
						RPD = 22.59	
5 Hexachlorobenzene							
1		4.312				ND	
2		4.273					
6 Diallate							
1		4.336				ND	
2		4.226					
7 Propachlor							
1		4.477				ND	
2		4.104					
8 alpha-BHC							
1		4.482				ND	
2		4.418					
9 gamma-BHC (Lindane)							
1	4.769	4.770	-0.001	4409726		0.7008	
2	4.725	4.732	-0.007	547760		0.0767	
						RPD = 160.54	
10 beta-BHC							
1		4.847				ND	
2		4.808					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
11 2,4,5-Trichlorophenol							
1		4.861				ND	
2		4.772					
12 delta-BHC							
1	4.983	4.995	-0.012	13462283		1.22	
2	5.034	5.041	-0.007	121886		-0.0619	
						RPD = 221.42	
14 Chlordane (technical)							
1		5.102				ND	
1		5.568					
1		6.179					
1		6.317					
1		7.132					
2		4.969					
2		5.489					
2		6.087					
2		6.243					
2		7.188					
13 Technical Chlordane							
1		5.102				ND	
1		5.568					
1		6.179					
1		6.317					
1		7.132					
2		4.969					
2		5.489					
2		6.087					
2		6.243					
2		7.188					
15 Heptachlor							
1		5.169				ND	
2		5.082					
16 Aldrin							
1		5.437				ND	
2		5.350					
17 Chlorpyrifos							
1	5.659	5.669	-0.010	1924635		-0.6795	
2	5.563	5.571	-0.008	222177		-2.17	
						RPD = -104.56	
LOD = 0.002000							
18 Isodrin							
1		5.762				ND	
2		5.710					
19 Dicofol							
1		5.800				ND	
2		5.671					
20 2,4'-DDE							
1		6.029				ND	
2		6.094					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
21 Heptachlor epoxide							
1		6.048				ND	
2		5.889					
22 trans-Chlordane							
1		6.178				ND	
2		6.087					
28 Toxaphene							
1		6.216				ND	
1		6.821					
1		7.495					
1		7.852					
1		8.169					
2		5.735					
2		7.090					
2		7.231					
2		7.745					
2		8.040					
23 cis-Chlordane							
1		6.320				ND	
2		6.243					
24 4,4'-DDE							
1		6.396				ND	
2		6.426					
25 Endosulfan I							
1	6.465	6.468	-0.003	948040		0.2614	
2	6.313	6.302	0.011	219270		-0.5392	
						RPD = -576.51	
26 2,4'-DDD							
1		6.580				ND	
2		6.640					
27 Dieldrin							
1		6.722				ND	
2		6.593					
29 2,4'-DDT							
1		6.848				ND	
2		6.963					
30 Endrin							
1		6.969				ND	
2		6.915					
31 Kepone							
1		7.011				ND	
2		7.031					
32 4,4'-DDD							
1		7.031				ND	
2		7.042					
33 Chlorobenzilate							
1		7.044				ND	
2		6.909					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1		7.207				ND	
2		7.141					
35 4,4'-DDT							
1		7.325				ND	
2		7.372					
36 Endrin aldehyde							
1		7.650				ND	
2		7.500					
37 Methoxychlor							
1		7.830				ND	
2		8.103					
38 Mirex							
1		7.987				ND	
2		8.294					
39 Endosulfan sulfate							
1		8.108				ND	
2		7.792					
40 Endrin ketone							
1		8.400				ND	
2		8.345					
$ 41 DCB Decachlorobiphenyl							
1	9.407	9.413	-0.006	124300145	20.0	14.1	
2	9.606	9.614	-0.008	16231664	20.0	15.1	
						RPD = 6.58	
42 Tris(2,3-dibromopropyl)phosphate							
1		11.209				ND	
2		11.395					
S 3 Endosulfan, Total							
1						0.2614	
2						-0.5392	
						RPD = -576.51	

LOD = 0.002000

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

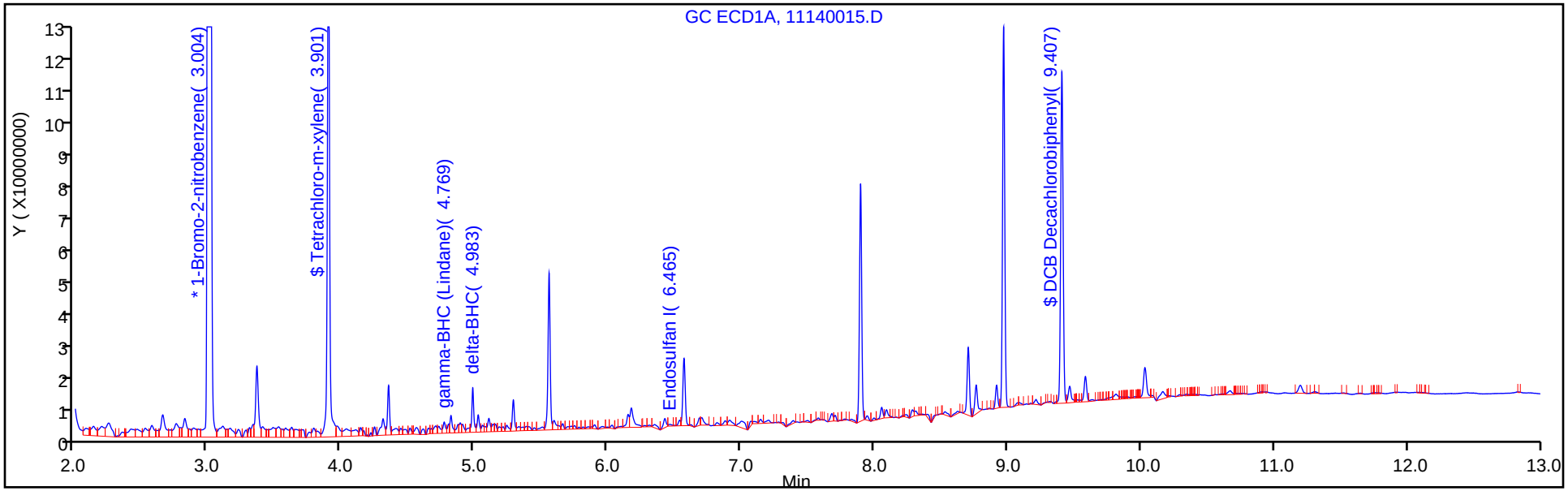
Report Date: 29-Nov-2018 14:12:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

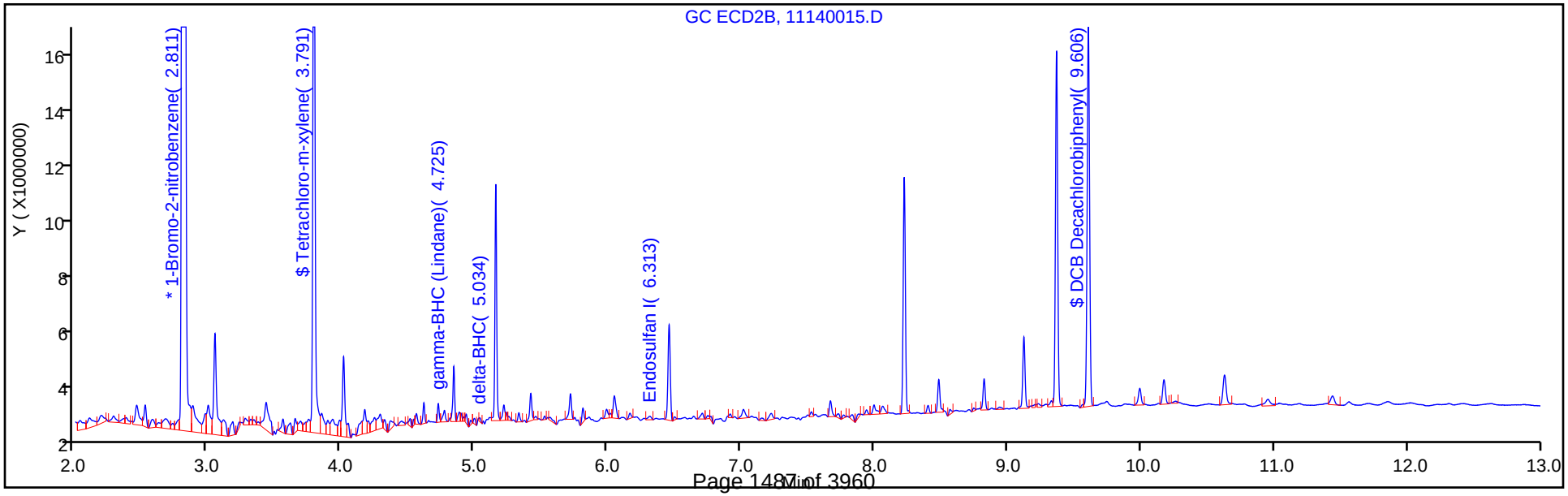
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140015.D

Injection Date:	14-Nov-2018 19:18:42	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	MB 280-435801/1-A			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140015.D				
Lims ID:	MB 280-435801/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	14-Nov-2018 19:18:42	ALS Bottle#:	10	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-435801/1-				
Misc. Info.:	280-0076199-015				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	29-Nov-2018 14:12:44	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0313				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	11.5	57.64
$ 41 DCB Decachlorobiphenyl	20.0	14.1	70.57

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	14.5	72.32
$ 41 DCB Decachlorobiphenyl	20.0	15.1	75.37

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-435801/1-A

Matrix: Water | Lab File ID: 11140015.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/01/2018 08:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 19:18

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437597 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
319-86-8	delta-BHC	0.020	U	0.050	0.020	0.0058
58-89-9	gamma-BHC (Lindane)	0.020	U	0.050	0.020	0.0069

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140015.D
Lims ID: MB 280-435801/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Nov-2018 19:18:42 ALS Bottle#: 10 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-435801/1-
Misc. Info.: 280-0076199-015
Operator ID: TEM Instrument ID: SGC_P2

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:44 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						1.92	
2						0.0148	
						RPD = 196.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.004	3.005	-0.001	2303108317	150.0	150.0	
2	2.811	2.811	0.000	214122130	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.901	3.903	-0.002	190046872	20.0	11.5	
2	3.791	3.795	-0.004	25960834	20.0	14.5	
						RPD = 22.59	
5 Hexachlorobenzene							
1		4.312				ND	
2		4.273					
6 Diallate							
1		4.336				ND	
2		4.226					
7 Propachlor							
1		4.477				ND	
2		4.104					
8 alpha-BHC							
1		4.482				ND	
2		4.418					
9 gamma-BHC (Lindane)							
1	4.769	4.770	-0.001	4409726		0.7008	
2	4.725	4.732	-0.007	547760		0.0767	
						RPD = 160.54	
10 beta-BHC							
1		4.847				ND	
2		4.808					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
11 2,4,5-Trichlorophenol							
1		4.861				ND	
2		4.772					
12 delta-BHC							
1	4.983	4.995	-0.012	13462283		1.22	
2	5.034	5.041	-0.007	121886		-0.0619	
						RPD = 221.42	
14 Chlordane (technical)							
1		5.102				ND	
1		5.568					
1		6.179					
1		6.317					
1		7.132					
2		4.969					
2		5.489					
2		6.087					
2		6.243					
2		7.188					
13 Technical Chlordane							
1		5.102				ND	
1		5.568					
1		6.179					
1		6.317					
1		7.132					
2		4.969					
2		5.489					
2		6.087					
2		6.243					
2		7.188					
15 Heptachlor							
1		5.169				ND	
2		5.082					
16 Aldrin							
1		5.437				ND	
2		5.350					
17 Chlorpyrifos							
1	5.659	5.669	-0.010	1924635		-0.6795	
2	5.563	5.571	-0.008	222177		-2.17	
						RPD = -104.56	
LOD = 0.002000							
18 Isodrin							
1		5.762				ND	
2		5.710					
19 Dicofol							
1		5.800				ND	
2		5.671					
20 2,4'-DDE							
1		6.029				ND	
2		6.094					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
21 Heptachlor epoxide							
1		6.048				ND	
2		5.889					
22 trans-Chlordane							
1		6.178				ND	
2		6.087					
28 Toxaphene							
1		6.216				ND	
1		6.821					
1		7.495					
1		7.852					
1		8.169					
2		5.735					
2		7.090					
2		7.231					
2		7.745					
2		8.040					
23 cis-Chlordane							
1		6.320				ND	
2		6.243					
24 4,4'-DDE							
1		6.396				ND	
2		6.426					
25 Endosulfan I							
1	6.465	6.468	-0.003	948040		0.2614	
2	6.313	6.302	0.011	219270		-0.5392	
						RPD = -576.51	
26 2,4'-DDD							
1		6.580				ND	
2		6.640					
27 Dieldrin							
1		6.722				ND	
2		6.593					
29 2,4'-DDT							
1		6.848				ND	
2		6.963					
30 Endrin							
1		6.969				ND	
2		6.915					
31 Kepone							
1		7.011				ND	
2		7.031					
32 4,4'-DDD							
1		7.031				ND	
2		7.042					
33 Chlorobenzilate							
1		7.044				ND	
2		6.909					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1		7.207				ND	
2		7.141					
35 4,4'-DDT							
1		7.325				ND	
2		7.372					
36 Endrin aldehyde							
1		7.650				ND	
2		7.500					
37 Methoxychlor							
1		7.830				ND	
2		8.103					
38 Mirex							
1		7.987				ND	
2		8.294					
39 Endosulfan sulfate							
1		8.108				ND	
2		7.792					
40 Endrin ketone							
1		8.400				ND	
2		8.345					
$ 41 DCB Decachlorobiphenyl							
1	9.407	9.413	-0.006	124300145	20.0	14.1	
2	9.606	9.614	-0.008	16231664	20.0	15.1	
						RPD = 6.58	
42 Tris(2,3-dibromopropyl)phosphate							
1		11.209				ND	
2		11.395					
S 3 Endosulfan, Total							
1						0.2614	
2						-0.5392	
						RPD = -576.51	

LOD = 0.002000

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

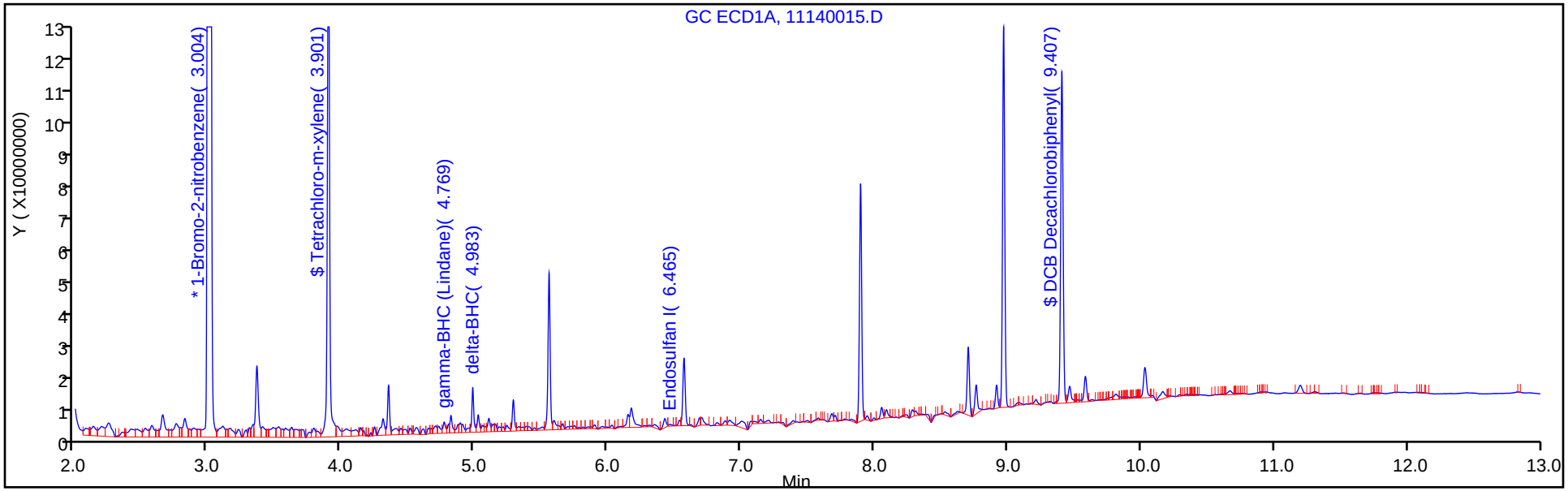
Report Date: 29-Nov-2018 14:12:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

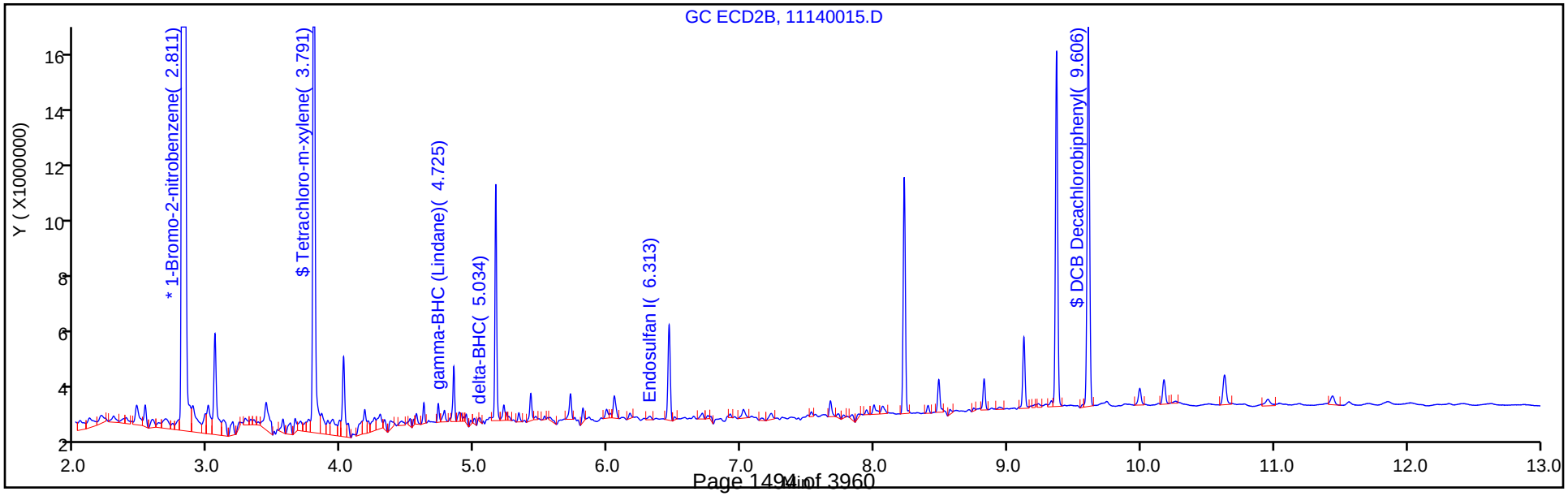
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140015.D

Injection Date:	14-Nov-2018 19:18:42	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	MB 280-435801/1-A			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140015.D				
Lims ID:	MB 280-435801/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	14-Nov-2018 19:18:42	ALS Bottle#:	10	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-435801/1-				
Misc. Info.:	280-0076199-015				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	29-Nov-2018 14:12:44	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0313				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	11.5	57.64
$ 41 DCB Decachlorobiphenyl	20.0	14.1	70.57

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	14.5	72.32
$ 41 DCB Decachlorobiphenyl	20.0	15.1	75.37

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-435801/2-A

Matrix: Water | Lab File ID: 11140016.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/01/2018 08:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 19:36

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437597 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.402		0.050	0.020	0.0077
72-55-9	4,4'-DDE	0.313		0.050	0.020	0.0075
50-29-3	4,4'-DDT	0.398		0.050	0.050	0.015
309-00-2	Aldrin	0.292		0.050	0.020	0.0059
319-84-6	alpha-BHC	0.380		0.050	0.020	0.0053
5103-71-9	alpha-Chlordane	0.394		0.050	0.020	0.0053
319-85-7	beta-BHC	0.362		0.050	0.020	0.0087
319-86-8	delta-BHC	0.403		0.050	0.020	0.0058
60-57-1	Dieldrin	0.429		0.050	0.020	0.0063
959-98-8	Endosulfan I	0.404		0.050	0.020	0.0058
33213-65-9	Endosulfan II	0.406		0.050	0.020	0.0070
1031-07-8	Endosulfan sulfate	0.455		0.050	0.020	0.0057
72-20-8	Endrin	0.415		0.050	0.020	0.0079
7421-93-4	Endrin aldehyde	0.295		0.050	0.020	0.0088
53494-70-5	Endrin ketone	0.414		0.050	0.020	0.0070
58-89-9	gamma-BHC (Lindane)	0.387		0.050	0.020	0.0069
5103-74-2	gamma-Chlordane	0.380		0.050	0.020	0.0091
76-44-8	Heptachlor	0.317		0.050	0.020	0.0077
1024-57-3	Heptachlor epoxide	0.380		0.050	0.020	0.0075
72-43-5	Methoxychlor	0.458		0.050	0.050	0.013

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	70		34-122
877-09-8	Tetrachloro-m-xylene	48		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140016.D
Lims ID: LCS 280-435801/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Nov-2018 19:36:11 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-435801/2
Misc. Info.: 280-0076199-016
Operator ID: TEM Instrument ID: SGC_P2

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:46 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	2344508294	150.0	150.0	
2	2.811	2.811	0.000	216972951	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.900	3.903	-0.003	161144415	20.0	9.67	
2	3.792	3.795	-0.003	20346749	20.0	11.0	
						RPD = 13.28	
5 Hexachlorobenzene							
1	4.307	4.312	-0.005	294051050	50.0	16.5	
2	4.269	4.273	-0.004	35134145	50.0	18.5	
						RPD = 11.44	
8 alpha-BHC							
1	4.478	4.482	-0.004	986541065	50.0	38.0	
2	4.414	4.418	-0.004	88780508	50.0	36.8	
						RPD = 3.08	
9 gamma-BHC (Lindane)							
1	4.766	4.770	-0.004	859378865	50.0	38.7	
2	4.728	4.732	-0.004	88015115	50.0	42.1	
						RPD = 8.28	
10 beta-BHC							
1	4.843	4.847	-0.004	310223154	50.0	36.2	
2	4.804	4.808	-0.004	37609554	50.0	42.0	
						RPD = 14.79	
12 delta-BHC							
1	4.991	4.995	-0.004	910729786	50.0	40.3	
2	5.037	5.041	-0.004	88484064	50.0	41.8	
						RPD = 3.44	
15 Heptachlor							
1	5.164	5.169	-0.005	621275155	50.0	31.7	
2	5.078	5.082	-0.004	64075630	50.0	35.4	
						RPD = 11.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
16 Aldrin							
1	5.433	5.437	-0.004	610073880	50.0	29.2	
2	5.345	5.350	-0.005	67364819	50.0	34.5	
						RPD = 16.75	
21 Heptachlor epoxide							
1	6.041	6.048	-0.007	678261460	50.0	38.0	
2	5.883	5.889	-0.006	75741468	50.0	42.7	
						RPD = 11.65	
22 trans-Chlordane							
1	6.173	6.178	-0.005	728438865	50.0	38.0	
2	6.080	6.087	-0.007	76554605	50.0	41.1	
						RPD = 7.94	
23 cis-Chlordane							
1	6.314	6.320	-0.006	723322163	50.0	39.4	
2	6.236	6.243	-0.007	72899203	50.0	41.4	
						RPD = 4.76	
24 4,4'-DDE							
1	6.390	6.396	-0.006	601139506	50.0	31.3	
2	6.419	6.426	-0.007	74117305	50.0	40.5	
						RPD = 25.48	
25 Endosulfan I							
1	6.462	6.468	-0.006	682011006	50.0	40.4	
2	6.295	6.302	-0.007	71949846	50.0	43.0	
						RPD = 6.21	
27 Dieldrin							
1	6.716	6.722	-0.006	805825622	50.0	42.9	
2	6.585	6.593	-0.008	80317956	50.0	43.6	
						RPD = 1.54	
30 Endrin							
1	6.964	6.969	-0.005	675595194	50.0	41.5	
2	6.908	6.915	-0.007	74178693	50.0	45.6	
						RPD = 9.54	
32 4,4'-DDD							
1	7.024	7.031	-0.007	600634453	50.0	40.2	
2	7.035	7.042	-0.007	61982786	50.0	41.6	
						RPD = 3.37	
34 Endosulfan II							
1	7.199	7.207	-0.008	621533379	50.0	40.6	
2	7.134	7.141	-0.007	63126244	50.0	39.9	
						RPD = 1.62	
35 4,4'-DDT							
1	7.318	7.325	-0.007	531392170	50.0	39.8	
2	7.366	7.372	-0.006	59064637	50.0	45.8	
						RPD = 13.87	
36 Endrin aldehyde							
1	7.644	7.650	-0.006	345333051	50.0	29.5	
2	7.493	7.500	-0.007	42378301	50.0	33.3	
						RPD = 12.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
37 Methoxychlor							
1	7.823	7.830	-0.007	279502677	50.0	45.8	
2	8.095	8.103	-0.008	30139175	50.0	47.3	
						RPD = 3.36	
39 Endosulfan sulfate							
1	8.103	8.108	-0.005	617215061	50.0	45.5	
2	7.784	7.792	-0.008	60808383	50.0	42.0	
						RPD = 7.85	
40 Endrin ketone							
1	8.394	8.400	-0.006	590244443	50.0	41.4	
2	8.337	8.345	-0.008	64682401	50.0	40.7	
						RPD = 1.78	
$ 41 DCB Decachlorobiphenyl							
1	9.407	9.413	-0.006	125237753	20.0	14.0	
2	9.605	9.614	-0.009	16261506	20.0	14.9	
						RPD = 6.41	

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

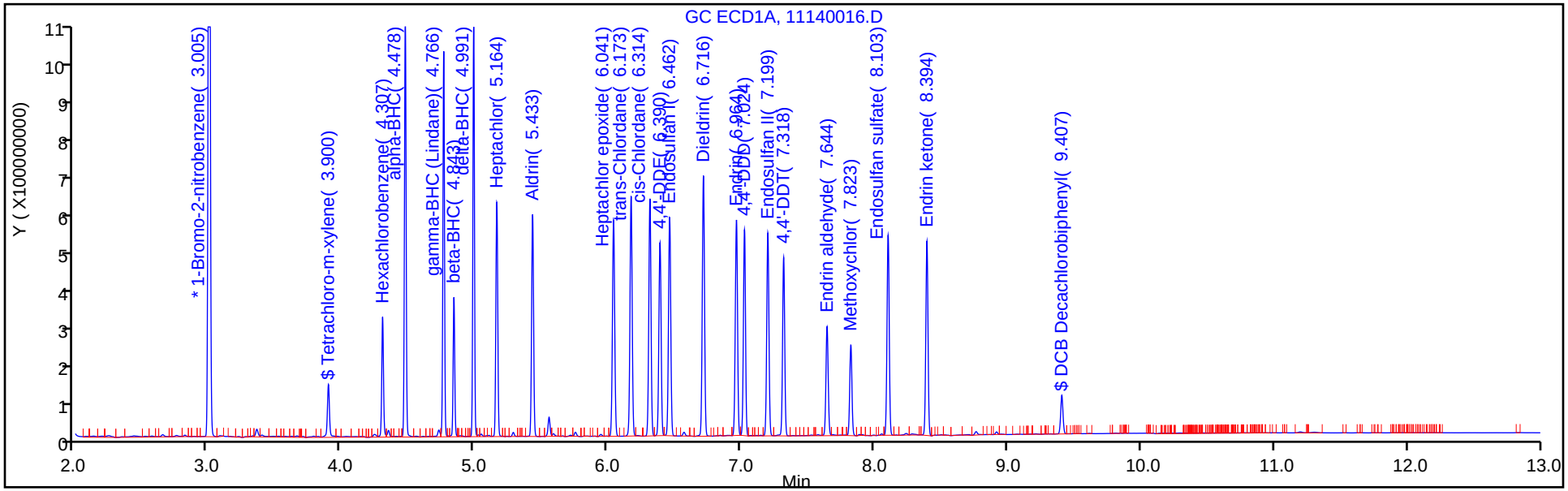
Report Date: 29-Nov-2018 14:12:47 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

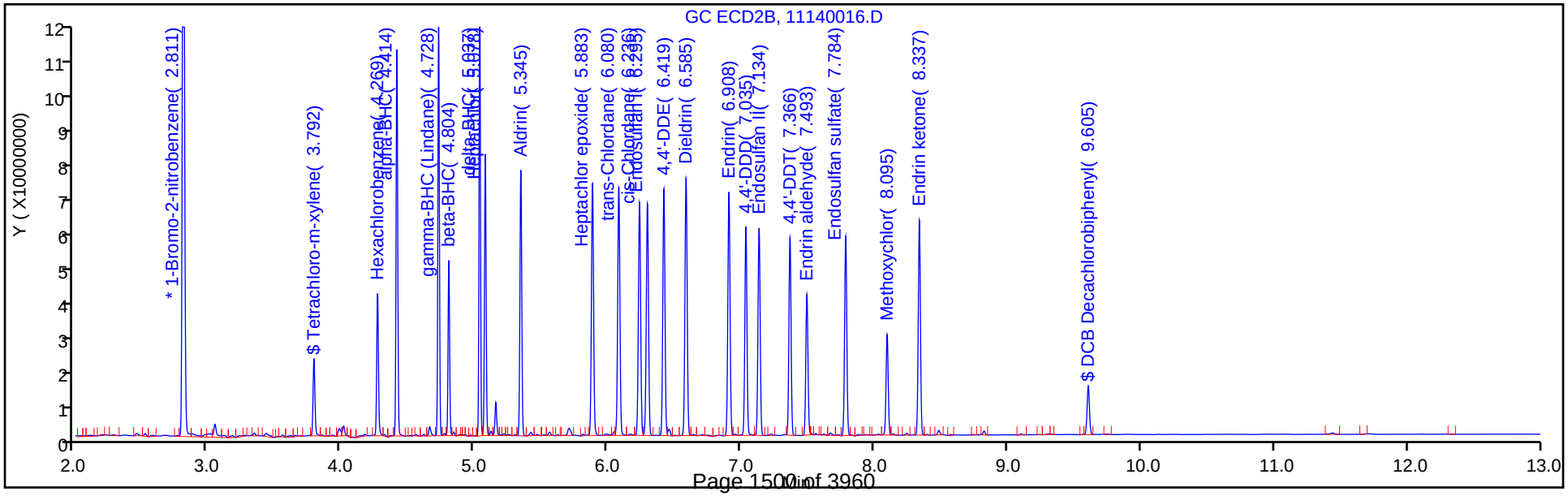
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140016.D

Injection Date:	14-Nov-2018 19:36:11	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LCS 280-435801/2-A			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140016.D				
Lims ID:	LCS 280-435801/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	14-Nov-2018 19:36:11	ALS Bottle#:	11	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-435801/2				
Misc. Info.:	280-0076199-016				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	29-Nov-2018 14:12:46	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0313				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	9.67	48.34
$ 41 DCB Decachlorobiphenyl	20.0	14.0	69.84

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	11.0	55.21
$ 41 DCB Decachlorobiphenyl	20.0	14.9	74.46

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-435801/3-A

Matrix: Water | Lab File ID: 11140017.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/01/2018 08:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 19:53

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP1 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437597 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
8001-35-2	Toxaphene	1.13	J	2.0	0.80	0.37

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	68		34-122
877-09-8	Tetrachloro-m-xylene	44		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140017.D
Lims ID: LCS 280-435801/3-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Nov-2018 19:53:48 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-435801/3
Misc. Info.: 280-0076199-017
Operator ID: TEM Instrument ID: SGC_P2

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 29-Nov-2018 14:12:48 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0313

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.007	3.005	0.002	2419130566	150.0	150.0	
2	2.813	2.811	0.002	222829089	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.901	3.903	-0.002	151512909	20.0	8.84	
2	3.792	3.795	-0.003	22401318	20.0	11.9	
						RPD = 29.34	
28 Toxaphene							
1	6.224	6.216	0.008	1972342	200.0	52.0	
1	6.815	6.821	-0.006	9357722	200.0	78.3	
1	0.000	7.495	-7.495	0	200.0	0	
1	7.851	7.852	-0.001	6250062	200.0	122.0	
1	8.170	8.169	0.001	13118628	200.0	200.1	
		Average of Peak Amounts =				113.1	
2	0.000	5.735	-5.735	0	200.0	0	
2	7.081	7.090	-0.009	4682928	200.0	142.4	
2	7.221	7.231	-0.010	13276492	200.0	157.4	
2	0.000	7.745	-7.745	0	200.0	0	
2	8.031	8.040	-0.009	8726172	200.0	185.7	
		Average of Peak Amounts =				161.8	
						RPD = 35.47	
$ 41 DCB Decachlorobiphenyl							
1	9.406	9.413	-0.007	125438505	20.0	13.6	
2	9.605	9.614	-0.009	16647719	20.0	14.8	
						RPD = 9.07	

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

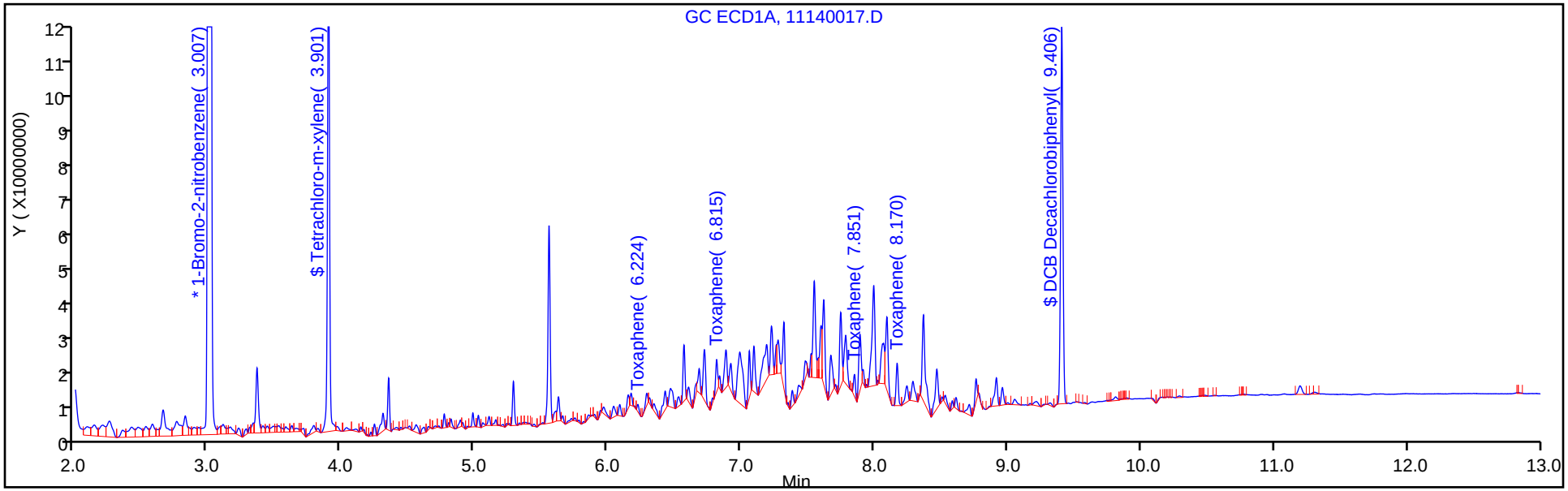
Report Date: 29-Nov-2018 14:12:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

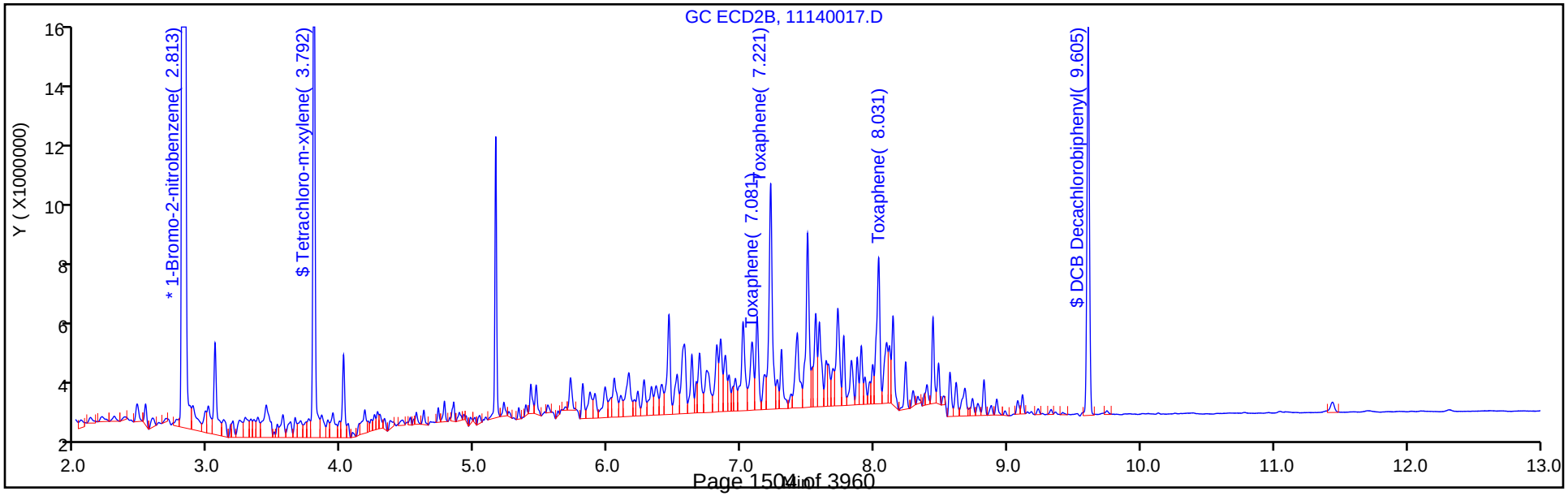
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140017.D

Injection Date:	14-Nov-2018 19:53:48	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LCS 280-435801/3-A			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140017.D				
Lims ID:	LCS 280-435801/3-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	14-Nov-2018 19:53:48	ALS Bottle#:	12	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-435801/3				
Misc. Info.:	280-0076199-017				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	29-Nov-2018 14:12:48	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0313				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	8.84	44.22
$ 41 DCB Decachlorobiphenyl	20.0	13.6	67.77

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	11.9	59.42
$ 41 DCB Decachlorobiphenyl	20.0	14.8	74.21

Report Date: 29-Nov-2018 14:12:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181114-76199.b\11140017.D

Injection Date: 14-Nov-2018 19:53:48 Instrument ID: SGC_P2

Lims ID: LCS 280-435801/3-A

Client ID:

Operator ID: TEM ALS Bottle#: 12 Worklist Smp#: 17

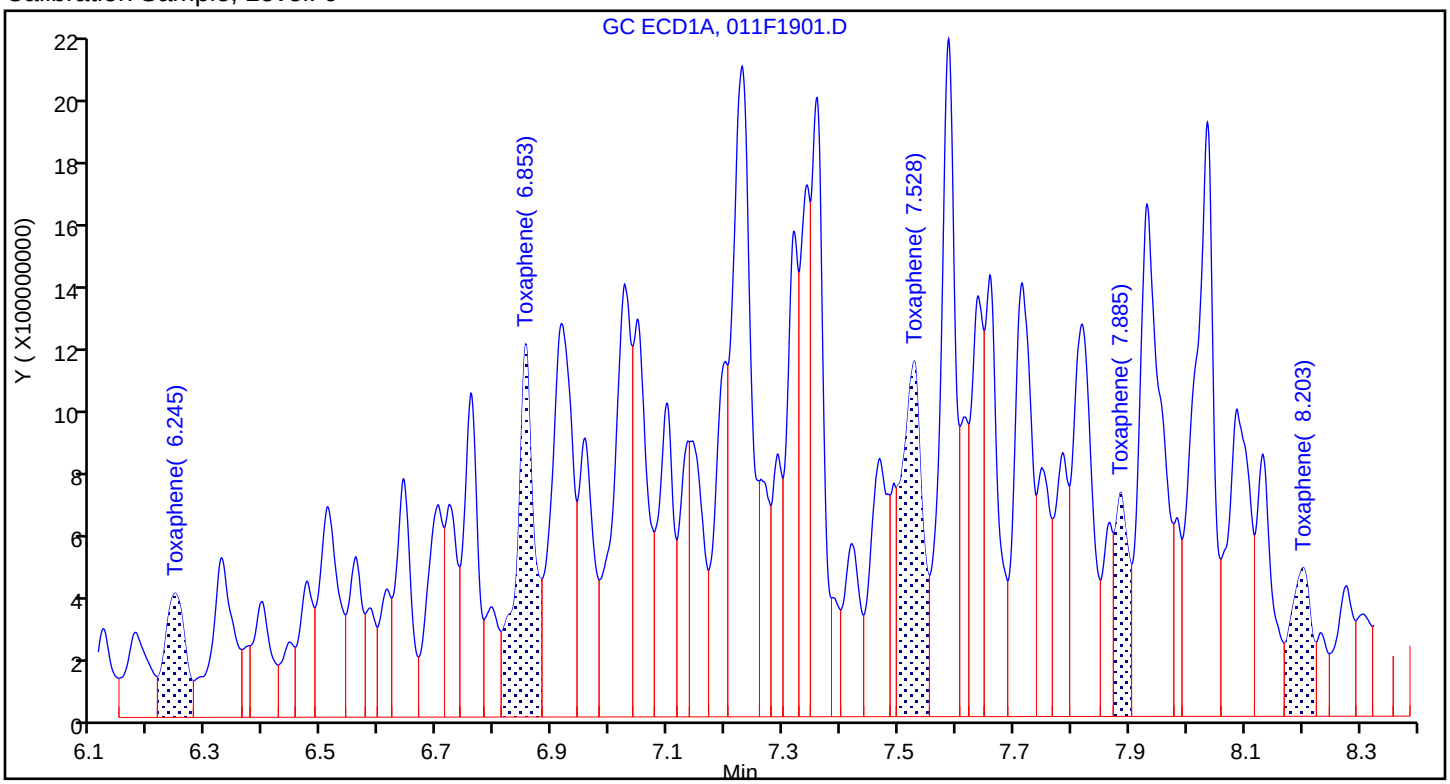
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

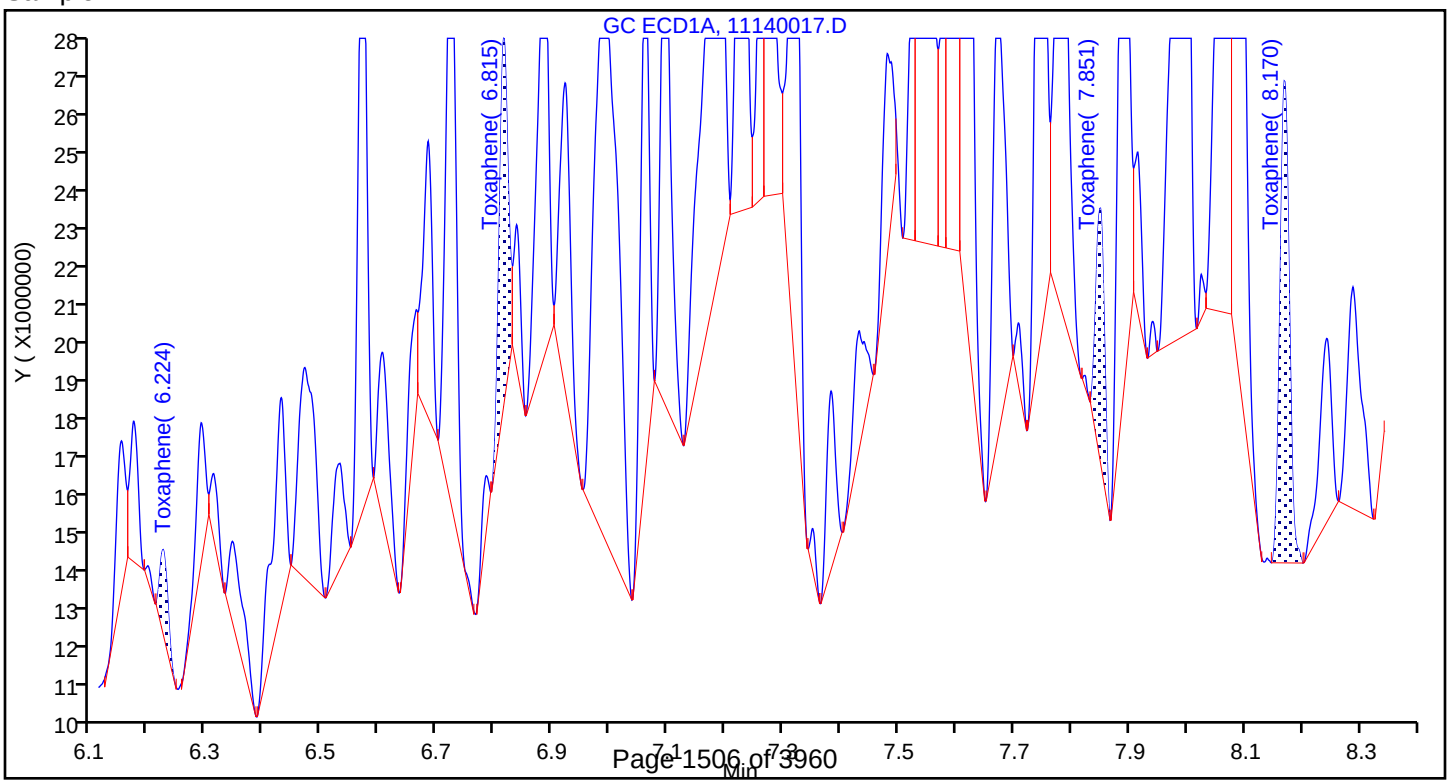
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2

Calibration Sample, Level: 6



Sample



PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 280-433303/6		10/13/2018 13:16	1		CLP1 0.32(mm)
PEM 280-433303/6		10/13/2018 13:16	1		CLP2 0.32(mm)
STD7 280-433303/9 IC		10/13/2018 14:08	1		CLP1 0.32(mm)
STD7 280-433303/9 IC		10/13/2018 14:08	1		CLP2 0.32(mm)
STD6 280-433303/10 IC		10/13/2018 14:26	1		CLP1 0.32(mm)
STD6 280-433303/10 IC		10/13/2018 14:26	1		CLP2 0.32(mm)
STD5 280-433303/11 IC		10/13/2018 14:43	1		CLP1 0.32(mm)
STD5 280-433303/11 IC		10/13/2018 14:43	1		CLP2 0.32(mm)
STD4 280-433303/12 IC		10/13/2018 15:01	1		CLP1 0.32(mm)
STD4 280-433303/12 IC		10/13/2018 15:01	1		CLP2 0.32(mm)
STD3 280-433303/13 IC		10/13/2018 15:18	1		CLP1 0.32(mm)
STD3 280-433303/13 IC		10/13/2018 15:18	1		CLP2 0.32(mm)
STD2 280-433303/14 IC		10/13/2018 15:35	1		CLP1 0.32(mm)
STD2 280-433303/14 IC		10/13/2018 15:35	1		CLP2 0.32(mm)
STD1 280-433303/15 IC		10/13/2018 15:53	1		CLP1 0.32(mm)
STD1 280-433303/15 IC		10/13/2018 15:53	1		CLP2 0.32(mm)
STD6 280-433303/16 IC		10/13/2018 16:10	1	011F1901.D	CLP1 0.32(mm)
STD6 280-433303/16 IC		10/13/2018 16:10	1	011F1901.D	CLP2 0.32(mm)
STD5 280-433303/17 IC		10/13/2018 16:28	1	012F2001.D	CLP1 0.32(mm)
STD5 280-433303/17 IC		10/13/2018 16:28	1	012F2001.D	CLP2 0.32(mm)
STD4 280-433303/18 IC		10/13/2018 16:45	1	013F2101.D	CLP1 0.32(mm)
STD4 280-433303/18 IC		10/13/2018 16:45	1	013F2101.D	CLP2 0.32(mm)
STD3 280-433303/19 IC		10/13/2018 17:03	1	014F2201.D	CLP1 0.32(mm)
STD3 280-433303/19 IC		10/13/2018 17:03	1	014F2201.D	CLP2 0.32(mm)
STD2 280-433303/20 IC		10/13/2018 17:20	1	015F2301.D	CLP1 0.32(mm)
STD2 280-433303/20 IC		10/13/2018 17:20	1	015F2301.D	CLP2 0.32(mm)
STD1 280-433303/21 IC		10/13/2018 17:37	1	016F2401.D	CLP1 0.32(mm)
STD1 280-433303/21 IC		10/13/2018 17:37	1	016F2401.D	CLP2 0.32(mm)
STD5 280-433303/22 IC		10/13/2018 17:55	1		CLP1 0.32(mm)
STD5 280-433303/22 IC		10/13/2018 17:55	1		CLP2 0.32(mm)
STD4 280-433303/23 IC		10/13/2018 18:12	1		CLP1 0.32(mm)
STD4 280-433303/23 IC		10/13/2018 18:12	1		CLP2 0.32(mm)
STD3 280-433303/24 IC		10/13/2018 18:30	1		CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD3 280-433303/24 IC		10/13/2018 18:30	1		CLP2 0.32(mm)
STD2 280-433303/25 IC		10/13/2018 18:47	1		CLP1 0.32(mm)
STD2 280-433303/25 IC		10/13/2018 18:47	1		CLP2 0.32(mm)
STD1 280-433303/26 IC		10/13/2018 19:05	1		CLP1 0.32(mm)
STD1 280-433303/26 IC		10/13/2018 19:05	1		CLP2 0.32(mm)
STD6 280-433303/27 IC		10/13/2018 19:22	1	022F3001.D	CLP1 0.32(mm)
STD6 280-433303/27 IC		10/13/2018 19:22	1	022F3001.D	CLP2 0.32(mm)
STD5 280-433303/28 IC		10/13/2018 19:39	1	023F3101.D	CLP1 0.32(mm)
STD5 280-433303/28 IC		10/13/2018 19:39	1	023F3101.D	CLP2 0.32(mm)
STD4 280-433303/29 ICIS		10/13/2018 19:57	1	024F3201.D	CLP1 0.32(mm)
STD4 280-433303/29 ICIS		10/13/2018 19:57	1	024F3201.D	CLP2 0.32(mm)
STD3 280-433303/30 IC		10/13/2018 20:14	1	025F3301.D	CLP1 0.32(mm)
STD3 280-433303/30 IC		10/13/2018 20:14	1	025F3301.D	CLP2 0.32(mm)
STD2 280-433303/31 IC		10/13/2018 20:32	1	026F3401.D	CLP1 0.32(mm)
STD2 280-433303/31 IC		10/13/2018 20:32	1	026F3401.D	CLP2 0.32(mm)
STD1 280-433303/32 IC		10/13/2018 20:49	1	027F3501.D	CLP1 0.32(mm)
STD1 280-433303/32 IC		10/13/2018 20:49	1	027F3501.D	CLP2 0.32(mm)
ICV 280-433303/33		10/13/2018 21:07	1	028F3601.D	CLP1 0.32(mm)
ICV 280-433303/33		10/13/2018 21:07	1	028F3601.D	CLP2 0.32(mm)
ICV 280-433303/34		10/13/2018 21:24	1	029F3701.D	CLP1 0.32(mm)
ICV 280-433303/34		10/13/2018 21:24	1	029F3701.D	CLP2 0.32(mm)
ICV 280-433303/35		10/13/2018 21:41	1	030F3801.D	CLP1 0.32(mm)
ICV 280-433303/35		10/13/2018 21:41	1	030F3801.D	CLP2 0.32(mm)
ICV 280-433303/36		10/13/2018 21:59	1	031F3901.D	CLP1 0.32(mm)
ICV 280-433303/36		10/13/2018 21:59	1	031F3901.D	CLP2 0.32(mm)
PEM 280-433303/37		10/13/2018 22:16	1		CLP1 0.32(mm)
PEM 280-433303/37		10/13/2018 22:16	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 22:34	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 22:34	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 22:51	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 22:51	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:08	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:08	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:26	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:26	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:43	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:43	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:00	1		CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		10/14/2018 00:00	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:18	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:18	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:35	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:35	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:53	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:53	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:10	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:10	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:27	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:27	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:45	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:45	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:02	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:02	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:19	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:19	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:37	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:37	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:54	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:54	1		CLP2 0.32(mm)
CCV 280-433303/54		10/14/2018 03:11	1		CLP1 0.32(mm)
CCV 280-433303/54		10/14/2018 03:11	1		CLP2 0.32(mm)
CCV 280-433303/55		10/14/2018 03:29	1		CLP1 0.32(mm)
CCV 280-433303/55		10/14/2018 03:29	1		CLP2 0.32(mm)
CCV 280-433303/56		10/14/2018 03:46	1		CLP1 0.32(mm)
CCV 280-433303/56		10/14/2018 03:46	1		CLP2 0.32(mm)
CCV 280-433303/57		10/14/2018 04:03	1		CLP1 0.32(mm)
CCV 280-433303/57		10/14/2018 04:03	1		CLP2 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 11/14/2018 16:40

Analysis Batch Number: 437597 End Date: 11/15/2018 03:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 280-437597/7		11/14/2018 16:40	1	11140007.D	CLP1 0.32(mm)
PEM 280-437597/7		11/14/2018 16:40	1	11140007.D	CLP2 0.32(mm)
CCV 280-437597/10		11/14/2018 17:33	1		CLP1 0.32(mm)
CCV 280-437597/10		11/14/2018 17:33	1		CLP2 0.32(mm)
CCV 280-437597/11		11/14/2018 17:51	1	11140011.D	CLP1 0.32(mm)
CCV 280-437597/11		11/14/2018 17:51	1	11140011.D	CLP2 0.32(mm)
CCV 280-437597/12		11/14/2018 18:08	1	11140012.D	CLP1 0.32(mm)
CCV 280-437597/12		11/14/2018 18:08	1	11140012.D	CLP2 0.32(mm)
CCVIS 280-437597/13		11/14/2018 18:26	1	11140013.D	CLP1 0.32(mm)
CCVIS 280-437597/13		11/14/2018 18:26	1	11140013.D	CLP2 0.32(mm)
ZZZZZ		11/14/2018 18:43	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 18:43	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 19:01	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 19:01	1		CLP2 0.32(mm)
MB 280-435801/1-A		11/14/2018 19:18	1	11140015.D	CLP1 0.32(mm)
MB 280-435801/1-A		11/14/2018 19:18	1	11140015.D	CLP2 0.32(mm)
LCS 280-435801/2-A		11/14/2018 19:36	1	11140016.D	CLP1 0.32(mm)
LCS 280-435801/2-A		11/14/2018 19:36	1	11140016.D	CLP2 0.32(mm)
LCS 280-435801/3-A		11/14/2018 19:53	1	11140017.D	CLP1 0.32(mm)
LCS 280-435801/3-A		11/14/2018 19:53	1	11140017.D	CLP2 0.32(mm)
ZZZZZ		11/14/2018 20:11	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 20:11	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 20:28	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 20:28	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 20:46	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 20:46	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 21:03	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 21:03	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 21:21	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 21:21	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 21:38	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 21:38	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 21:56	100		CLP1 0.32(mm)
ZZZZZ		11/14/2018 21:56	100		CLP2 0.32(mm)
ZZZZZ		11/14/2018 22:14	100		CLP1 0.32(mm)
ZZZZZ		11/14/2018 22:14	100		CLP2 0.32(mm)
ZZZZZ		11/14/2018 22:31	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 22:31	1		CLP2 0.32(mm)
ZZZZZ		11/14/2018 22:49	1		CLP1 0.32(mm)
ZZZZZ		11/14/2018 22:49	1		CLP2 0.32(mm)
280-116270-13		11/14/2018 23:06	1	11140041.D	CLP1 0.32(mm)
280-116270-13		11/14/2018 23:06	1	11140041.D	CLP2 0.32(mm)
280-116270-12		11/14/2018 23:24	1	11140042.D	CLP1 0.32(mm)
280-116270-12		11/14/2018 23:24	1	11140042.D	CLP2 0.32(mm)
CCV 280-437597/33		11/14/2018 23:41	1		CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 11/14/2018 16:40

Analysis Batch Number: 437597 End Date: 11/15/2018 03:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-437597/33		11/14/2018 23:41	1		CLP2 0.32(mm)
CCV 280-437597/34		11/14/2018 23:59	1	11140034.D	CLP1 0.32(mm)
CCV 280-437597/34		11/14/2018 23:59	1	11140034.D	CLP2 0.32(mm)
CCV 280-437597/35		11/15/2018 00:16	1	11140035.D	CLP1 0.32(mm)
CCV 280-437597/35		11/15/2018 00:16	1	11140035.D	CLP2 0.32(mm)
CCVIS 280-437597/36		11/15/2018 00:34	1	11140036.D	CLP1 0.32(mm)
CCVIS 280-437597/36		11/15/2018 00:34	1	11140036.D	CLP2 0.32(mm)
ZZZZZ		11/15/2018 00:51	1000		CLP1 0.32(mm)
ZZZZZ		11/15/2018 00:51	1000		CLP2 0.32(mm)
ZZZZZ		11/15/2018 01:09	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 01:09	100		CLP2 0.32(mm)
ZZZZZ		11/15/2018 01:26	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 01:26	100		CLP2 0.32(mm)
ZZZZZ		11/15/2018 01:44	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 01:44	100		CLP2 0.32(mm)
ZZZZZ		11/15/2018 02:01	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 02:01	100		CLP2 0.32(mm)
ZZZZZ		11/15/2018 02:19	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 02:19	100		CLP2 0.32(mm)
ZZZZZ		11/15/2018 02:36	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 02:36	100		CLP2 0.32(mm)
ZZZZZ		11/15/2018 02:54	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 02:54	100		CLP2 0.32(mm)
ZZZZZ		11/15/2018 03:11	100		CLP1 0.32(mm)
ZZZZZ		11/15/2018 03:11	100		CLP2 0.32(mm)

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435801 Batch Start Date: 11/01/18 08:30 Batch Analyst: Matsumoto, Jordan T

Batch Method: 3510C Batch End Date: 11/05/18 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	8081 LCS 00450
MB 280-435801/1		3510C, 8081B				1000 mL	10 mL	7 SU	
LCS 280-435801/2		3510C, 8081B				1000 mL	10 mL	7 SU	1 mL
LCS 280-435801/3		3510C, 8081B				1000 mL	10 mL	7 SU	
280-116270-A-12	LL3mw-244-181001-GW	3510C, 8081B	T	1491.6 g	501.4 g	990.2 mL	10 mL	7 SU	
280-116270-D-13	SCFmw-004-181001-GW	3510C, 8081B	T	1517.1 g	500.9 g	1016.2 mL	10 mL	7 SU	

Lab Sample ID	Client Sample ID	Method Chain	Basis	8081/82 Surr 00105	8081Toxaphene 00031	AnalysisComment			
MB 280-435801/1		3510C, 8081B		1 mL					
LCS 280-435801/2		3510C, 8081B		1 mL		81			
LCS 280-435801/3		3510C, 8081B		1 mL	1 mL	Tox			
280-116270-A-12	LL3mw-244-181001-GW	3510C, 8081B	T	1 mL					
280-116270-D-13	SCFmw-004-181001-GW	3510C, 8081B	T	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435801 Batch Start Date: 11/01/18 08:30 Batch Analyst: Matsumoto, Jordan T

Batch Method: 3510C Batch End Date: 11/05/18 22:00

Batch Notes	
Balance ID	24750399
Batch Comment	DV-OP-0006/0007; BB8 set @ 10.00 mL
Analyst ID - Concentration	MM/CR
Concentration 1 Corrected Temperature	88/88 Degrees C
Equipment ID - Concentration 1	A/B
Exchange Solvent ID	Hexane_cycl_00053
Analyst ID - Extraction	JM
Florisil ID	phenomenex prod lot #S18-003670
Florisil Solution Reagent ID	FlorisilSol_00155
Method/Fraction	3510C/8081A/8081B_DOD5/8082
Na2SO4 ID	0000205461_00006
NaCl ID	181957
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00411
Prep Solvent Volume Used	180 mL
Analyst ID - Spike Analyst	JM
Analyst ID - Spike Witness Analyst	Reviewer:AAG
Sufficient Volume for Batch QC	No
Concentration 1 Uncorrected Temperature	89/87 Degrees C
Reagent Water ID	S. ELGA

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8082A_DOD5

Polychlorinated Biphenyls (PCBs) by Gas Chromatography

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): CLP2 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCX1 #	DCBP1 #
FWGmw-018-181001-GW	280-116270-1	71	91 Q
FWGmw-020-181001-GW	280-116270-9	93	91 Q
	MB 280-436278/1-A	80	87
	LCS 280-436278/2-A	85	85

	QC LIMITS
TCX = Tetrachloro-m-xylene	25-120
DCBP = DCB Decachlorobiphenyl	30-136

Column to be used to flag recovery values

FORM II 8082A

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11261817.D

Lab ID: LCS 280-436278/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
PCB-1016	2.00	1.98	99	46-129	
PCB-1260	2.00	2.00	100	45-134	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: MB 280-436278/1-A

Matrix: Water Date Extracted: 11/05/2018 09:12

Lab File ID:(1) 11261816.D Lab File ID:(2)

Date Analyzed:(1) 11/26/2018 21:26 Date Analyzed:(2)

Instrument ID:(1) SGC_J Instrument ID:(2) SGC_J

GC Column:(1) CLP2 ID: 0.32(mm) GC Column:(2) CLP1 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-436278/2-A	11/26/2018 21:47	
FWGmw-018-181001-GW	280-116270-1	11/27/2018 03:04	11/27/2018 03:04
FWGmw-020-181001-GW	280-116270-9	11/27/2018 07:39	11/27/2018 07:39

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: MB 280-436278/1-A

Matrix: Water Date Extracted: 11/05/2018 09:12

Lab File ID:(1) Lab File ID:(2) 11261816.D

Date Analyzed:(1) Date Analyzed:(2) 11/26/2018 21:26

Instrument ID:(1) SGC_J Instrument ID:(2) SGC_J

GC Column:(1) CLP2 ID: 0.32(mm) GC Column:(2) CLP1 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-436278/2-A	11/26/2018 21:47	
FWGmw-018-181001-GW	280-116270-1	11/27/2018 03:04	11/27/2018 03:04
FWGmw-020-181001-GW	280-116270-9	11/27/2018 07:39	11/27/2018 07:39

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: STDL51660 280-438388/20 Date Analyzed: 11/21/2018 15:27

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11211820.D Heated Purge: (Y/N) N

Calibration ID: 34386

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		29769998	1.97				
UPPER LIMIT		59539996	2.47				
LOWER LIMIT		14884999	1.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-438388/39		27962663	1.97				
ICV 280-438388/40		29773128	1.97				
ICV 280-438388/41		26927485	1.97				
ICV 280-438388/42		26954302	1.97				
ICV 280-438388/43		30567576	1.97				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: STDL51660 280-438388/20 Date Analyzed: 11/21/2018 15:27

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11211820.D Heated Purge: (Y/N) N

Calibration ID: 34387

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		167274345	1.75				
UPPER LIMIT		334548690	2.25				
LOWER LIMIT		83637173	1.25				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-438388/39		158680424	1.75				
ICV 280-438388/40		167287659	1.75				
ICV 280-438388/41		153501296	1.75				
ICV 280-438388/42		152978208	1.75				
ICV 280-438388/43		172646811	1.75				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: CCVIS 280-438794/4 Date Analyzed: 11/26/2018 17:11

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11261804.D Heated Purge: (Y/N) N

Calibration ID: 34394

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		34956215	1.97				
UPPER LIMIT		69912430	2.47				
LOWER LIMIT		17478108	1.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-436278/1-A		37408029	1.97				
LCS 280-436278/2-A		37943874	1.97				
CCV 280-438794/18		38359891	1.97				
CCV 280-438794/28		39694392	1.97				
280-116270-1	FWGmw-018-181001-GW	37460378	1.96				
CCV 280-438794/38		37791074	1.97				
280-116270-9	FWGmw-020-181001-GW	37930330	1.97				
CCV 280-438794/46		38094644	1.97				
CCV 280-438794/47		36425447	1.97				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Sample No.: CCVIS 280-438794/4 Date Analyzed: 11/26/2018 17:11

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11261804.D Heated Purge: (Y/N) N

Calibration ID: 34395

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		178044551	1.74				
UPPER LIMIT		356089102	2.24				
LOWER LIMIT		89022276	1.24				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-436278/1-A		187489194	1.74				
LCS 280-436278/2-A		190986736	1.74				
CCV 280-438794/18		189595870	1.74				
CCV 280-438794/28		195974164	1.74				
280-116270-1	FWGmw-018-181001-GW	188158000	1.74				
CCV 280-438794/38		189317567	1.74				
280-116270-9	FWGmw-020-181001-GW	189288589	1.74				
CCV 280-438794/46		190336249	1.74				
CCV 280-438794/47		186006437	1.74				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436278/2-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): Date Analyzed (2): 11/26/2018 21:47

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.27	3.02	3.52	1.80	1.68	
		2	3.63	3.38	3.88	1.62		
		3	4.12	3.87	4.37	1.60		
		4	4.27	4.02	4.52	1.67		
		5	4.73	4.48	4.98	1.70		
PCB-1260	1	1	6.25	6.00	6.50	1.90	1.76	
		2	7.00	6.75	7.25	2.06		
		3	7.49	7.24	7.74	1.56		
		4	7.93	7.68	8.18	1.53		
		5	8.32	8.07	8.57	1.74		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436278/2-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): 11/26/2018 21:47 Date Analyzed (2):

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		
				FROM	TO	PEAK	MEAN	
PCB-1016	2	1	3.27	3.02	3.52	2.11	1.98	
		2	3.66	3.41	3.91	1.95		
		3	4.12	3.87	4.37	1.92		
		4	4.26	4.01	4.51	1.95		
		5	4.50	4.25	4.75	1.95		
PCB-1260	2	1	6.65	6.40	6.90	2.19	2.00	
		2	7.11	6.87	7.37	2.38		
		3	7.64	7.39	7.89	1.80		
		4	8.01	7.76	8.26	1.81		
		5	8.51	8.27	8.77	1.83		

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: 11261832.D

Analysis Method: 8082A | Date Collected: 10/26/2018 09:30

Extraction Method: 3510C | Date Extracted: 11/05/2018 09:12

Sample wt/vol: 956.7(mL) | Date Analyzed: 11/27/2018 03:04

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438794 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	0.42	U M	1.0	0.42	0.13
11104-28-2	PCB-1221	0.26	U M	1.0	0.26	0.22
11141-16-5	PCB-1232	0.63	U M	1.0	0.63	0.17
53469-21-9	PCB-1242	0.31	U M	1.0	0.31	0.11
12672-29-6	PCB-1248	0.31	U Q M	1.0	0.31	0.096
11097-69-1	PCB-1254	0.26	U M	1.0	0.26	0.12
11096-82-5	PCB-1260	0.42	U M	1.0	0.42	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	71		25-120
2051-24-3	DCB Decachlorobiphenyl	91	Q	30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261832.D
Lims ID: 280-116270-A-1-A
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 27-Nov-2018 03:04:47 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-A-1-A
Misc. Info.: 280-0076546-032
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:51:28

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.964	1.965	-0.001	37460378	1000.0	
2	1.741	1.742	-0.001	188158000	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						
1	2.878	2.878	0.000	10971740	11.2	
2	2.774	2.775	-0.001	34814053	14.1	
					RPD = 23.00	
3 PCB-1221						U
1		3.085			ND	
1		3.232				
1		3.269				
2		3.092				
2		3.222				
2		3.276				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7	PCB-1232					U
1		3.088			ND	
1		3.271				
1		4.118				
1		4.264				
1		4.731				
2		3.275				
2		3.665				
2		4.121				
2		4.265				
2		4.928				
1	PCB-1016					U
1		3.268			ND	
1		3.631				
1		4.118				
1		4.265				
1		4.731				
2		3.272				
2		3.662				
2		4.118				
2		4.262				
2		4.495				
4	PCB-1248					U
1		3.629			ND	
1		4.115				
1		4.729				
1		5.505				
1		6.005				
2		4.119				
2		4.499				
2		4.789				
2		4.929				
2		6.102				
10	PCB-1242					U
1		3.631			ND	
1		4.117				
1		4.264				
1		5.237				
1		5.261				
2		3.664				
2		4.121				
2		4.264				
2		4.788				
2		4.928				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.182			ND	
1		5.509				
1		5.849				
1		6.622				
1		6.995				
2		5.529				
2		5.952				
2		6.402				
2		6.649				
2		7.119				
5 PCB-1262						U
1		6.248			ND	
1		7.154				
1		7.488				
1		7.931				
1		8.321				
2		6.648				
2		7.248				
2		7.645				
2		8.011				
2		8.515				
12 PCB-1260						U
1		6.248			ND	
1		6.995				
1		7.491				
1		7.931				
1		8.321				
2		6.645				
2		7.115				
2		7.642				
2		8.008				
2		8.515				
13 PCB-1268						U
1		8.381			ND	
1		8.434				
1		8.707				
1		9.224				
1		9.637				
2		8.511				
2		8.574				
2		8.928				
2		9.358				
2		9.821				
$ 15 DCB Decachlorobiphenyl						
1	9.914	9.915	-0.001	12294199	16.0	
2	10.181	10.182	-0.001	50963955	18.2	
					RPD = 12.68	
S 8 Polychlorinated biphenyls, Total						
1		0.000			ND	
2		0.000				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
2 PCB-5460						
1		0.000			ND	
1		12.739				
1		0.000				
1		13.802				
1		14.259				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
6 PCB-5432						
1		7.063			ND	
1		7.693				
1		8.203				
1		9.029				
1		9.459				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
11 PCB-5442						
1		9.459			ND	
1		9.923				
1		10.079				
1		10.289				
1		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

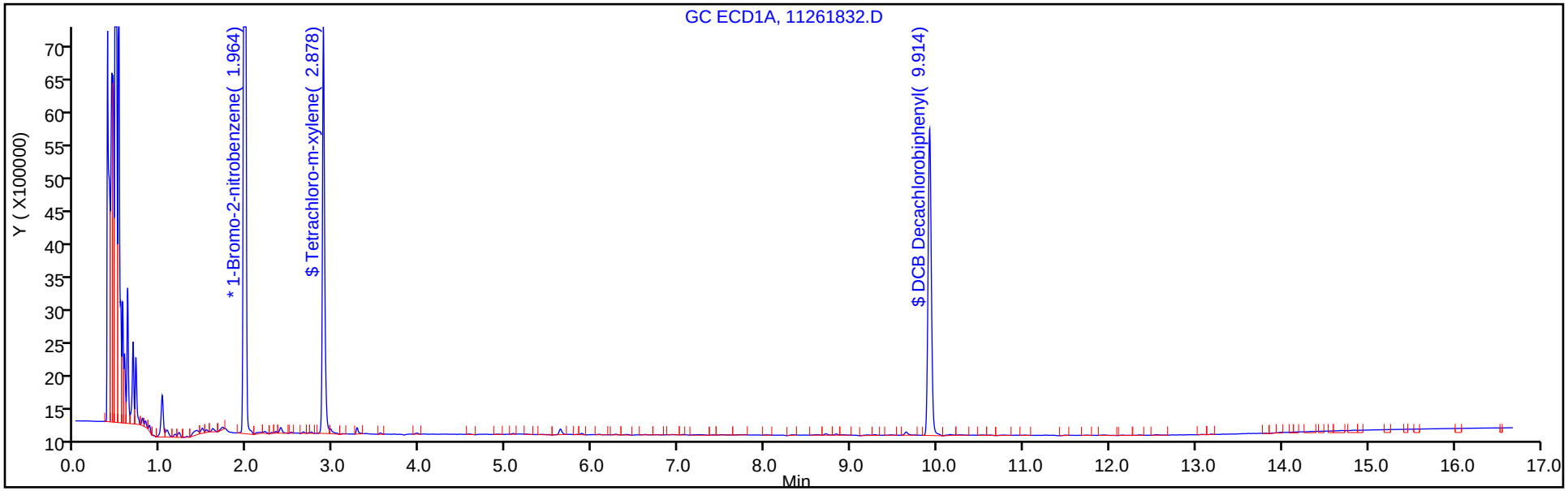
Report Date: 28-Nov-2018 13:12:55 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

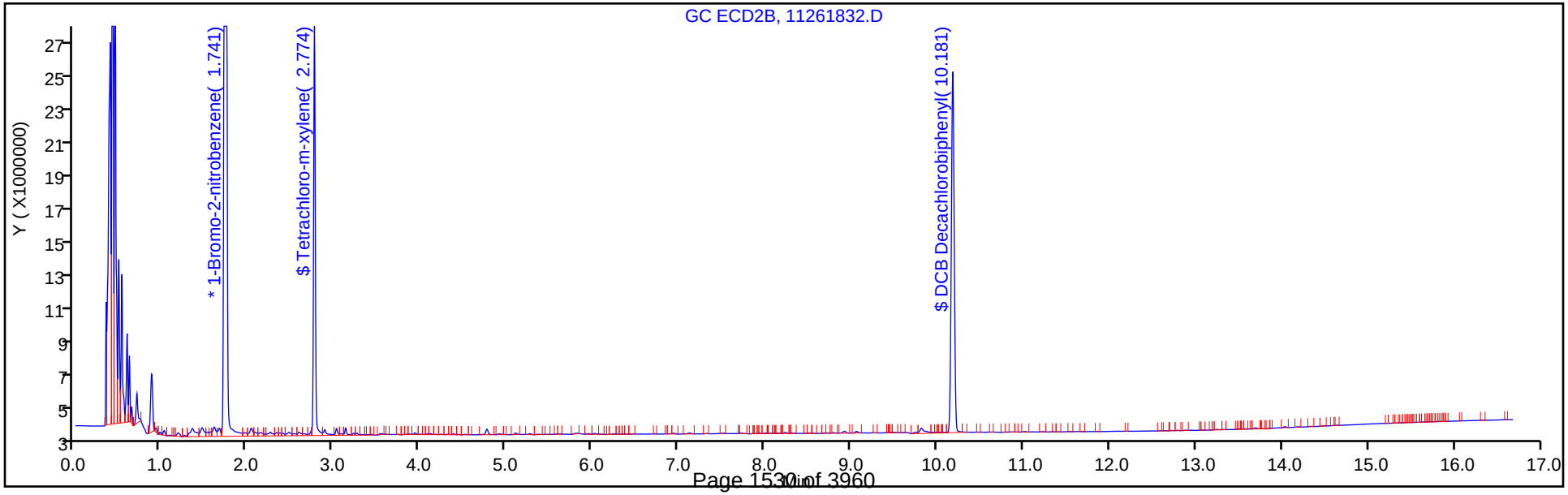
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261832.D

Injection Date:	27-Nov-2018 03:04:47	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	280-116270-A-1-A	Lab Sample ID:	280-116270-1	Worklist Smp#:	32
Client ID:	FWGmw-018-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261832.D				
Lims ID:	280-116270-A-1-A				
Client ID:	FWGmw-018-181001-GW				
Sample Type:	Client				
Inject. Date:	27-Nov-2018 03:04:47	ALS Bottle#:	32	Worklist Smp#:	32
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-A-1-A				
Misc. Info.:	280-0076546-032				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	28-Nov-2018 13:12:49	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: patadiab		Date:	28-Nov-2018 12:51:28		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	11.2	56.12
$ 15 DCB Decachlorobiphenyl	20.0	16.0	80.12

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	14.1	70.70
$ 15 DCB Decachlorobiphenyl	20.0	18.2	90.96

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-020-181001-GW | Lab Sample ID: 280-116270-9

Matrix: Water | Lab File ID: 11261845.D

Analysis Method: 8082A | Date Collected: 10/26/2018 10:00

Extraction Method: 3510C | Date Extracted: 11/05/2018 09:12

Sample wt/vol: 957.7(mL) | Date Analyzed: 11/27/2018 07:39

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438794 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	0.42	U M	1.0	0.42	0.13
11104-28-2	PCB-1221	0.26	U M	1.0	0.26	0.22
11141-16-5	PCB-1232	0.63	U M	1.0	0.63	0.17
53469-21-9	PCB-1242	0.31	U M	1.0	0.31	0.11
12672-29-6	PCB-1248	0.31	U Q M	1.0	0.31	0.096
11097-69-1	PCB-1254	0.26	U M	1.0	0.26	0.12
11096-82-5	PCB-1260	0.42	U M	1.0	0.42	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	93		25-120
2051-24-3	DCB Decachlorobiphenyl	91	Q	30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261845.D
Lims ID: 280-116270-A-9-A
Client ID: FWGmw-020-181001-GW
Sample Type: Client
Inject. Date: 27-Nov-2018 07:39:53 ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-A-9-A
Misc. Info.: 280-0076546-045
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:13:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 13:10:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.969	1.965	0.004	37930330	1000.0	
2	1.742	1.742	0.000	189288589	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						
1	2.879	2.878	0.001	15400423	15.5	
2	2.776	2.775	0.001	45772226	18.7	
					RPD = 18.44	
3 PCB-1221						U
1		3.085			ND	
1		3.232				
1		3.269				
2		3.092				
2		3.222				
2		3.276				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7	PCB-1232					U
1		3.088			ND	
1		3.271				
1		4.118				
1		4.264				
1		4.731				
2		3.275				
2		3.665				
2		4.121				
2		4.265				
2		4.928				
1	PCB-1016					U
1		3.268			ND	
1		3.631				
1		4.118				
1		4.265				
1		4.731				
2		3.272				
2		3.662				
2		4.118				
2		4.262				
2		4.495				
4	PCB-1248					U
1		3.629			ND	
1		4.115				
1		4.729				
1		5.505				
1		6.005				
2		4.119				
2		4.499				
2		4.789				
2		4.929				
2		6.102				
10	PCB-1242					U
1		3.631			ND	
1		4.117				
1		4.264				
1		5.237				
1		5.261				
2		3.664				
2		4.121				
2		4.264				
2		4.788				
2		4.928				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.182			ND	
1		5.509				
1		5.849				
1		6.622				
1		6.995				
2		5.529				
2		5.952				
2		6.402				
2		6.649				
2		7.119				
5 PCB-1262						U
1		6.248			ND	
1		7.154				
1		7.488				
1		7.931				
1		8.321				
2		6.648				
2		7.248				
2		7.645				
2		8.011				
2		8.515				
12 PCB-1260						U
1		6.248			ND	
1		6.995				
1		7.491				
1		7.931				
1		8.321				
2		6.645				
2		7.115				
2		7.642				
2		8.008				
2		8.515				
13 PCB-1268						U
1		8.381			ND	
1		8.434				
1		8.707				
1		9.224				
1		9.637				
2		8.511				
2		8.574				
2		8.928				
2		9.358				
2		9.821				
$ 15 DCB Decachlorobiphenyl						
1	9.912	9.915	-0.003	12332990	15.9	
2	10.179	10.182	-0.003	51034154	18.1	
					RPD = 13.16	
S 8 Polychlorinated biphenyls, Total						
1		0.000			ND	
2		0.000				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
2 PCB-5460						
1		0.000			ND	
1		12.739				
1		0.000				
1		13.802				
1		14.259				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
6 PCB-5432						
1		7.063			ND	
1		7.693				
1		8.203				
1		9.029				
1		9.459				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
11 PCB-5442						
1		9.459			ND	
1		9.923				
1		10.079				
1		10.289				
1		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

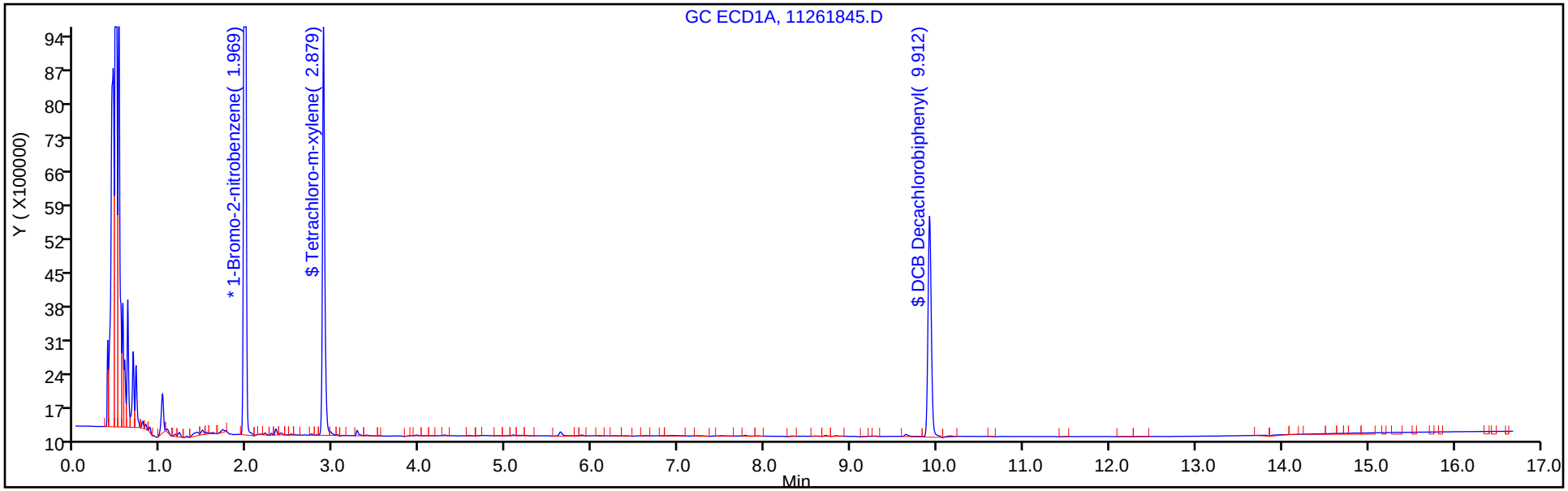
Report Date: 28-Nov-2018 13:13:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

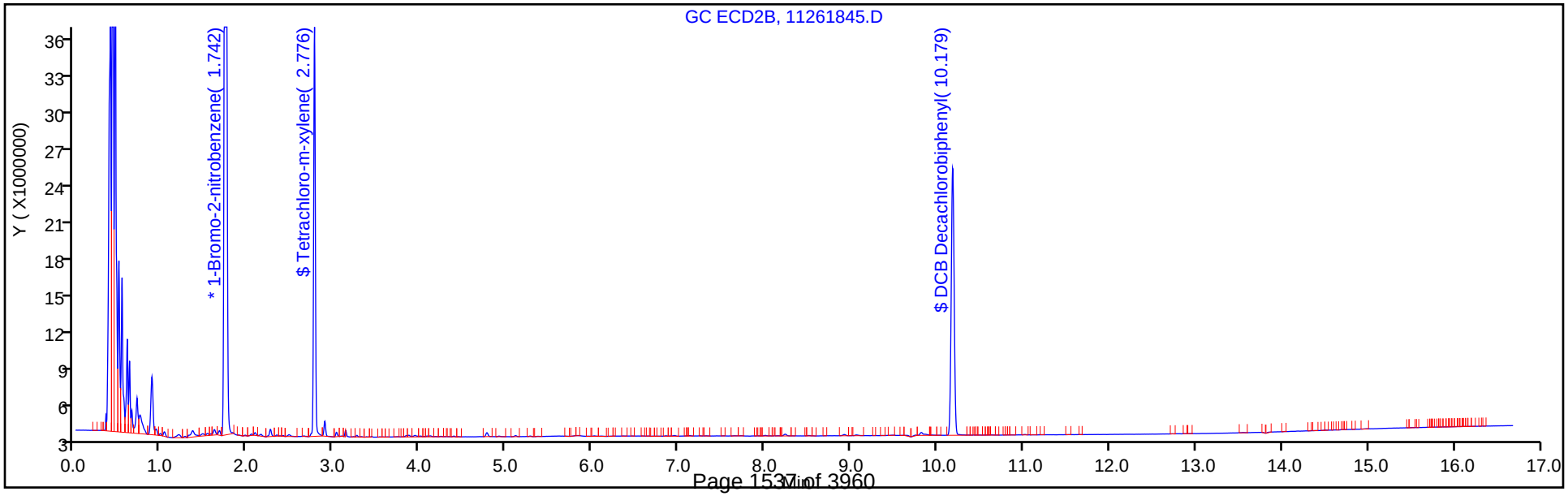
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261845.D

Injection Date:	27-Nov-2018 07:39:53	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	280-116270-A-9-A	Lab Sample ID:	280-116270-9	Worklist Smp#:	45
Client ID:	FWGmw-020-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	45
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261845.D				
Lims ID:	280-116270-A-9-A				
Client ID:	FWGmw-020-181001-GW				
Sample Type:	Client				
Inject. Date:	27-Nov-2018 07:39:53	ALS Bottle#:	45	Worklist Smp#:	45
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-A-9-A				
Misc. Info.:	280-0076546-045				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	28-Nov-2018 13:13:03	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: patadiab		Date:	28-Nov-2018 13:10:59		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	15.5	77.56
$ 15 DCB Decachlorobiphenyl	20.0	15.9	79.35

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	18.7	93.31
$ 15 DCB Decachlorobiphenyl	20.0	18.1	90.53

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.7122 0.4127	0.6118 0.4011	0.5704	0.4630	0.4556	Lin1	9.8720	0.4076							0.9960		0.9900
PCB-1248 Peak 2	1.0403 0.8770	0.9550 0.9026	1.0280	0.8779	0.9242	Lin1	4.6019	0.8921							0.9990		0.9900
PCB-1248 Peak 3	1.2895 0.9992	1.1836 1.0099	1.2299	1.0238	1.0668	Lin1	9.5371	1.0079							0.9980		0.9900
PCB-1248 Peak 4	0.8968 0.6951	0.8199 0.7107	0.8337	0.7223	0.7530	Lin1	6.0934	0.7077							0.9990		0.9900
PCB-1248 Peak 5	0.5801 0.4479	0.5241 0.4719	0.5587	0.4626	0.4874	Lin1	3.7614	0.4626							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Lin1	499158 9442915	908243 11858019	1647978	3572971	6545537	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 2	BNB	Lin1	729109 20068466	1417622 26688023	2970012	6774612	13279339	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 3	BNB	Lin1	903744 22864792	1757060 29858711	3553415	7900982	15327875	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 4	BNB	Lin1	628528 15905035	1217158 21012955	2408573	5573784	10818763	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 5	BNB	Lin1	406565 10248925	778039 13952293	1614155	3570034	7003033	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D
Lims ID: STDL71248
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 09:48:04 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71248
Misc. Info.: 280-0076428-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	29567346	1000.0	1000.0	
2	1.748	1.744	0.004	169218357	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	11858019	1000.0	959.6	
1	4.114	4.115	-0.001	26688023	1000.0	1006.7	
1	4.731	4.729	0.002	29858711	1000.0	992.4	
1	5.504	5.505	-0.001	21012955	1000.0	995.6	
1	6.004	6.005	-0.001	13952293	1000.0	1012.0	
		Average of Peak Amounts =				993.3	
2	4.121	4.119	0.002	83375893	1000.0	957.5	
2	4.498	4.499	-0.001	49673627	1000.0	973.7	
2	4.791	4.789	0.002	68034804	1000.0	970.6	
2	4.927	4.929	-0.002	74524210	1000.0	959.9	
2	6.101	6.102	-0.001	51421671	1000.0	963.6	
		Average of Peak Amounts =				965.0	
						RPD = 2.88	
S 8 Polychlorinated biphenyls, Total							
1						993.3	
2						965.0	
						RPD = 2.88	

Reagents:

AR_1248_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

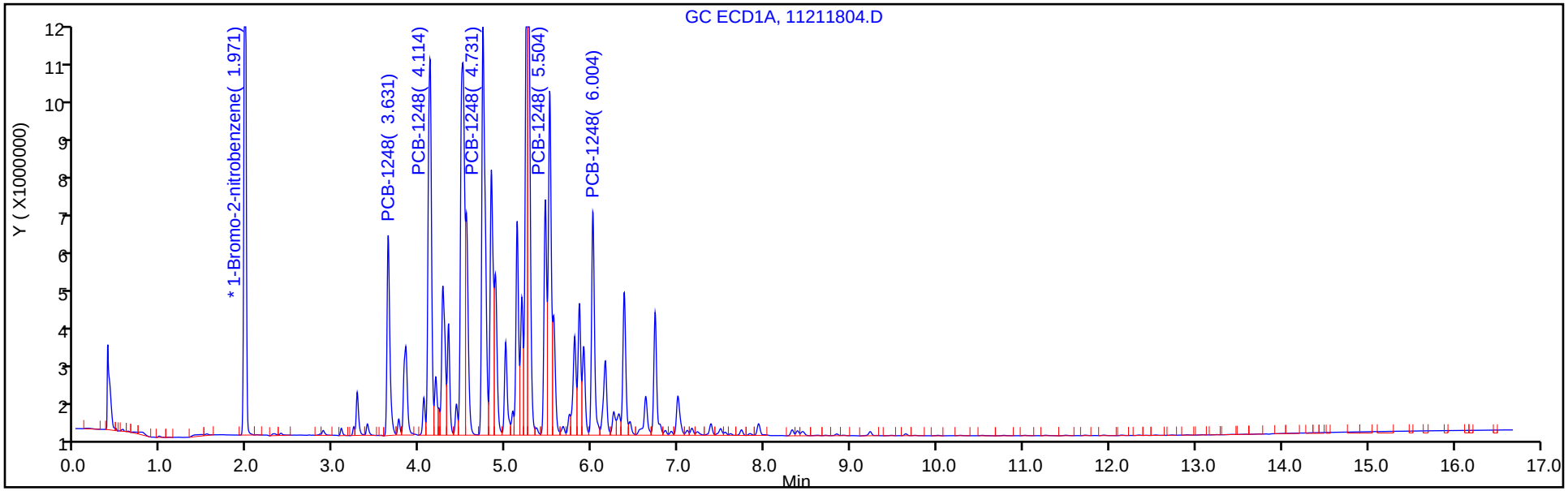
Report Date: 23-Nov-2018 11:01:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

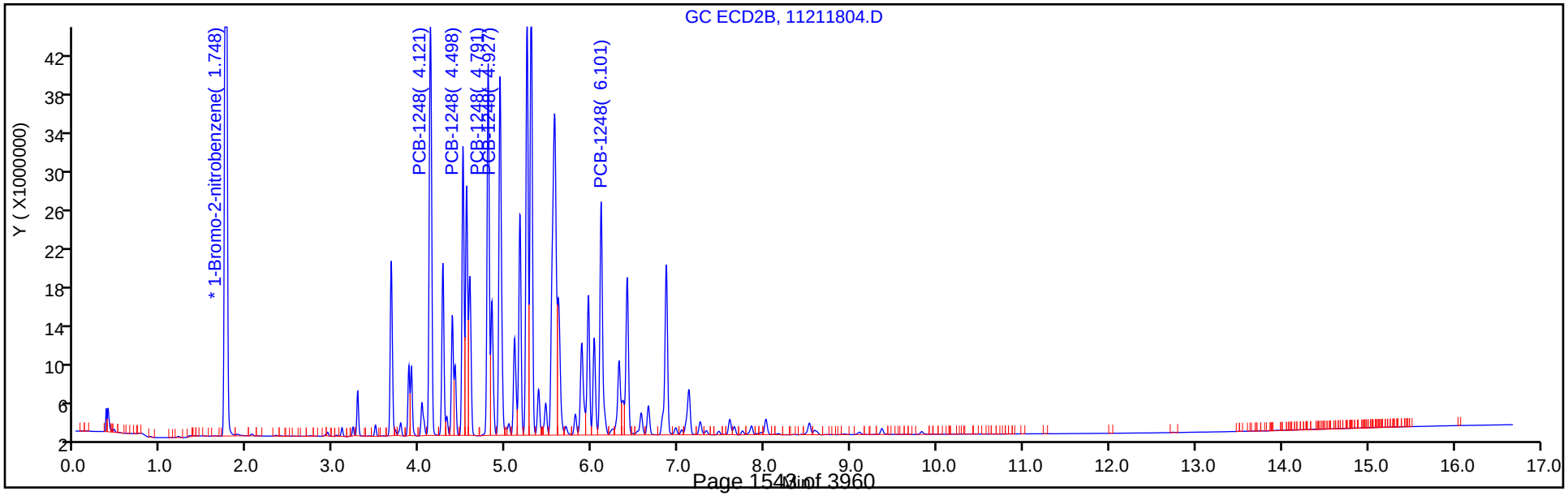
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D

Injection Date:	21-Nov-2018 09:48:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71248			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D
Lims ID: STDL61248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 10:09:17 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61248
Misc. Info.: 280-0076428-005
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:51 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	30510716	1000.0	1000.0	
2	1.748	1.744	0.004	173614890	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.631	3.629	0.002	9442915	750.0	735.0	
1	4.115	4.115	0.000	20068466	750.0	732.2	
1	4.731	4.729	0.002	22864792	750.0	734.0	
1	5.505	5.505	0.000	15905035	750.0	728.0	M
1	6.005	6.005	0.000	10248925	750.0	718.0	
		Average of Peak Amounts =				729.5	
2	4.118	4.119	-0.001	66929326	750.0	745.5	
2	4.498	4.499	-0.001	38624976	750.0	733.4	
2	4.791	4.789	0.002	53290956	750.0	736.2	
2	4.928	4.929	-0.001	59463126	750.0	742.7	
2	6.101	6.102	-0.001	40520608	750.0	736.4	
		Average of Peak Amounts =				738.8	
						RPD = 1.28	
S 8 Polychlorinated biphenyls, Total							
1						729.5	
2						738.8	
						RPD = 1.28	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1248_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

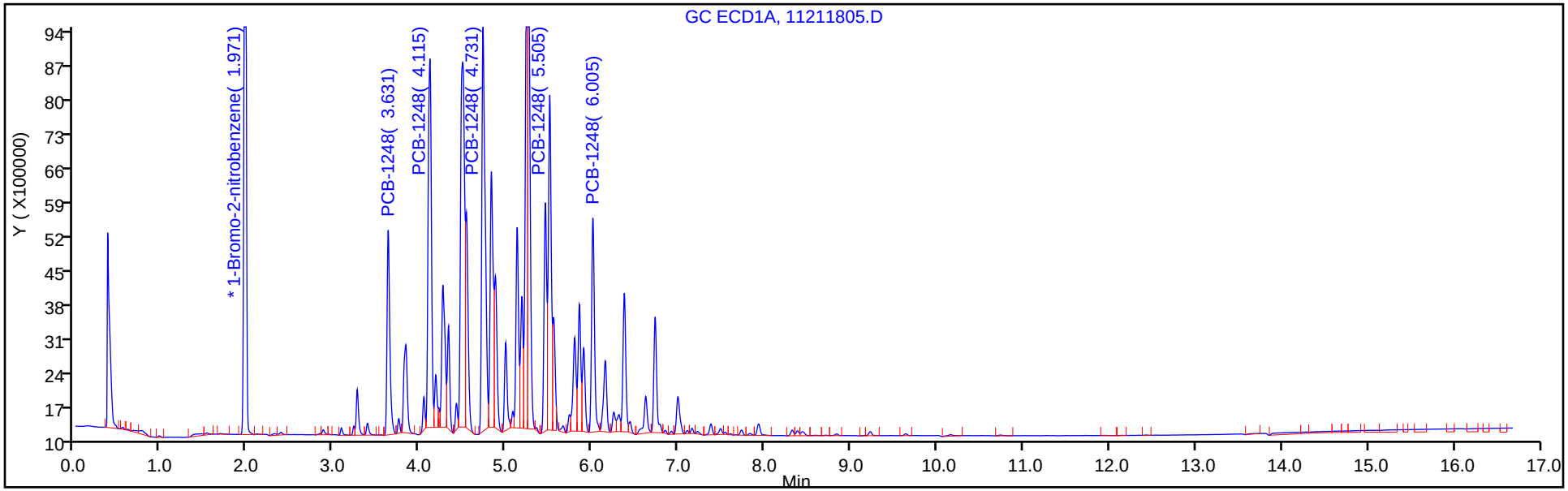
Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

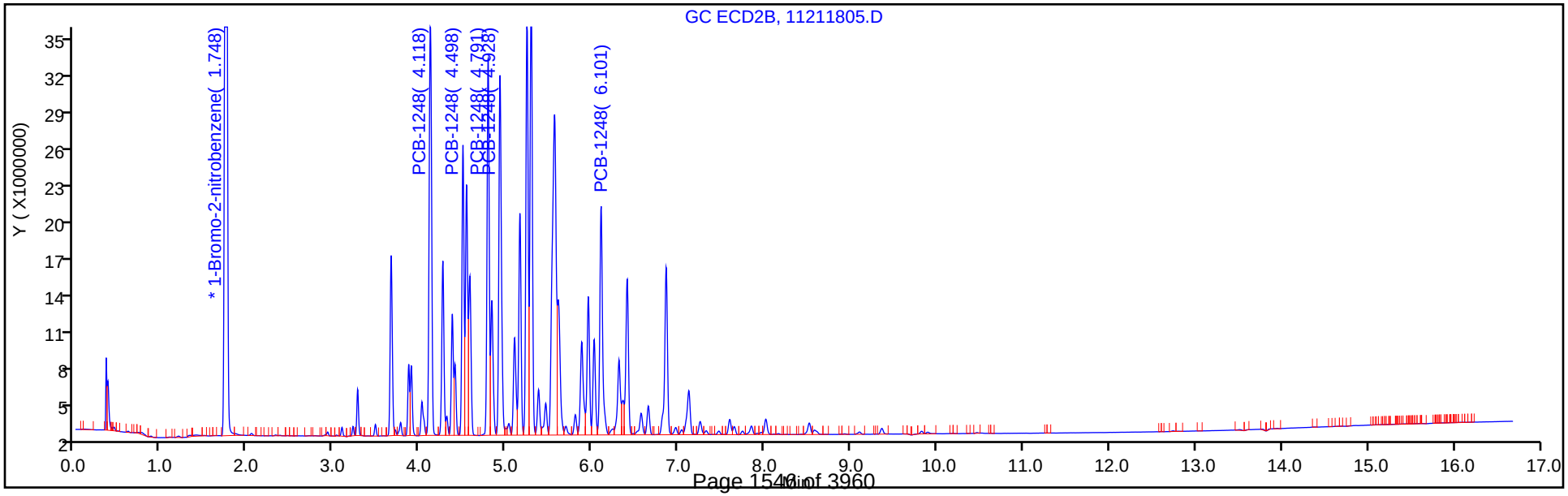
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date:	21-Nov-2018 10:09:17	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61248			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date: 21-Nov-2018 10:09:17 Instrument ID: SGC_J

Lims ID: STDL61248

Client ID:

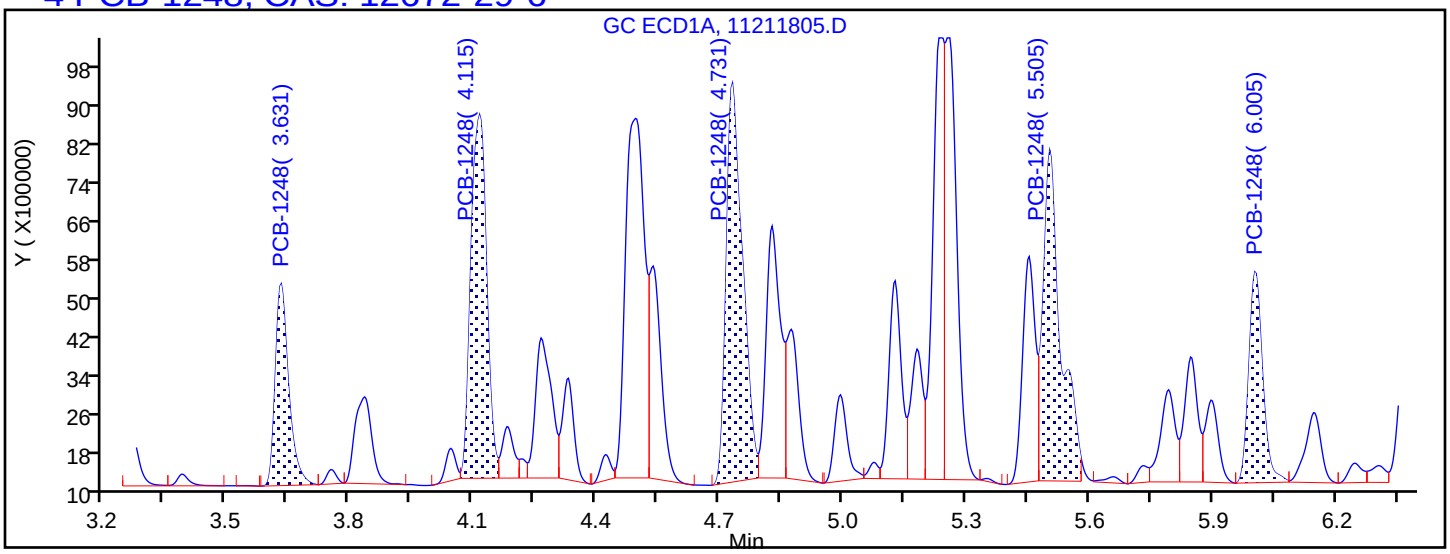
Operator ID: ALS ALS Bottle#: 5 Worklist Smp#: 5

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

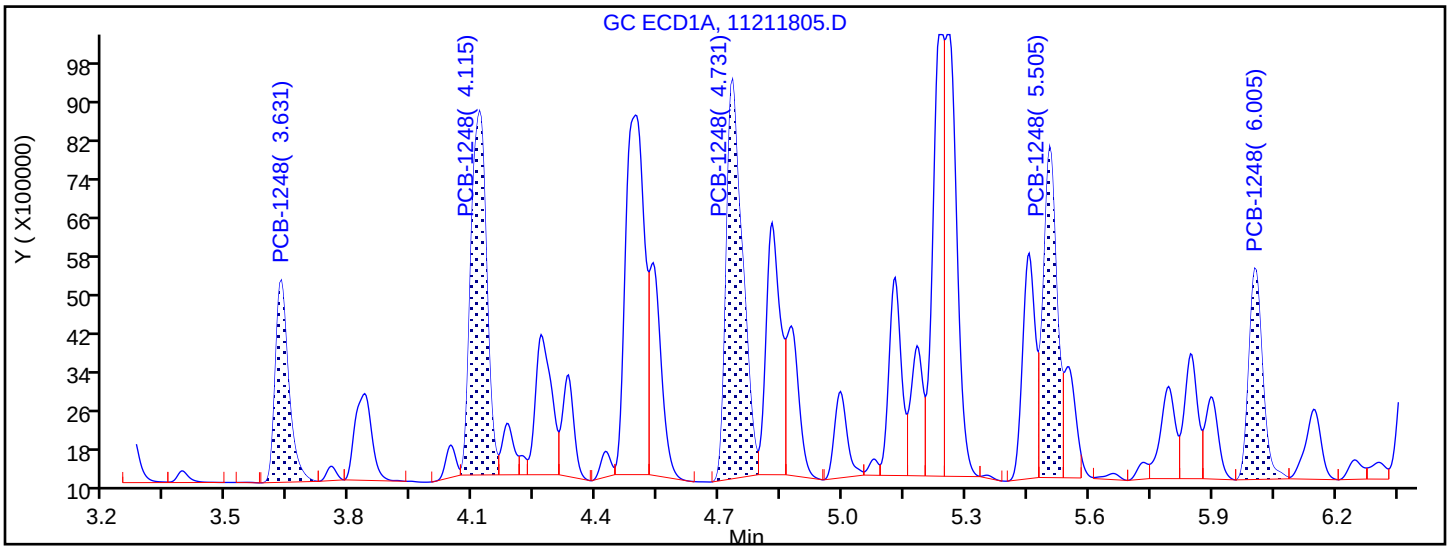
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

4 PCB-1248, CAS: 12672-29-6



Processing Integration Results

3.631	Response = 9442915
4.115	Response = 20068466
4.731	Response = 22864792
5.505	Response = 20328921
6.005	Response = 10248925



Manual Integration Results

3.631	Response = 9442915	
4.115	Response = 20068466	
4.731	Response = 22864792	
5.505	Response = 15905035	M
6.005	Response = 10248925	

Reviewer: patadiab, 21-Nov-2018 11:04:58

Audit Action: Split an Integrated Peak Audit Reason: Shouldering

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D
Lims ID: STDL51248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 10:30:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51248
Misc. Info.: 280-0076428-006
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28736785	1000.0	1000.0	
2	1.745	1.745	0.000	164020581	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.629	3.629	0.000	6545537	500.0	534.6	
1	4.115	4.115	0.000	13279339	500.0	512.9	
1	4.729	4.729	0.000	15327875	500.0	519.7	
1	5.505	5.505	0.000	10818763	500.0	523.3	M
1	6.005	6.005	0.000	7003033	500.0	518.7	
		Average of Peak Amounts =				521.8	
2	4.119	4.119	0.000	45483505	500.0	531.6	
2	4.499	4.499	0.000	26585884	500.0	529.3	
2	4.789	4.789	0.000	36645923	500.0	530.3	
2	4.929	4.929	0.000	40664465	500.0	532.9	
2	6.102	6.102	0.000	28205008	500.0	538.4	
		Average of Peak Amounts =				532.5	
						RPD = 2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

AR_1248_L5_00021 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

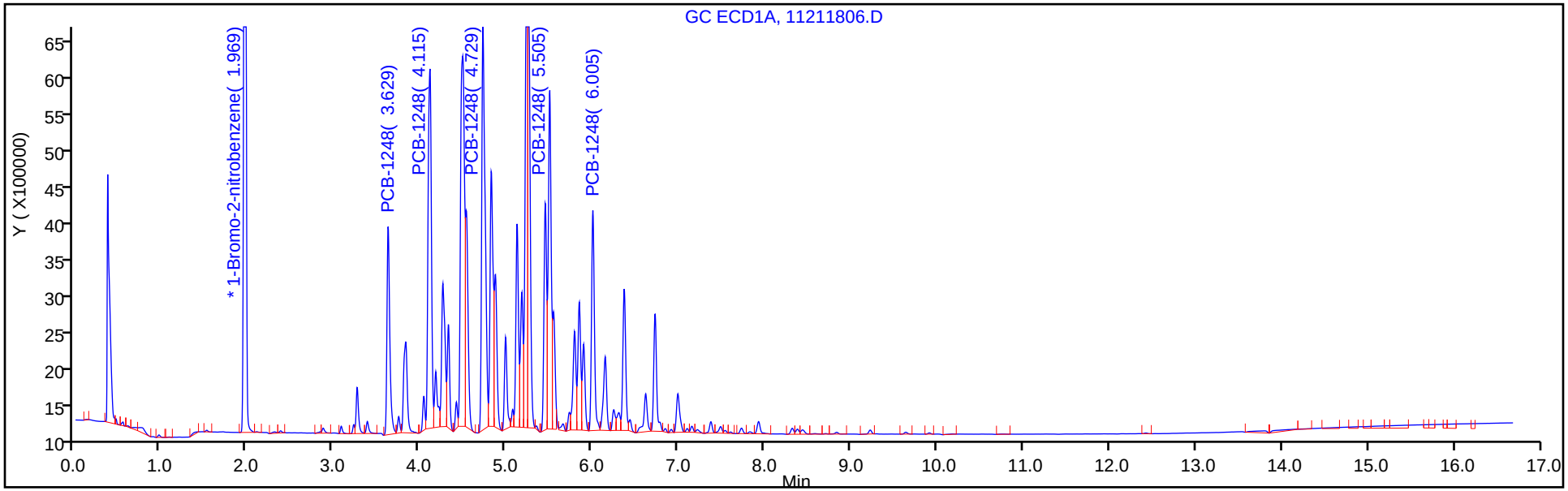
Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

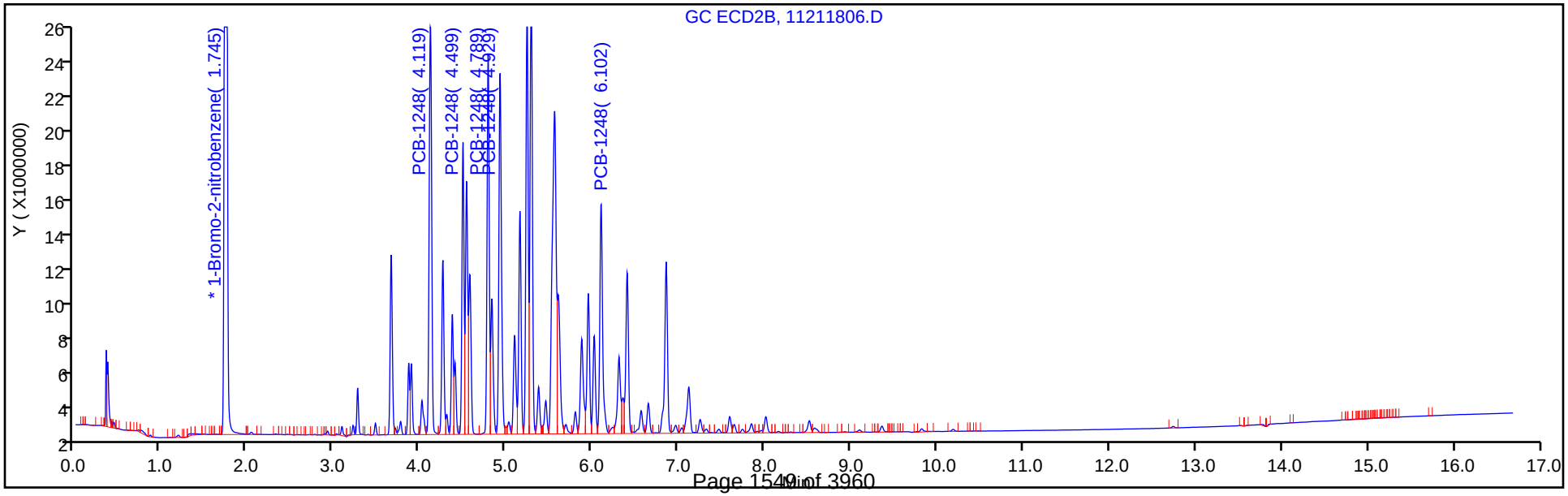
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date:	21-Nov-2018 10:30:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



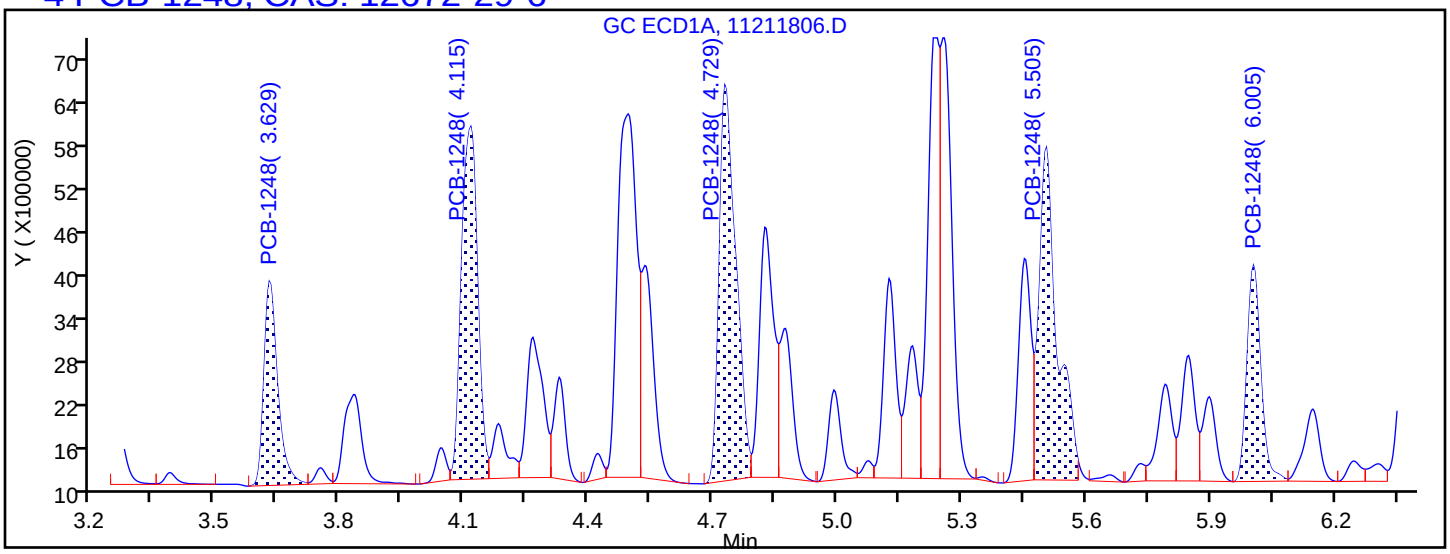
Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

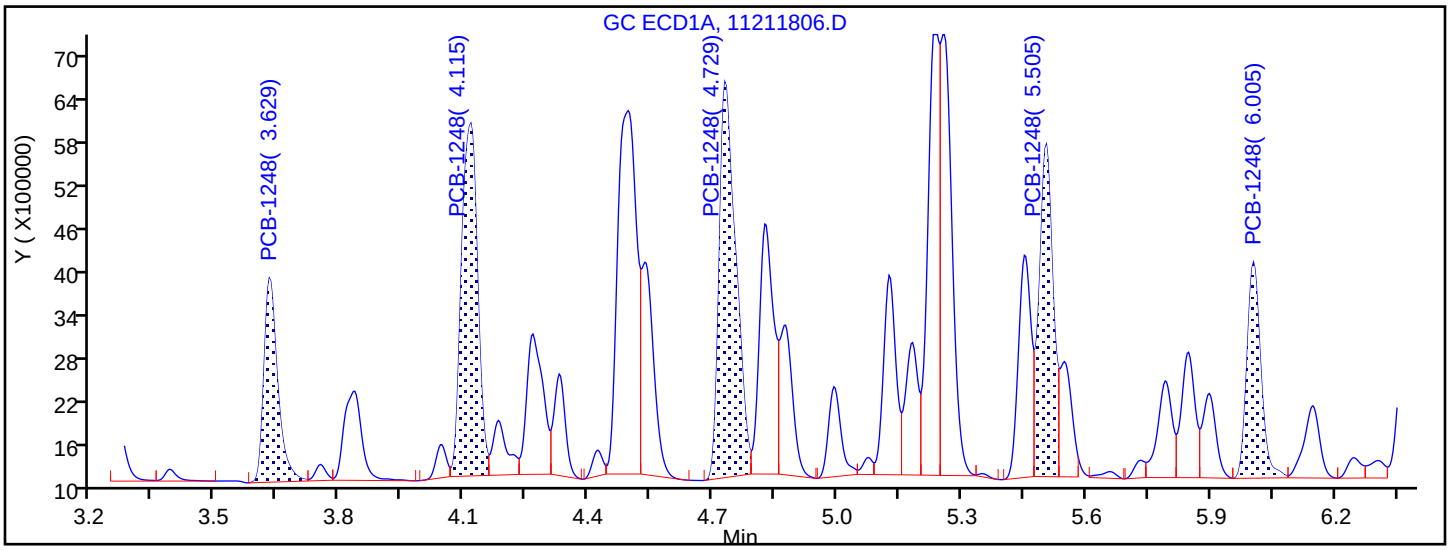
Injection Date:	21-Nov-2018 10:30:25	Instrument ID:	SGC_J		
Lims ID:	STDL51248				
Client ID:					
Operator ID:	ALS	ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		
Column:	CLP1 Pesticides Column 1 (0.32 mm)	Detector	GC ECD1A		

4 PCB-1248, CAS: 12672-29-6



Processing Integration Results

3.629	Response = 6545537
4.115	Response = 13279339
4.729	Response = 15327875
5.505	Response = 14072476
6.005	Response = 7003033



Manual Integration Results

3.629	Response = 6545537	
4.115	Response = 13279339	
4.729	Response = 15327875	
5.505	Response = 10818763	M
6.005	Response = 7003033	

Reviewer: mooret, 21-Nov-2018 15:16:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D
Lims ID: STDL41248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 10:51:35 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41248
Misc. Info.: 280-0076428-007
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:55 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:16:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	30868128	1000.0	1000.0	
2	1.748	1.745	0.003	175701150	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	3572971	250.0	259.7	
1	4.114	4.115	-0.001	6774612	250.0	240.9	
1	4.731	4.729	0.002	7900982	250.0	244.5	
1	5.504	5.505	-0.001	5573784	250.0	246.5	
1	6.004	6.005	-0.001	3570034	250.0	241.9	
		Average of Peak Amounts =				246.7	
2	4.121	4.119	0.002	24413334	250.0	258.1	
2	4.498	4.499	-0.001	14232505	250.0	255.2	
2	4.791	4.789	0.002	19636547	250.0	255.1	
2	4.928	4.929	-0.001	21701862	250.0	256.9	
2	6.101	6.102	-0.001	14716689	250.0	254.0	
		Average of Peak Amounts =				255.9	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						246.7	
2						255.9	
						RPD = 3.64	

Reagents:

AR_1248_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

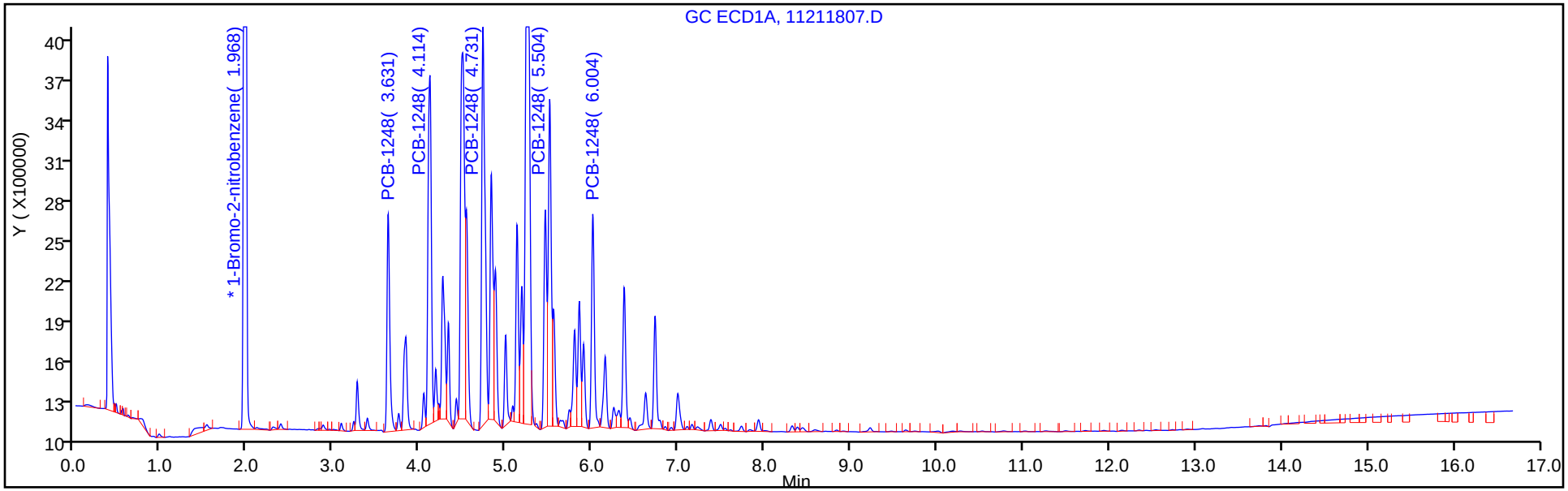
Report Date: 23-Nov-2018 11:01:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

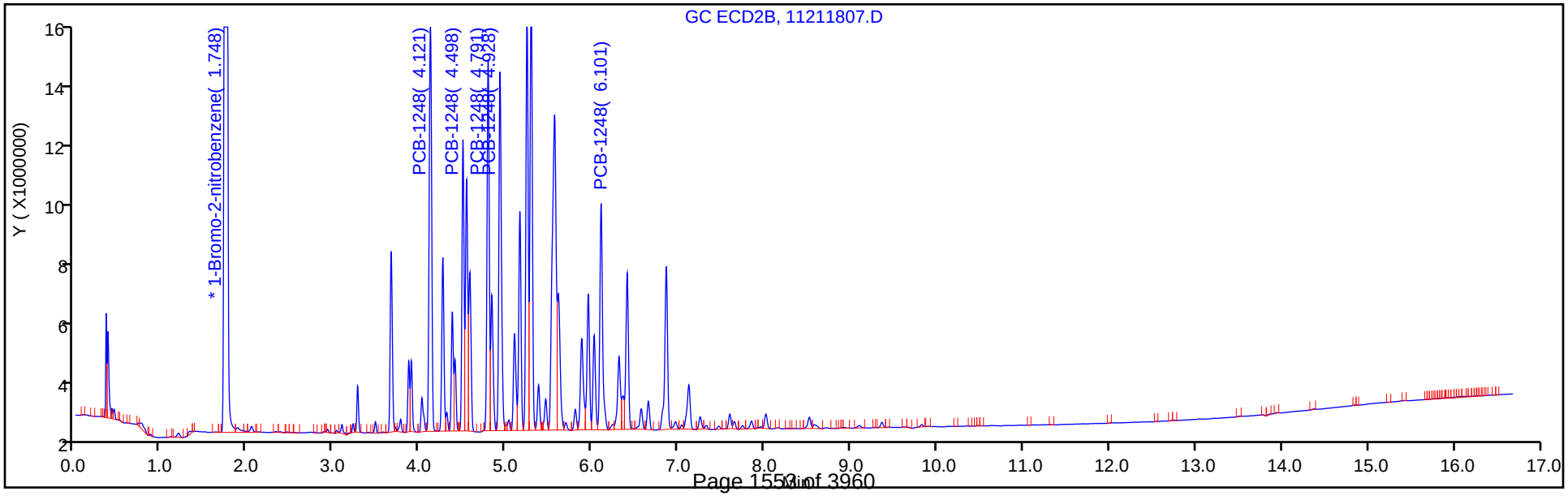
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D

Injection Date:	21-Nov-2018 10:51:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41248			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D
Lims ID: STDL31248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 11:12:45 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31248
Misc. Info.: 280-0076428-008
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:41:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	28891546	1000.0	1000.0	
2	1.746	1.745	0.001	164562398	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	1647978	100.0	115.7	
1	4.113	4.115	-0.002	2970012	100.0	110.1	
1	4.730	4.729	0.001	3553415	100.0	112.6	
1	5.506	5.505	0.001	2408573	100.0	109.2	
1	6.006	6.005	0.001	1614155	100.0	112.6	
		Average of Peak Amounts =				112.0	
2	4.120	4.119	0.001	10526463	100.0	109.8	
2	4.500	4.499	0.001	6322335	100.0	111.3	
2	4.790	4.789	0.001	8735777	100.0	110.4	
2	4.930	4.929	0.001	9459919	100.0	110.4	
2	6.103	6.102	0.001	6426439	100.0	109.9	
		Average of Peak Amounts =				110.4	
						RPD = 1.50	
S 8 Polychlorinated biphenyls, Total							
1						112.0	
2						110.4	
						RPD = 1.50	

Reagents:

AR_1248_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

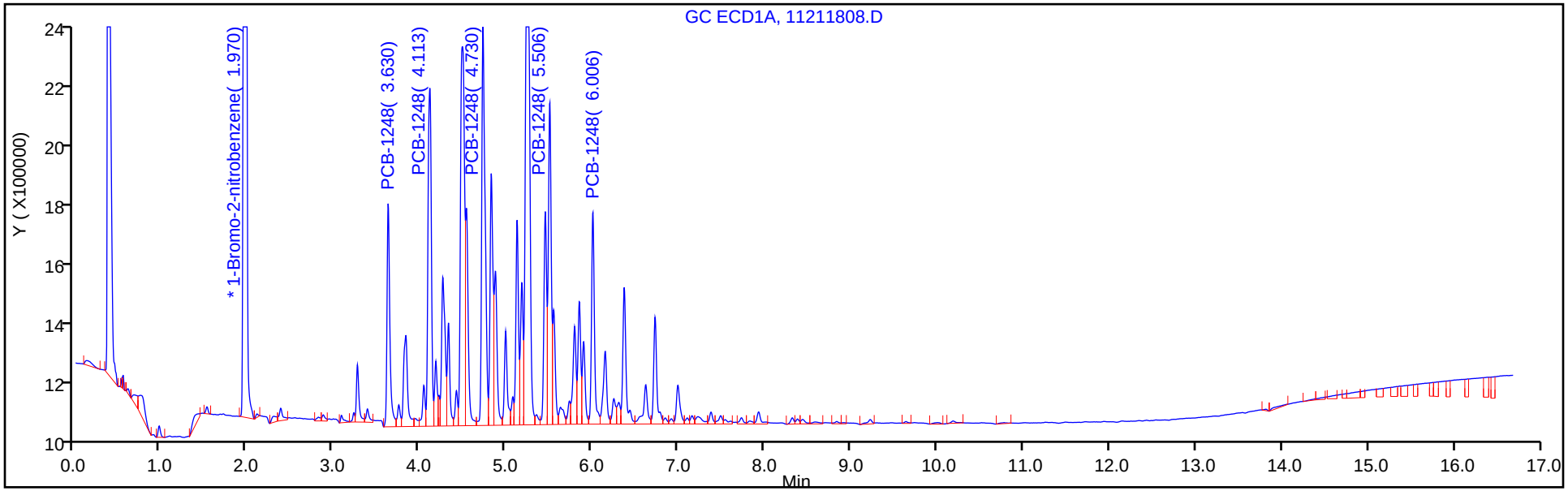
Report Date: 23-Nov-2018 11:01:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

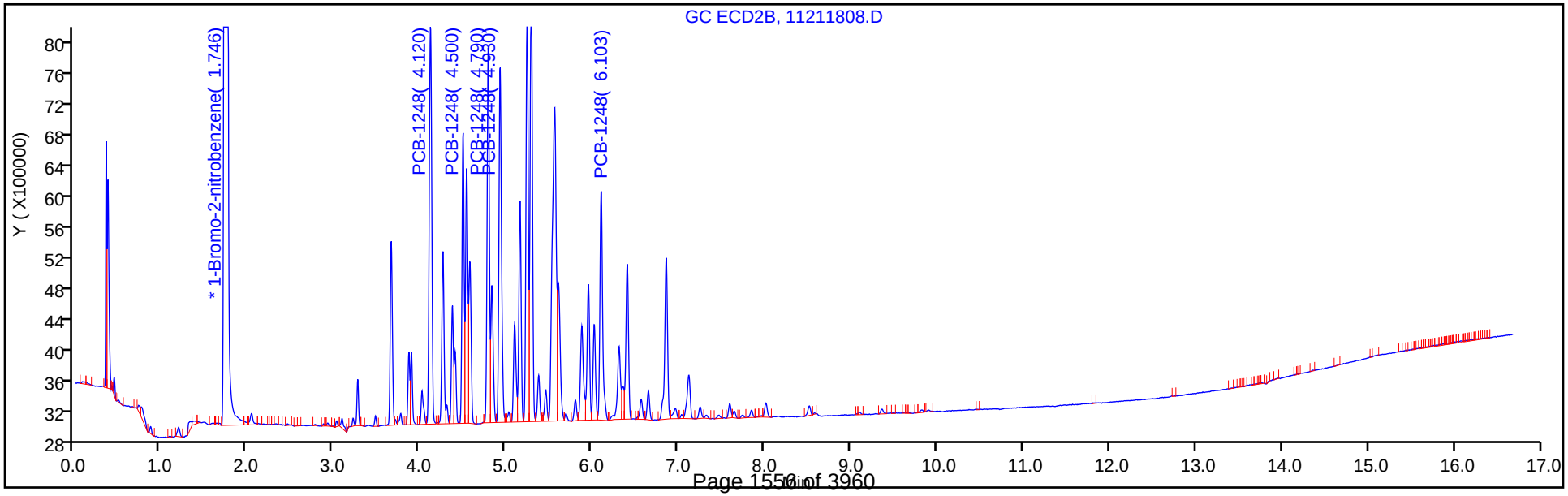
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D

Injection Date:	21-Nov-2018 11:12:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31248			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D
Lims ID: STDL21248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 11:33:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21248
Misc. Info.: 280-0076428-009
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:59 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:58:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	29689350	1000.0	1000.0	
2	1.748	1.745	0.003	167941963	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	908243	50.0	50.8	
1	4.111	4.115	-0.004	1417622	50.0	48.4	
1	4.728	4.729	-0.001	1757060	50.0	49.3	
1	5.505	5.505	0.000	1217158	50.0	49.3	
1	6.005	6.005	0.000	778039	50.0	48.5	
		Average of Peak Amounts =				49.3	
2	4.121	4.119	0.002	5857367	50.0	52.3	
2	4.498	4.499	-0.001	3480448	50.0	51.5	
2	4.791	4.789	0.002	4913700	50.0	51.7	
2	4.928	4.929	-0.001	5227558	50.0	51.9	
2	6.101	6.102	-0.001	3543306	50.0	52.0	
		Average of Peak Amounts =				51.9	
						RPD = 5.21	
S 8 Polychlorinated biphenyls, Total							
1						49.3	
2						51.9	
						RPD = 5.21	

Reagents:

AR_1248_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

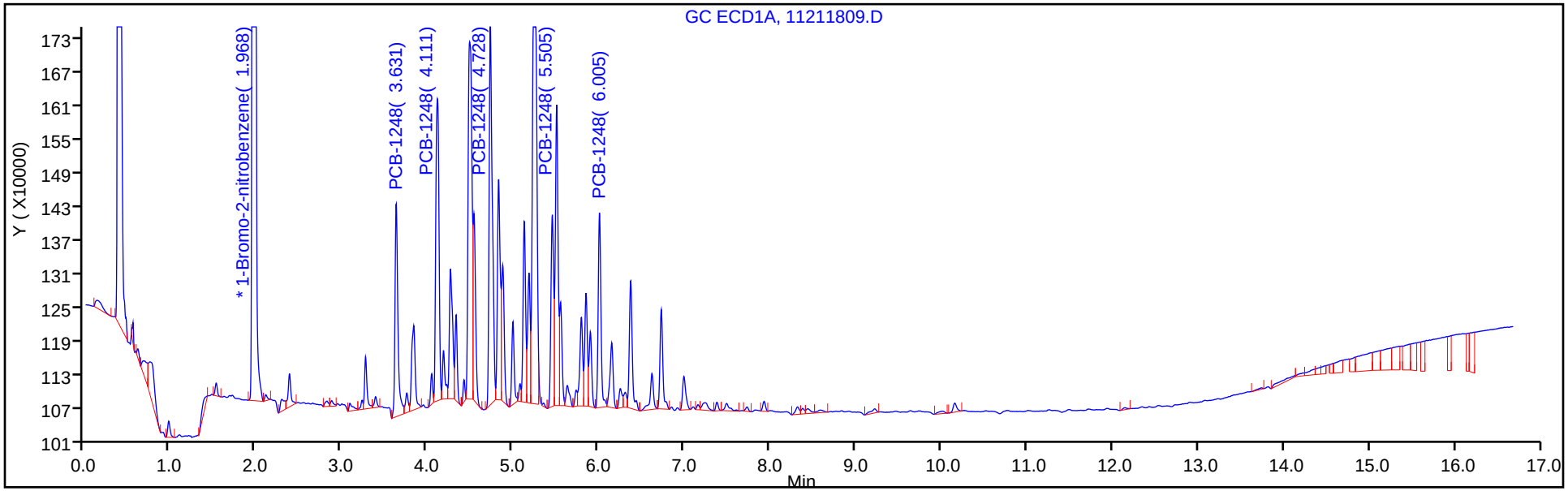
Report Date: 23-Nov-2018 11:02:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

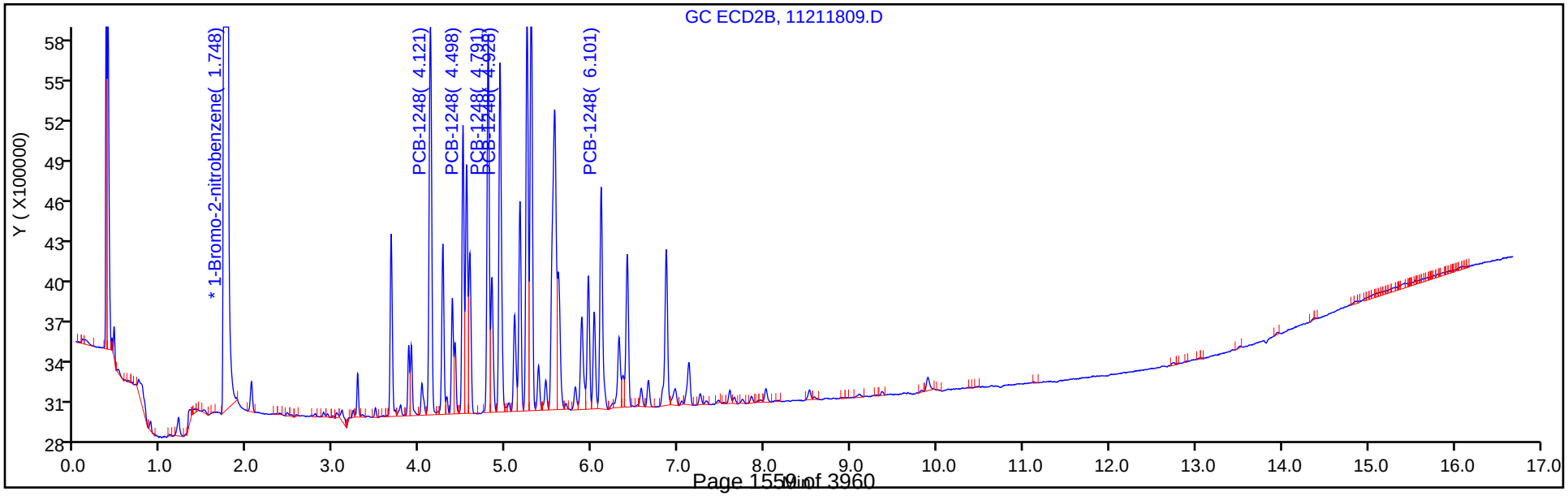
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D

Injection Date:	21-Nov-2018 11:33:58	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21248			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D
Lims ID: STDL11248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 11:55:11 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11248
Misc. Info.: 280-0076428-010
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 12:21:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.969	-0.002	28034459	1000.0	1000.0	
2	1.747	1.745	0.002	159672391	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	499158	25.0	19.5	
1	4.113	4.115	-0.002	729109	25.0	24.0	
1	4.730	4.729	0.001	903744	25.0	22.5	
1	5.503	5.505	-0.002	628528	25.0	23.1	
1	6.003	6.005	-0.002	406565	25.0	23.2	
		Average of Peak Amounts =				22.5	
2	4.120	4.119	0.001	2976466	25.0	20.2	
2	4.497	4.499	-0.002	1854776	25.0	20.7	
2	4.790	4.789	0.001	2664448	25.0	20.7	
2	4.927	4.929	-0.002	2696182	25.0	20.3	
2	6.100	6.102	-0.002	1808002	25.0	20.5	
		Average of Peak Amounts =				20.5	
						RPD = 9.11	
S 8 Polychlorinated biphenyls, Total							
1						22.5	
2						20.5	
						RPD = 9.11	

Reagents:

AR_1248_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

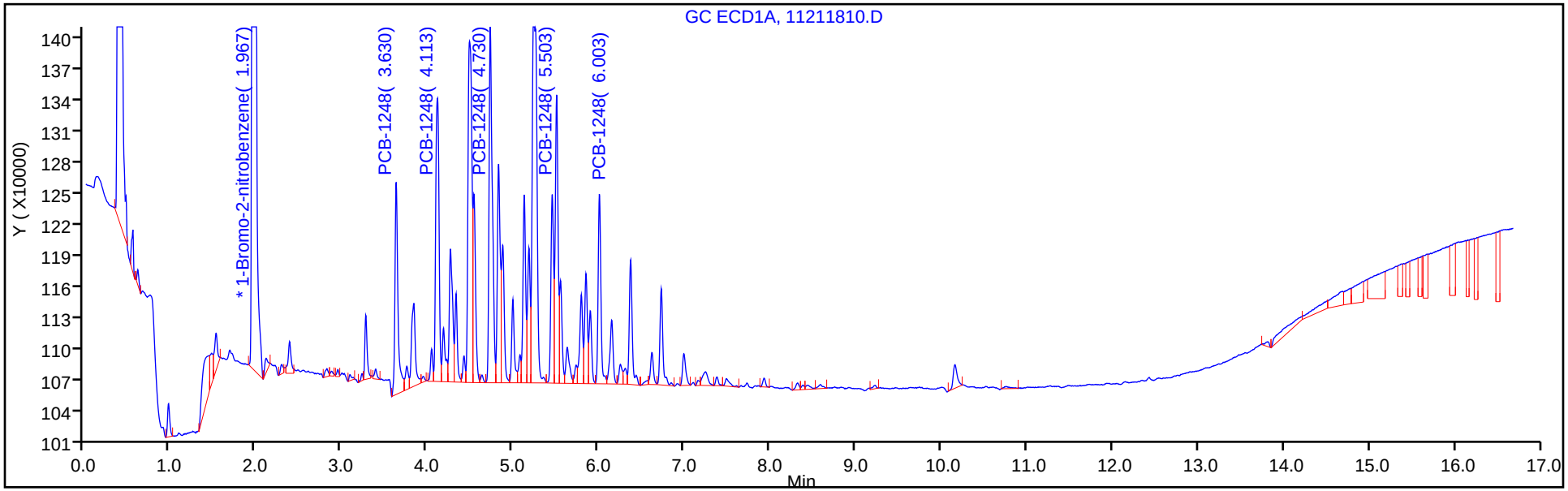
Report Date: 23-Nov-2018 11:02:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

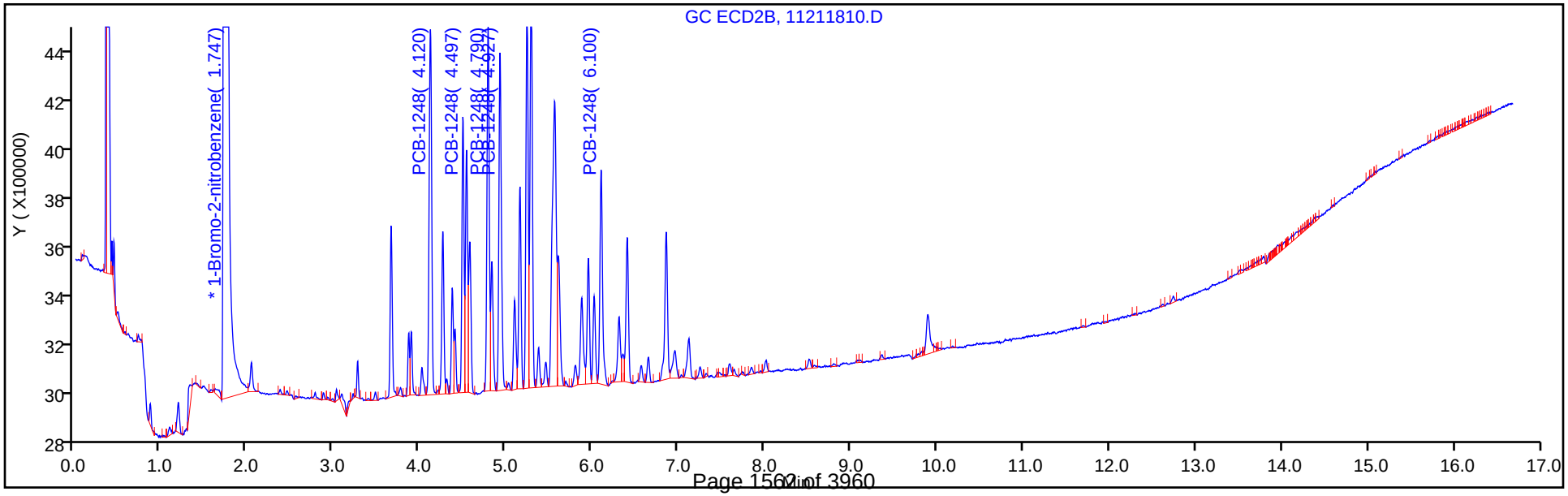
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D

Injection Date:	21-Nov-2018 11:55:11	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11248			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34379

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.7456 0.5140	0.6975 0.4927	0.6397	0.5558	0.5546	Lin1	8.4168	0.5058							0.9970		0.9900
PCB-1248 Peak 2	0.4646 0.2966	0.4145 0.2935	0.3842	0.3240	0.3242	Lin1	5.4995	0.2958							0.9980		0.9900
PCB-1248 Peak 3	0.6675 0.4093	0.5852 0.4021	0.5308	0.4470	0.4468	Lin1	8.2830	0.4057							0.9980		0.9900
PCB-1248 Peak 4	0.6754 0.4567	0.6225 0.4404	0.5749	0.4941	0.4958	Lin1	7.7151	0.4508							0.9970		0.9900
PCB-1248 Peak 5	0.4529 0.3112	0.4220 0.3039	0.3905	0.3350	0.3439	Lin1	4.9536	0.3102							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34379

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Lin1	2976466 66929326	5857367 83375893	10526463	24413334	45483505	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 2	BNB	Lin1	1854776 38624976	3480448 49673627	6322335	14232505	26585884	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 3	BNB	Lin1	2664448 53290956	4913700 68034804	8735777	19636547	36645923	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 4	BNB	Lin1	2696182 59463126	5227558 74524210	9459919	21701862	40664465	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 5	BNB	Lin1	1808002 40520608	3543306 51421671	6426439	14716689	28205008	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D
Lims ID: STDL71248
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 09:48:04 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71248
Misc. Info.: 280-0076428-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	29567346	1000.0	1000.0	
2	1.748	1.744	0.004	169218357	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	11858019	1000.0	959.6	
1	4.114	4.115	-0.001	26688023	1000.0	1006.7	
1	4.731	4.729	0.002	29858711	1000.0	992.4	
1	5.504	5.505	-0.001	21012955	1000.0	995.6	
1	6.004	6.005	-0.001	13952293	1000.0	1012.0	
		Average of Peak Amounts =				993.3	
2	4.121	4.119	0.002	83375893	1000.0	957.5	
2	4.498	4.499	-0.001	49673627	1000.0	973.7	
2	4.791	4.789	0.002	68034804	1000.0	970.6	
2	4.927	4.929	-0.002	74524210	1000.0	959.9	
2	6.101	6.102	-0.001	51421671	1000.0	963.6	
		Average of Peak Amounts =				965.0	
						RPD = 2.88	
S 8 Polychlorinated biphenyls, Total							
1						993.3	
2						965.0	
						RPD = 2.88	

Reagents:

AR_1248_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

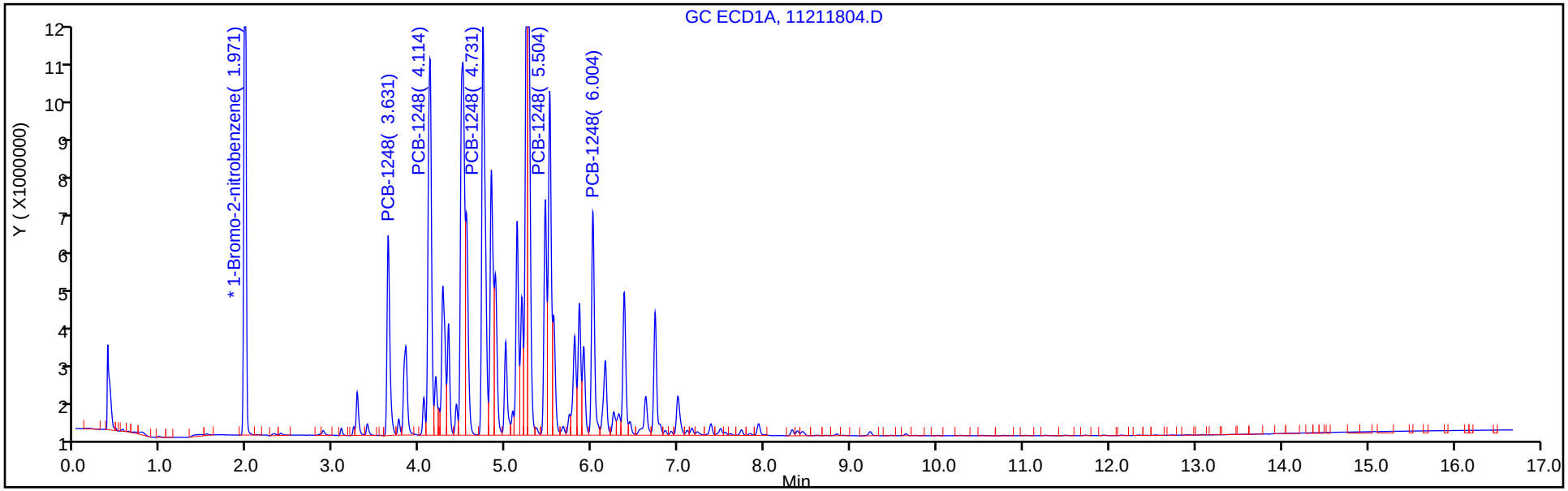
Report Date: 23-Nov-2018 11:01:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

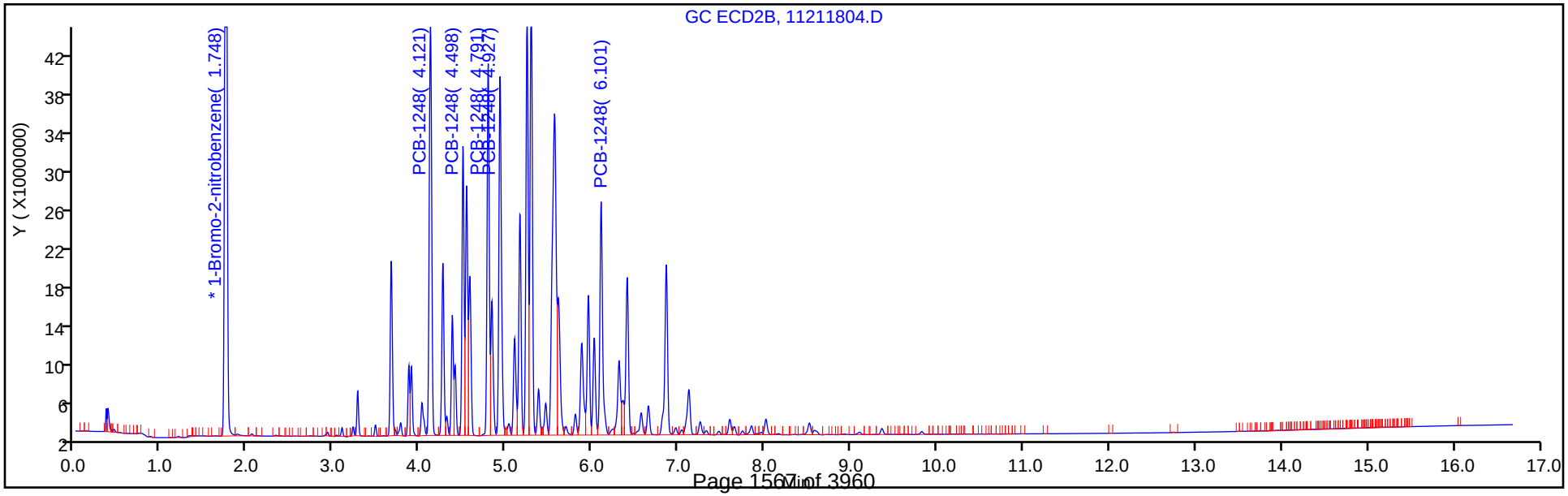
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D

Injection Date:	21-Nov-2018 09:48:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71248			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D
Lims ID: STDL61248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 10:09:17 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61248
Misc. Info.: 280-0076428-005
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:51 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	30510716	1000.0	1000.0	
2	1.748	1.744	0.004	173614890	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.631	3.629	0.002	9442915	750.0	735.0	
1	4.115	4.115	0.000	20068466	750.0	732.2	
1	4.731	4.729	0.002	22864792	750.0	734.0	
1	5.505	5.505	0.000	15905035	750.0	728.0	M
1	6.005	6.005	0.000	10248925	750.0	718.0	
		Average of Peak Amounts =				729.5	
2	4.118	4.119	-0.001	66929326	750.0	745.5	
2	4.498	4.499	-0.001	38624976	750.0	733.4	
2	4.791	4.789	0.002	53290956	750.0	736.2	
2	4.928	4.929	-0.001	59463126	750.0	742.7	
2	6.101	6.102	-0.001	40520608	750.0	736.4	
		Average of Peak Amounts =				738.8	
						RPD = 1.28	
S 8 Polychlorinated biphenyls, Total							
1						729.5	
2						738.8	
						RPD = 1.28	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1248_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

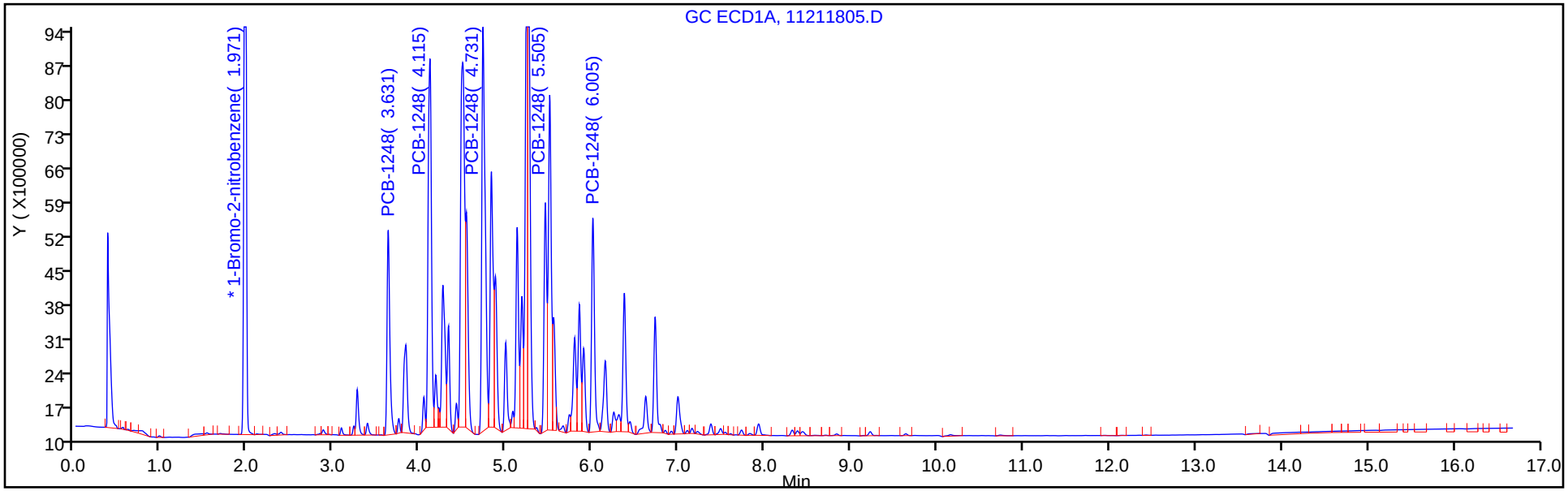
Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

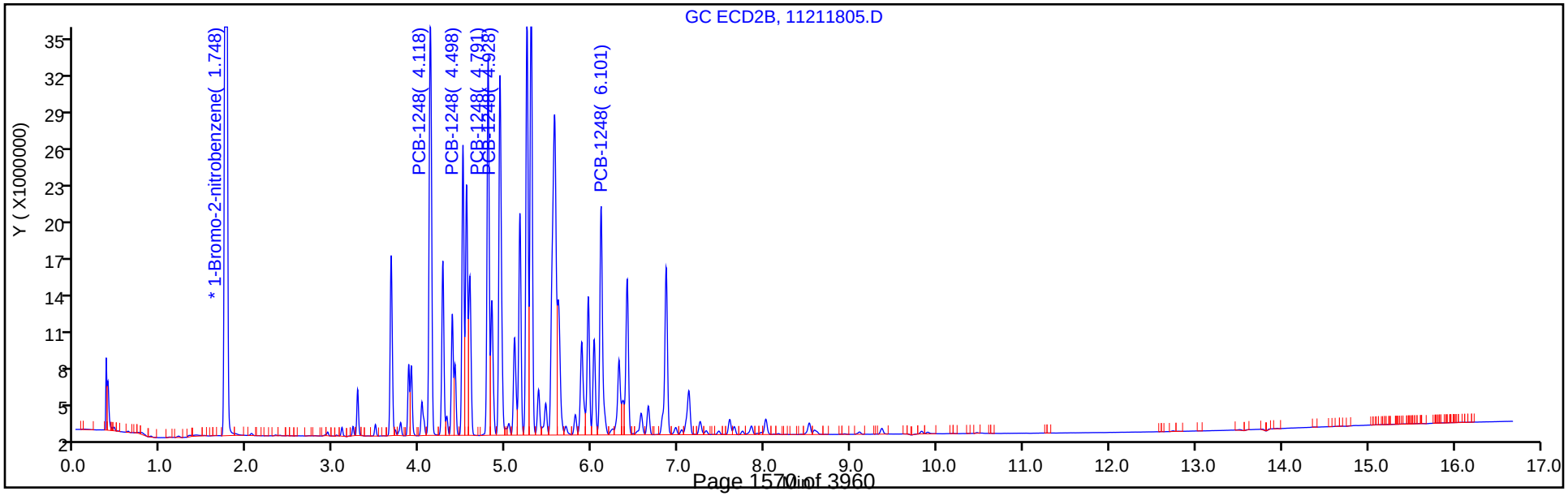
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date:	21-Nov-2018 10:09:17	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61248			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D
Lims ID: STDL51248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 10:30:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51248
Misc. Info.: 280-0076428-006
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28736785	1000.0	1000.0	
2	1.745	1.745	0.000	164020581	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.629	3.629	0.000	6545537	500.0	534.6	
1	4.115	4.115	0.000	13279339	500.0	512.9	
1	4.729	4.729	0.000	15327875	500.0	519.7	
1	5.505	5.505	0.000	10818763	500.0	523.3	M
1	6.005	6.005	0.000	7003033	500.0	518.7	
		Average of Peak Amounts =				521.8	
2	4.119	4.119	0.000	45483505	500.0	531.6	
2	4.499	4.499	0.000	26585884	500.0	529.3	
2	4.789	4.789	0.000	36645923	500.0	530.3	
2	4.929	4.929	0.000	40664465	500.0	532.9	
2	6.102	6.102	0.000	28205008	500.0	538.4	
		Average of Peak Amounts =				532.5	
						RPD = 2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

AR_1248_L5_00021 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

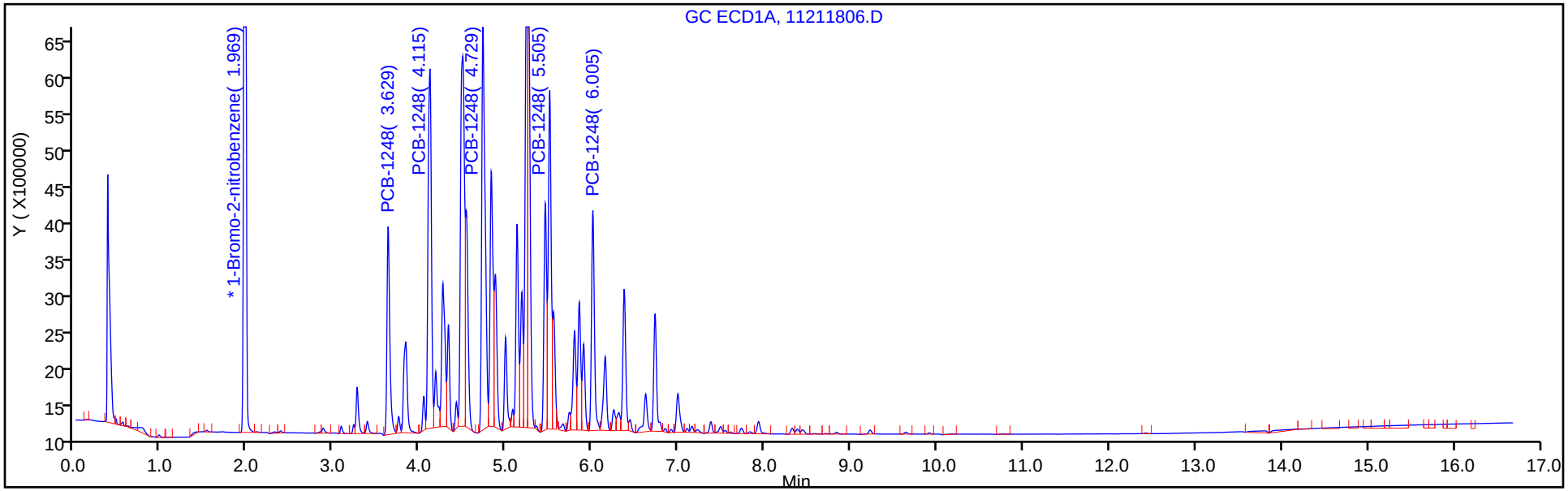
Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

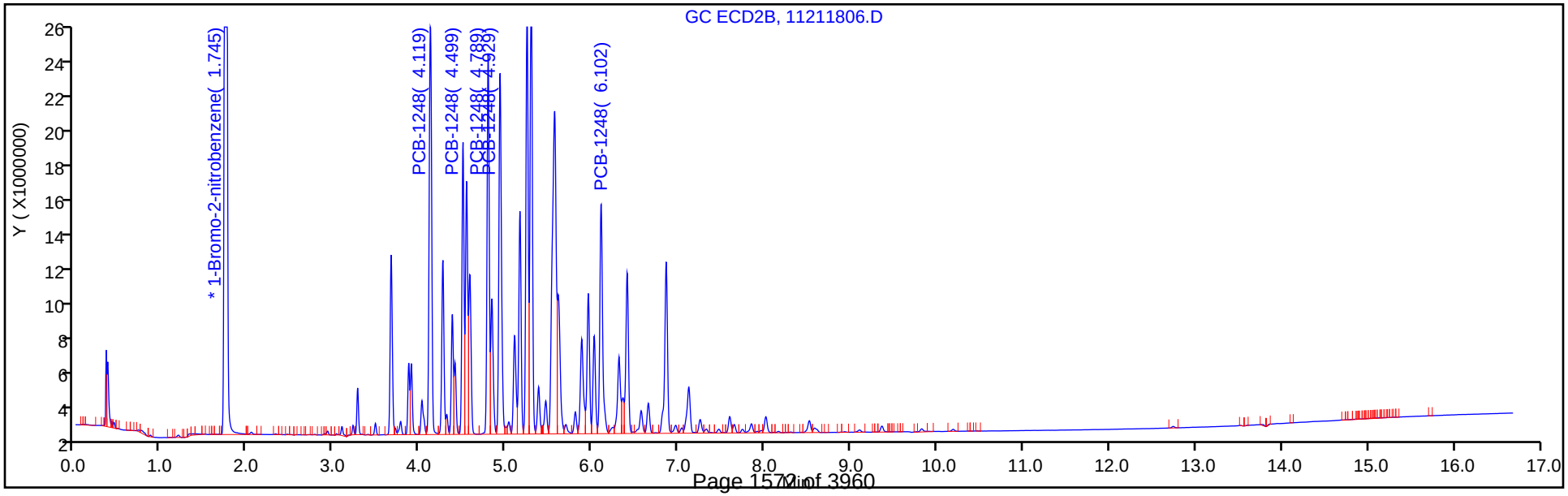
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date:	21-Nov-2018 10:30:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D
Lims ID: STDL41248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 10:51:35 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41248
Misc. Info.: 280-0076428-007
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:55 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:16:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	30868128	1000.0	1000.0	
2	1.748	1.745	0.003	175701150	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	3572971	250.0	259.7	
1	4.114	4.115	-0.001	6774612	250.0	240.9	
1	4.731	4.729	0.002	7900982	250.0	244.5	
1	5.504	5.505	-0.001	5573784	250.0	246.5	
1	6.004	6.005	-0.001	3570034	250.0	241.9	
		Average of Peak Amounts =				246.7	
2	4.121	4.119	0.002	24413334	250.0	258.1	
2	4.498	4.499	-0.001	14232505	250.0	255.2	
2	4.791	4.789	0.002	19636547	250.0	255.1	
2	4.928	4.929	-0.001	21701862	250.0	256.9	
2	6.101	6.102	-0.001	14716689	250.0	254.0	
		Average of Peak Amounts =				255.9	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						246.7	
2						255.9	
						RPD = 3.64	

Reagents:

AR_1248_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

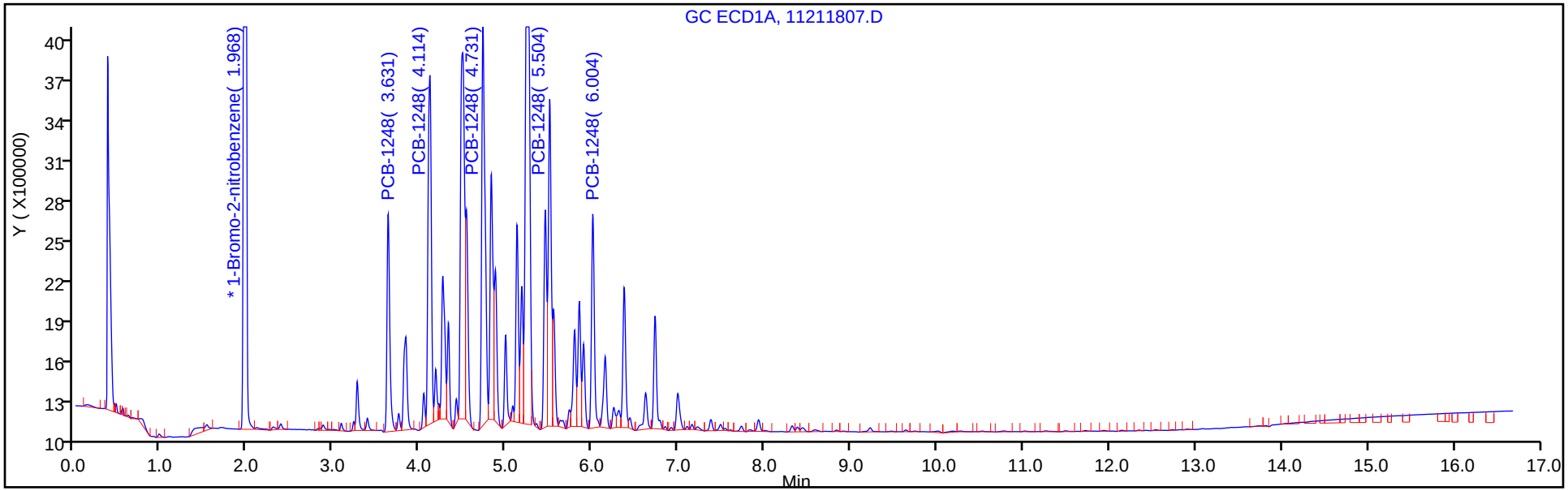
Report Date: 23-Nov-2018 11:01:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

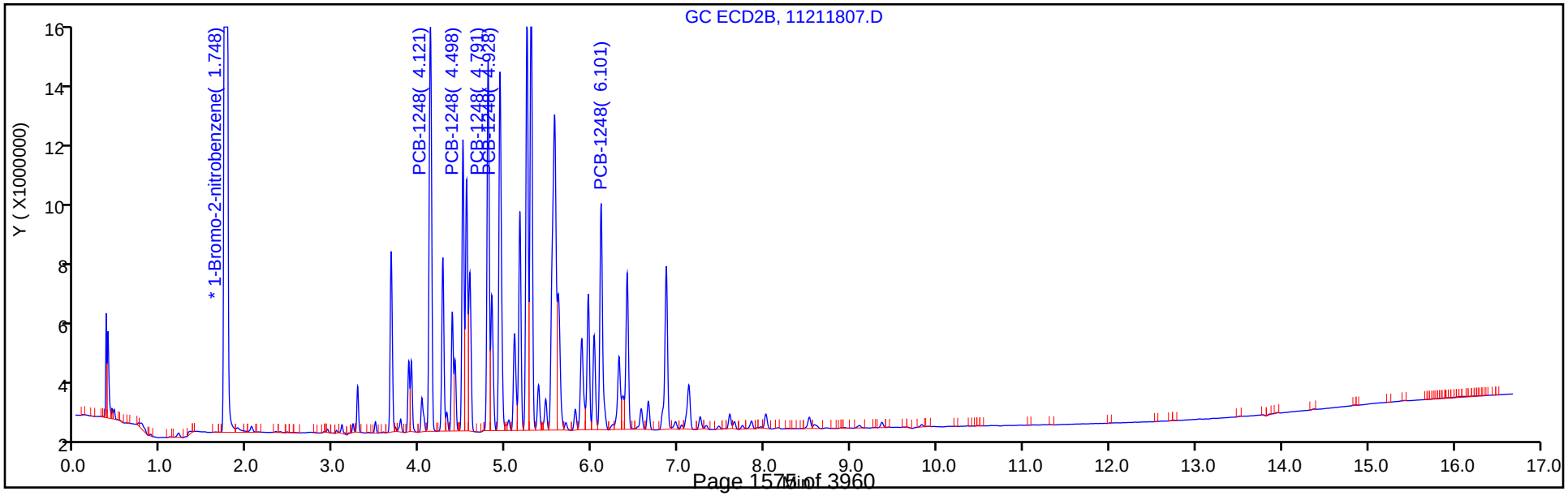
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D

Injection Date:	21-Nov-2018 10:51:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41248			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D
Lims ID: STDL31248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 11:12:45 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31248
Misc. Info.: 280-0076428-008
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:41:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	28891546	1000.0	1000.0	
2	1.746	1.745	0.001	164562398	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	1647978	100.0	115.7	
1	4.113	4.115	-0.002	2970012	100.0	110.1	
1	4.730	4.729	0.001	3553415	100.0	112.6	
1	5.506	5.505	0.001	2408573	100.0	109.2	
1	6.006	6.005	0.001	1614155	100.0	112.6	
		Average of Peak Amounts =				112.0	
2	4.120	4.119	0.001	10526463	100.0	109.8	
2	4.500	4.499	0.001	6322335	100.0	111.3	
2	4.790	4.789	0.001	8735777	100.0	110.4	
2	4.930	4.929	0.001	9459919	100.0	110.4	
2	6.103	6.102	0.001	6426439	100.0	109.9	
		Average of Peak Amounts =				110.4	
						RPD = 1.50	
S 8 Polychlorinated biphenyls, Total							
1						112.0	
2						110.4	
						RPD = 1.50	

Reagents:

AR_1248_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

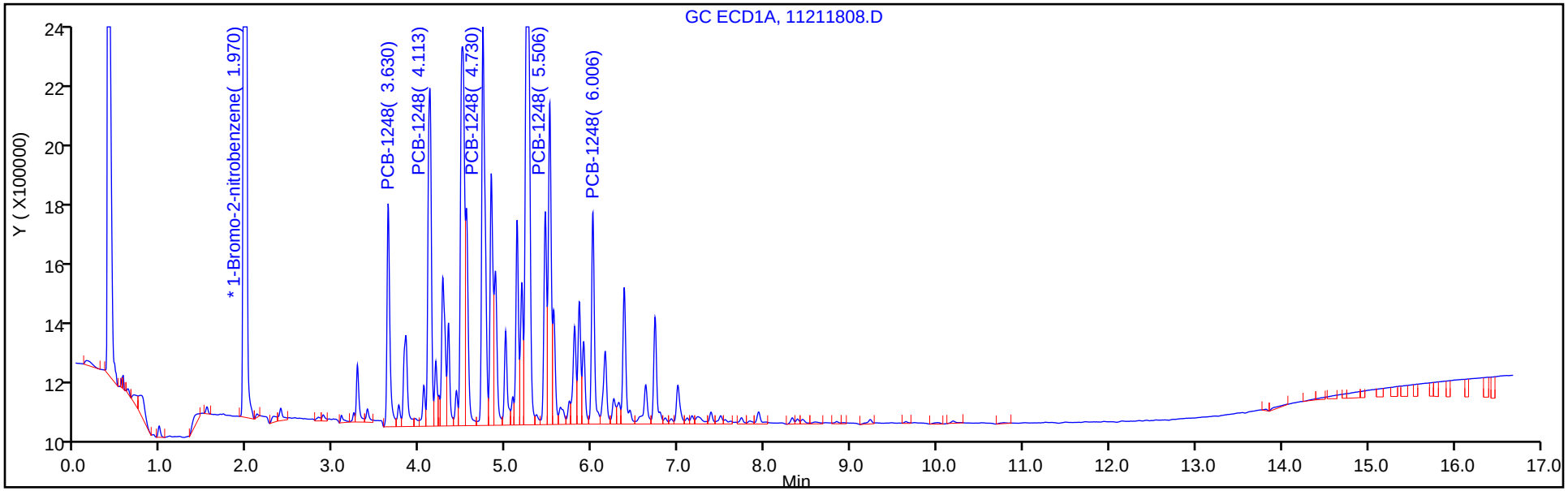
Report Date: 23-Nov-2018 11:01:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

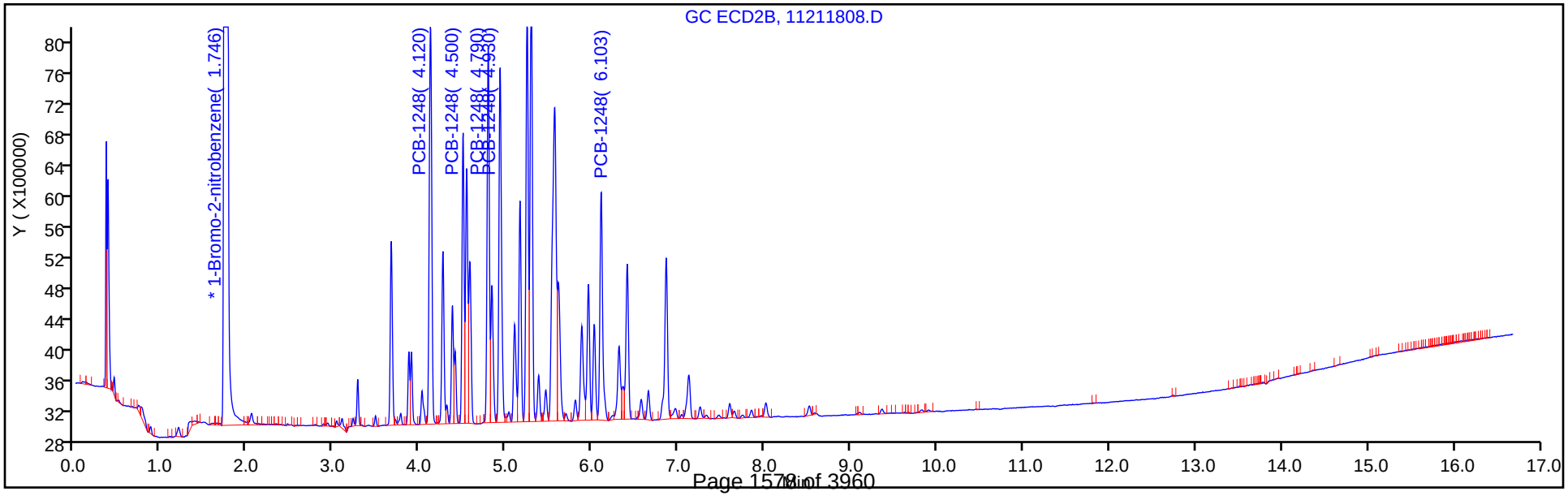
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D

Injection Date:	21-Nov-2018 11:12:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31248			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D
Lims ID: STDL21248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 11:33:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21248
Misc. Info.: 280-0076428-009
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:59 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:58:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	29689350	1000.0	1000.0	
2	1.748	1.745	0.003	167941963	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	908243	50.0	50.8	
1	4.111	4.115	-0.004	1417622	50.0	48.4	
1	4.728	4.729	-0.001	1757060	50.0	49.3	
1	5.505	5.505	0.000	1217158	50.0	49.3	
1	6.005	6.005	0.000	778039	50.0	48.5	
		Average of Peak Amounts =				49.3	
2	4.121	4.119	0.002	5857367	50.0	52.3	
2	4.498	4.499	-0.001	3480448	50.0	51.5	
2	4.791	4.789	0.002	4913700	50.0	51.7	
2	4.928	4.929	-0.001	5227558	50.0	51.9	
2	6.101	6.102	-0.001	3543306	50.0	52.0	
		Average of Peak Amounts =				51.9	
						RPD = 5.21	
S 8 Polychlorinated biphenyls, Total							
1						49.3	
2						51.9	
						RPD = 5.21	

Reagents:

AR_1248_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

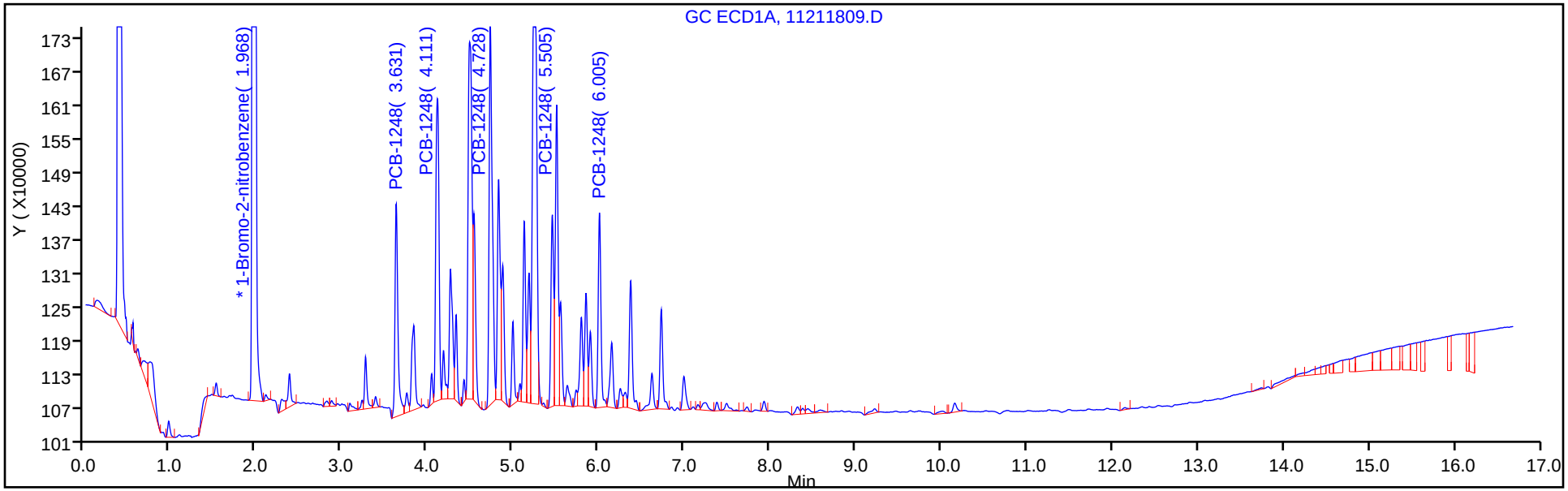
Report Date: 23-Nov-2018 11:02:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

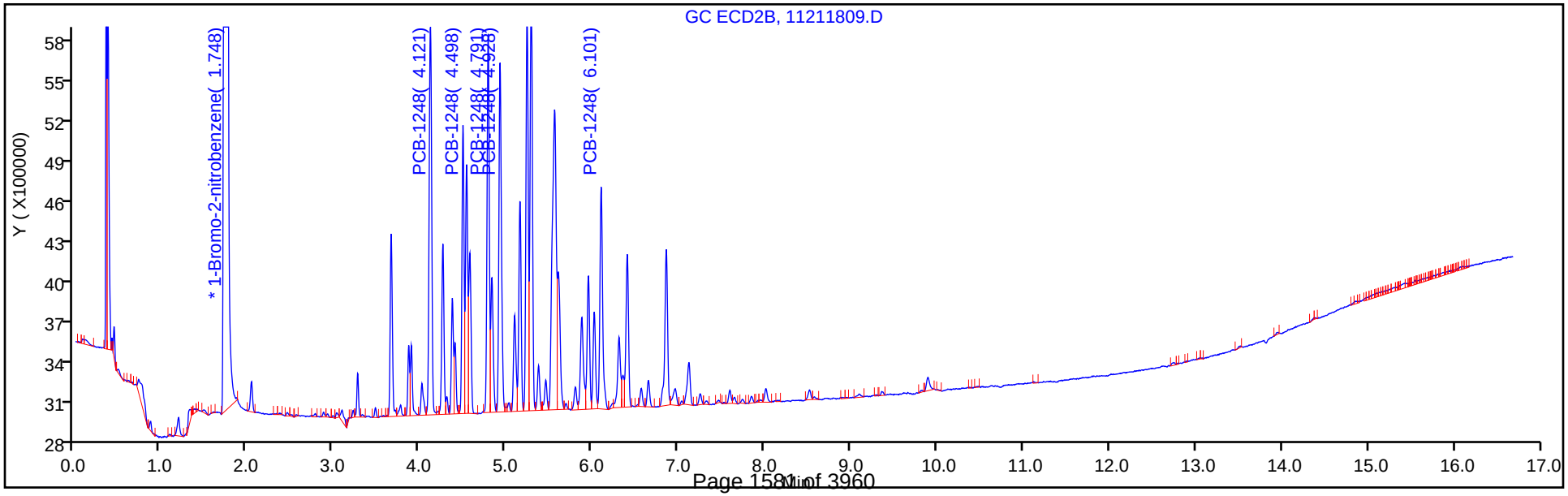
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D

Injection Date:	21-Nov-2018 11:33:58	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21248			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D
Lims ID: STDL11248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 11:55:11 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11248
Misc. Info.: 280-0076428-010
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 12:21:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.969	-0.002	28034459	1000.0	1000.0	
2	1.747	1.745	0.002	159672391	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	499158	25.0	19.5	
1	4.113	4.115	-0.002	729109	25.0	24.0	
1	4.730	4.729	0.001	903744	25.0	22.5	
1	5.503	5.505	-0.002	628528	25.0	23.1	
1	6.003	6.005	-0.002	406565	25.0	23.2	
		Average of Peak Amounts =				22.5	
2	4.120	4.119	0.001	2976466	25.0	20.2	
2	4.497	4.499	-0.002	1854776	25.0	20.7	
2	4.790	4.789	0.001	2664448	25.0	20.7	
2	4.927	4.929	-0.002	2696182	25.0	20.3	
2	6.100	6.102	-0.002	1808002	25.0	20.5	
		Average of Peak Amounts =				20.5	
						RPD = 9.11	
S 8 Polychlorinated biphenyls, Total							
1						22.5	
2						20.5	
						RPD = 9.11	

Reagents:

AR_1248_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

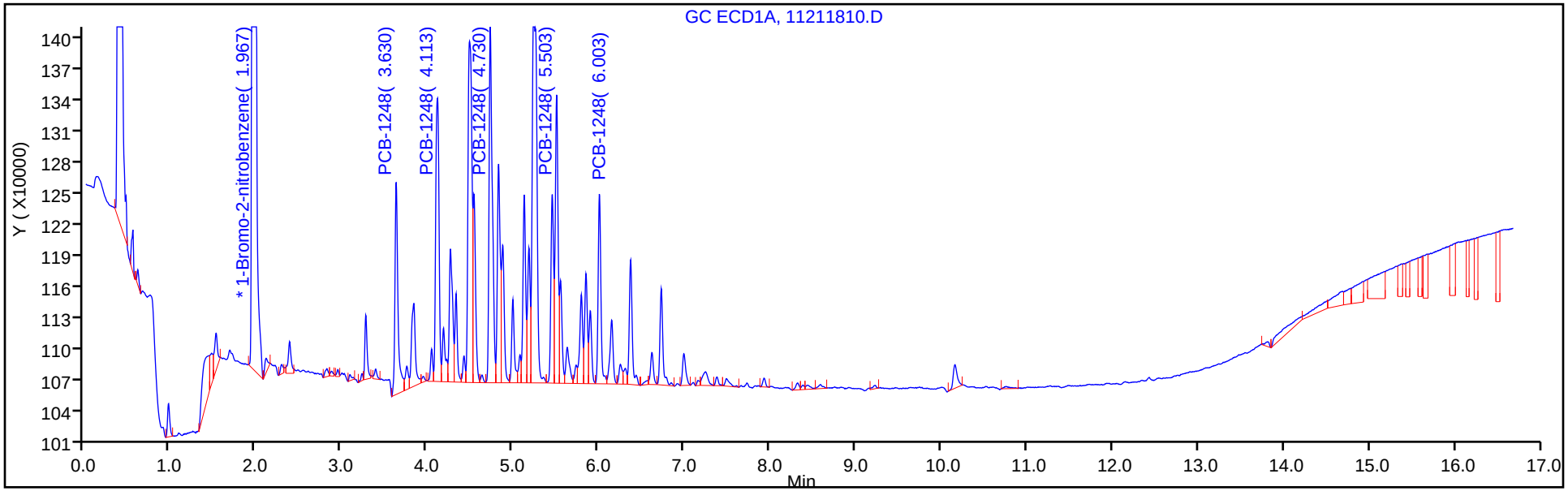
Report Date: 23-Nov-2018 11:02:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

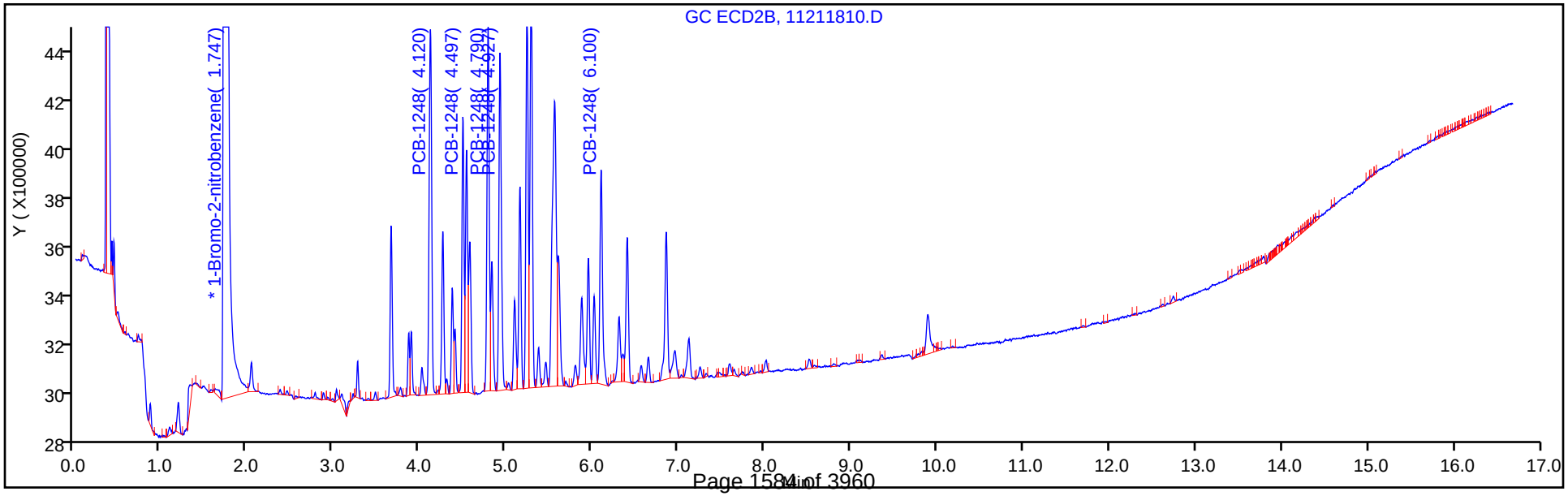
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D

Injection Date:	21-Nov-2018 11:55:11	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11248			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.3324 0.2543	0.3063 0.2408	0.2831	0.2742	0.2560	Lin1	2.7935	0.2469							0.9990		0.9900
PCB-1221 Peak 2	0.2001 0.1490	0.1916 0.1317	0.1804	0.1697	0.1512	Lin1	2.3729	0.1411							0.9920		0.9900
PCB-1221 Peak 3	0.7629 0.6346	0.7594 0.5938	0.7881	0.6927	0.6412	Lin1	7.0937	0.6167							0.9960		0.9900
PCB-1254 Peak 1	1.0411 0.7678	1.0771 0.7457	0.9481	0.8237	0.7656	Lin1	11.881	0.7483							0.9980		0.9900
PCB-1254 Peak 2	1.3591 1.1371	1.4854 1.0678	1.3447	1.2147	1.1311	Lin1	13.399	1.0986							0.9970		0.9900
PCB-1254 Peak 3	0.9424 0.8572	1.0002 0.8194	0.9434	0.8812	0.8159	Lin1	5.8262	0.8290							0.9990		0.9900
PCB-1254 Peak 4	1.2545 1.0368	1.3517 0.9872	1.2209	1.1047	1.0311	Lin1	11.971	1.0070							0.9980		0.9900
PCB-1254 Peak 5	1.5798 1.4286	1.7199 1.3750	1.5764	1.4700	1.4137	Lin1	10.152	1.3955							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Lin1	258968 5979075	422934 7654096	794996	2063928	3897553	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 2	BNB	Lin1	155902 3504422	264535 4185310	506503	1277667	2302370	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 3	BNB	Lin1	594265 14922887	1048520 18870386	2212927	5214449	9761452	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 1	BNB	Lin1	810954 18053312	1487053 23698129	2662071	6200718	11654391	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 2	BNB	Lin1	1058665 26738366	2050858 33934042	3775608	9144535	17219418	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 3	BNB	Lin1	734067 20156036	1380932 26040802	2648846	6634099	12420039	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 4	BNB	Lin1	977183 24380329	1866154 31371863	3428029	8316205	15696475	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 5	BNB	Lin1	1230625 33590891	2374593 43698000	4426432	11066699	21521176	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D
Lims ID: STDL72154
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 12:16:22 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL72154
Misc. Info.: 280-0076428-011
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31780064	1000.0	1000.0	
2	1.748	1.745	0.003	176632693	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.088	3.085	0.003	7654096	1000.0	964.1	
1	3.231	3.232	-0.001	4185310	1000.0	916.3	
1	3.271	3.269	0.002	18870386	1000.0	951.3	
		Average of Peak Amounts =				943.9	
2	3.094	3.092	0.002	23025045	1000.0	950.4	
2	3.221	3.222	-0.001	15205275	1000.0	956.1	
2	3.278	3.276	0.002	52969181	1000.0	950.9	
		Average of Peak Amounts =				952.5	
						RPD = 0.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.181	5.182	-0.001	23698129	1000.0	980.6	
1	5.508	5.509	-0.001	33934042	1000.0	959.7	
1	5.848	5.849	-0.001	26040802	1000.0	981.4	
1	6.621	6.622	-0.001	31371863	1000.0	968.4	
1	6.994	6.995	-0.001	43698000	1000.0	978.1	
		Average of Peak Amounts =				973.6	
2	5.531	5.529	0.002	96750392	1000.0	950.5	
2	5.951	5.952	-0.001	75935033	1000.0	949.3	
2	6.404	6.402	0.002	102458024	1000.0	940.6	
2	6.648	6.649	-0.001	61272987	1000.0	948.5	
2	7.118	7.119	-0.001	150030344	1000.0	953.5	
		Average of Peak Amounts =				948.5	
						RPD = 2.62	
S 8 Polychlorinated biphenyls, Total							
1						1917.5	
2						1901.0	
						RPD = 0.87	

Reagents:

AR_2154_L7_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

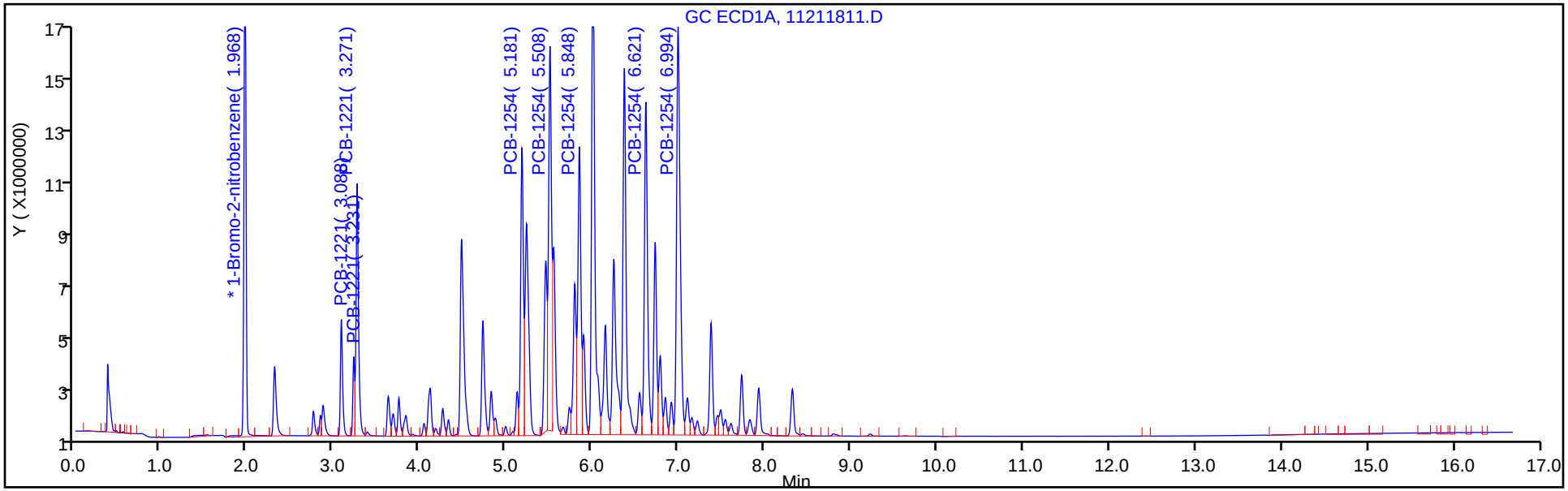
Report Date: 23-Nov-2018 11:02:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

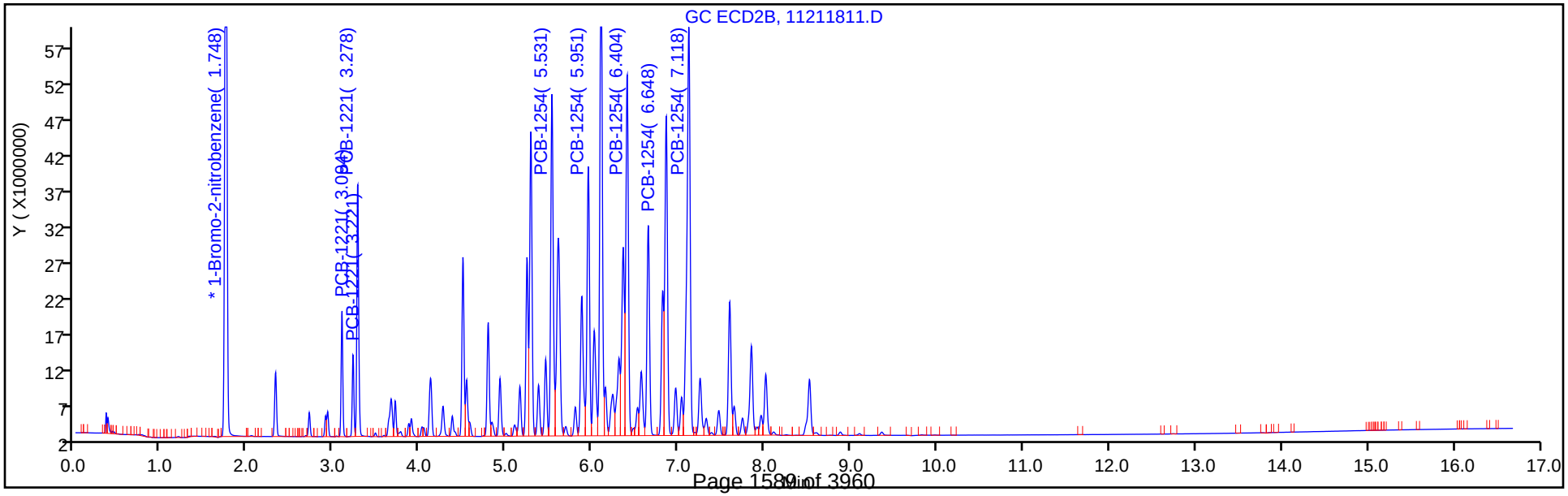
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D

Injection Date:	21-Nov-2018 12:16:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL72154			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D
Lims ID: STDL62154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 12:37:32 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL62154
Misc. Info.: 280-0076428-012
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:06 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31351854	1000.0	1000.0	
2	1.746	1.745	0.001	175195598	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	5979075	750.0	761.1	
1	3.230	3.232	-0.002	3504422	750.0	775.2	
1	3.270	3.269	0.001	14922887	750.0	760.3	
		Average of Peak Amounts =				765.5	
2	3.093	3.092	0.001	18439769	750.0	763.3	
2	3.223	3.222	0.001	12375313	750.0	782.0	
2	3.276	3.276	0.000	42701683	750.0	769.7	
		Average of Peak Amounts =				771.7	
						RPD = 0.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	18053312	750.0	753.6	
1	5.506	5.509	-0.003	26738366	750.0	764.1	
1	5.850	5.849	0.001	20156036	750.0	768.4	
1	6.620	6.622	-0.002	24380329	750.0	760.3	
1	6.993	6.995	-0.002	33590891	750.0	760.5	
		Average of Peak Amounts =				761.4	
2	5.530	5.529	0.001	76003812	750.0	748.9	
2	5.953	5.952	0.001	60170755	750.0	755.0	
2	6.403	6.402	0.001	82164284	750.0	757.0	
2	6.650	6.649	0.001	48574994	750.0	754.4	
2	7.120	7.119	0.001	117808494	750.0	751.3	
		Average of Peak Amounts =				753.3	
						RPD = 1.07	
S 8 Polychlorinated biphenyls, Total							
1						1526.9	
2						1525.0	
						RPD = 0.12	

Reagents:

AR_2154_L6_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

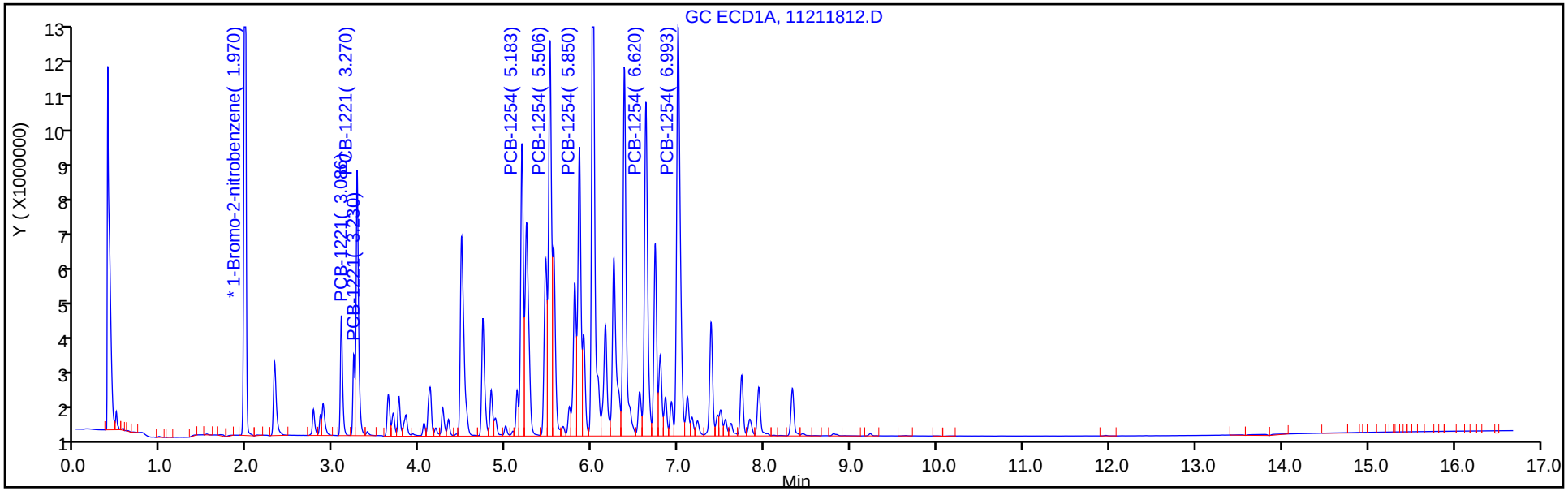
Report Date: 23-Nov-2018 11:02:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

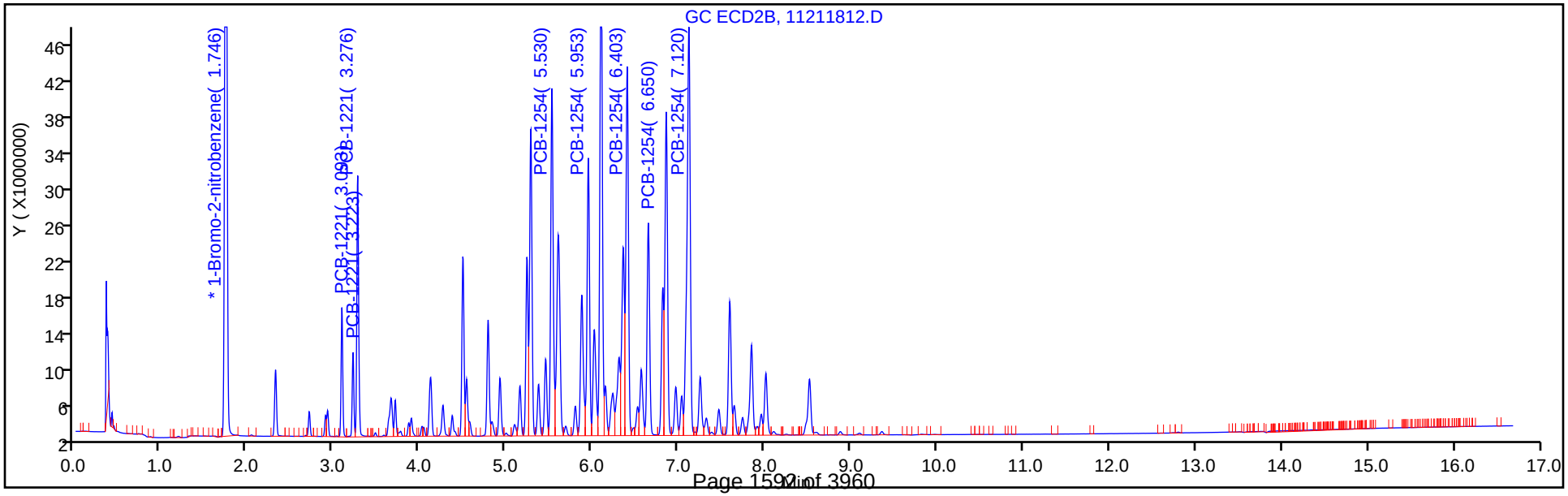
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D

Injection Date:	21-Nov-2018 12:37:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL62154			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D
Lims ID: STDL52154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 12:58:43 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL52154
Misc. Info.: 280-0076428-013
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:10 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	30445909	1000.0	1000.0	
2	1.749	1.749	0.000	171268741	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	3897553	500.0	507.1	
1	3.232	3.232	0.000	2302370	500.0	519.0	
1	3.269	3.269	0.000	9761452	500.0	508.4	
		Average of Peak Amounts =				511.5	
2	3.092	3.092	0.000	12215805	500.0	510.5	
2	3.222	3.222	0.000	7689765	500.0	492.0	
2	3.276	3.276	0.000	27611810	500.0	503.2	
		Average of Peak Amounts =				501.9	
						RPD = 1.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	11654391	500.0	495.7	
1	5.509	5.509	0.000	17219418	500.0	502.6	M
1	5.849	5.849	0.000	12420039	500.0	485.0	
1	6.622	6.622	0.000	15696475	500.0	500.1	
1	6.995	6.995	0.000	21521176	500.0	499.3	
		Average of Peak Amounts =				496.5	
2	5.529	5.529	0.000	51845638	500.0	516.9	
2	5.952	5.952	0.000	40591711	500.0	515.7	
2	6.402	6.402	0.000	55787230	500.0	520.3	
2	6.649	6.649	0.000	32678665	500.0	513.5	
2	7.119	7.119	0.000	79736218	500.0	514.8	
		Average of Peak Amounts =				516.3	
						RPD = 3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

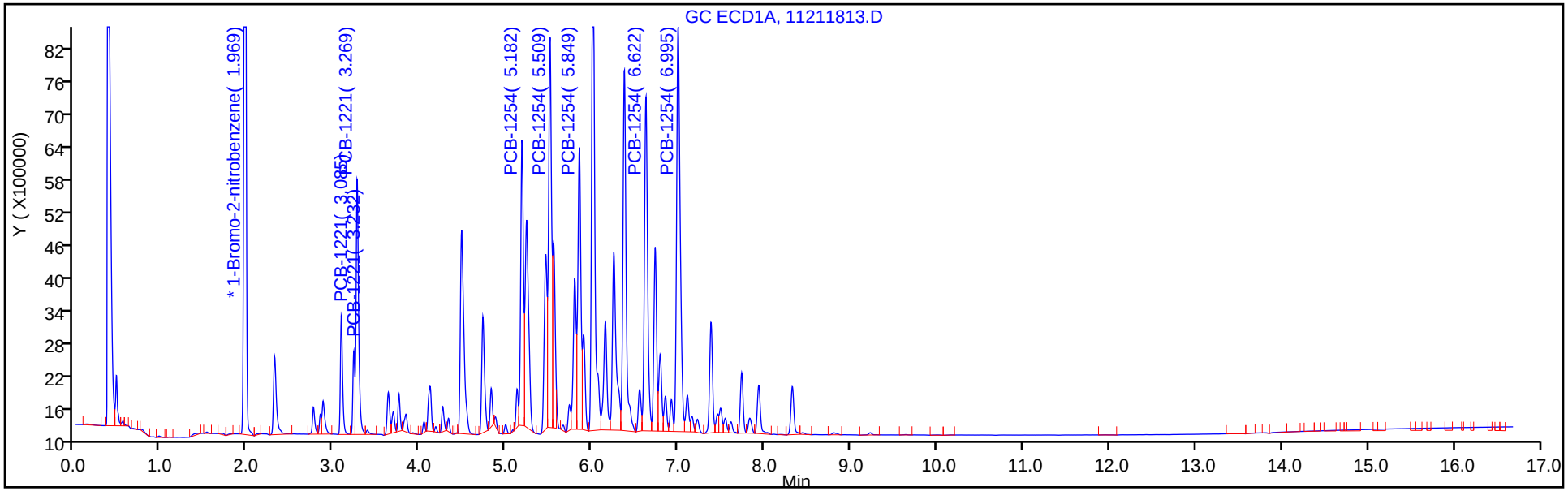
Report Date: 23-Nov-2018 11:02:10 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

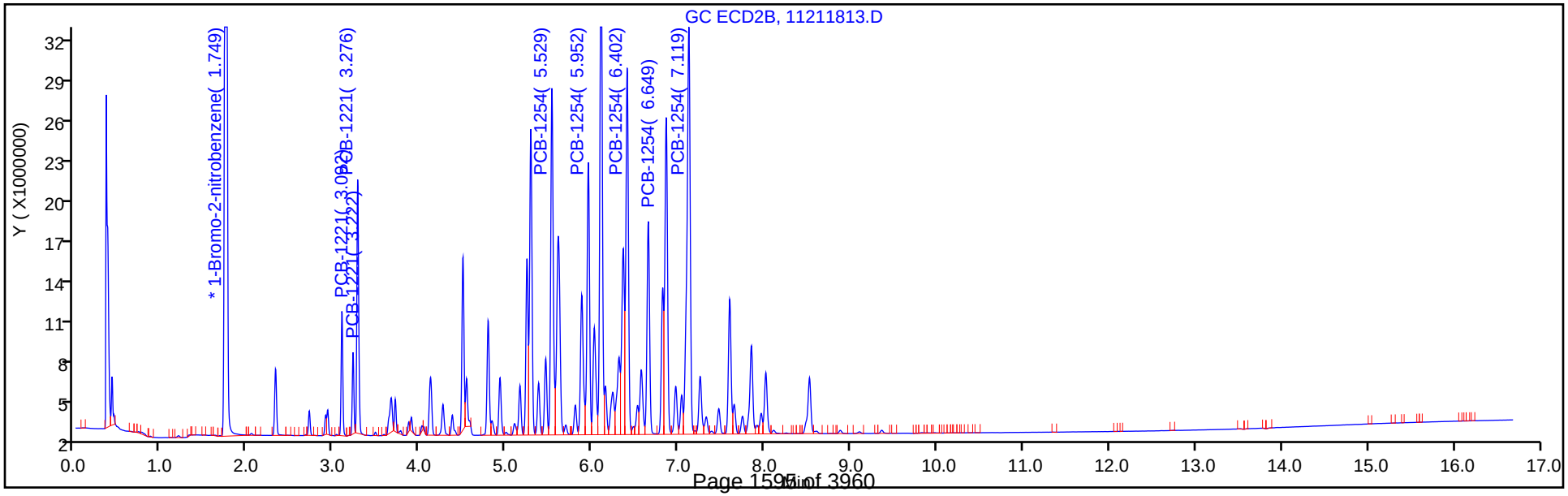
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date:	21-Nov-2018 12:58:43	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL52154			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:10 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date: 21-Nov-2018 12:58:43 Instrument ID: SGC_J

Lims ID: STDL52154

Client ID:

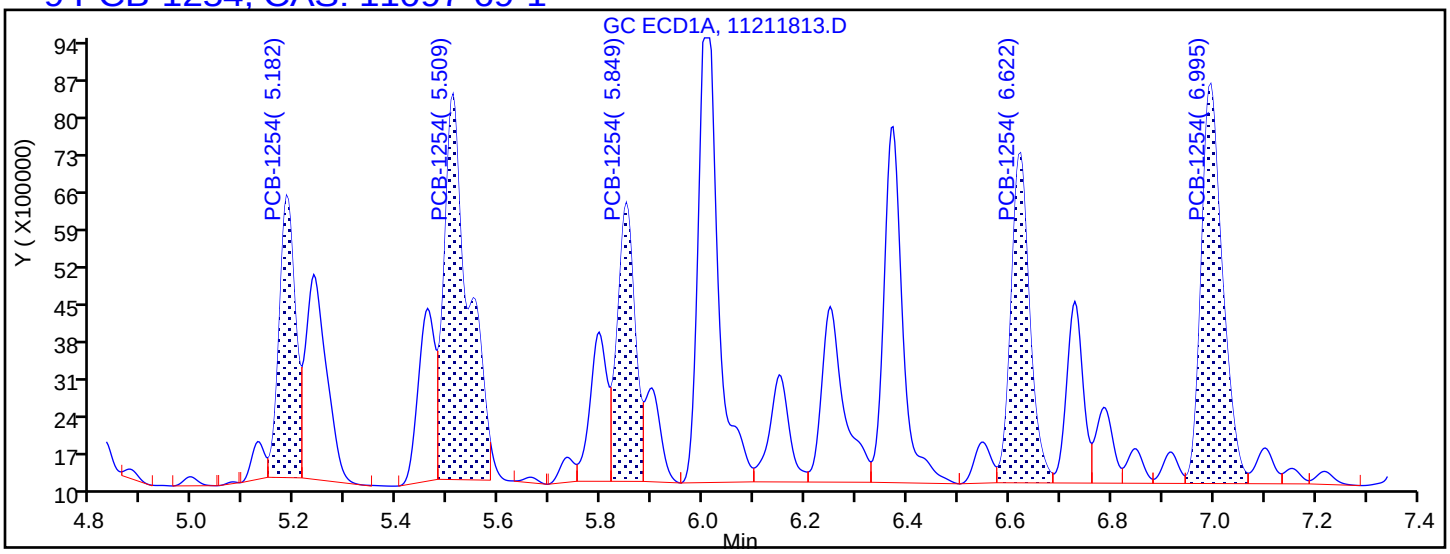
Operator ID: ALS ALS Bottle#: 13 Worklist Smp#: 13

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

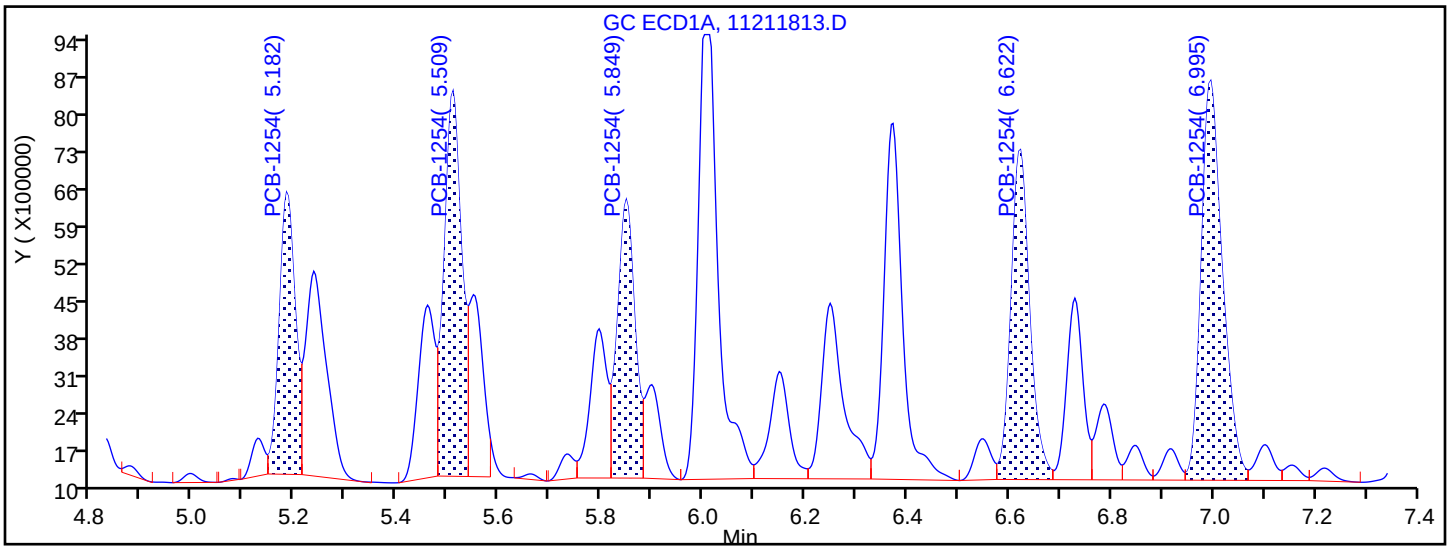
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.182	Response = 11654391
5.509	Response = 23607478
5.849	Response = 12420039
6.622	Response = 15696475
6.995	Response = 21521176



Manual Integration Results

5.182	Response = 11654391	
5.509	Response = 17219418	M
5.849	Response = 12420039	
6.622	Response = 15696475	
6.995	Response = 21521176	

Reviewer: mooret, 21-Nov-2018 15:10:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D
Lims ID: STDL42154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 13:19:55 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL42154
Misc. Info.: 280-0076428-014
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:12 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30112720	1000.0	1000.0	
2	1.747	1.749	-0.002	169613542	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2063928	250.0	266.3	
1	3.230	3.232	-0.002	1277667	250.0	283.8	
1	3.270	3.269	0.001	5214449	250.0	269.3	
		Average of Peak Amounts =				273.1	
2	3.093	3.092	0.001	6662383	250.0	271.7	
2	3.223	3.222	0.001	4151876	250.0	261.9	
2	3.277	3.276	0.001	14954730	250.0	267.4	
		Average of Peak Amounts =				267.0	
						RPD = 2.27	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6200718	250.0	259.3	
1	5.506	5.509	-0.003	9144535	250.0	264.2	M
1	5.846	5.849	-0.003	6634099	250.0	258.7	
1	6.620	6.622	-0.002	8316205	250.0	262.4	
1	6.993	6.995	-0.002	11066699	250.0	256.1	
		Average of Peak Amounts =				260.1	
2	5.530	5.529	0.001	27978613	250.0	273.1	
2	5.953	5.952	0.001	21681477	250.0	270.3	
2	6.403	6.402	0.001	29833754	250.0	272.7	
2	6.650	6.649	0.001	17685692	250.0	272.4	
2	7.120	7.119	0.001	42598206	250.0	269.8	
		Average of Peak Amounts =				271.7	
						RPD = 4.33	
S 8 Polychlorinated biphenyls, Total							
1						533.3	
2						538.7	
						RPD = 1.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

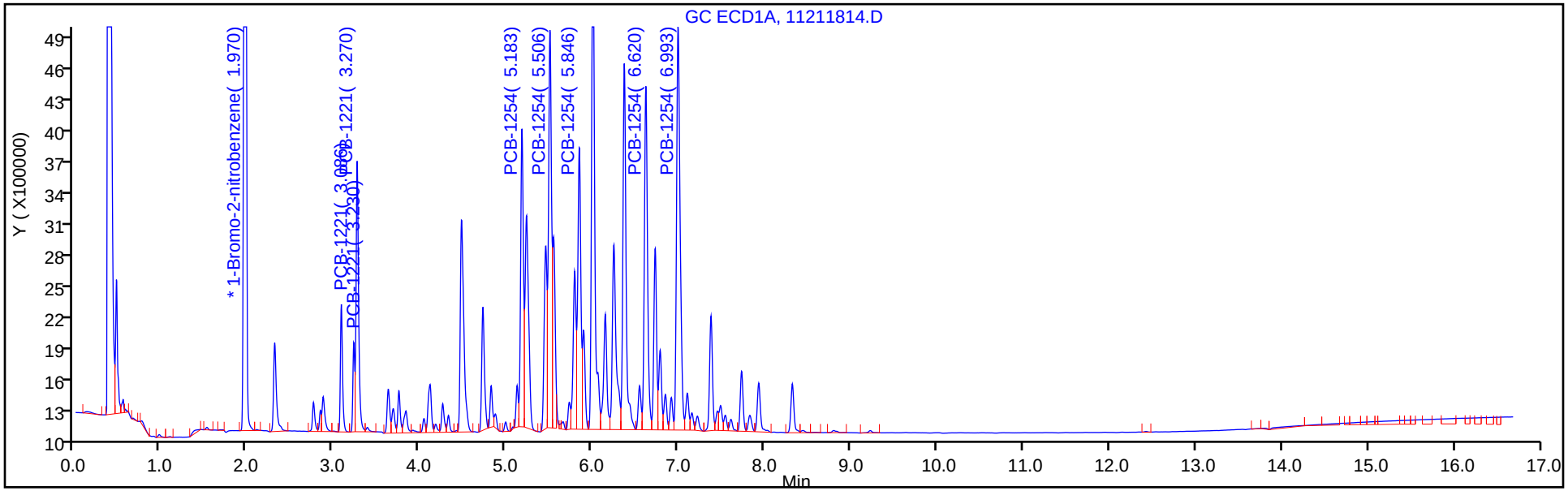
Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

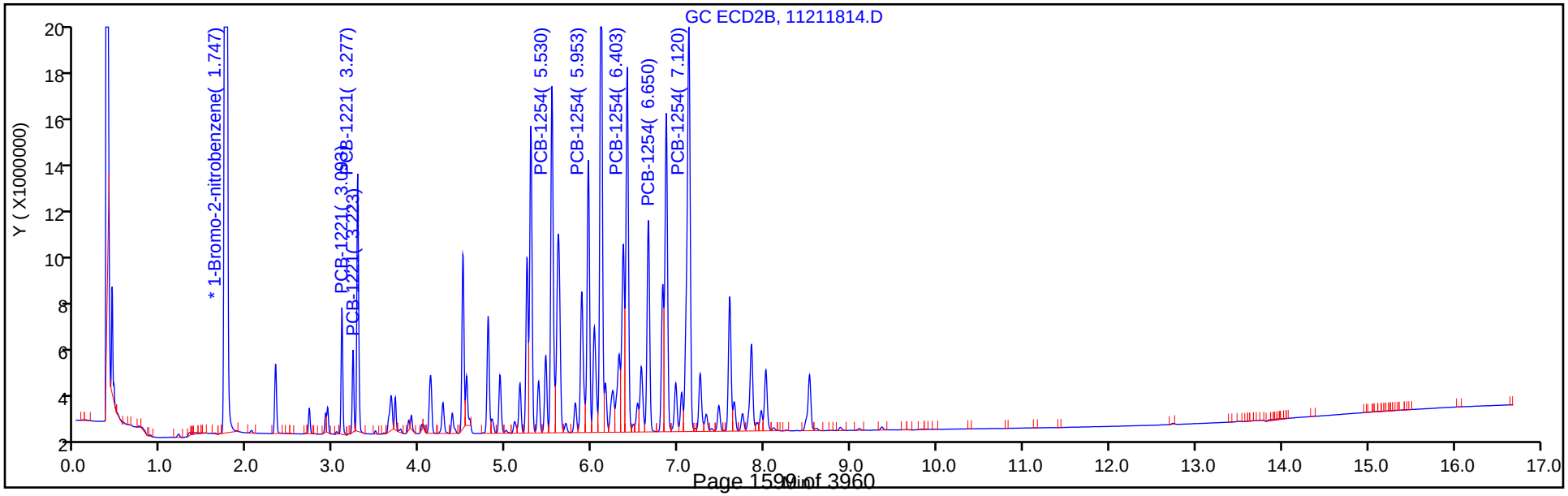
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date:	21-Nov-2018 13:19:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL42154			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date: 21-Nov-2018 13:19:55 Instrument ID: SGC_J

Lims ID: STDL42154

Client ID:

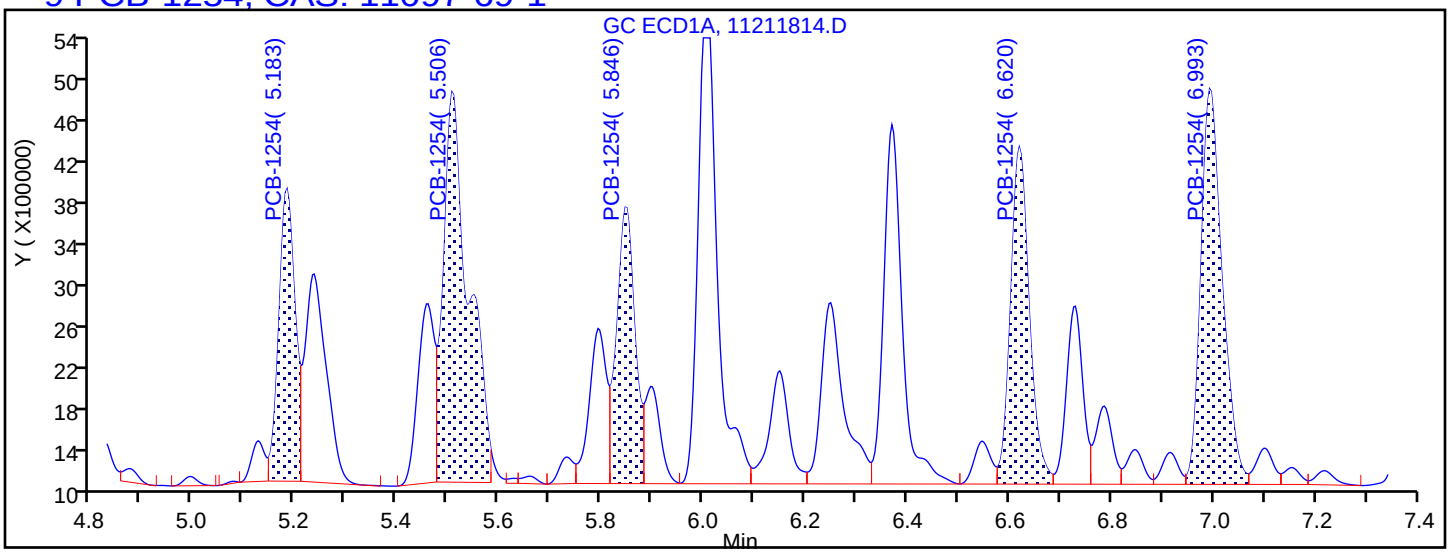
Operator ID: ALS ALS Bottle#: 14 Worklist Smp#: 14

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

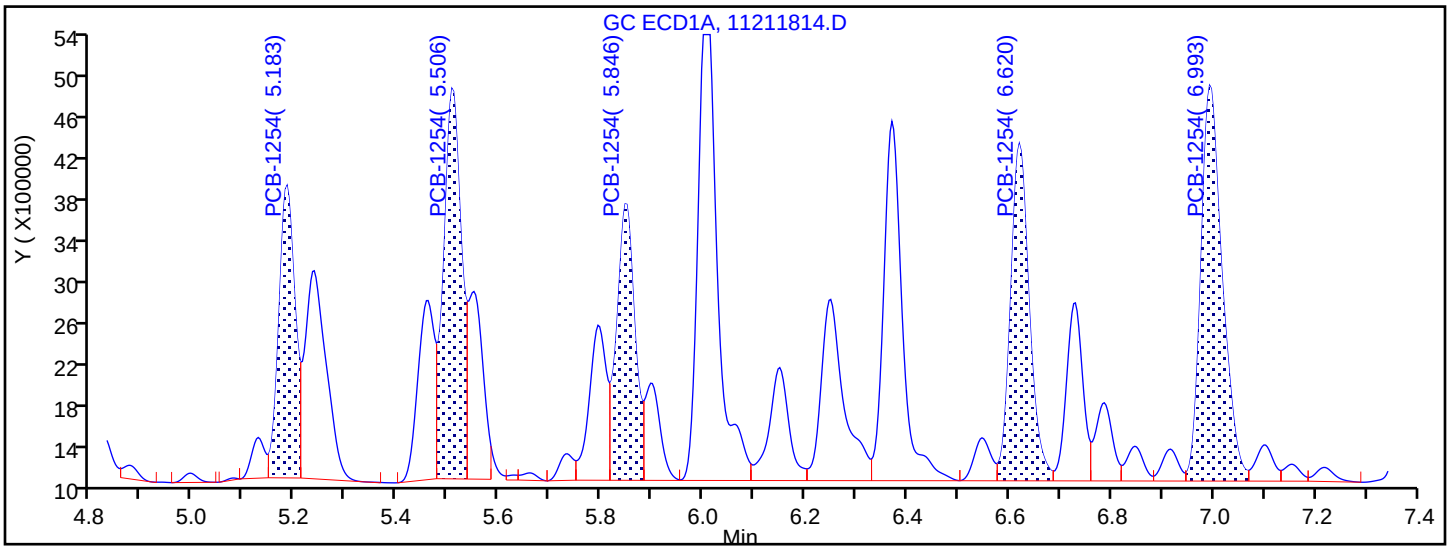
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 6200718
5.506	Response = 12802421
5.846	Response = 6634099
6.620	Response = 8316205
6.993	Response = 11066699



Manual Integration Results

5.183	Response = 6200718	
5.506	Response = 9144535	M
5.846	Response = 6634099	
6.620	Response = 8316205	
6.993	Response = 11066699	

Reviewer: mooret, 21-Nov-2018 15:11:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D
Lims ID: STDL32154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 13:41:08 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL32154
Misc. Info.: 280-0076428-015
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28078685	1000.0	1000.0	
2	1.746	1.749	-0.003	159417859	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	794996	100.0	103.4	
1	3.229	3.232	-0.003	506503	100.0	111.0	
1	3.269	3.269	0.000	2212927	100.0	116.3	
		Average of Peak Amounts =				110.2	
2	3.093	3.092	0.001	2763923	100.0	108.2	
2	3.223	3.222	0.001	1748923	100.0	109.7	
2	3.276	3.276	0.000	6335939	100.0	111.0	
		Average of Peak Amounts =				109.6	
						RPD = 0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	2662071	100.0	110.8	
1	5.506	5.509	-0.003	3775608	100.0	110.2	M
1	5.849	5.849	0.000	2648846	100.0	106.8	
1	6.619	6.622	-0.003	3428029	100.0	109.3	
1	6.993	6.995	-0.002	4426432	100.0	105.7	
		Average of Peak Amounts =				108.6	
2	5.529	5.529	0.000	11951653	100.0	113.9	
2	5.953	5.952	0.001	9184571	100.0	112.5	
2	6.403	6.402	0.001	12571284	100.0	112.4	
2	6.649	6.649	0.000	7560827	100.0	113.9	
2	7.119	7.119	0.000	18178594	100.0	113.0	
		Average of Peak Amounts =				113.1	
						RPD = 4.13	
S 8 Polychlorinated biphenyls, Total							
1						218.8	
2						222.8	
						RPD = 1.82	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

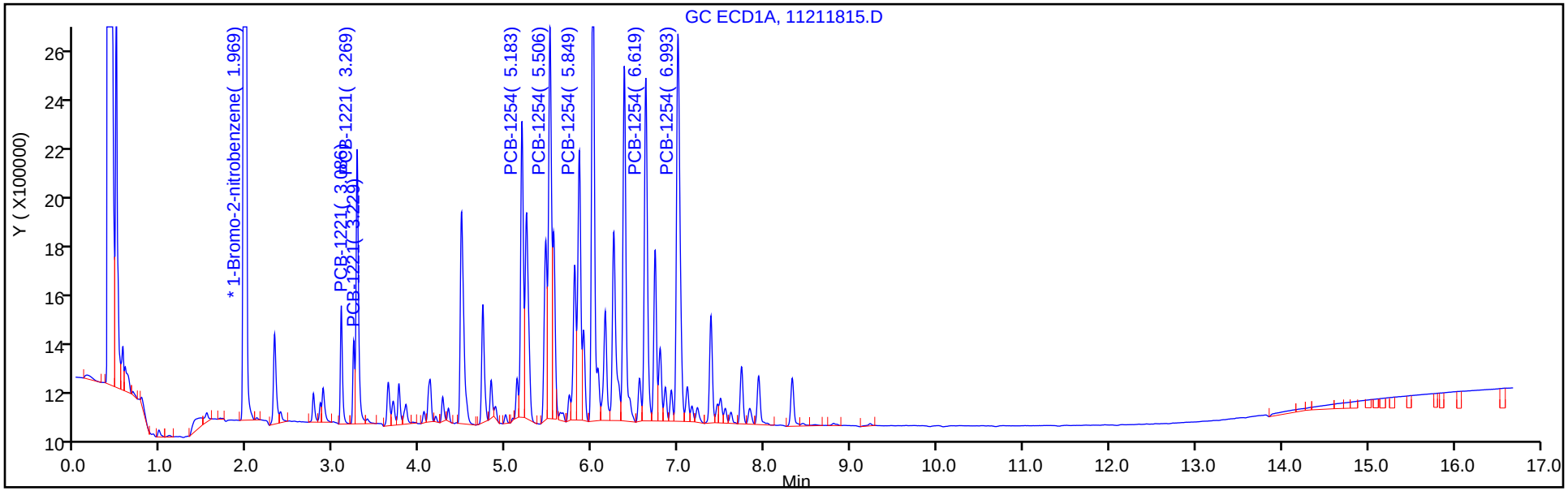
Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

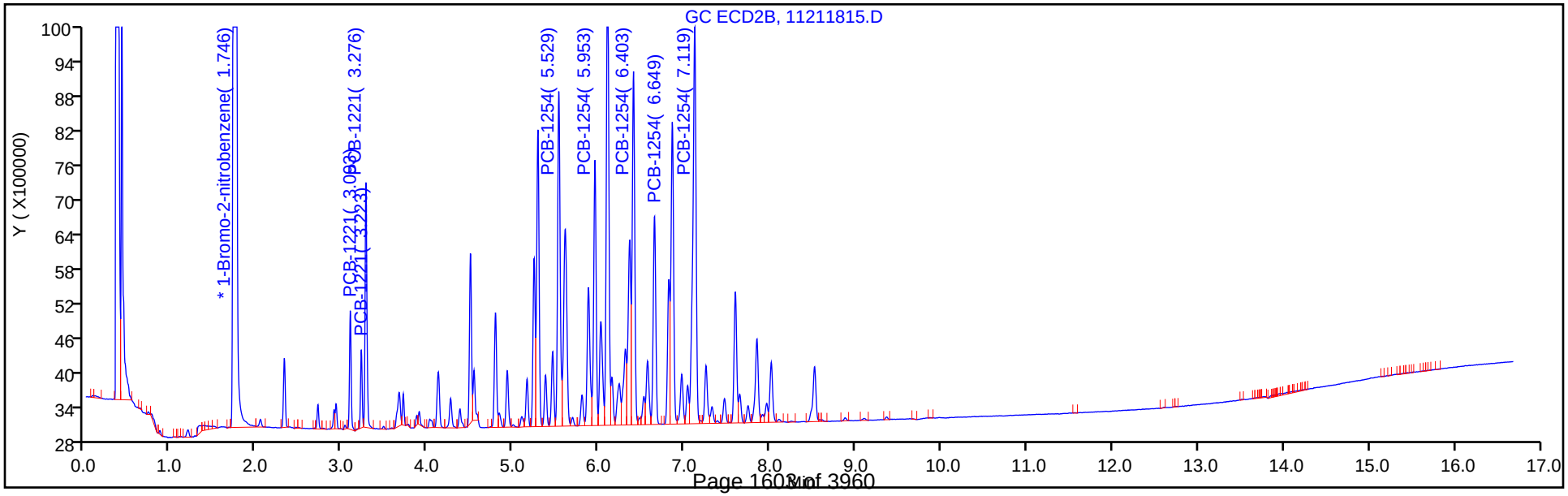
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date:	21-Nov-2018 13:41:08	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL32154			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date: 21-Nov-2018 13:41:08 Instrument ID: SGC_J

Lims ID: STDL32154

Client ID:

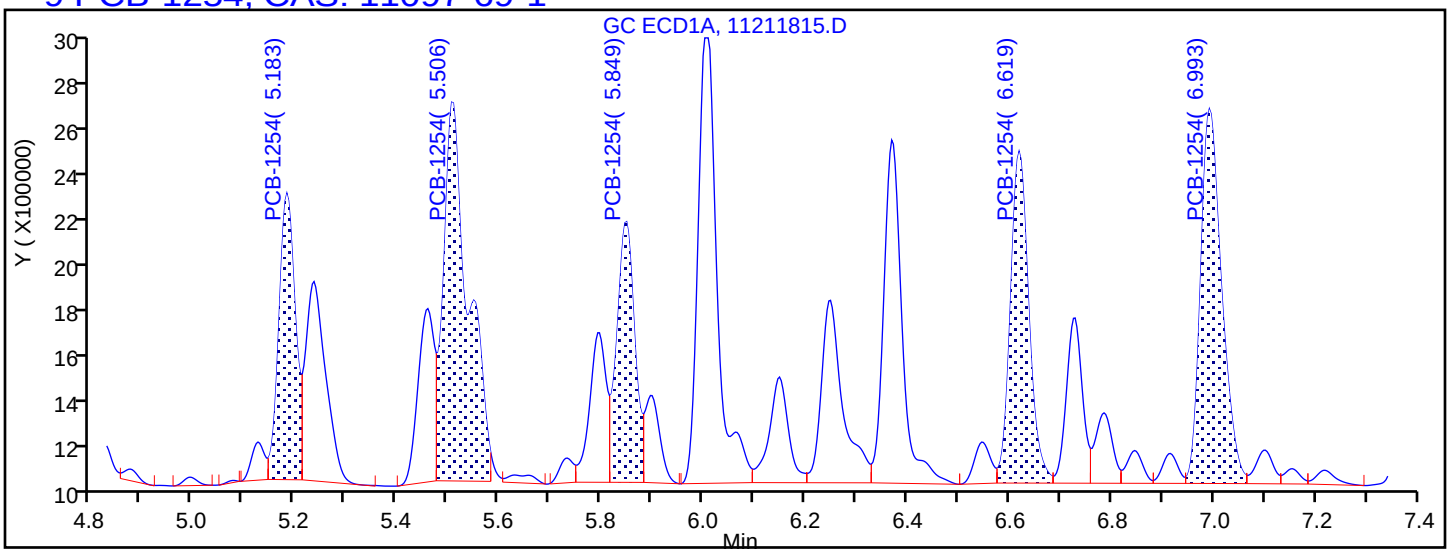
Operator ID: ALS ALS Bottle#: 15 Worklist Smp#: 15

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

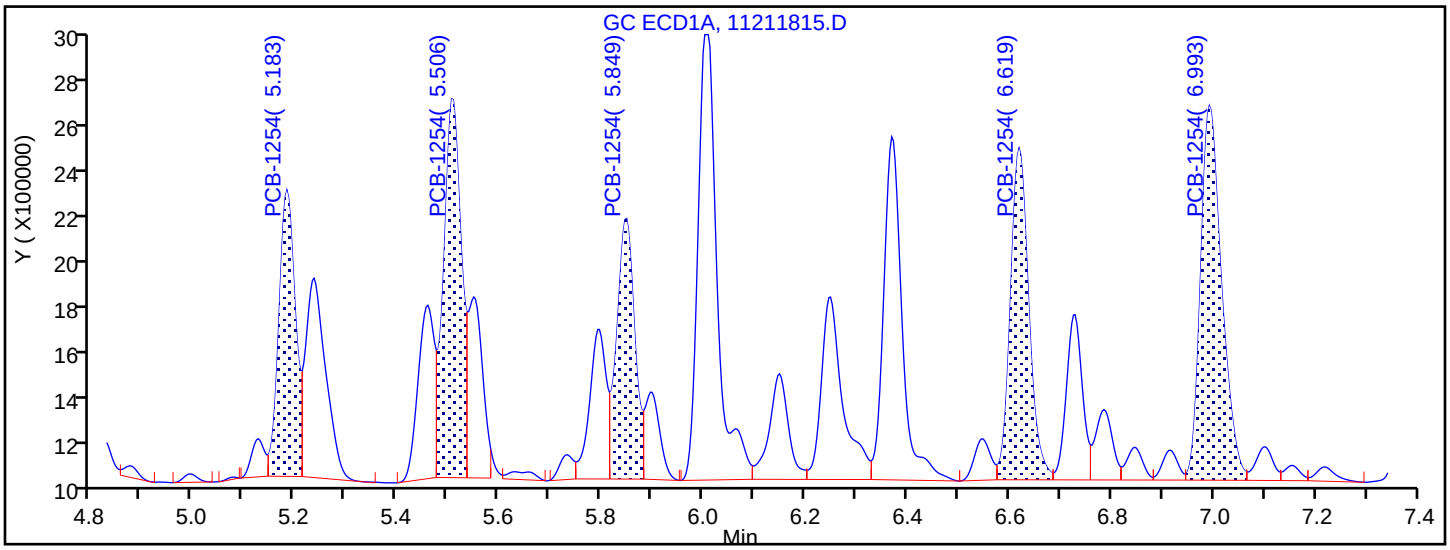
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 2662071
5.506	Response = 5259178
5.849	Response = 2648846
6.619	Response = 3428029
6.993	Response = 4426432



Manual Integration Results

5.183	Response = 2662071	
5.506	Response = 3775608	M
5.849	Response = 2648846	
6.619	Response = 3428029	
6.993	Response = 4426432	

Reviewer: mooret, 21-Nov-2018 15:11:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D
Lims ID: STDL22154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 14:02:19 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL22154
Misc. Info.: 280-0076428-016
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	27612767	1000.0	1000.0	
2	1.746	1.749	-0.003	155958976	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	422934	50.0	50.7	
1	3.229	3.232	-0.003	264535	50.0	51.1	
1	3.269	3.269	0.000	1048520	50.0	50.1	
		Average of Peak Amounts =				50.6	
2	3.093	3.092	0.001	1479927	50.0	49.7	
2	3.223	3.222	0.001	922521	50.0	52.8	
2	3.276	3.276	0.000	3428605	50.0	53.7	
		Average of Peak Amounts =				52.0	
						RPD = 2.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	1487053	50.0	56.1	
1	5.506	5.509	-0.003	2050858	50.0	55.4	
1	5.846	5.849	-0.003	1380932	50.0	53.3	
1	6.619	6.622	-0.003	1866154	50.0	55.2	
1	6.993	6.995	-0.002	2374593	50.0	54.4	
		Average of Peak Amounts =				54.9	
2	5.530	5.529	0.001	6401352	50.0	53.9	
2	5.953	5.952	0.001	4927585	50.0	54.0	
2	6.403	6.402	0.001	6824249	50.0	54.3	
2	6.646	6.649	-0.003	4105287	50.0	55.1	
2	7.120	7.119	0.001	9840352	50.0	54.8	
		Average of Peak Amounts =				54.4	
						RPD = 0.81	
S 8 Polychlorinated biphenyls, Total							
1						105.5	
2						106.5	
						RPD = 0.93	

Reagents:

AR_2154_L2_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

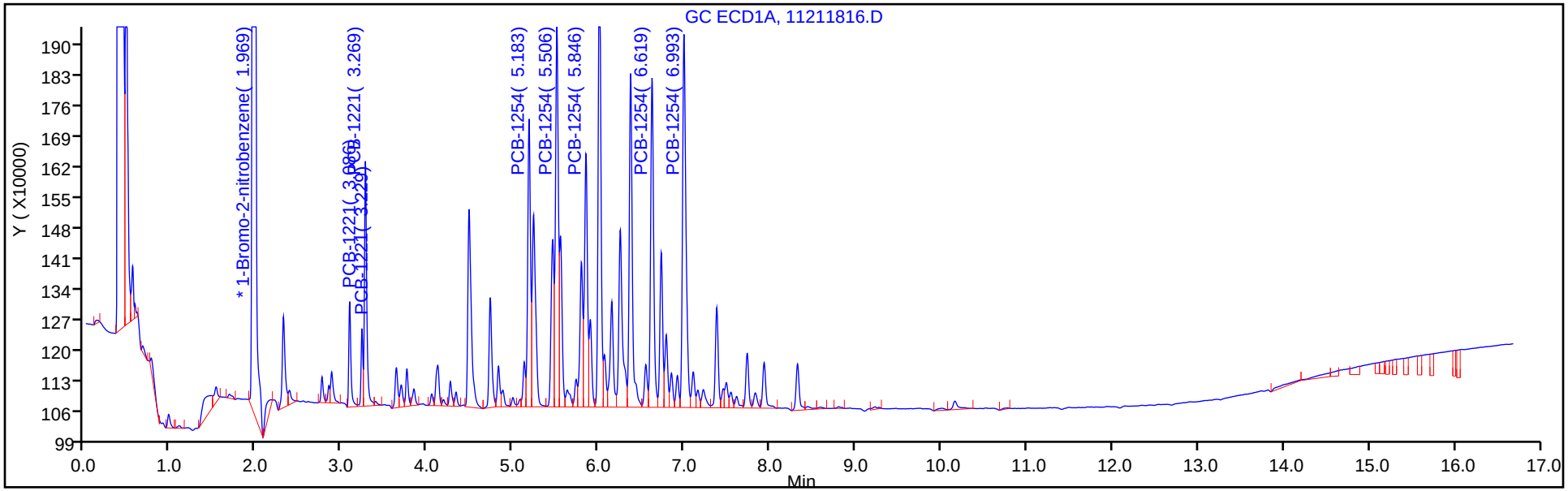
Report Date: 23-Nov-2018 11:02:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

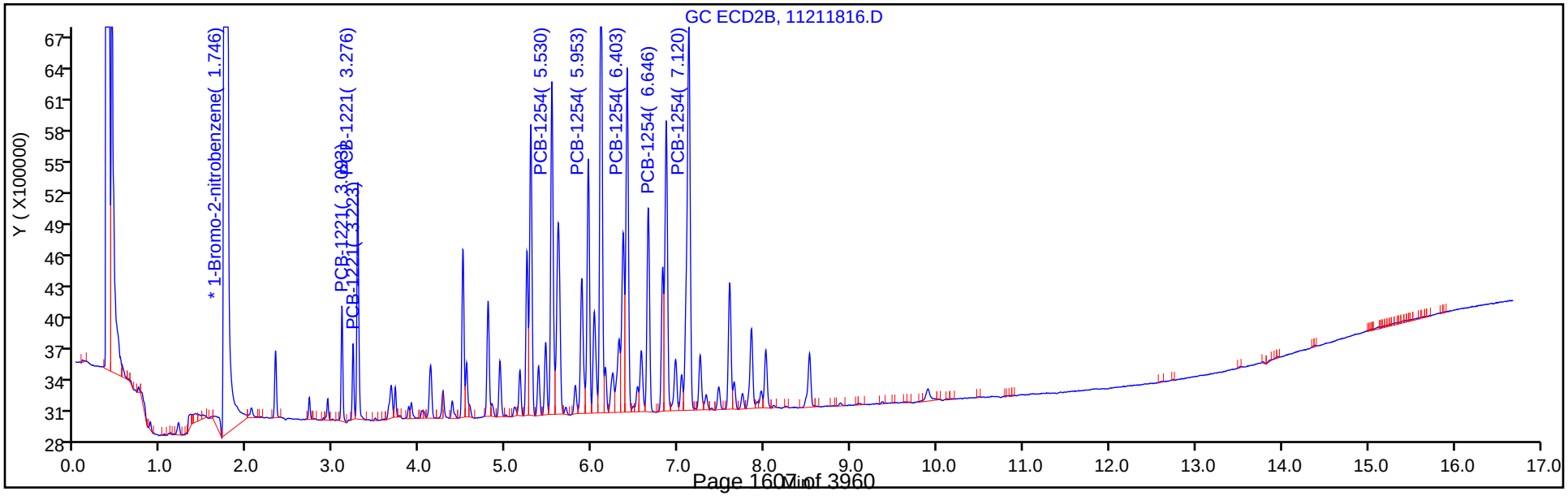
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D

Injection Date:	21-Nov-2018 14:02:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL22154			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D
Lims ID: STDL12154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 14:23:32 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL12154
Misc. Info.: 280-0076428-017
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:20 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:12:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31158892	1000.0	1000.0	
2	1.749	1.749	0.000	174644682	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	258968	25.0	22.3	
1	3.229	3.232	-0.003	155902	25.0	18.6	
1	3.272	3.269	0.003	594265	25.0	19.4	
		Average of Peak Amounts =				20.1	
2	3.092	3.092	0.000	990606	25.0	21.2	
2	3.222	3.222	0.000	531473	25.0	20.4	
2	3.276	3.276	0.000	1966030	25.0	19.1	
		Average of Peak Amounts =				20.2	
						RPD = 0.49	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	810954	25.0	18.9	
1	5.509	5.509	0.000	1058665	25.0	18.7	M
1	5.849	5.849	0.000	734067	25.0	21.4	
1	6.619	6.622	-0.003	977183	25.0	19.3	
1	6.992	6.995	-0.003	1230625	25.0	21.0	
		Average of Peak Amounts =				19.9	
2	5.529	5.529	0.000	3601131	25.0	17.7	
2	5.952	5.952	0.000	2735694	25.0	18.2	
2	6.402	6.402	0.000	3769252	25.0	17.7	
2	6.649	6.649	0.000	2218210	25.0	17.2	
2	7.119	7.119	0.000	5349050	25.0	17.7	
		Average of Peak Amounts =				17.7	
						RPD = 11.52	
S 8 Polychlorinated biphenyls, Total							
1						40.0	
2						37.9	
						RPD = 5.30	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

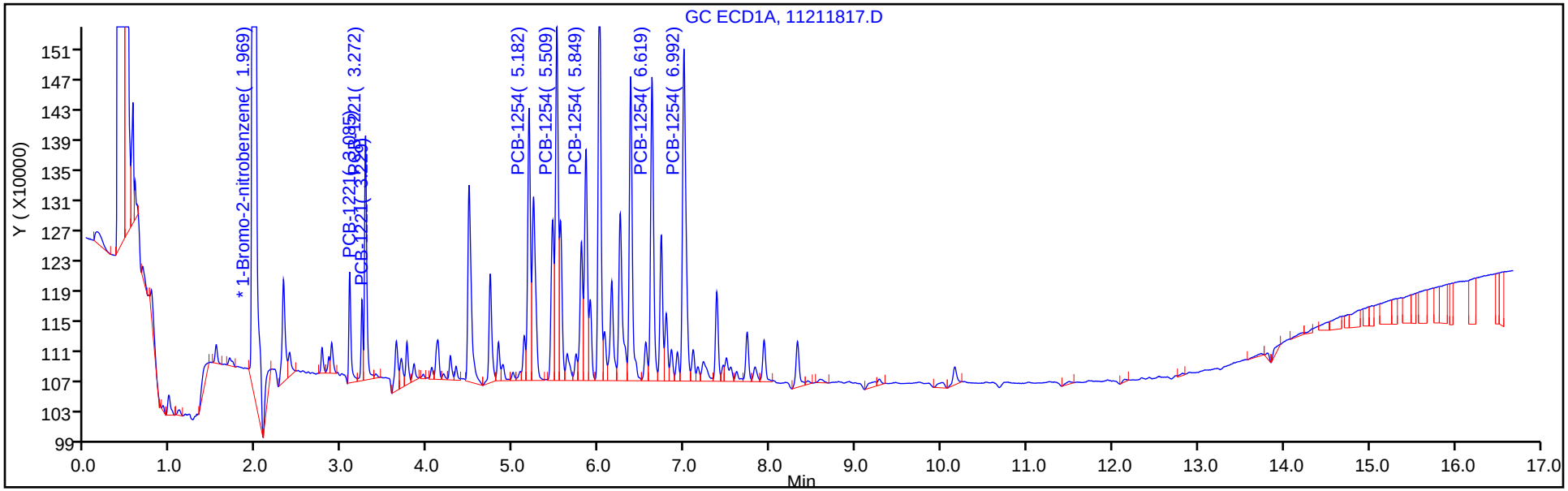
Report Date: 23-Nov-2018 11:02:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

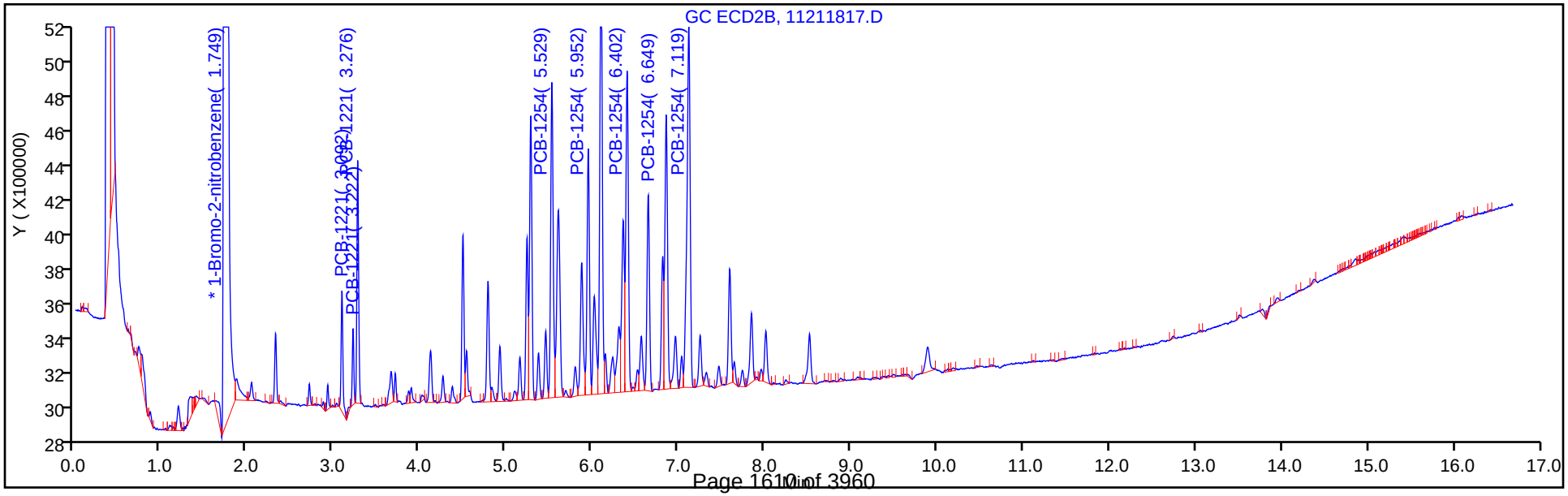
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL12154			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



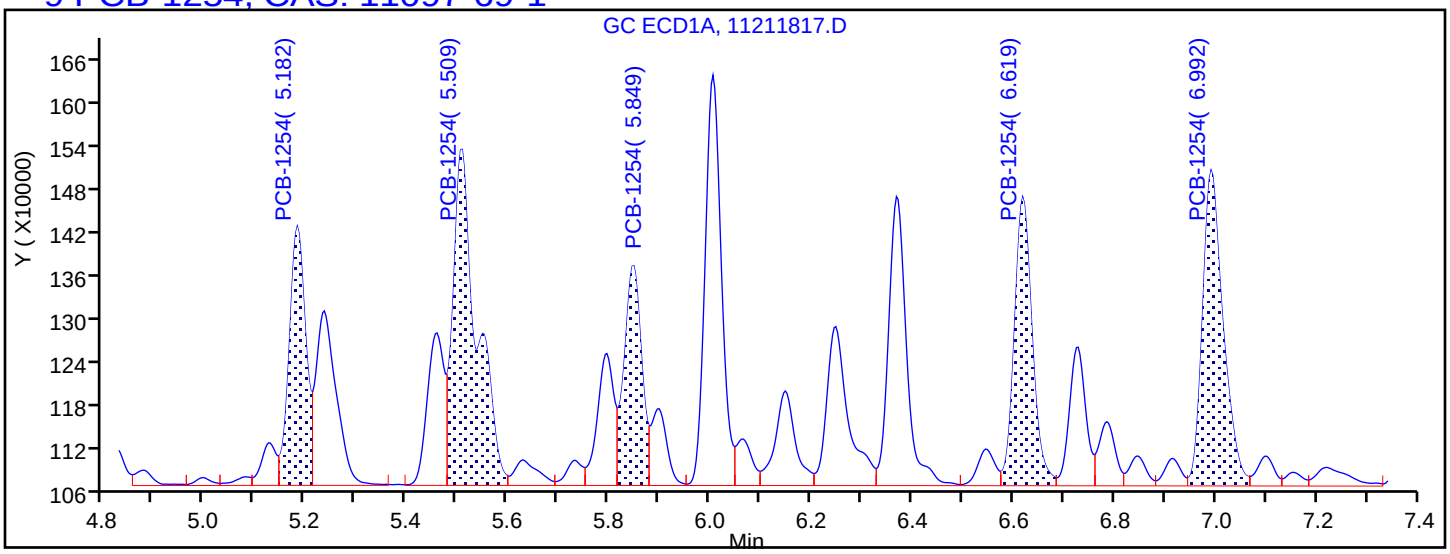
Report Date: 23-Nov-2018 11:02:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

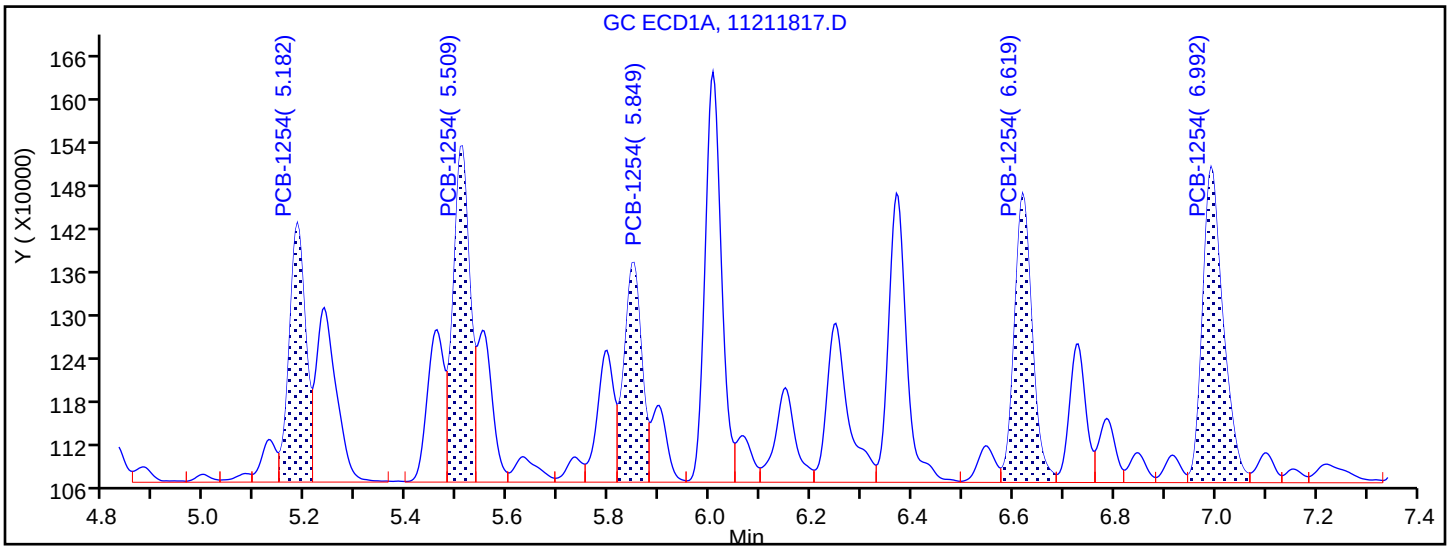
Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J		
Lims ID:	STDL12154				
Client ID:					
Operator ID:	ALS	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		
Column:	CLP1 Pesticides Column 1 (0.32 mm)	Detector	GC ECD1A		

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.182	Response = 810954
5.509	Response = 1501336
5.849	Response = 734067
6.619	Response = 977183
6.992	Response = 1230625



Manual Integration Results

5.182	Response = 810954	
5.509	Response = 1058665	M
5.849	Response = 734067	
6.619	Response = 977183	
6.992	Response = 1230625	

Reviewer: mooret, 21-Nov-2018 15:12:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34383

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.2269 0.1403	0.1898 0.1304	0.1734	0.1571	0.1427	Lin1	2.8240	0.1342							0.9970		0.9900
PCB-1221 Peak 2	0.1217 0.0942	0.1183 0.0861	0.1097	0.0979	0.0898	Lin1	1.2314	0.0888							0.9970		0.9900
PCB-1221 Peak 3	0.4503 0.3250	0.4397 0.2999	0.3974	0.3527	0.3224	Lin1	5.3527	0.3097							0.9970		0.9900
PCB-1254 Peak 1	0.8248 0.5784	0.8209 0.5477	0.7497	0.6598	0.6054	Lin1	10.612	0.5651							0.9950		0.9900
PCB-1254 Peak 2	0.6266 0.4579	0.6319 0.4299	0.5761	0.5113	0.4740	Lin1	7.5798	0.4449							0.9960		0.9900
PCB-1254 Peak 3	0.8633 0.6253	0.8751 0.5801	0.7886	0.7036	0.6515	Lin1	10.868	0.6052							0.9950		0.9900
PCB-1254 Peak 4	0.5081 0.3697	0.5265 0.3469	0.4743	0.4171	0.3816	Lin1	6.5376	0.3588							0.9950		0.9900
PCB-1254 Peak 5	1.2251 0.8966	1.2619 0.8494	1.1403	1.0046	0.9311	Lin1	15.121	0.8749							0.9960		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34383

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Lin1	990606 18439769	1479927 23025045	2763923	6662383	12215805	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 2	BNB	Lin1	531473 12375313	922521 15205275	1748923	4151876	7689765	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 3	BNB	Lin1	1966030 42701683	3428605 52969181	6335939	14954730	27611810	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 1	BNB	Lin1	3601131 76003812	6401352 96750392	11951653	27978613	51845638	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 2	BNB	Lin1	2735694 60170755	4927585 75935033	9184571	21681477	40591711	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 3	BNB	Lin1	3769252 82164284	6824249 102458024	12571284	29833754	55787230	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 4	BNB	Lin1	2218210 48574994	4105287 61272987	7560827	17685692	32678665	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 5	BNB	Lin1	5349050 117808494	9840352 150030344	18178594	42598206	79736218	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D
Lims ID: STDL72154
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 12:16:22 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL72154
Misc. Info.: 280-0076428-011
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31780064	1000.0	1000.0	
2	1.748	1.745	0.003	176632693	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.088	3.085	0.003	7654096	1000.0	964.1	
1	3.231	3.232	-0.001	4185310	1000.0	916.3	
1	3.271	3.269	0.002	18870386	1000.0	951.3	
		Average of Peak Amounts =				943.9	
2	3.094	3.092	0.002	23025045	1000.0	950.4	
2	3.221	3.222	-0.001	15205275	1000.0	956.1	
2	3.278	3.276	0.002	52969181	1000.0	950.9	
		Average of Peak Amounts =				952.5	
						RPD = 0.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.181	5.182	-0.001	23698129	1000.0	980.6	
1	5.508	5.509	-0.001	33934042	1000.0	959.7	
1	5.848	5.849	-0.001	26040802	1000.0	981.4	
1	6.621	6.622	-0.001	31371863	1000.0	968.4	
1	6.994	6.995	-0.001	43698000	1000.0	978.1	
		Average of Peak Amounts =				973.6	
2	5.531	5.529	0.002	96750392	1000.0	950.5	
2	5.951	5.952	-0.001	75935033	1000.0	949.3	
2	6.404	6.402	0.002	102458024	1000.0	940.6	
2	6.648	6.649	-0.001	61272987	1000.0	948.5	
2	7.118	7.119	-0.001	150030344	1000.0	953.5	
		Average of Peak Amounts =				948.5	
						RPD = 2.62	
S 8 Polychlorinated biphenyls, Total							
1						1917.5	
2						1901.0	
						RPD = 0.87	

Reagents:

AR_2154_L7_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

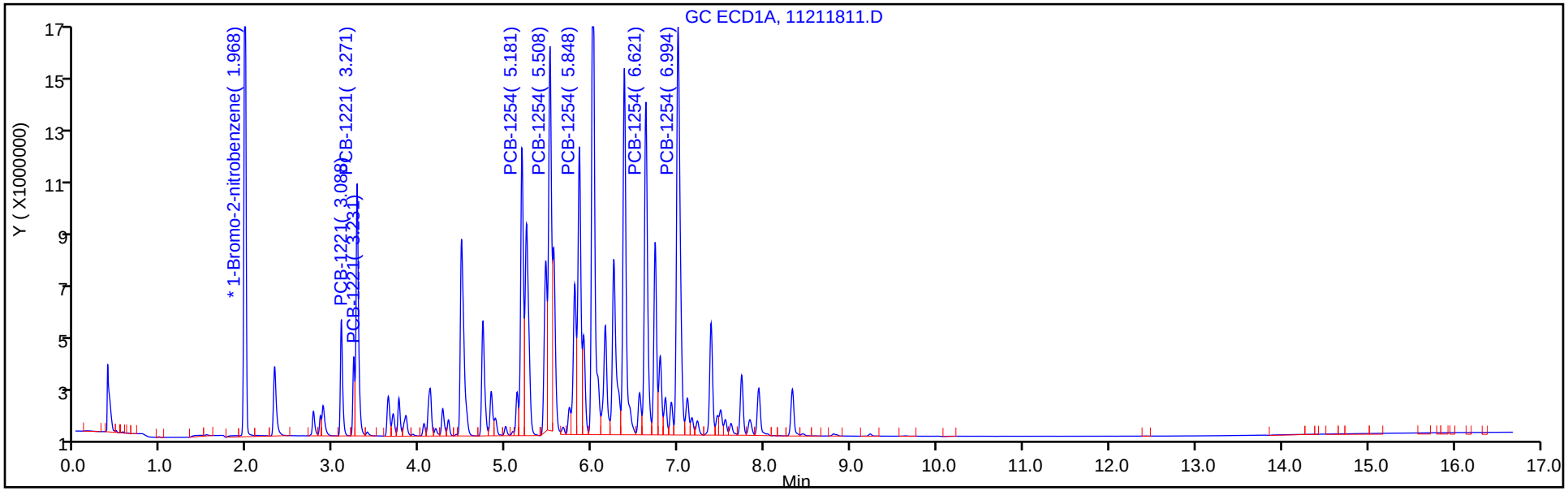
Report Date: 23-Nov-2018 11:02:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

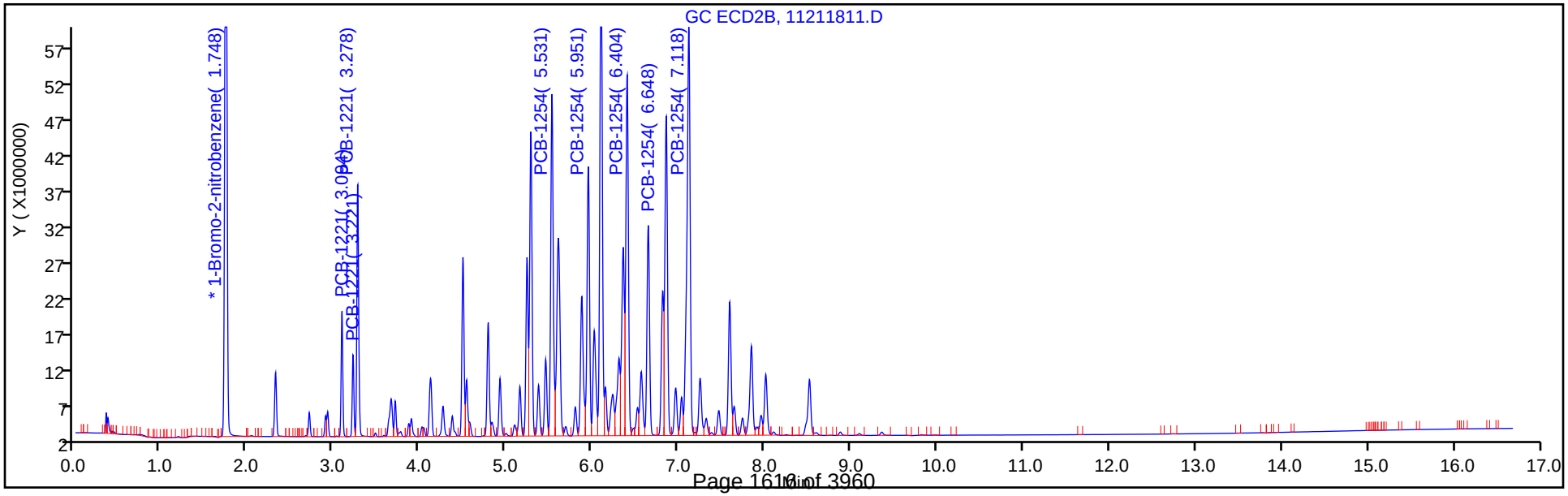
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D

Injection Date:	21-Nov-2018 12:16:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL72154			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D
Lims ID: STDL62154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 12:37:32 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL62154
Misc. Info.: 280-0076428-012
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:06 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31351854	1000.0	1000.0	
2	1.746	1.745	0.001	175195598	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	5979075	750.0	761.1	
1	3.230	3.232	-0.002	3504422	750.0	775.2	
1	3.270	3.269	0.001	14922887	750.0	760.3	
		Average of Peak Amounts =				765.5	
2	3.093	3.092	0.001	18439769	750.0	763.3	
2	3.223	3.222	0.001	12375313	750.0	782.0	
2	3.276	3.276	0.000	42701683	750.0	769.7	
		Average of Peak Amounts =				771.7	
						RPD = 0.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	18053312	750.0	753.6	
1	5.506	5.509	-0.003	26738366	750.0	764.1	
1	5.850	5.849	0.001	20156036	750.0	768.4	
1	6.620	6.622	-0.002	24380329	750.0	760.3	
1	6.993	6.995	-0.002	33590891	750.0	760.5	
		Average of Peak Amounts =				761.4	
2	5.530	5.529	0.001	76003812	750.0	748.9	
2	5.953	5.952	0.001	60170755	750.0	755.0	
2	6.403	6.402	0.001	82164284	750.0	757.0	
2	6.650	6.649	0.001	48574994	750.0	754.4	
2	7.120	7.119	0.001	117808494	750.0	751.3	
		Average of Peak Amounts =				753.3	
						RPD = 1.07	
S 8 Polychlorinated biphenyls, Total							
1						1526.9	
2						1525.0	
						RPD = 0.12	

Reagents:

AR_2154_L6_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

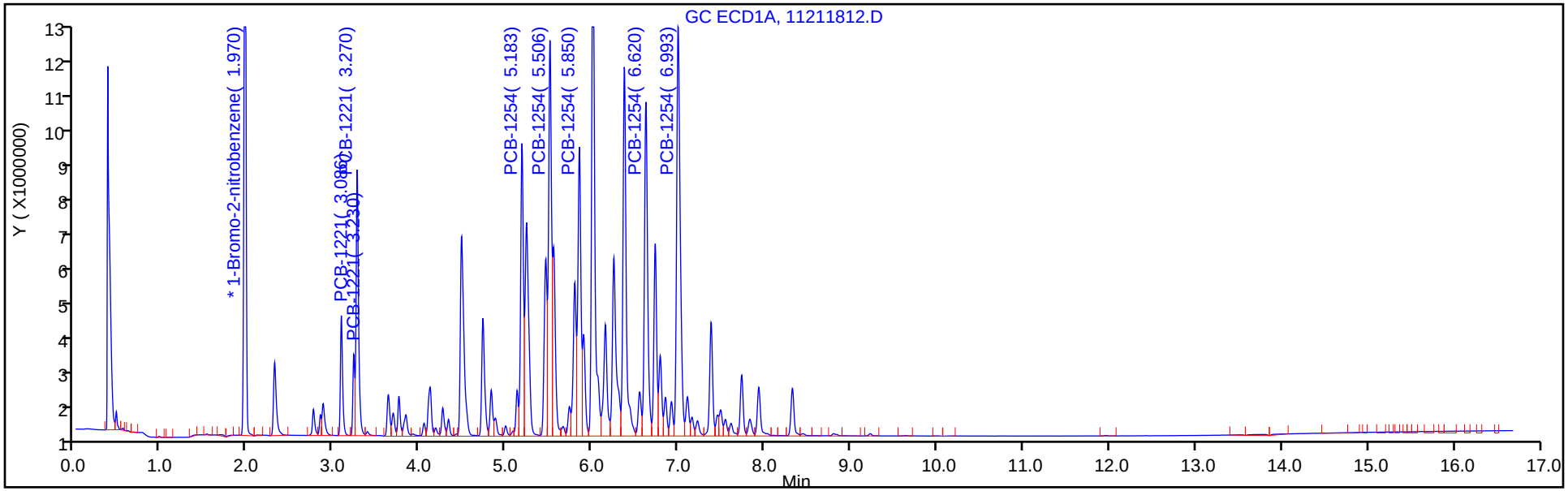
Report Date: 23-Nov-2018 11:02:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

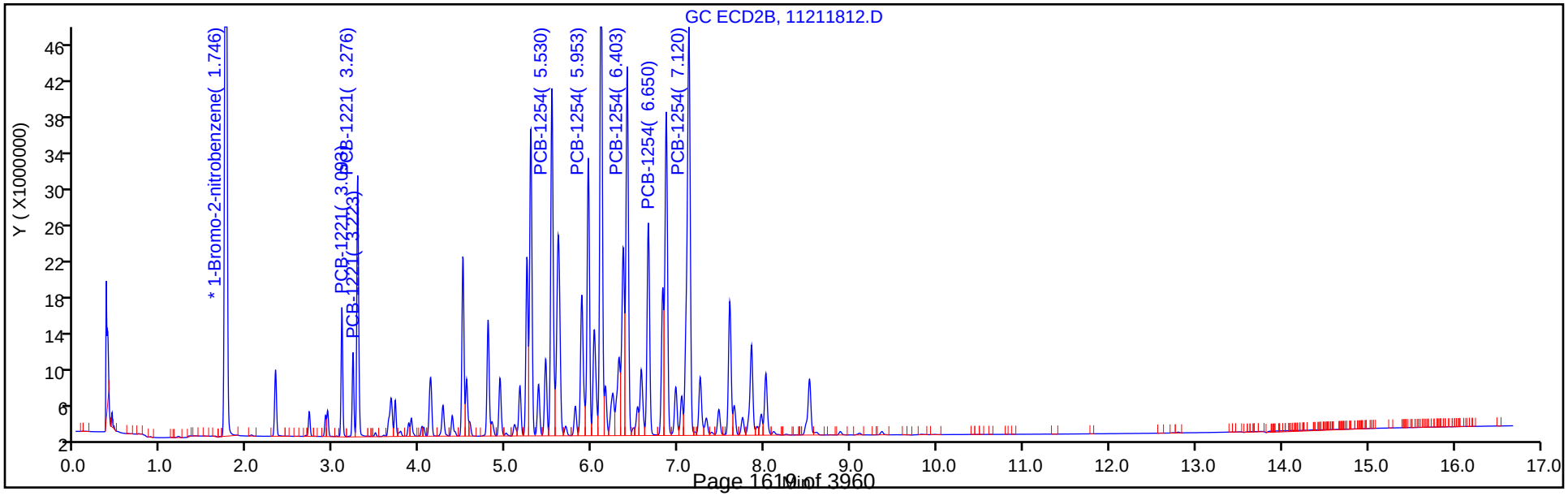
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D

Injection Date:	21-Nov-2018 12:37:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL62154			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D
Lims ID: STDL52154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 12:58:43 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL52154
Misc. Info.: 280-0076428-013
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:10 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	30445909	1000.0	1000.0	
2	1.749	1.749	0.000	171268741	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	3897553	500.0	507.1	
1	3.232	3.232	0.000	2302370	500.0	519.0	
1	3.269	3.269	0.000	9761452	500.0	508.4	
		Average of Peak Amounts =				511.5	
2	3.092	3.092	0.000	12215805	500.0	510.5	
2	3.222	3.222	0.000	7689765	500.0	492.0	
2	3.276	3.276	0.000	27611810	500.0	503.2	
		Average of Peak Amounts =				501.9	
						RPD = 1.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	11654391	500.0	495.7	
1	5.509	5.509	0.000	17219418	500.0	502.6	M
1	5.849	5.849	0.000	12420039	500.0	485.0	
1	6.622	6.622	0.000	15696475	500.0	500.1	
1	6.995	6.995	0.000	21521176	500.0	499.3	
		Average of Peak Amounts =				496.5	
2	5.529	5.529	0.000	51845638	500.0	516.9	
2	5.952	5.952	0.000	40591711	500.0	515.7	
2	6.402	6.402	0.000	55787230	500.0	520.3	
2	6.649	6.649	0.000	32678665	500.0	513.5	
2	7.119	7.119	0.000	79736218	500.0	514.8	
		Average of Peak Amounts =				516.3	
						RPD = 3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

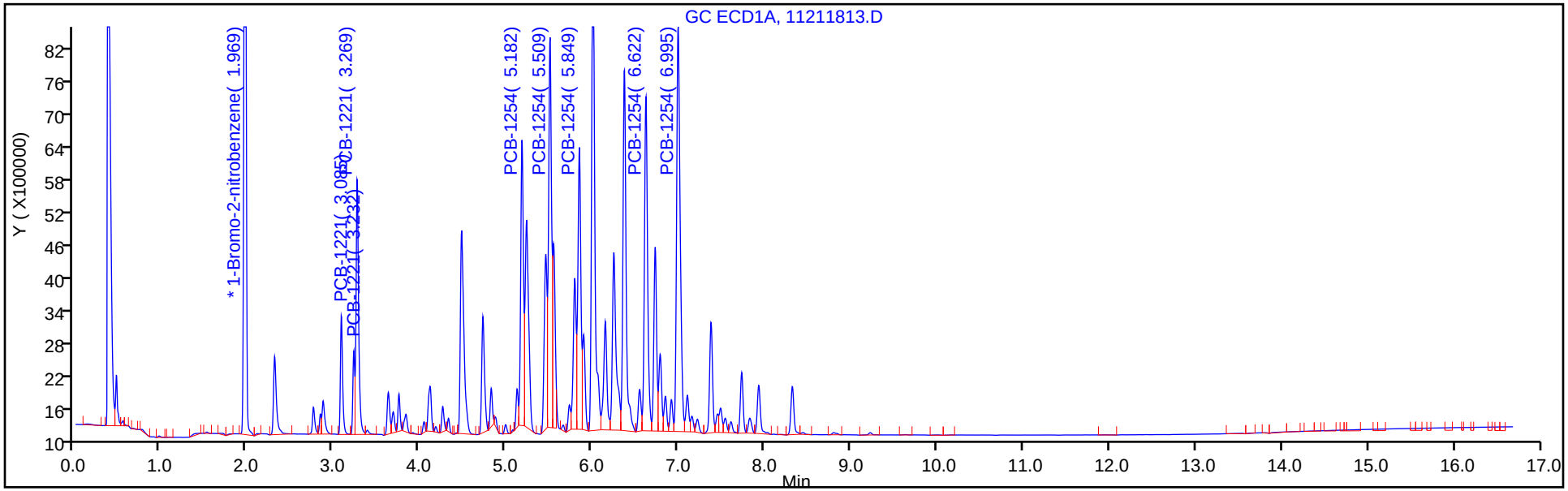
Report Date: 23-Nov-2018 11:02:11 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

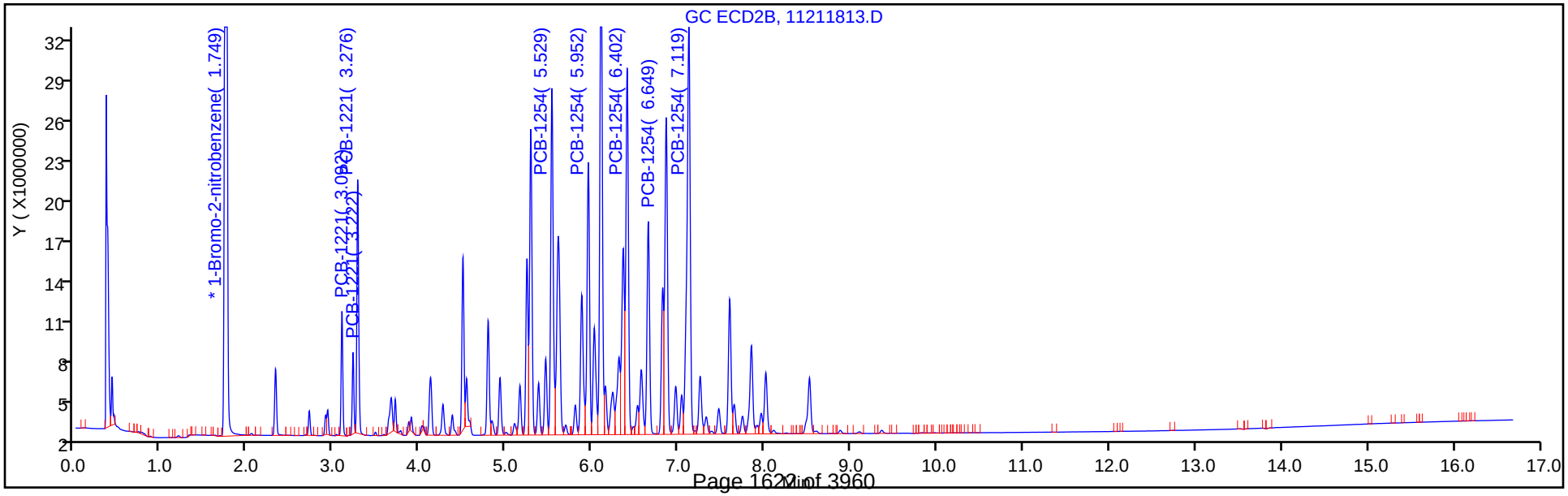
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date:	21-Nov-2018 12:58:43	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL52154			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D
Lims ID: STDL42154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 13:19:55 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL42154
Misc. Info.: 280-0076428-014
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:12 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30112720	1000.0	1000.0	
2	1.747	1.749	-0.002	169613542	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2063928	250.0	266.3	
1	3.230	3.232	-0.002	1277667	250.0	283.8	
1	3.270	3.269	0.001	5214449	250.0	269.3	
		Average of Peak Amounts =				273.1	
2	3.093	3.092	0.001	6662383	250.0	271.7	
2	3.223	3.222	0.001	4151876	250.0	261.9	
2	3.277	3.276	0.001	14954730	250.0	267.4	
		Average of Peak Amounts =				267.0	
						RPD = 2.27	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6200718	250.0	259.3	
1	5.506	5.509	-0.003	9144535	250.0	264.2	M
1	5.846	5.849	-0.003	6634099	250.0	258.7	
1	6.620	6.622	-0.002	8316205	250.0	262.4	
1	6.993	6.995	-0.002	11066699	250.0	256.1	
		Average of Peak Amounts =				260.1	
2	5.530	5.529	0.001	27978613	250.0	273.1	
2	5.953	5.952	0.001	21681477	250.0	270.3	
2	6.403	6.402	0.001	29833754	250.0	272.7	
2	6.650	6.649	0.001	17685692	250.0	272.4	
2	7.120	7.119	0.001	42598206	250.0	269.8	
		Average of Peak Amounts =				271.7	
						RPD = 4.33	
S 8 Polychlorinated biphenyls, Total							
1						533.3	
2						538.7	
						RPD = 1.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

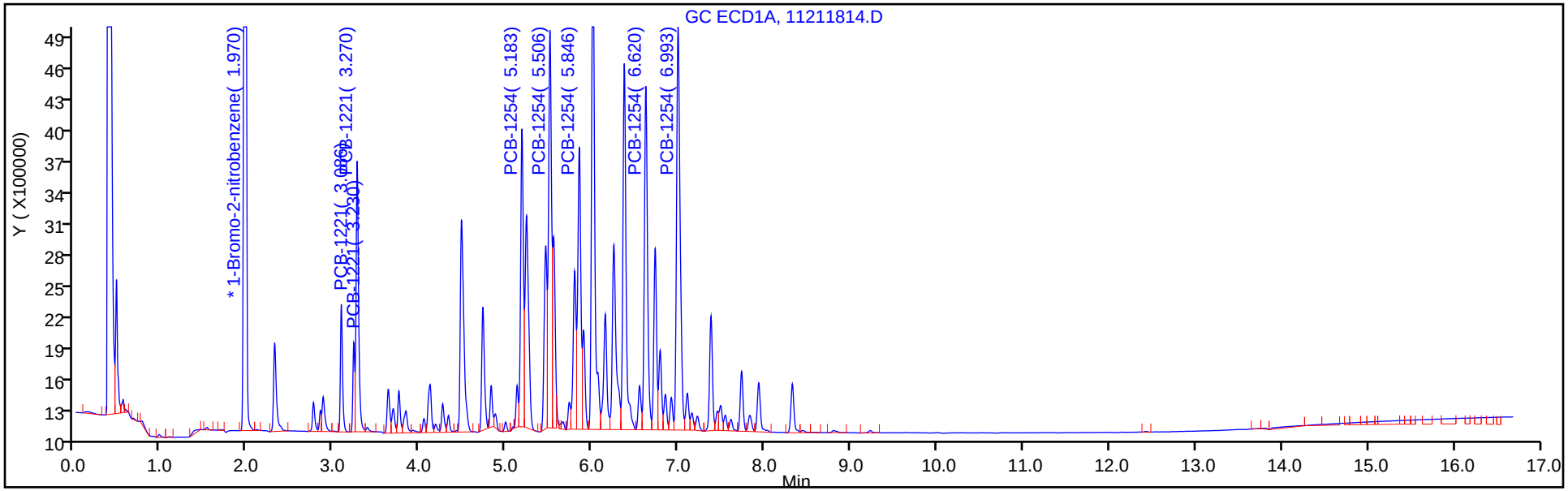
Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

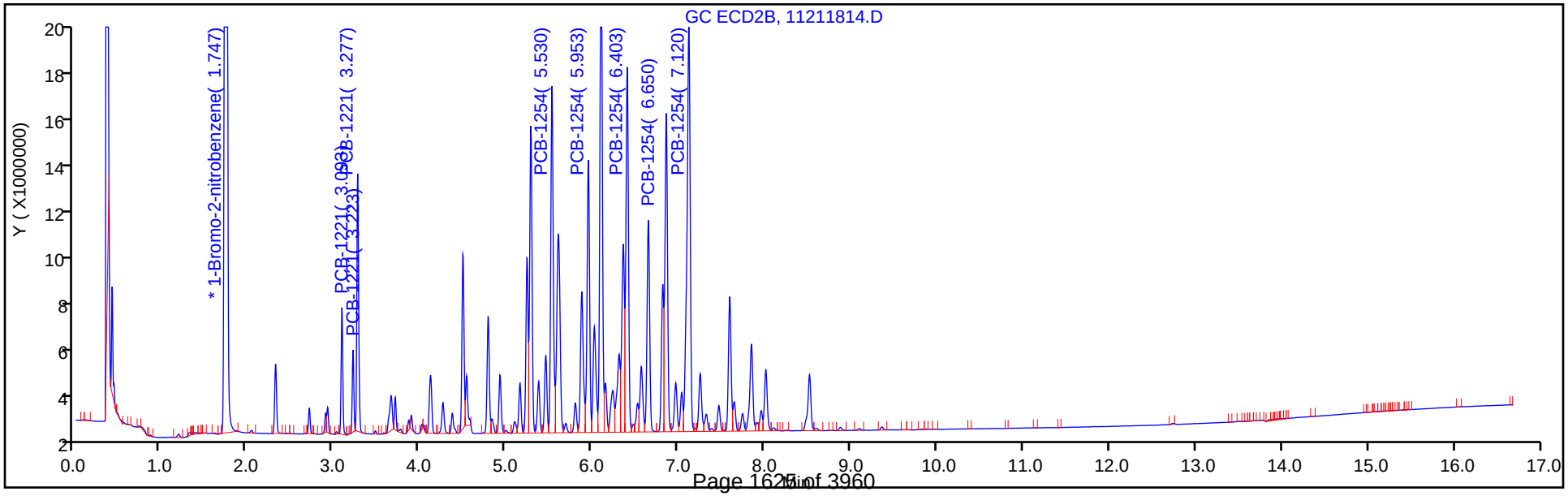
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date:	21-Nov-2018 13:19:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL42154			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D
Lims ID: STDL32154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 13:41:08 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL32154
Misc. Info.: 280-0076428-015
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28078685	1000.0	1000.0	
2	1.746	1.749	-0.003	159417859	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	794996	100.0	103.4	
1	3.229	3.232	-0.003	506503	100.0	111.0	
1	3.269	3.269	0.000	2212927	100.0	116.3	
		Average of Peak Amounts =				110.2	
2	3.093	3.092	0.001	2763923	100.0	108.2	
2	3.223	3.222	0.001	1748923	100.0	109.7	
2	3.276	3.276	0.000	6335939	100.0	111.0	
		Average of Peak Amounts =				109.6	
						RPD = 0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	2662071	100.0	110.8	
1	5.506	5.509	-0.003	3775608	100.0	110.2	M
1	5.849	5.849	0.000	2648846	100.0	106.8	
1	6.619	6.622	-0.003	3428029	100.0	109.3	
1	6.993	6.995	-0.002	4426432	100.0	105.7	
		Average of Peak Amounts =				108.6	
2	5.529	5.529	0.000	11951653	100.0	113.9	
2	5.953	5.952	0.001	9184571	100.0	112.5	
2	6.403	6.402	0.001	12571284	100.0	112.4	
2	6.649	6.649	0.000	7560827	100.0	113.9	
2	7.119	7.119	0.000	18178594	100.0	113.0	
		Average of Peak Amounts =				113.1	
						RPD = 4.13	
S 8 Polychlorinated biphenyls, Total							
1						218.8	
2						222.8	
						RPD = 1.82	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

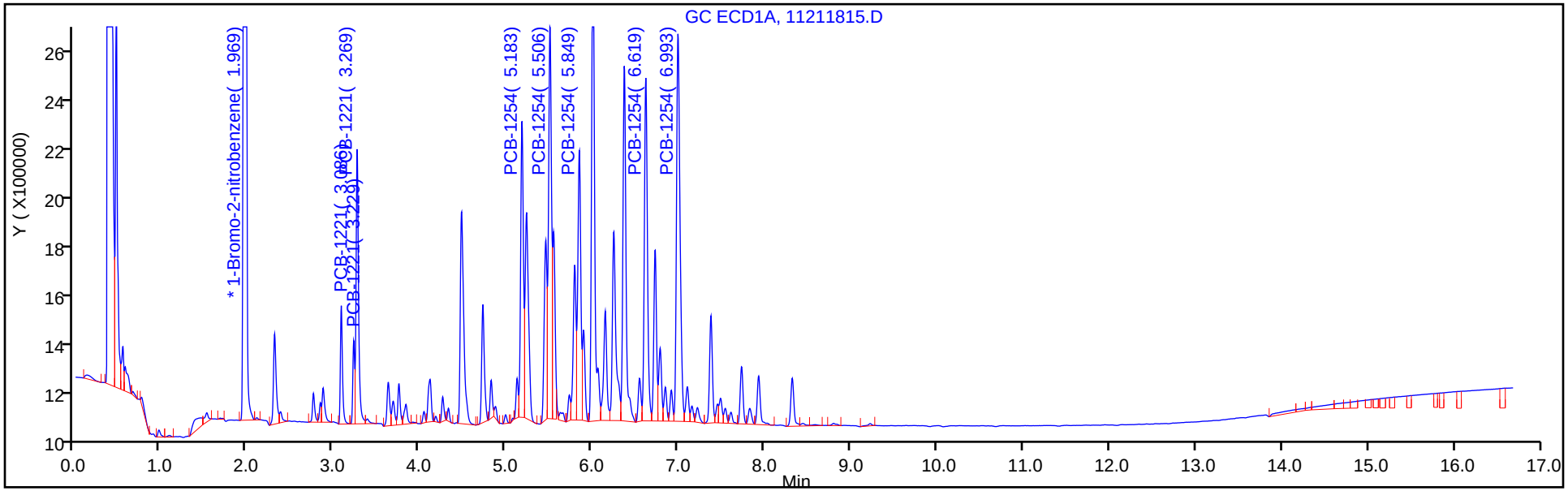
Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

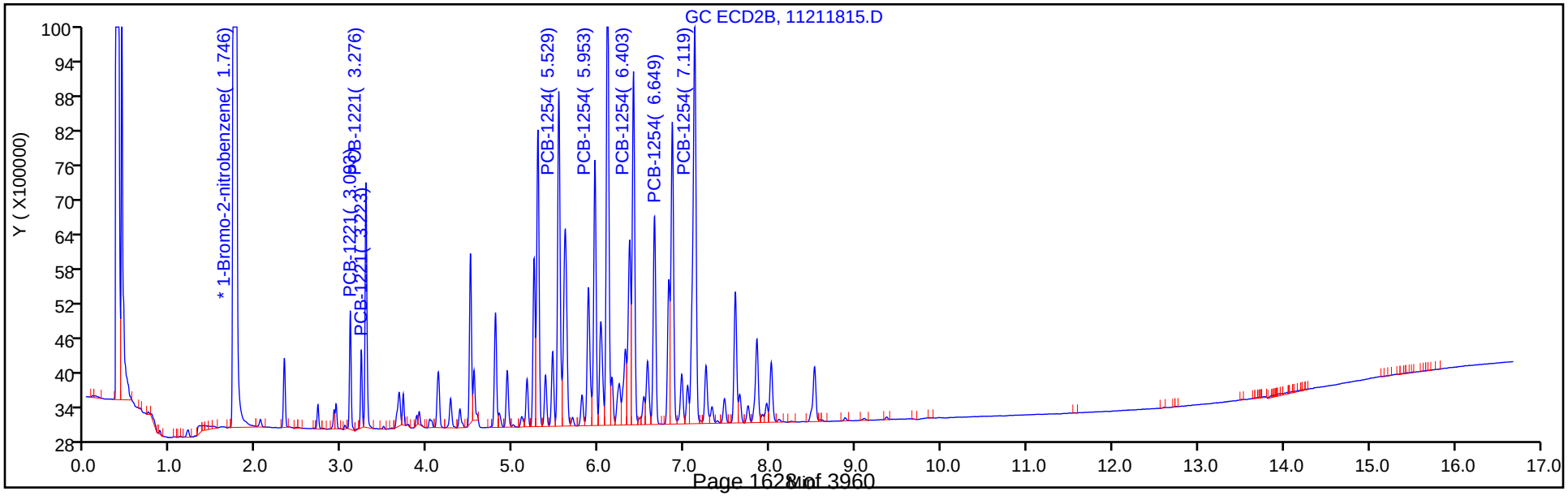
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date:	21-Nov-2018 13:41:08	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL32154			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D
Lims ID: STDL22154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 14:02:19 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL22154
Misc. Info.: 280-0076428-016
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	27612767	1000.0	1000.0	
2	1.746	1.749	-0.003	155958976	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	422934	50.0	50.7	
1	3.229	3.232	-0.003	264535	50.0	51.1	
1	3.269	3.269	0.000	1048520	50.0	50.1	
		Average of Peak Amounts =				50.6	
2	3.093	3.092	0.001	1479927	50.0	49.7	
2	3.223	3.222	0.001	922521	50.0	52.8	
2	3.276	3.276	0.000	3428605	50.0	53.7	
		Average of Peak Amounts =				52.0	
						RPD = 2.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	1487053	50.0	56.1	
1	5.506	5.509	-0.003	2050858	50.0	55.4	
1	5.846	5.849	-0.003	1380932	50.0	53.3	
1	6.619	6.622	-0.003	1866154	50.0	55.2	
1	6.993	6.995	-0.002	2374593	50.0	54.4	
		Average of Peak Amounts =				54.9	
2	5.530	5.529	0.001	6401352	50.0	53.9	
2	5.953	5.952	0.001	4927585	50.0	54.0	
2	6.403	6.402	0.001	6824249	50.0	54.3	
2	6.646	6.649	-0.003	4105287	50.0	55.1	
2	7.120	7.119	0.001	9840352	50.0	54.8	
		Average of Peak Amounts =				54.4	
						RPD = 0.81	
S 8 Polychlorinated biphenyls, Total							
1						105.5	
2						106.5	
						RPD = 0.93	

Reagents:

AR_2154_L2_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

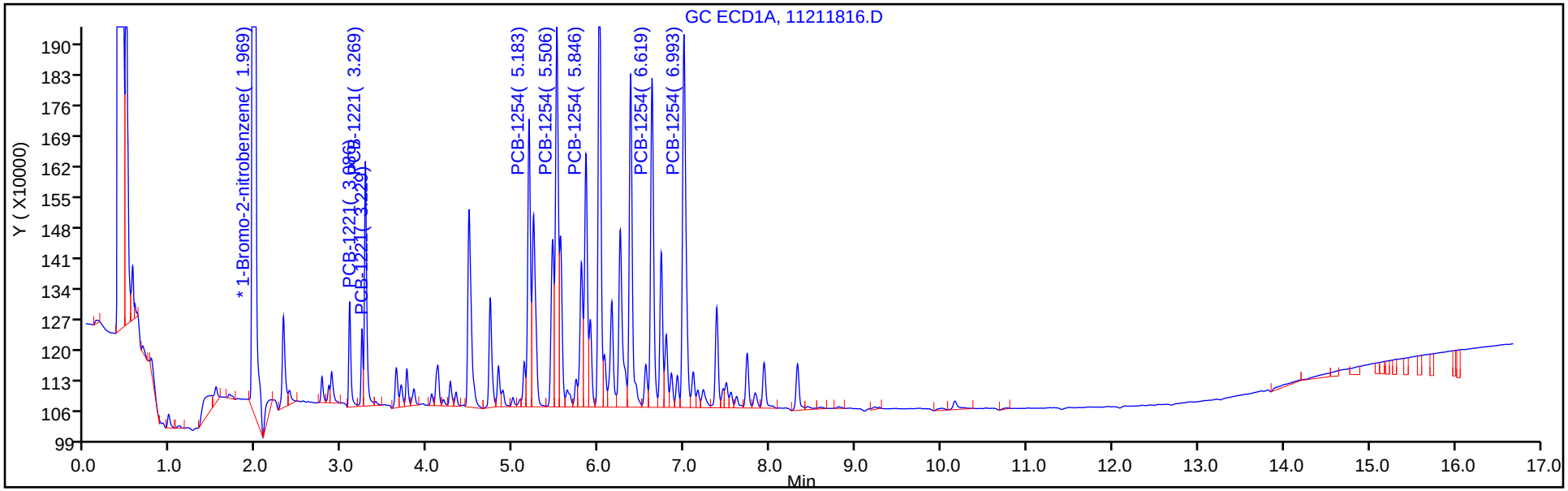
Report Date: 23-Nov-2018 11:02:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

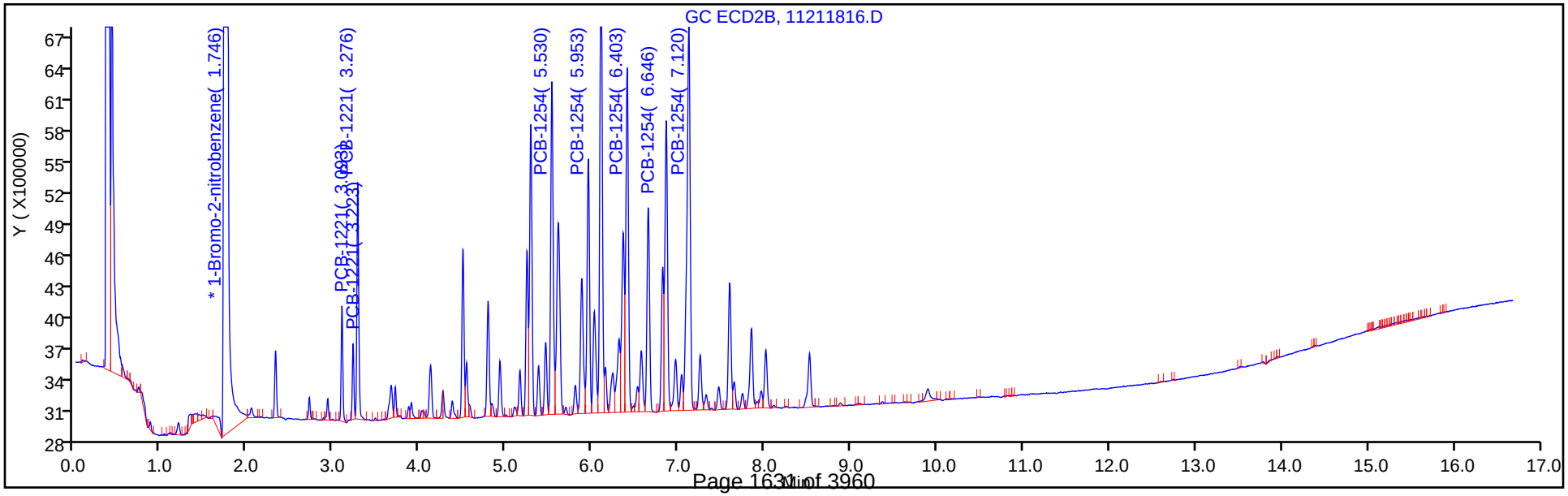
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D

Injection Date:	21-Nov-2018 14:02:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL22154			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D
Lims ID: STDL12154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 14:23:32 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL12154
Misc. Info.: 280-0076428-017
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:20 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:12:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31158892	1000.0	1000.0	
2	1.749	1.749	0.000	174644682	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	258968	25.0	22.3	
1	3.229	3.232	-0.003	155902	25.0	18.6	
1	3.272	3.269	0.003	594265	25.0	19.4	
		Average of Peak Amounts =				20.1	
2	3.092	3.092	0.000	990606	25.0	21.2	
2	3.222	3.222	0.000	531473	25.0	20.4	
2	3.276	3.276	0.000	1966030	25.0	19.1	
		Average of Peak Amounts =				20.2	
						RPD = 0.49	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	810954	25.0	18.9	
1	5.509	5.509	0.000	1058665	25.0	18.7	M
1	5.849	5.849	0.000	734067	25.0	21.4	
1	6.619	6.622	-0.003	977183	25.0	19.3	
1	6.992	6.995	-0.003	1230625	25.0	21.0	
		Average of Peak Amounts =				19.9	
2	5.529	5.529	0.000	3601131	25.0	17.7	
2	5.952	5.952	0.000	2735694	25.0	18.2	
2	6.402	6.402	0.000	3769252	25.0	17.7	
2	6.649	6.649	0.000	2218210	25.0	17.2	
2	7.119	7.119	0.000	5349050	25.0	17.7	
		Average of Peak Amounts =				17.7	
						RPD = 11.52	
S 8 Polychlorinated biphenyls, Total							
1						40.0	
2						37.9	
						RPD = 5.30	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

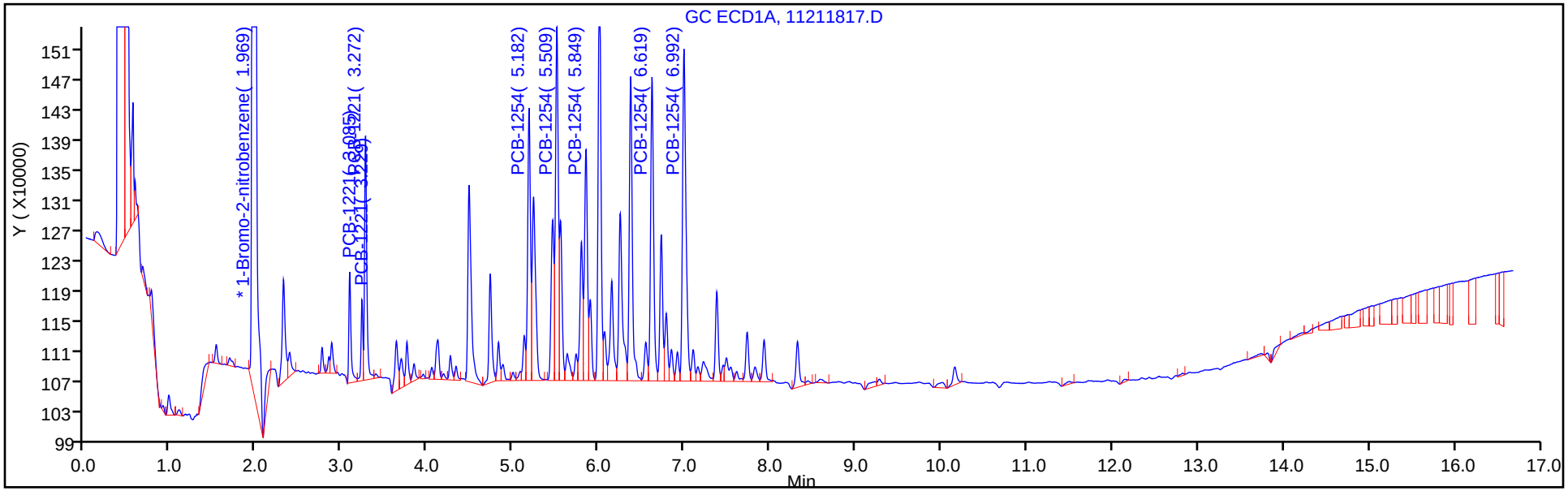
Report Date: 23-Nov-2018 11:02:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

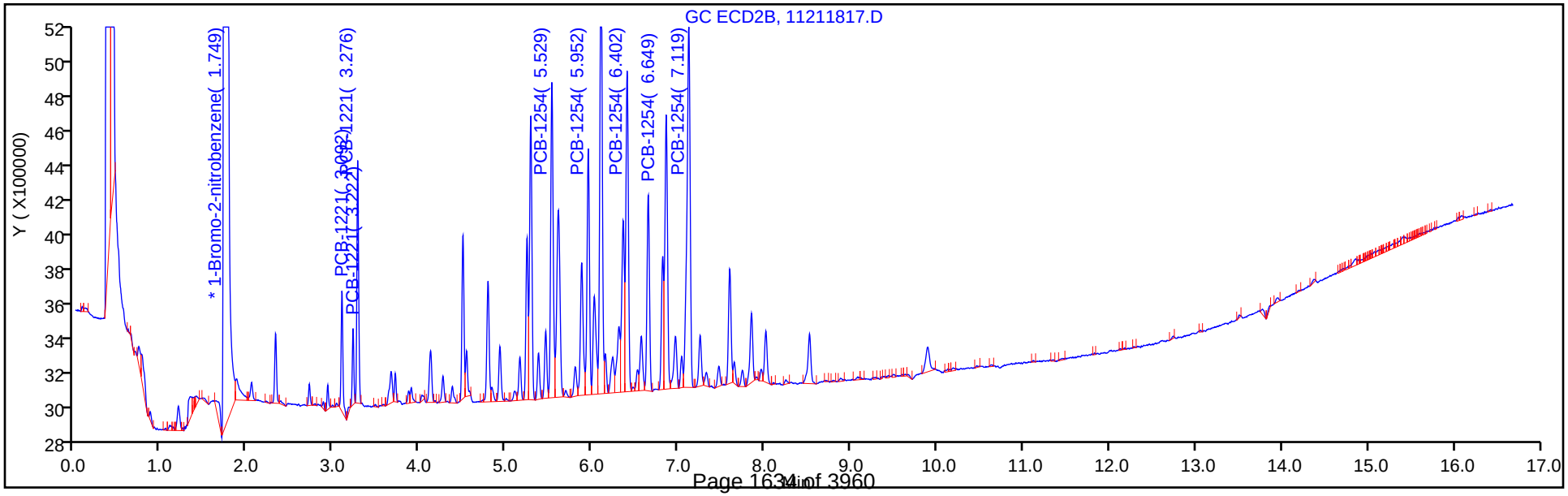
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL12154			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34386

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.5677 0.4346	0.5551 0.3962	0.5409	0.4852	0.4570	Lin1	6.3337	0.4201							0.9940		0.9900
PCB-1016 Peak 2	1.3072 0.9928	1.2929 0.9421	1.2319	1.1161	1.0742	Lin1	13.843	0.9818							0.9950		0.9900
PCB-1016 Peak 3	1.8906 1.8578	1.9617 1.8002	1.9602	1.8927	1.9482	Lin1	4.5623	1.8506							0.9990		0.9900
PCB-1016 Peak 4	0.8890 0.7766	0.9092 0.7383	0.9043	0.8365	0.8317	Lin1	6.3362	0.7699							0.9970		0.9900
PCB-1016 Peak 5	0.9487 0.8423	0.9583 0.8137	0.9580	0.8987	0.8701	Lin1	5.7144	0.8346							0.9980		0.9900
PCB-1260 Peak 1	1.3639 1.1412	1.3747 1.1236	1.3336	1.2270	1.2120	Lin1	9.8220	1.1438							0.9980		0.9900
PCB-1260 Peak 2	1.8759 1.7707	1.9174 1.7702	1.9079	1.8103	1.8575	Lin1	5.2462	1.7856							0.9990		0.9900
PCB-1260 Peak 3	1.1956 1.0408	1.1845 1.0428	1.2002	1.0955	1.1080	Lin1	6.3677	1.0526							0.9990		0.9900
PCB-1260 Peak 4	2.4858 2.3766	2.5292 2.3887	2.5314	2.4370	2.4961	Lin1	5.2228	2.4051							1.0000		0.9900
PCB-1260 Peak 5	1.1252 1.0822	1.1505 1.0911	1.1460	1.1027	1.1345	Lin1	2.0533	1.0959							1.0000		0.9900
Tetrachloro-m-xylene	24.166 26.317	25.085 26.191	25.541	25.685	26.715	Lin1	-3.160	26.379							1.0000		0.9900
DCB Decachlorobiphenyl	25.943 19.864	24.892 19.439	23.887	21.374	21.028	Lin1	11.557	19.760							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34386

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Lin1	469132 10292626	883638 12255500	1679350	3816191	6801886	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 2	BNB	Lin1	1080310 23509757	2058248 29138313	3824818	8778351	15989031	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 3	BNB	Lin1	1562445 43992946	3122897 55680903	6086050	14886212	28999155	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 4	BNB	Lin1	734649 18389026	1447486 22835416	2807752	6578902	12379838	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 5	BNB	Lin1	784034 19946184	1525625 25166398	2974460	7068443	12951678	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 1	BNB	Lin1	1127159 27023644	2188444 34751926	4140653	9650098	18040094	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 2	BNB	Lin1	1550296 41930903	3052493 54752979	5923763	14238155	27649105	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 3	BNB	Lin1	988085 24646608	1885624 32252970	3726238	8615850	16493165	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 4	BNB	Lin1	2054328 56278619	4026393 73881863	7859527	19166787	37154269	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 5	BNB	Lin1	929879 25627349	1831626 33747429	3558044	8672757	16886305	25.0 750	50.0 1000	100	250	500
Tetrachloro-m-xylene	BNB	Lin1	998558 31159991	1996738 40504428	3964953	10100542	19882681	1.25 37.5	2.50 50.0	5.00	12.5	25.0
DCB Decachlorobiphenyl	BNB	Lin1	1072007 23519401	1981347 30062336	3708204	8405396	15649907	1.25 37.5	2.50 50.0	5.00	12.5	25.0

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D
Lims ID: STDL71660
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 14:44:45 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71660
Misc. Info.: 280-0076428-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:22 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:26:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30929643	1000.0	1000.0	
2	1.746	1.749	-0.003	172682643	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.879	0.001	40504428	50.0	49.8	
2	2.776	2.780	-0.004	105788700	50.0	48.2	
						RPD = 3.20	
1 PCB-1016							
1	3.270	3.269	0.001	12255500	1000.0	928.2	
1	3.633	3.633	0.000	29138313	1000.0	945.4	
1	4.116	4.116	0.000	55680903	1000.0	970.3	
1	4.263	4.263	0.000	22835416	1000.0	950.7	
1	4.730	4.729	0.001	25166398	1000.0	968.1	
		Average of Peak Amounts =				952.5	
2	3.276	3.276	0.000	35638141	1000.0	956.5	
2	3.666	3.666	0.000	73285982	1000.0	952.1	
2	4.123	4.123	0.000	163781976	1000.0	957.7	
2	4.266	4.266	0.000	69518646	1000.0	946.1	
2	4.496	4.496	0.000	37279827	1000.0	943.6	
		Average of Peak Amounts =				951.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.249	0.001	34751926	1000.0	973.7	
1	6.993	6.993	0.000	54752979	1000.0	988.5	
1	7.490	7.489	0.001	32252970	1000.0	984.6	
1	7.930	7.929	0.001	73881863	1000.0	991.0	
1	8.320	8.319	0.001	33747429	1000.0	993.7	
		Average of Peak Amounts =				986.3	
2	6.650	6.646	0.004	121750112	1000.0	963.1	
2	7.116	7.116	0.000	181248886	1000.0	965.7	
2	7.646	7.646	0.000	109270203	1000.0	970.8	
2	8.013	8.013	0.000	244056914	1000.0	967.3	
2	8.516	8.516	0.000	187015797	1000.0	968.8	
		Average of Peak Amounts =				967.2	
						RPD = 1.96	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	30062336	50.0	48.6	
2	10.186	10.186	0.000	121182268	50.0	48.3	
						RPD = 0.69	
S 8 Polychlorinated biphenyls, Total							
1						1938.9	
2						1918.4	
						RPD = 1.06	

Reagents:

AR_1660_L7_00026	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

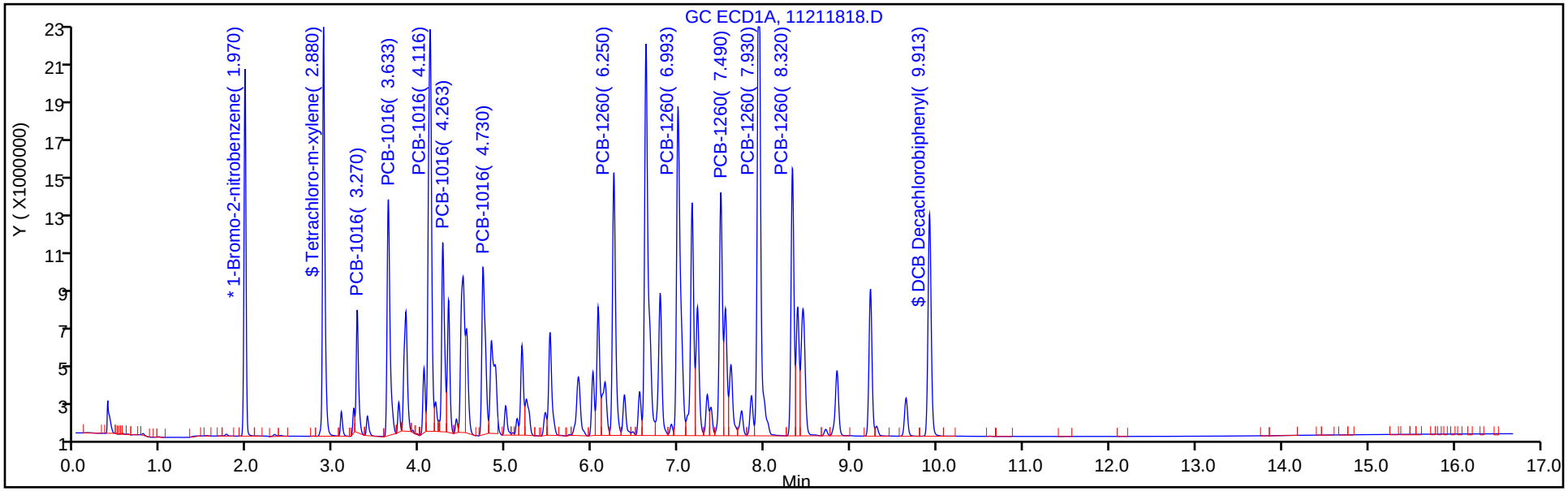
Report Date: 23-Nov-2018 11:02:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

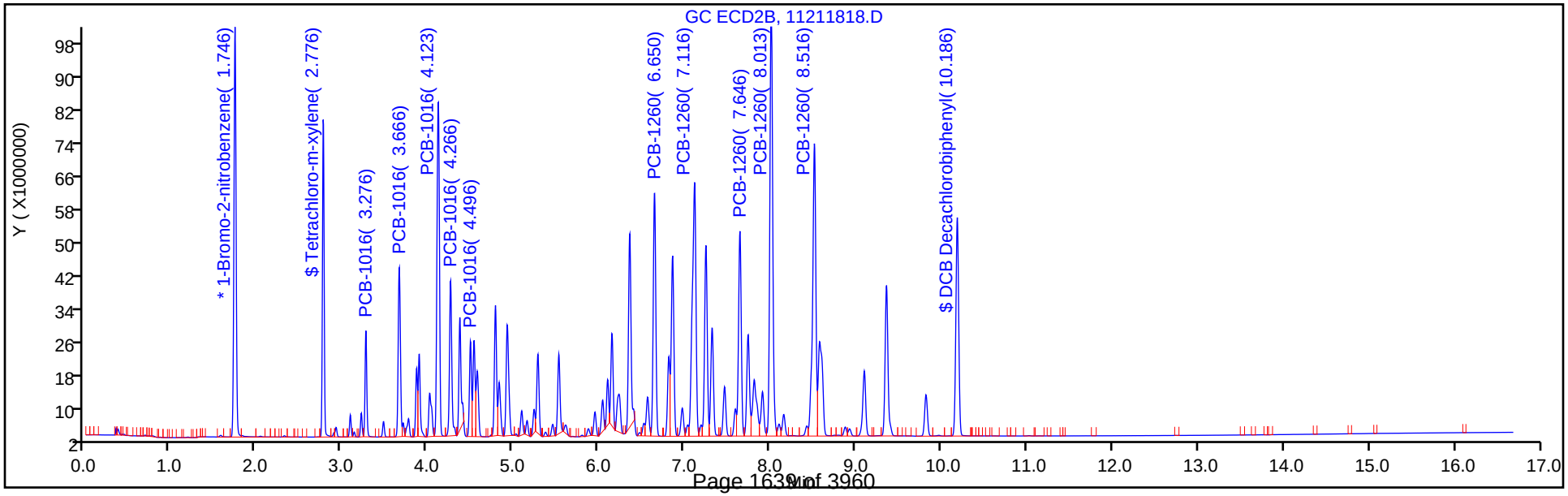
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D

Injection Date:	21-Nov-2018 14:44:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71660			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D
Lims ID: STDL61660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 15:05:56 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61660
Misc. Info.: 280-0076428-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:25 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:02:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31573792	1000.0	1000.0	
2	1.749	1.749	0.000	174603036	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	31159991	37.5	37.5	
2	2.779	2.780	-0.001	83308843	37.5	37.4	
						RPD = 0.34	
1 PCB-1016							
1	3.272	3.269	0.003	10292626	750.0	760.9	
1	3.632	3.633	-0.001	23509757	750.0	744.3	
1	4.118	4.116	0.002	43992946	750.0	750.5	
1	4.265	4.263	0.002	18389026	750.0	748.3	
1	4.732	4.729	0.003	19946184	750.0	750.1	
		Average of Peak Amounts =				750.8	
2	3.275	3.276	-0.001	28324629	750.0	748.3	
2	3.665	3.666	-0.001	58050459	750.0	742.3	
2	4.122	4.123	-0.001	128903407	750.0	742.4	
2	4.265	4.266	-0.001	55437372	750.0	742.9	
2	4.499	4.496	0.003	30262522	750.0	754.2	
		Average of Peak Amounts =				746.0	
						RPD = 0.64	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.249	-0.001	27023644	750.0	739.7	
1	6.992	6.993	-0.001	41930903	750.0	740.8	
1	7.488	7.489	-0.001	24646608	750.0	735.5	
1	7.932	7.929	0.003	56278619	750.0	738.9	
1	8.322	8.319	0.003	25627349	750.0	738.8	
		Average of Peak Amounts =				738.7	
2	6.649	6.646	0.003	95127310	750.0	741.1	
2	7.115	7.116	-0.001	141113456	750.0	740.7	
2	7.645	7.646	-0.001	84305248	750.0	737.8	
2	8.012	8.013	-0.001	189441684	750.0	739.9	
2	8.515	8.516	-0.001	144616476	750.0	738.0	
		Average of Peak Amounts =				739.5	
						RPD = 0.10	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	23519401	37.5	37.1	
2	10.185	10.186	-0.001	94115340	37.5	36.9	
						RPD = 0.55	
S 8 Polychlorinated biphenyls, Total							
1						1489.5	
2						1485.5	
						RPD = 0.27	

Reagents:

AR_1660_L6_00033	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

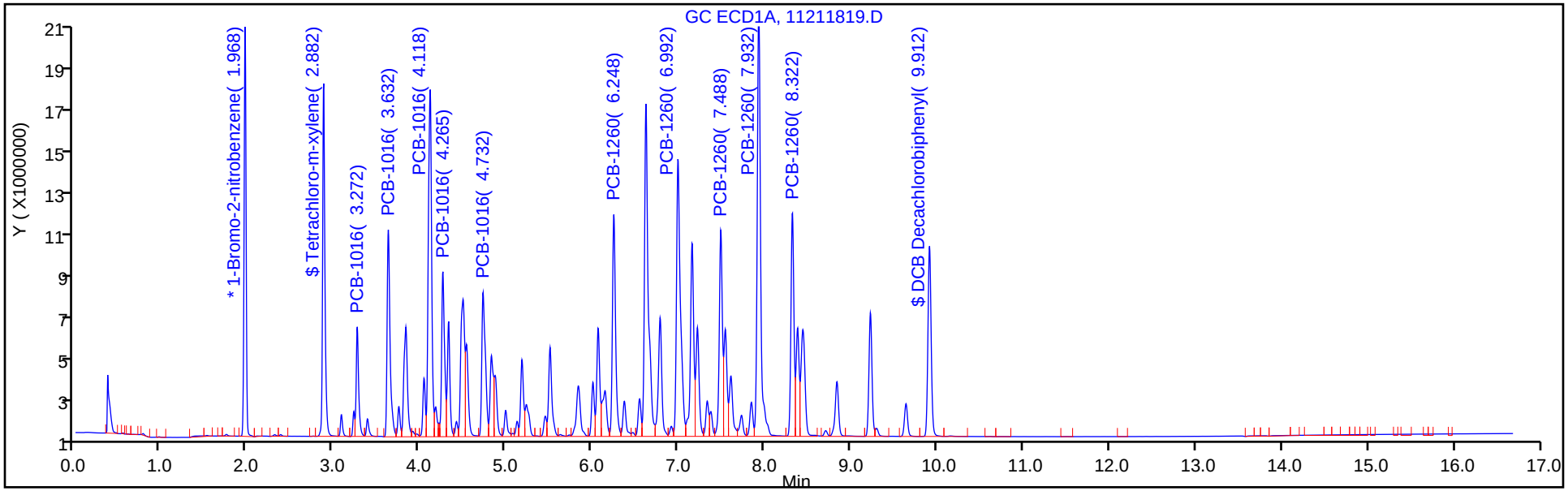
Report Date: 23-Nov-2018 11:02:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

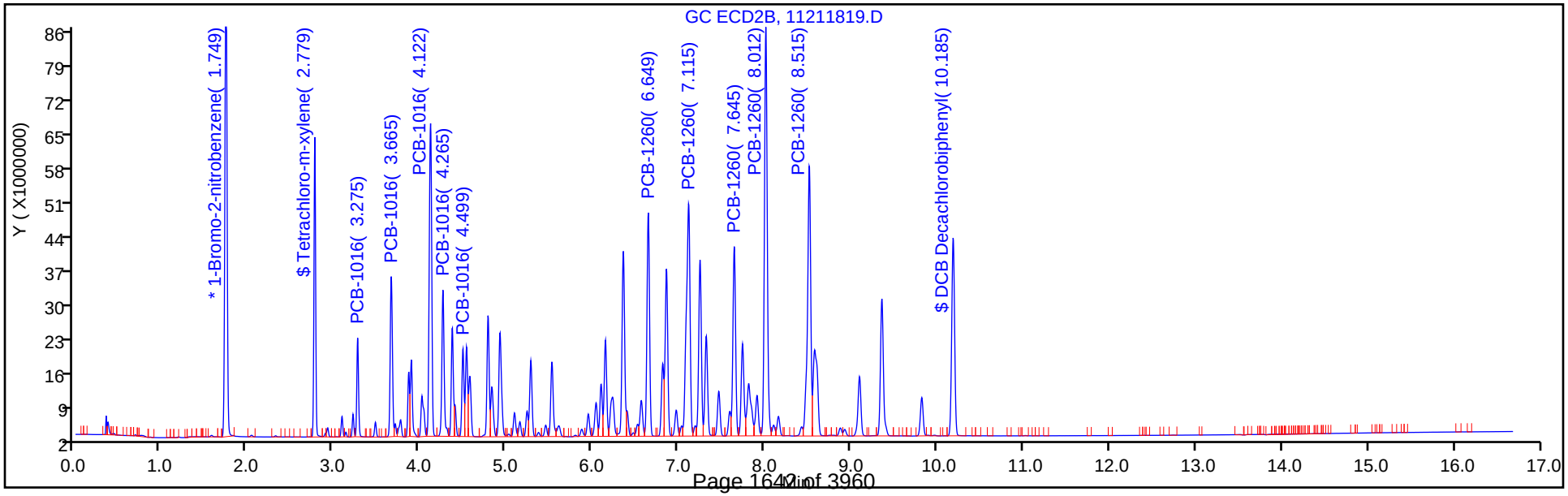
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D

Injection Date:	21-Nov-2018 15:05:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61660			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D
Lims ID: STDL51660
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 21-Nov-2018 15:27:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51660
Misc. Info.: 280-0076428-020
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:27 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29769998	1000.0	1000.0	
2	1.746	1.746	0.000	167274345	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	19882681	25.0	25.4	
2	2.780	2.780	0.000	55710908	25.0	25.9	
						RPD = 1.91	
1 PCB-1016							M
1	3.269	3.269	0.000	6801886	500.0	528.8	
1	3.633	3.633	0.000	15989031	500.0	532.9	
1	4.116	4.116	0.000	28999155	500.0	523.9	
1	4.263	4.263	0.000	12379838	500.0	531.9	
1	4.729	4.729	0.000	12951678	500.0	514.4	
		Average of Peak Amounts =				526.4	
2	3.276	3.276	0.000	18899868	500.0	516.1	
2	3.666	3.666	0.000	40057019	500.0	530.0	M
2	4.123	4.123	0.000	88563385	500.0	528.5	M
2	4.266	4.266	0.000	38741347	500.0	537.6	M
2	4.496	4.496	0.000	20361835	500.0	524.5	M
		Average of Peak Amounts =				527.3	
						RPD = 0.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	18040094	500.0	521.2	
1	6.993	6.993	0.000	27649105	500.0	517.2	
1	7.489	7.489	0.000	16493165	500.0	520.3	
1	7.929	7.929	0.000	37154269	500.0	516.7	
1	8.319	8.319	0.000	16886305	500.0	515.7	
		Average of Peak Amounts =				518.2	
2	6.646	6.646	0.000	64958906	500.0	524.4	
2	7.116	7.116	0.000	96225163	500.0	523.6	
2	7.646	7.646	0.000	57482127	500.0	521.5	
2	8.013	8.013	0.000	129198578	500.0	523.3	
2	8.516	8.516	0.000	99208427	500.0	525.0	
		Average of Peak Amounts =				523.6	
						RPD = 1.02	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	15649907	25.0	26.0	
2	10.186	10.186	0.000	64572494	25.0	26.2	
						RPD = 0.81	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

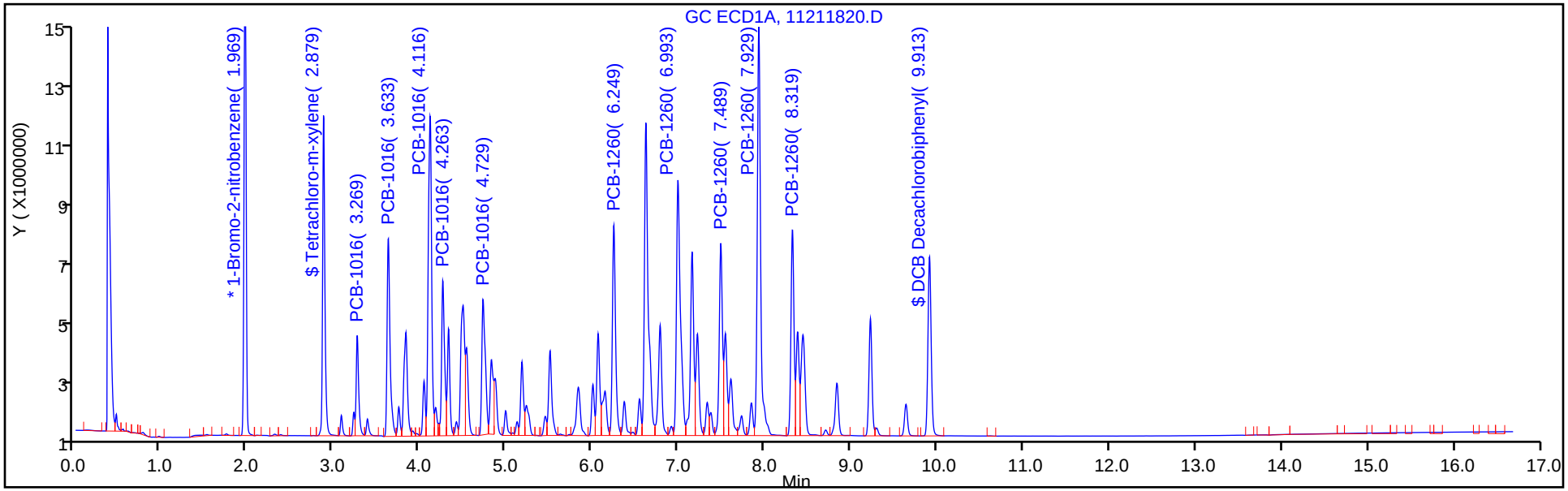
Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

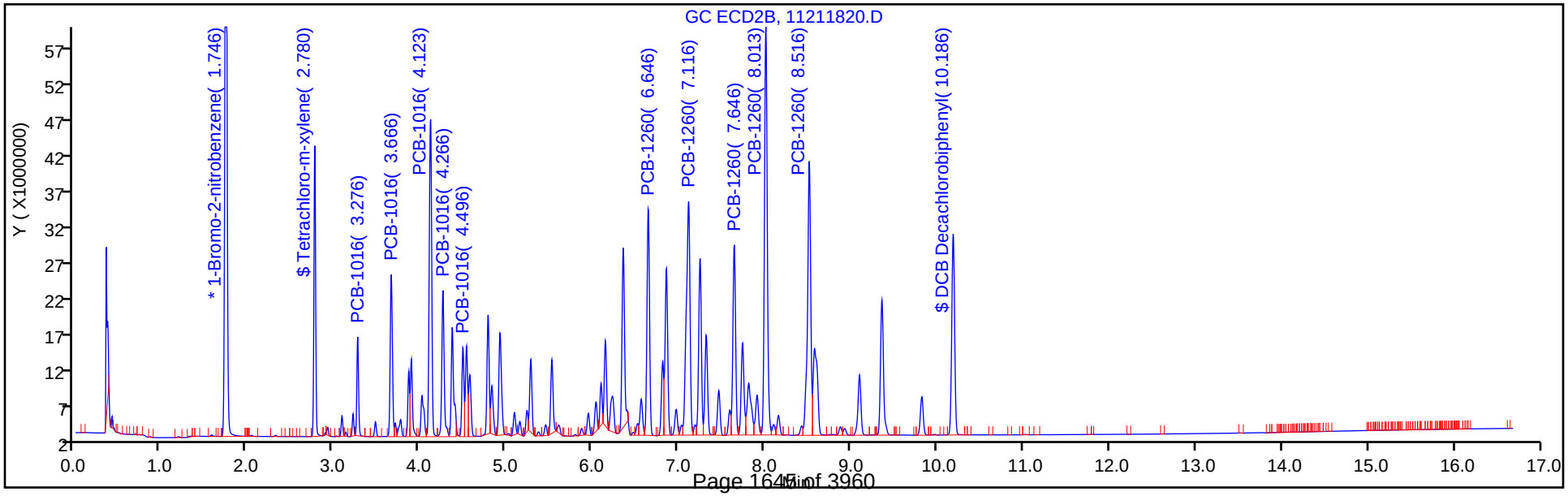
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date:	21-Nov-2018 15:27:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51660			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D
Lims ID: STDL41660
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 15:48:22 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41660
Misc. Info.: 280-0076428-021
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:30 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31460203	1000.0	1000.0	
2	1.749	1.746	0.003	176509413	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	10100542	12.5	12.3	
2	2.779	2.780	-0.001	30523746	12.5	13.2	
						RPD = 6.95	
1 PCB-1016							
1	3.272	3.269	0.003	3816191	250.0	273.7	
1	3.632	3.633	-0.001	8778351	250.0	270.1	
1	4.119	4.116	0.003	14886212	250.0	253.2	
1	4.265	4.263	0.002	6578902	250.0	263.4	
1	4.732	4.729	0.003	7068443	250.0	262.4	
		Average of Peak Amounts =				264.6	
2	3.275	3.276	-0.001	10752270	250.0	270.6	
2	3.665	3.666	-0.001	22260570	250.0	271.3	
2	4.122	4.123	-0.001	48351201	250.0	266.7	
2	4.265	4.266	-0.001	21045310	250.0	269.2	
2	4.499	4.496	0.003	11353500	250.0	269.0	
		Average of Peak Amounts =				269.4	
						RPD = 1.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9650098	250.0	259.6	
1	6.992	6.993	-0.001	14238155	250.0	250.5	
1	7.489	7.489	0.000	8615850	250.0	254.1	
1	7.932	7.929	0.003	19166787	250.0	251.1	
1	8.322	8.319	0.003	8672757	250.0	249.7	
		Average of Peak Amounts =				253.0	
2	6.649	6.646	0.003	35419484	250.0	264.3	
2	7.115	7.116	-0.001	52349958	250.0	263.8	
2	7.645	7.646	-0.001	31335455	250.0	263.4	
2	8.012	8.013	-0.001	70151512	250.0	263.6	
2	8.515	8.516	-0.001	53442743	250.0	262.1	
		Average of Peak Amounts =				263.4	
						RPD = 4.04	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8405396	12.5	12.9	
2	10.185	10.186	-0.001	35221995	12.5	13.2	
						RPD = 2.14	
S 8 Polychlorinated biphenyls, Total							
1						517.6	
2						532.8	
						RPD = 2.90	

Reagents:

AR_1660_L4_00068	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

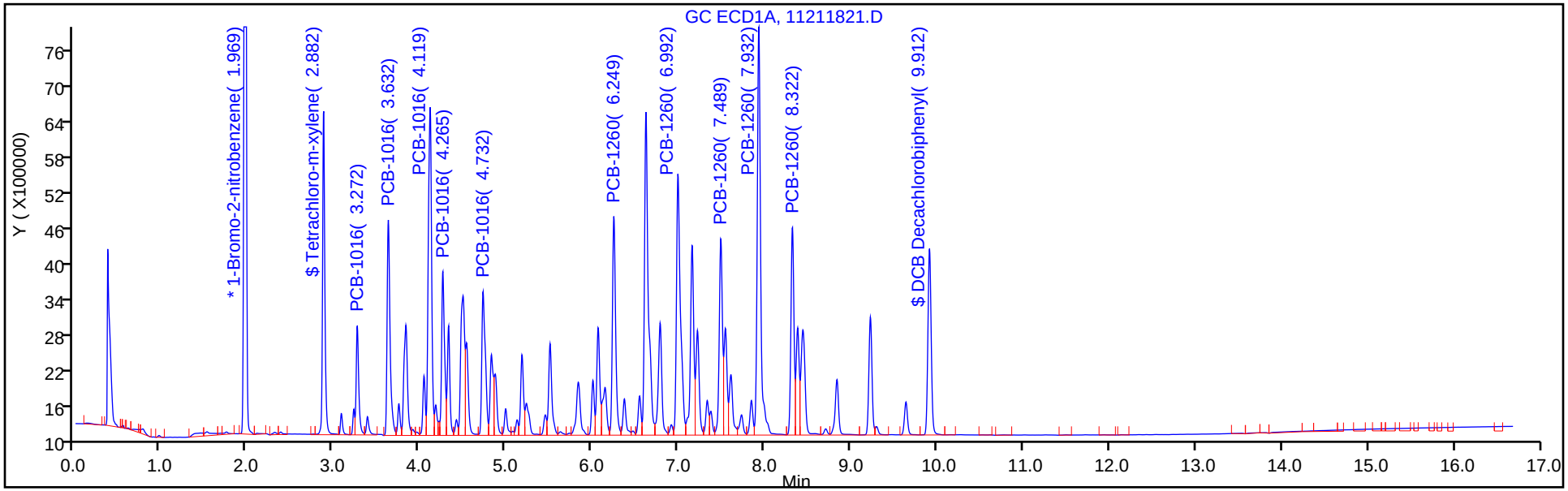
Report Date: 23-Nov-2018 11:02:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

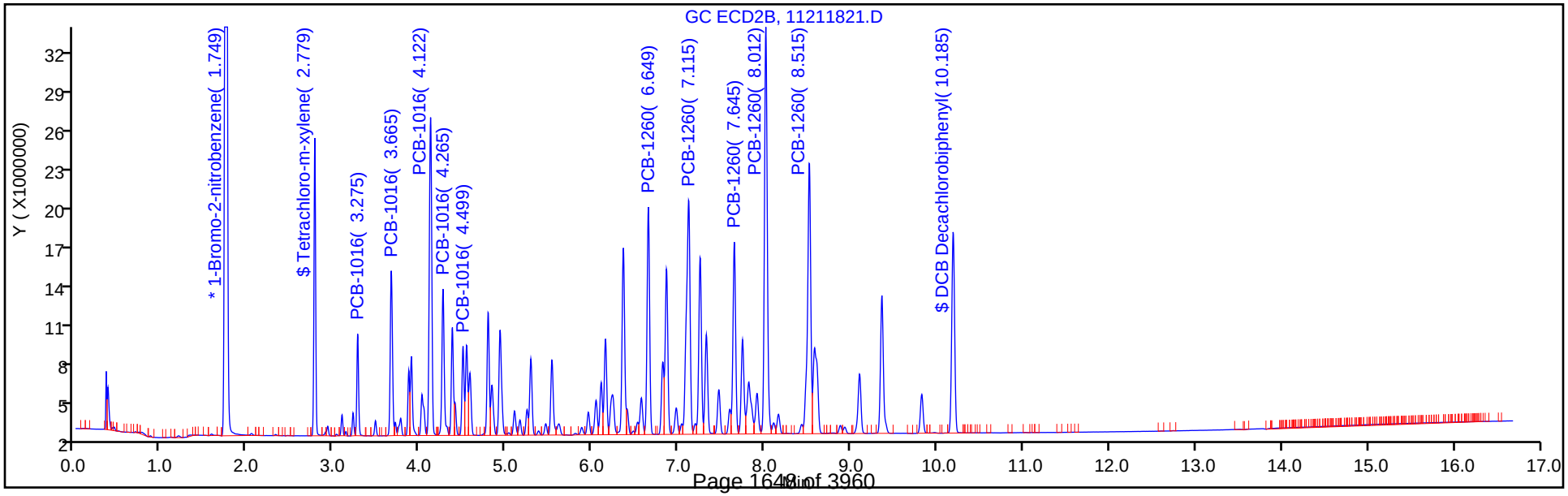
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D

Injection Date:	21-Nov-2018 15:48:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41660			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D
Lims ID: STDL31660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 16:09:34 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31660
Misc. Info.: 280-0076428-022
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:05:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31048095	1000.0	1000.0	
2	1.750	1.746	0.004	175133355	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	3964953	5.00	4.96	
2	2.780	2.780	0.000	13257502	5.00	5.43	
						RPD = 9.06	
1 PCB-1016							
1	3.269	3.269	0.000	1679350	100.0	113.7	
1	3.633	3.633	0.000	3824818	100.0	111.4	
1	4.116	4.116	0.000	6086050	100.0	103.5	
1	4.263	4.263	0.000	2807752	100.0	109.2	
1	4.729	4.729	0.000	2974460	100.0	107.9	
		Average of Peak Amounts =				109.1	
2	3.276	3.276	0.000	4799160	100.0	112.6	
2	3.666	3.666	0.000	9573999	100.0	108.2	
2	4.123	4.123	0.000	20834280	100.0	108.0	
2	4.266	4.266	0.000	9095859	100.0	108.4	
2	4.496	4.496	0.000	5107027	100.0	112.5	
		Average of Peak Amounts =				109.9	
						RPD = 0.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	4140653	100.0	108.0	
1	6.993	6.993	0.000	5923763	100.0	103.9	
1	7.489	7.489	0.000	3726238	100.0	108.0	
1	7.929	7.929	0.000	7859527	100.0	103.1	
1	8.319	8.319	0.000	3558044	100.0	102.7	
		Average of Peak Amounts =				105.1	
2	6.650	6.646	0.004	15611005	100.0	109.8	
2	7.116	7.116	0.000	22806129	100.0	108.8	
2	7.646	7.646	0.000	13672887	100.0	108.8	
2	8.013	8.013	0.000	30406302	100.0	108.5	
2	8.520	8.516	0.004	23327598	100.0	108.5	
		Average of Peak Amounts =				108.9	
						RPD = 3.50	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	3708204	5.00	5.46	
2	10.186	10.186	0.000	15646900	5.00	5.52	
						RPD = 1.19	
S 8 Polychlorinated biphenyls, Total							
1						214.3	
2						218.8	
						RPD = 2.10	

Reagents:

AR_1660_L3_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

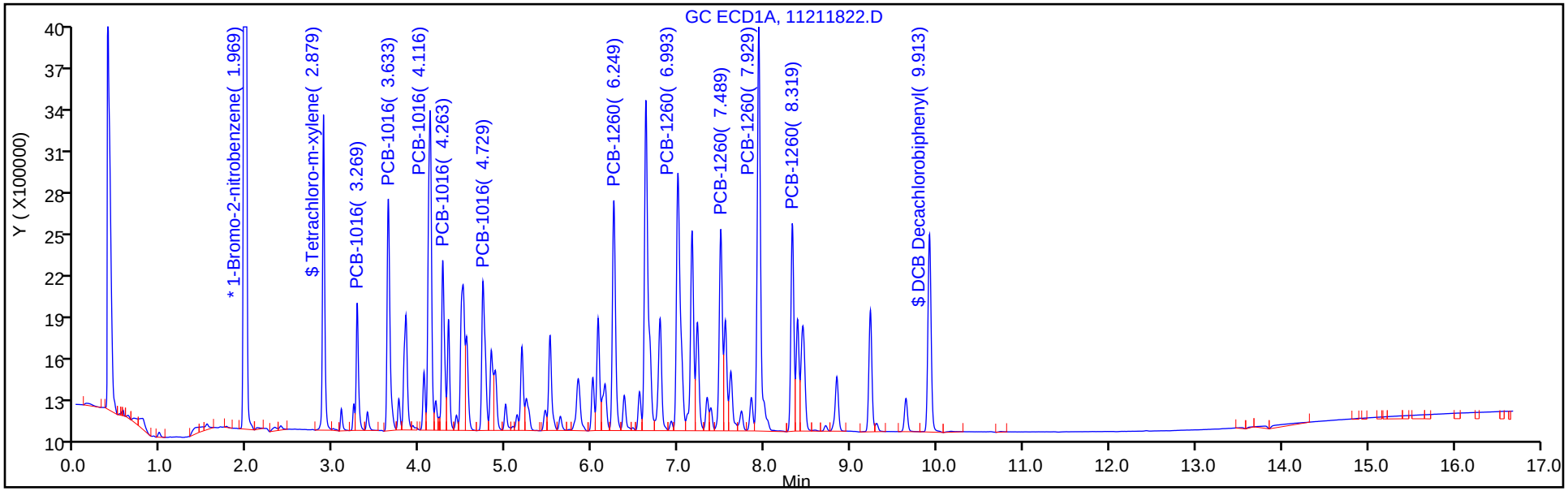
Report Date: 23-Nov-2018 11:02:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

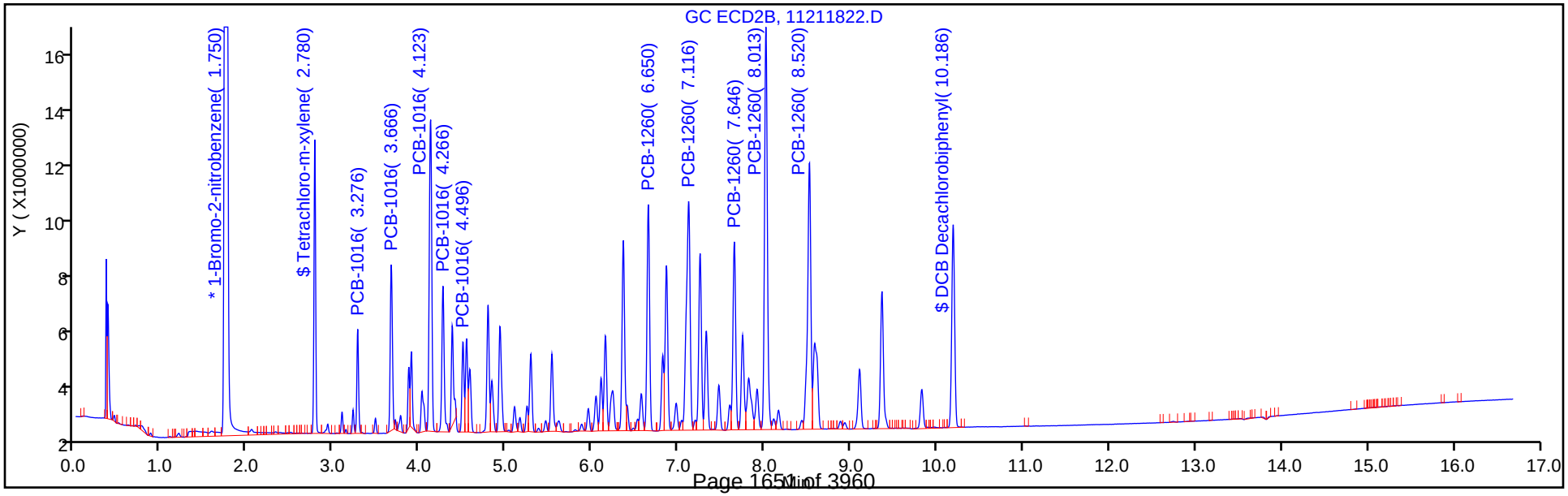
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D

Injection Date:	21-Nov-2018 16:09:34	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31660			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D
Lims ID: STDL21660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 16:30:45 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21660
Misc. Info.: 280-0076428-023
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:36 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31839217	1000.0	1000.0	
2	1.750	1.746	0.004	177179573	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	1996738	2.50	2.50	
2	2.780	2.780	0.000	7055763	2.50	2.57	
						RPD = 3.03	
1 PCB-1016							
1	3.269	3.269	0.000	883638	50.0	51.0	
1	3.629	3.633	-0.004	2058248	50.0	51.7	
1	4.116	4.116	0.000	3122897	50.0	50.5	
1	4.263	4.263	0.000	1447486	50.0	50.8	
1	4.729	4.729	0.000	1525625	50.0	50.6	
		Average of Peak Amounts =				50.9	
2	3.276	3.276	0.000	2565446	50.0	51.6	
2	3.666	3.666	0.000	5231349	50.0	50.8	
2	4.123	4.123	0.000	11249839	50.0	51.1	
2	4.266	4.266	0.000	4898205	50.0	50.4	
2	4.496	4.496	0.000	2765621	50.0	52.2	
		Average of Peak Amounts =				51.2	
						RPD = 0.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	2188444	50.0	51.5	
1	6.993	6.993	0.000	3052493	50.0	50.8	
1	7.489	7.489	0.000	1885624	50.0	50.2	
1	7.929	7.929	0.000	4026393	50.0	50.4	
1	8.319	8.319	0.000	1831626	50.0	50.6	
		Average of Peak Amounts =				50.7	
2	6.650	6.646	0.004	8418682	50.0	52.2	
2	7.116	7.116	0.000	12242650	50.0	51.8	
2	7.646	7.646	0.000	7400170	50.0	52.4	
2	8.013	8.013	0.000	16246619	50.0	51.8	
2	8.516	8.516	0.000	12553559	50.0	52.0	
		Average of Peak Amounts =				52.0	
						RPD = 2.58	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1981347	2.50	2.56	
2	10.183	10.186	-0.003	8427351	2.50	2.61	
						RPD = 1.72	
S 8 Polychlorinated biphenyls, Total							
1						101.6	
2						103.3	
						RPD = 1.59	

Reagents:

AR_1660_L2_00030	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

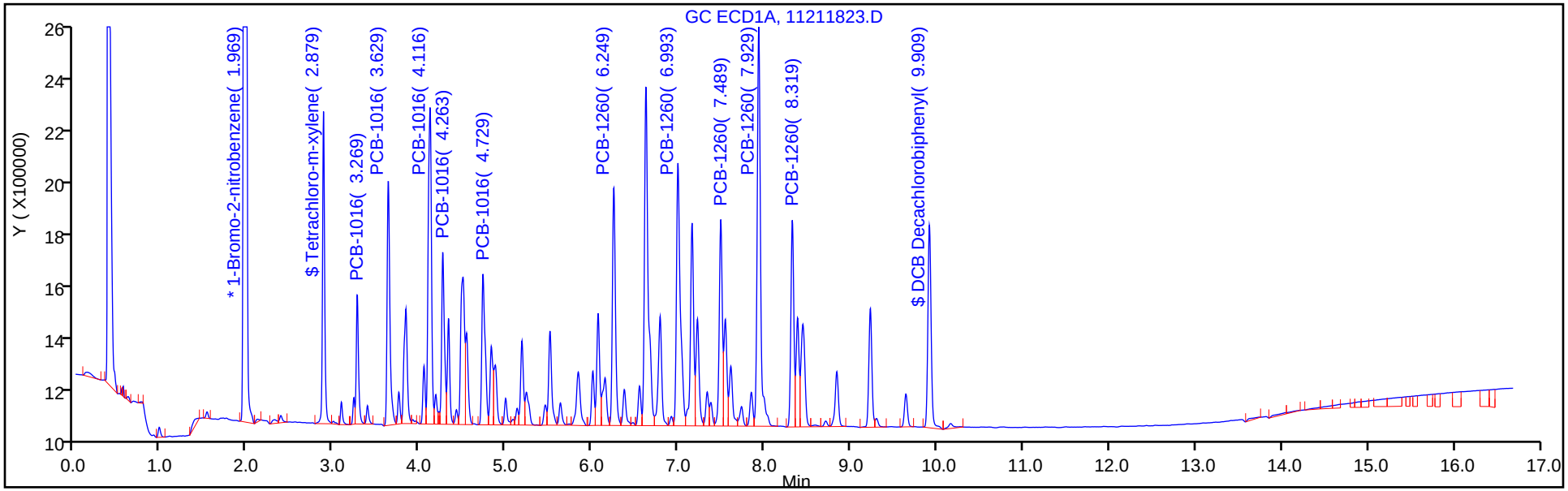
Report Date: 23-Nov-2018 11:02:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

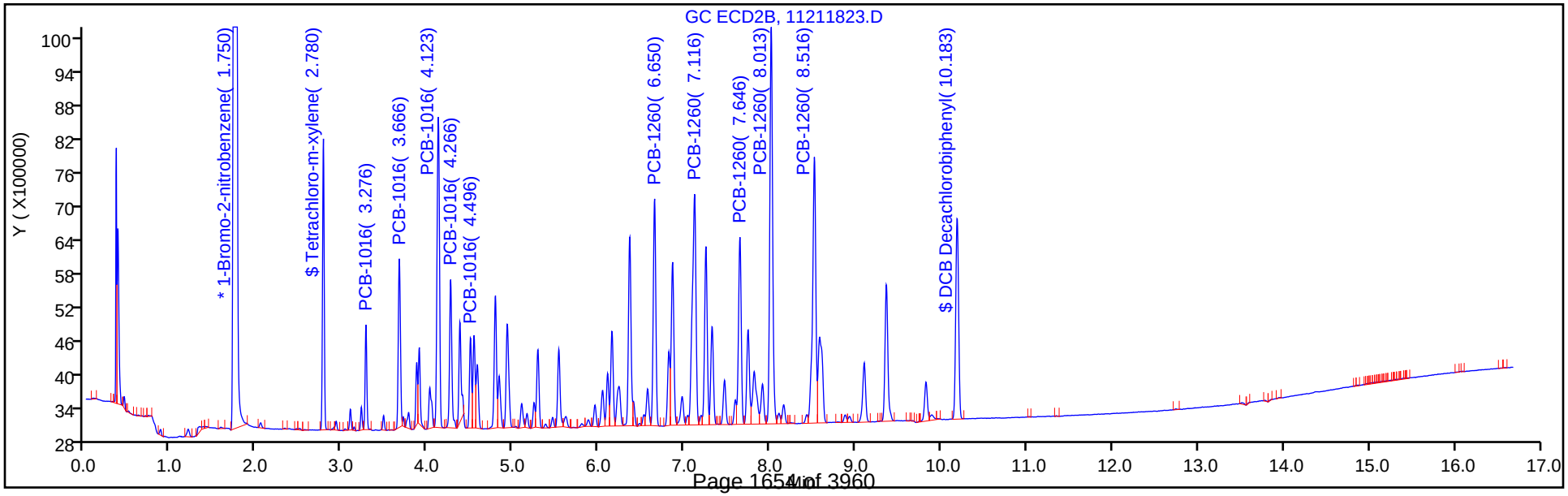
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D

Injection Date:	21-Nov-2018 16:30:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21660			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D
Lims ID: STDL11660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 16:51:56 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11660
Misc. Info.: 280-0076428-024
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:40 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	33056810	1000.0	1000.0	
2	1.749	1.746	0.003	183948370	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	998558	1.25	1.26	
2	2.779	2.780	-0.001	3780517	1.25	1.04	
						RPD = 19.58	
1 PCB-1016							
1	3.272	3.269	0.003	469132	25.0	18.7	
1	3.632	3.633	-0.001	1080310	25.0	19.2	
1	4.116	4.116	0.000	1562445	25.0	23.1	
1	4.262	4.263	-0.001	734649	25.0	20.6	
1	4.729	4.729	0.000	784034	25.0	21.6	
		Average of Peak Amounts =				20.6	
2	3.276	3.276	0.000	1402102	25.0	19.3	
2	3.666	3.666	0.000	2975533	25.0	20.4	
2	4.122	4.123	-0.001	6206319	25.0	20.7	
2	4.266	4.266	0.000	2787481	25.0	20.5	
2	4.499	4.496	0.003	1494252	25.0	18.9	
		Average of Peak Amounts =				19.9	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	1127159	25.0	21.2	
1	6.992	6.993	-0.001	1550296	25.0	23.3	
1	7.489	7.489	0.000	988085	25.0	22.3	
1	7.929	7.929	0.000	2054328	25.0	23.7	
1	8.319	8.319	0.000	929879	25.0	23.8	
		Average of Peak Amounts =				22.9	
2	6.649	6.646	0.003	4471690	25.0	20.0	
2	7.116	7.116	0.000	6532137	25.0	20.5	
2	7.646	7.646	0.000	3887676	25.0	20.3	
2	8.012	8.013	-0.001	8601587	25.0	20.6	
2	8.516	8.516	0.000	6657019	25.0	20.6	
		Average of Peak Amounts =				20.4	
						RPD = 11.35	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1072007	1.25	1.06	
2	10.186	10.186	0.000	4494073	1.25	0.99	
						RPD = 6.04	
S 8 Polychlorinated biphenyls, Total							
1						43.5	
2						40.4	
						RPD = 7.49	

Reagents:

AR_1660_L1_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

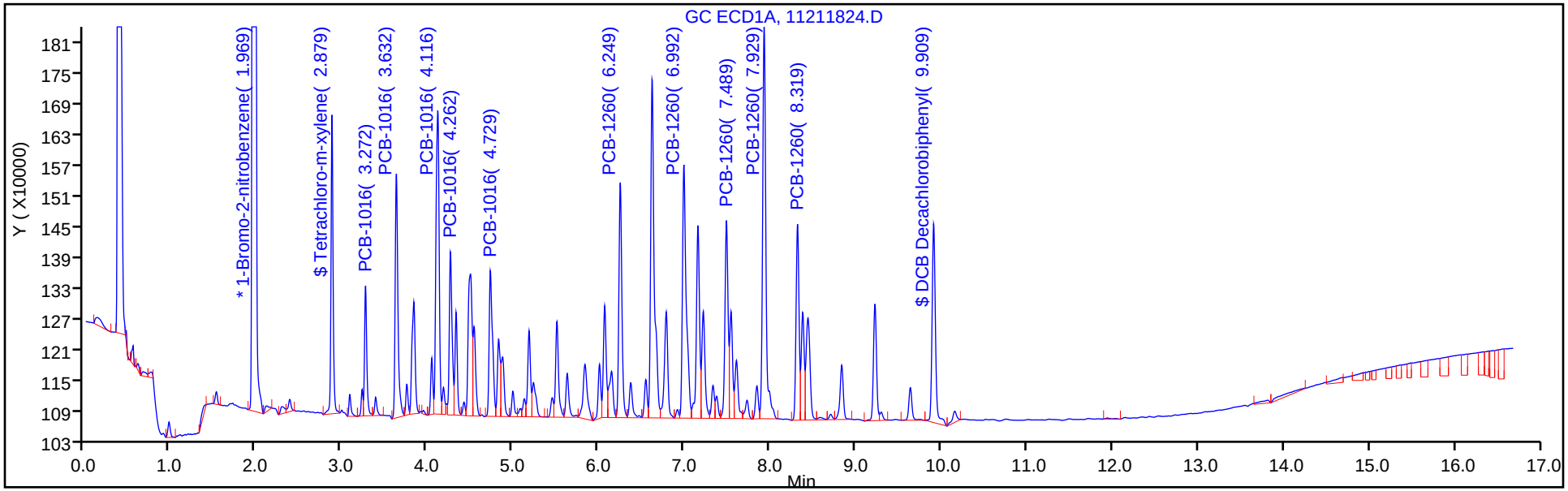
Report Date: 23-Nov-2018 11:02:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

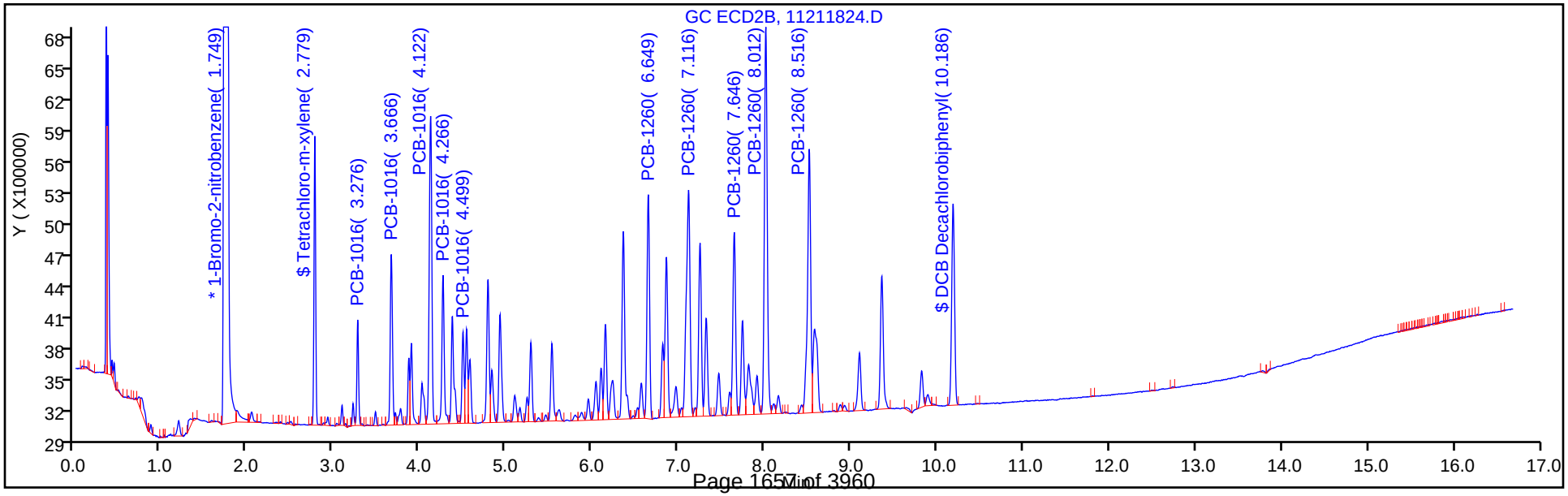
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D

Injection Date:	21-Nov-2018 16:51:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11660			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34387

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.3049 0.2163	0.2896 0.2064	0.2740	0.2437	0.2260	Lin1	3.5264	0.2121							0.9970		0.9900
PCB-1016 Peak 2	0.6470 0.4433	0.5905 0.4244	0.5467	0.5045	0.4789	Lin1	7.2549	0.4381							0.9960		0.9900
PCB-1016 Peak 3	1.3496 0.9844	1.2699 0.9485	1.1896	1.0957	1.0589	Lin1	13.573	0.9762							0.9970		0.9900
PCB-1016 Peak 4	0.6061 0.4233	0.5529 0.4026	0.5194	0.4769	0.4632	Lin1	6.5676	0.4186							0.9960		0.9900
PCB-1016 Peak 5	0.3249 0.2311	0.3122 0.2159	0.2916	0.2573	0.2435	Lin1	3.8771	0.2247							0.9960		0.9900
PCB-1260 Peak 1	0.9724 0.7264	0.9503 0.7051	0.8914	0.8027	0.7767	Lin1	9.8584	0.7218							0.9970		0.9900
PCB-1260 Peak 2	1.4204 1.0776	1.3819 1.0496	1.3022	1.1863	1.1505	Lin1	13.516	1.0728							0.9980		0.9900
PCB-1260 Peak 3	0.8454 0.6438	0.8353 0.6328	0.7807	0.7101	0.6873	Lin1	8.0530	0.6435							0.9980		0.9900
PCB-1260 Peak 4	1.8704 1.4466	1.8339 1.4133	1.7362	1.5898	1.5448	Lin1	16.988	1.4435							0.9980		0.9900
PCB-1260 Peak 5	1.4476 1.1043	1.4170 1.0830	1.3320	1.2111	1.1862	Lin1	13.444	1.1040							0.9980		0.9900
Tetrachloro-m-xylene	16.442 12.724	15.929 12.252	15.140	13.834	13.322	Lin1	7.5033	12.555							0.9980		0.9900
DCB Decachlorobiphenyl	19.545 14.374	19.026 14.035	17.869	15.964	15.441	Lin1	10.184	14.328							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34387

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Lin1	1402102 28324629	2565446 35638141	4799160	10752270	18899868	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 2	BNB	Lin1	2975533 58050459	5231349 73285982	9573999	22260570	40057019	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 3	BNB	Lin1	6206319 128903407	11249839 163781976	20834280	48351201	88563385	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 4	BNB	Lin1	2787481 55437372	4898205 69518646	9095859	21045310	38741347	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 5	BNB	Lin1	1494252 30262522	2765621 37279827	5107027	11353500	20361835	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 1	BNB	Lin1	4471690 95127310	8418682 121750112	15611005	35419484	64958906	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 2	BNB	Lin1	6532137 141113456	12242650 181248886	22806129	52349958	96225163	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 3	BNB	Lin1	3887676 84305248	7400170 109270203	13672887	31335455	57482127	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 4	BNB	Lin1	8601587 189441684	16246619 244056914	30406302	70151512	129198578	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 5	BNB	Lin1	6657019 144616476	12553559 187015797	23327598	53442743	99208427	25.0 750	50.0 1000	100	250	500
Tetrachloro-m-xylene	BNB	Lin1	3780517 83308843	7055763 105788700	13257502	30523746	55710908	1.25 37.5	2.50 50.0	5.00	12.5	25.0
DCB Decachlorobiphenyl	BNB	Lin1	4494073 94115340	8427351 121182268	15646900	35221995	64572494	1.25 37.5	2.50 50.0	5.00	12.5	25.0

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D
Lims ID: STDL71660
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 14:44:45 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71660
Misc. Info.: 280-0076428-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:22 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:26:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30929643	1000.0	1000.0	
2	1.746	1.749	-0.003	172682643	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.879	0.001	40504428	50.0	49.8	
2	2.776	2.780	-0.004	105788700	50.0	48.2	
						RPD = 3.20	
1 PCB-1016							
1	3.270	3.269	0.001	12255500	1000.0	928.2	
1	3.633	3.633	0.000	29138313	1000.0	945.4	
1	4.116	4.116	0.000	55680903	1000.0	970.3	
1	4.263	4.263	0.000	22835416	1000.0	950.7	
1	4.730	4.729	0.001	25166398	1000.0	968.1	
		Average of Peak Amounts =				952.5	
2	3.276	3.276	0.000	35638141	1000.0	956.5	
2	3.666	3.666	0.000	73285982	1000.0	952.1	
2	4.123	4.123	0.000	163781976	1000.0	957.7	
2	4.266	4.266	0.000	69518646	1000.0	946.1	
2	4.496	4.496	0.000	37279827	1000.0	943.6	
		Average of Peak Amounts =				951.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.249	0.001	34751926	1000.0	973.7	
1	6.993	6.993	0.000	54752979	1000.0	988.5	
1	7.490	7.489	0.001	32252970	1000.0	984.6	
1	7.930	7.929	0.001	73881863	1000.0	991.0	
1	8.320	8.319	0.001	33747429	1000.0	993.7	
		Average of Peak Amounts =				986.3	
2	6.650	6.646	0.004	121750112	1000.0	963.1	
2	7.116	7.116	0.000	181248886	1000.0	965.7	
2	7.646	7.646	0.000	109270203	1000.0	970.8	
2	8.013	8.013	0.000	244056914	1000.0	967.3	
2	8.516	8.516	0.000	187015797	1000.0	968.8	
		Average of Peak Amounts =				967.2	
						RPD = 1.96	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	30062336	50.0	48.6	
2	10.186	10.186	0.000	121182268	50.0	48.3	
						RPD = 0.69	
S 8 Polychlorinated biphenyls, Total							
1						1938.9	
2						1918.4	
						RPD = 1.06	

Reagents:

AR_1660_L7_00026	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

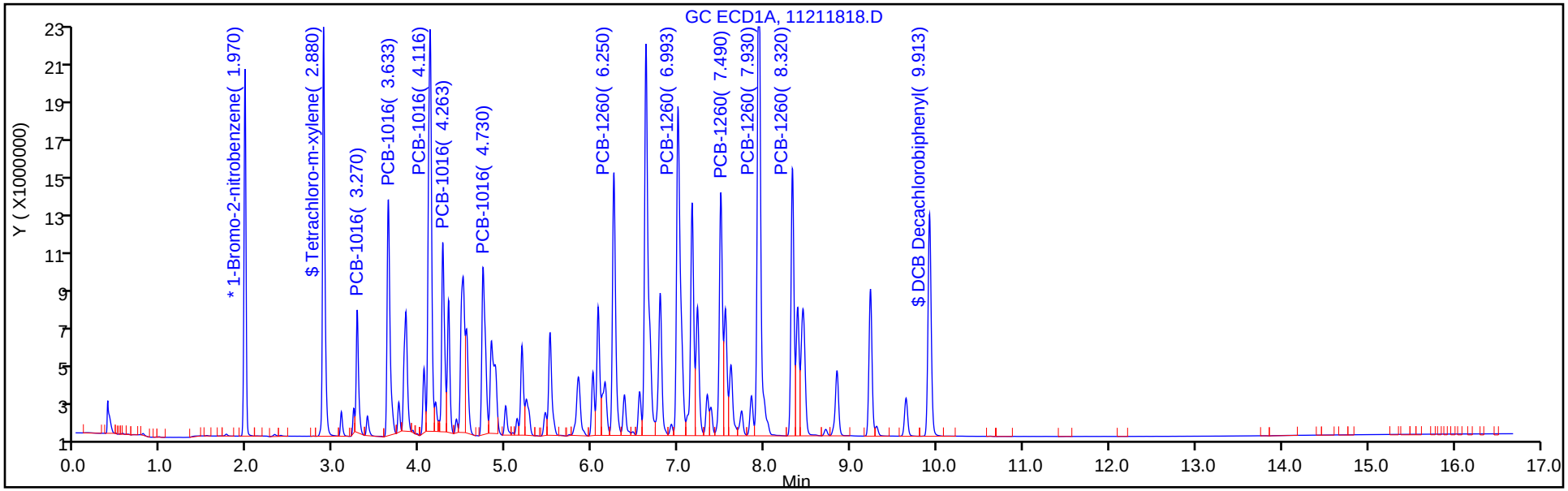
Report Date: 23-Nov-2018 11:02:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

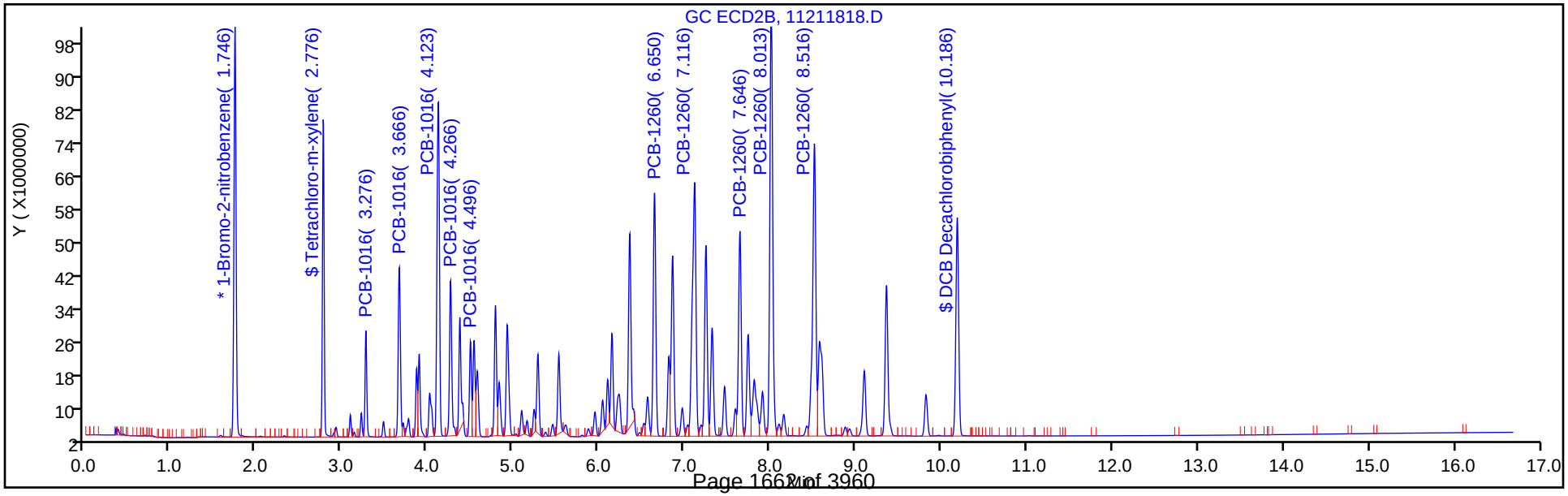
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D

Injection Date:	21-Nov-2018 14:44:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71660			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D
Lims ID: STDL61660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 15:05:56 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61660
Misc. Info.: 280-0076428-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:25 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:02:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31573792	1000.0	1000.0	
2	1.749	1.749	0.000	174603036	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	31159991	37.5	37.5	
2	2.779	2.780	-0.001	83308843	37.5	37.4	
						RPD = 0.34	
1 PCB-1016							
1	3.272	3.269	0.003	10292626	750.0	760.9	
1	3.632	3.633	-0.001	23509757	750.0	744.3	
1	4.118	4.116	0.002	43992946	750.0	750.5	
1	4.265	4.263	0.002	18389026	750.0	748.3	
1	4.732	4.729	0.003	19946184	750.0	750.1	
		Average of Peak Amounts =				750.8	
2	3.275	3.276	-0.001	28324629	750.0	748.3	
2	3.665	3.666	-0.001	58050459	750.0	742.3	
2	4.122	4.123	-0.001	128903407	750.0	742.4	
2	4.265	4.266	-0.001	55437372	750.0	742.9	
2	4.499	4.496	0.003	30262522	750.0	754.2	
		Average of Peak Amounts =				746.0	
						RPD = 0.64	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.249	-0.001	27023644	750.0	739.7	
1	6.992	6.993	-0.001	41930903	750.0	740.8	
1	7.488	7.489	-0.001	24646608	750.0	735.5	
1	7.932	7.929	0.003	56278619	750.0	738.9	
1	8.322	8.319	0.003	25627349	750.0	738.8	
		Average of Peak Amounts =				738.7	
2	6.649	6.646	0.003	95127310	750.0	741.1	
2	7.115	7.116	-0.001	141113456	750.0	740.7	
2	7.645	7.646	-0.001	84305248	750.0	737.8	
2	8.012	8.013	-0.001	189441684	750.0	739.9	
2	8.515	8.516	-0.001	144616476	750.0	738.0	
		Average of Peak Amounts =				739.5	
						RPD = 0.10	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	23519401	37.5	37.1	
2	10.185	10.186	-0.001	94115340	37.5	36.9	
						RPD = 0.55	
S 8 Polychlorinated biphenyls, Total							
1						1489.5	
2						1485.5	
						RPD = 0.27	

Reagents:

AR_1660_L6_00033	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

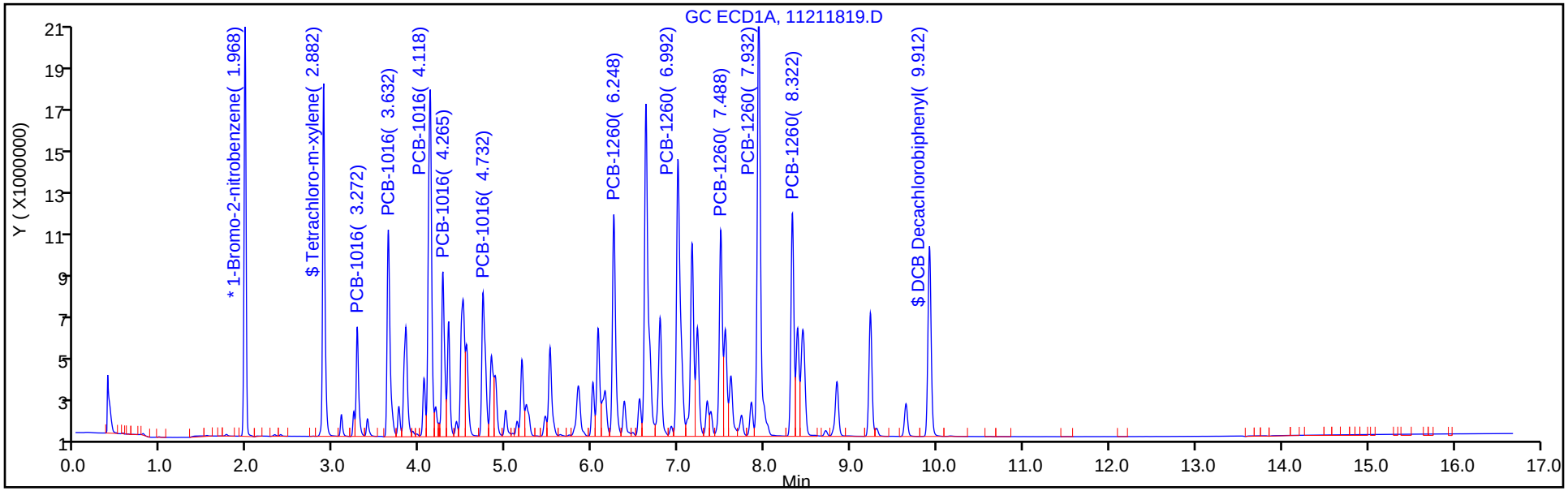
Report Date: 23-Nov-2018 11:02:26 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

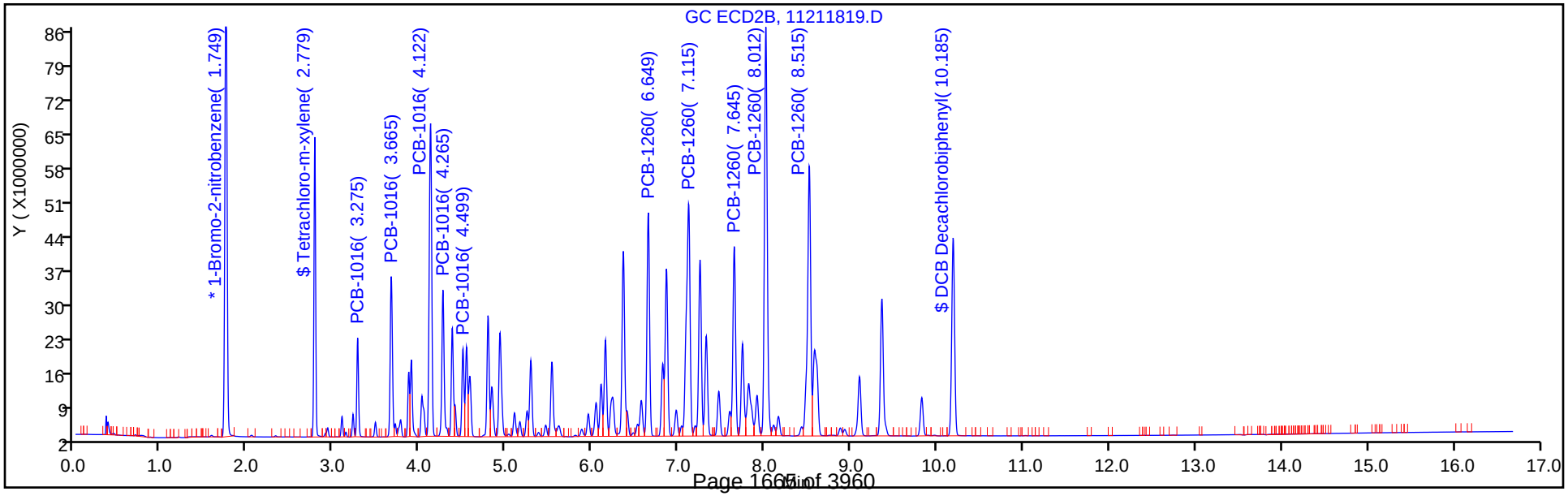
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D

Injection Date:	21-Nov-2018 15:05:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61660			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D
Lims ID: STDL51660
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 21-Nov-2018 15:27:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51660
Misc. Info.: 280-0076428-020
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:27 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29769998	1000.0	1000.0	
2	1.746	1.746	0.000	167274345	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	19882681	25.0	25.4	
2	2.780	2.780	0.000	55710908	25.0	25.9	
						RPD = 1.91	
1 PCB-1016							M
1	3.269	3.269	0.000	6801886	500.0	528.8	
1	3.633	3.633	0.000	15989031	500.0	532.9	
1	4.116	4.116	0.000	28999155	500.0	523.9	
1	4.263	4.263	0.000	12379838	500.0	531.9	
1	4.729	4.729	0.000	12951678	500.0	514.4	
		Average of Peak Amounts =				526.4	
2	3.276	3.276	0.000	18899868	500.0	516.1	
2	3.666	3.666	0.000	40057019	500.0	530.0	M
2	4.123	4.123	0.000	88563385	500.0	528.5	M
2	4.266	4.266	0.000	38741347	500.0	537.6	M
2	4.496	4.496	0.000	20361835	500.0	524.5	M
		Average of Peak Amounts =				527.3	
						RPD = 0.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	18040094	500.0	521.2	
1	6.993	6.993	0.000	27649105	500.0	517.2	
1	7.489	7.489	0.000	16493165	500.0	520.3	
1	7.929	7.929	0.000	37154269	500.0	516.7	
1	8.319	8.319	0.000	16886305	500.0	515.7	
		Average of Peak Amounts =				518.2	
2	6.646	6.646	0.000	64958906	500.0	524.4	
2	7.116	7.116	0.000	96225163	500.0	523.6	
2	7.646	7.646	0.000	57482127	500.0	521.5	
2	8.013	8.013	0.000	129198578	500.0	523.3	
2	8.516	8.516	0.000	99208427	500.0	525.0	
		Average of Peak Amounts =				523.6	
						RPD = 1.02	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	15649907	25.0	26.0	
2	10.186	10.186	0.000	64572494	25.0	26.2	
						RPD = 0.81	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

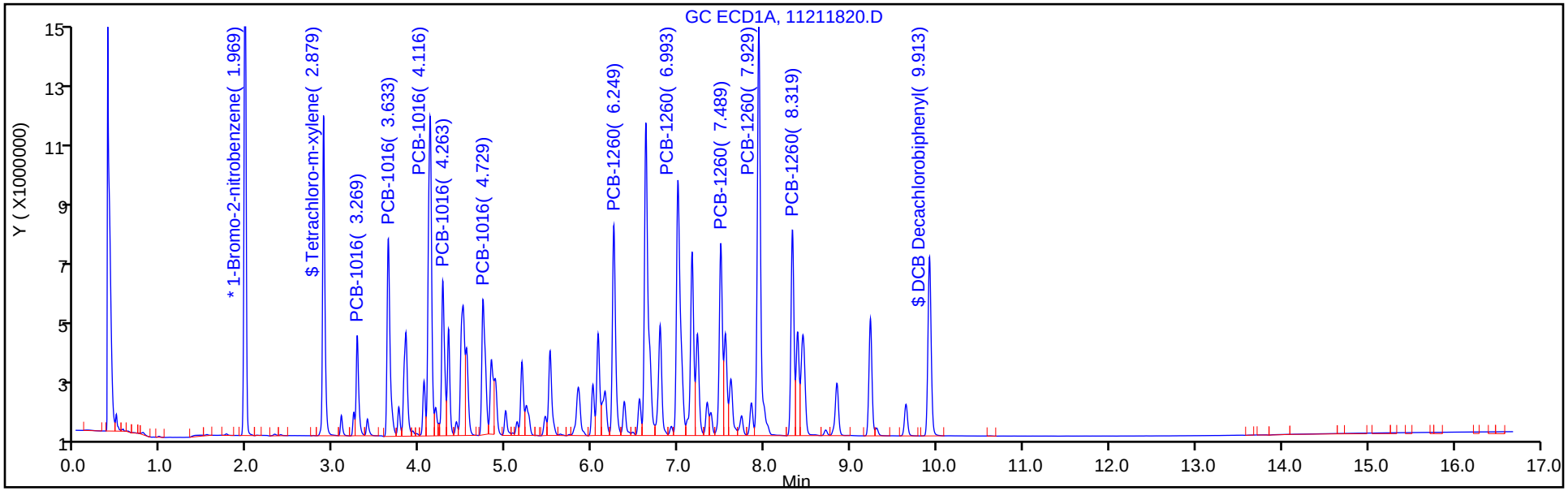
Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

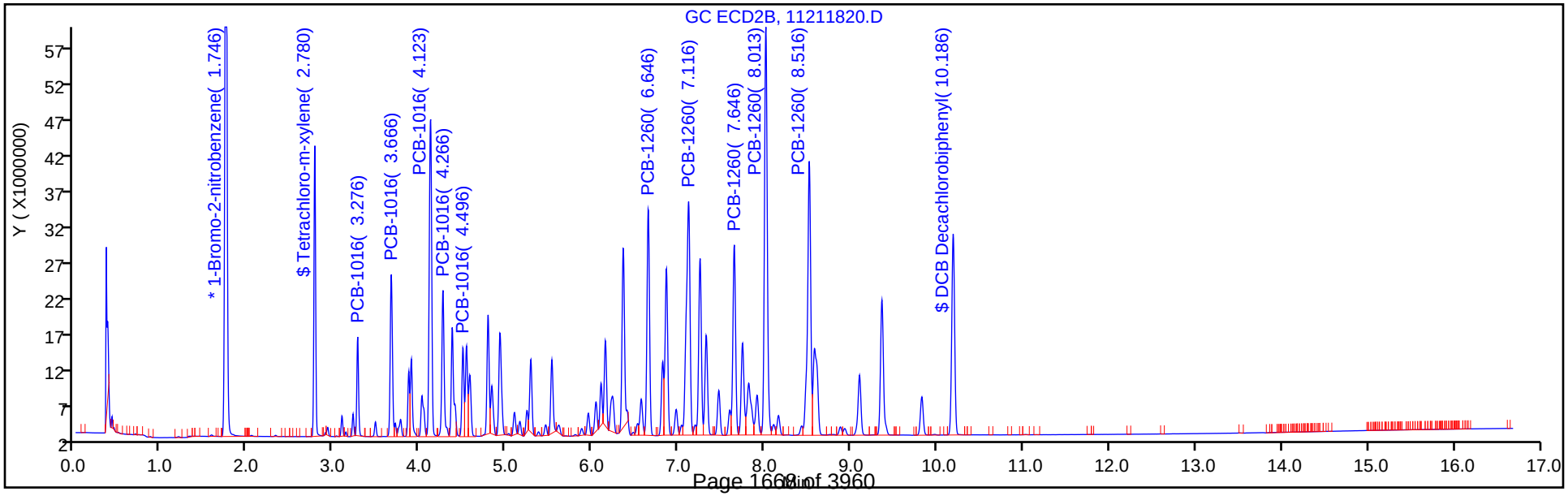
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date:	21-Nov-2018 15:27:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51660			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date: 21-Nov-2018 15:27:09 Instrument ID: SGC_J

Lims ID: STDL51660

Client ID:

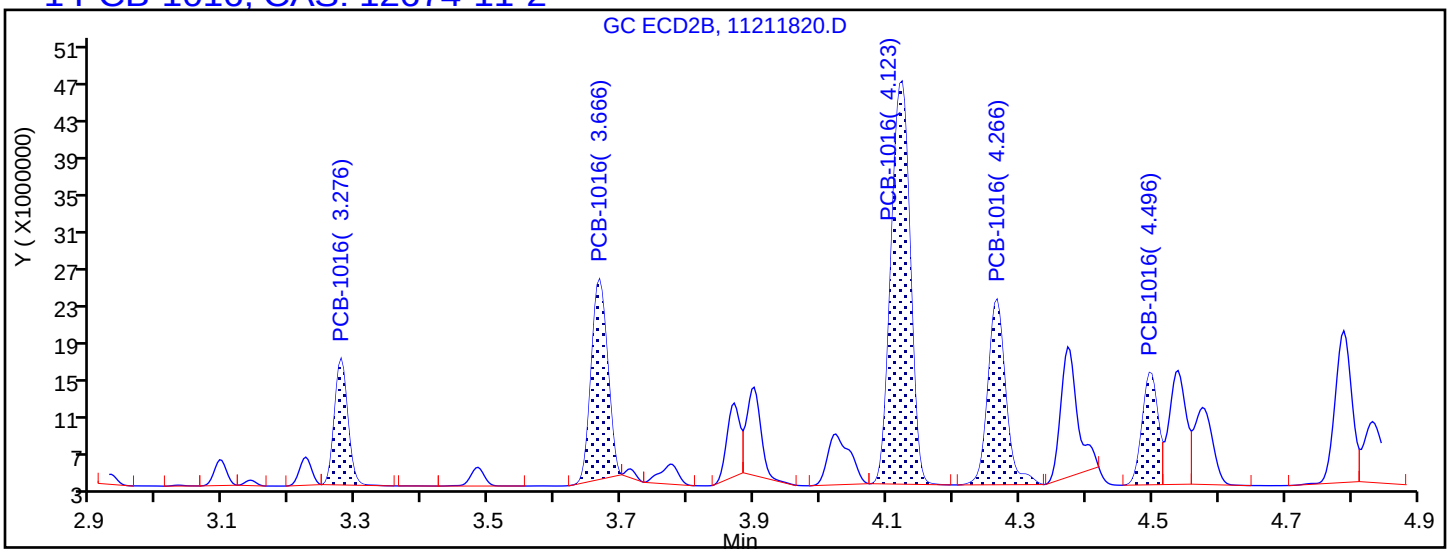
Operator ID: ALS ALS Bottle#: 20 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

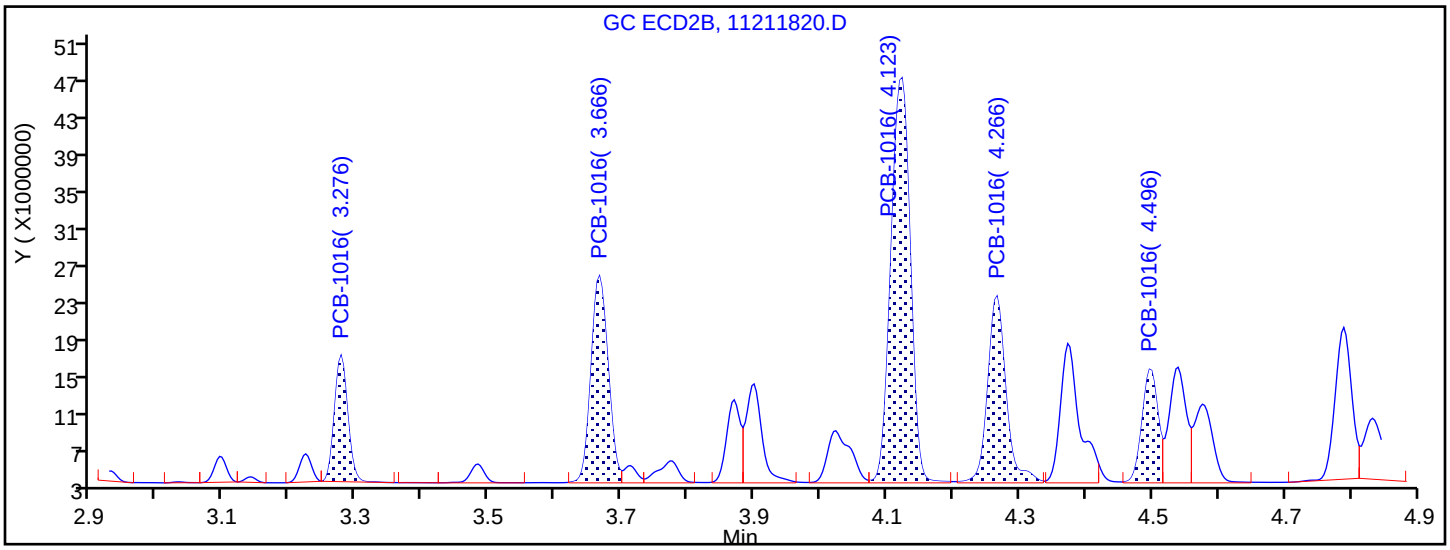
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.276	Response = 18899868	
3.666	Response = 37059133	
4.123	Response = 87084066	
4.266	Response = 37557635	
4.496	Response = 19881812	



Manual Integration Results

3.276	Response = 18899868	
3.666	Response = 40057019	M
4.123	Response = 88563385	M
4.266	Response = 38741347	M
4.496	Response = 20361835	M

Reviewer: patadiab, 23-Nov-2018 10:03:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D
Lims ID: STDL41660
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 15:48:22 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41660
Misc. Info.: 280-0076428-021
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:30 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31460203	1000.0	1000.0	
2	1.749	1.746	0.003	176509413	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	10100542	12.5	12.3	
2	2.779	2.780	-0.001	30523746	12.5	13.2	
						RPD = 6.95	
1 PCB-1016							
1	3.272	3.269	0.003	3816191	250.0	273.7	
1	3.632	3.633	-0.001	8778351	250.0	270.1	
1	4.119	4.116	0.003	14886212	250.0	253.2	
1	4.265	4.263	0.002	6578902	250.0	263.4	
1	4.732	4.729	0.003	7068443	250.0	262.4	
		Average of Peak Amounts =				264.6	
2	3.275	3.276	-0.001	10752270	250.0	270.6	
2	3.665	3.666	-0.001	22260570	250.0	271.3	
2	4.122	4.123	-0.001	48351201	250.0	266.7	
2	4.265	4.266	-0.001	21045310	250.0	269.2	
2	4.499	4.496	0.003	11353500	250.0	269.0	
		Average of Peak Amounts =				269.4	
						RPD = 1.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9650098	250.0	259.6	
1	6.992	6.993	-0.001	14238155	250.0	250.5	
1	7.489	7.489	0.000	8615850	250.0	254.1	
1	7.932	7.929	0.003	19166787	250.0	251.1	
1	8.322	8.319	0.003	8672757	250.0	249.7	
		Average of Peak Amounts =				253.0	
2	6.649	6.646	0.003	35419484	250.0	264.3	
2	7.115	7.116	-0.001	52349958	250.0	263.8	
2	7.645	7.646	-0.001	31335455	250.0	263.4	
2	8.012	8.013	-0.001	70151512	250.0	263.6	
2	8.515	8.516	-0.001	53442743	250.0	262.1	
		Average of Peak Amounts =				263.4	
						RPD = 4.04	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8405396	12.5	12.9	
2	10.185	10.186	-0.001	35221995	12.5	13.2	
						RPD = 2.14	
S 8 Polychlorinated biphenyls, Total							
1						517.6	
2						532.8	
						RPD = 2.90	

Reagents:

AR_1660_L4_00068	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

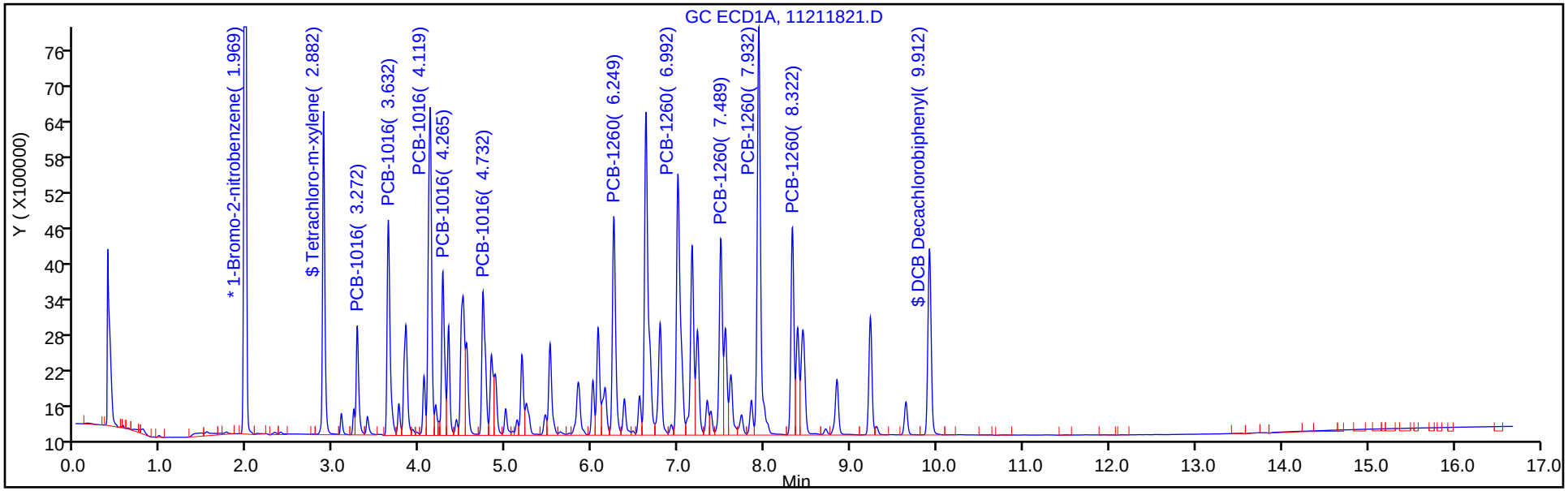
Report Date: 23-Nov-2018 11:02:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

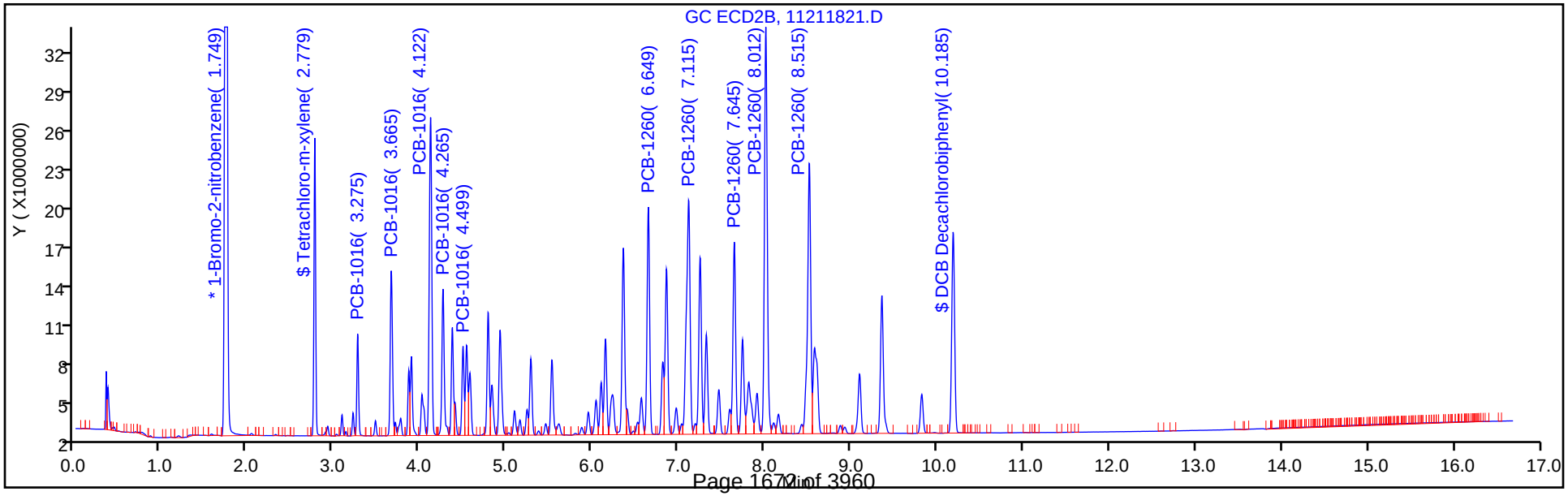
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D

Injection Date:	21-Nov-2018 15:48:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41660			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D
Lims ID: STDL31660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 16:09:34 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31660
Misc. Info.: 280-0076428-022
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:05:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31048095	1000.0	1000.0	
2	1.750	1.746	0.004	175133355	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	3964953	5.00	4.96	
2	2.780	2.780	0.000	13257502	5.00	5.43	
						RPD = 9.06	
1 PCB-1016							
1	3.269	3.269	0.000	1679350	100.0	113.7	
1	3.633	3.633	0.000	3824818	100.0	111.4	
1	4.116	4.116	0.000	6086050	100.0	103.5	
1	4.263	4.263	0.000	2807752	100.0	109.2	
1	4.729	4.729	0.000	2974460	100.0	107.9	
		Average of Peak Amounts =				109.1	
2	3.276	3.276	0.000	4799160	100.0	112.6	
2	3.666	3.666	0.000	9573999	100.0	108.2	
2	4.123	4.123	0.000	20834280	100.0	108.0	
2	4.266	4.266	0.000	9095859	100.0	108.4	
2	4.496	4.496	0.000	5107027	100.0	112.5	
		Average of Peak Amounts =				109.9	
						RPD = 0.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	4140653	100.0	108.0	
1	6.993	6.993	0.000	5923763	100.0	103.9	
1	7.489	7.489	0.000	3726238	100.0	108.0	
1	7.929	7.929	0.000	7859527	100.0	103.1	
1	8.319	8.319	0.000	3558044	100.0	102.7	
		Average of Peak Amounts =				105.1	
2	6.650	6.646	0.004	15611005	100.0	109.8	
2	7.116	7.116	0.000	22806129	100.0	108.8	
2	7.646	7.646	0.000	13672887	100.0	108.8	
2	8.013	8.013	0.000	30406302	100.0	108.5	
2	8.520	8.516	0.004	23327598	100.0	108.5	
		Average of Peak Amounts =				108.9	
						RPD = 3.50	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	3708204	5.00	5.46	
2	10.186	10.186	0.000	15646900	5.00	5.52	
						RPD = 1.19	
S 8 Polychlorinated biphenyls, Total							
1						214.3	
2						218.8	
						RPD = 2.10	

Reagents:

AR_1660_L3_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

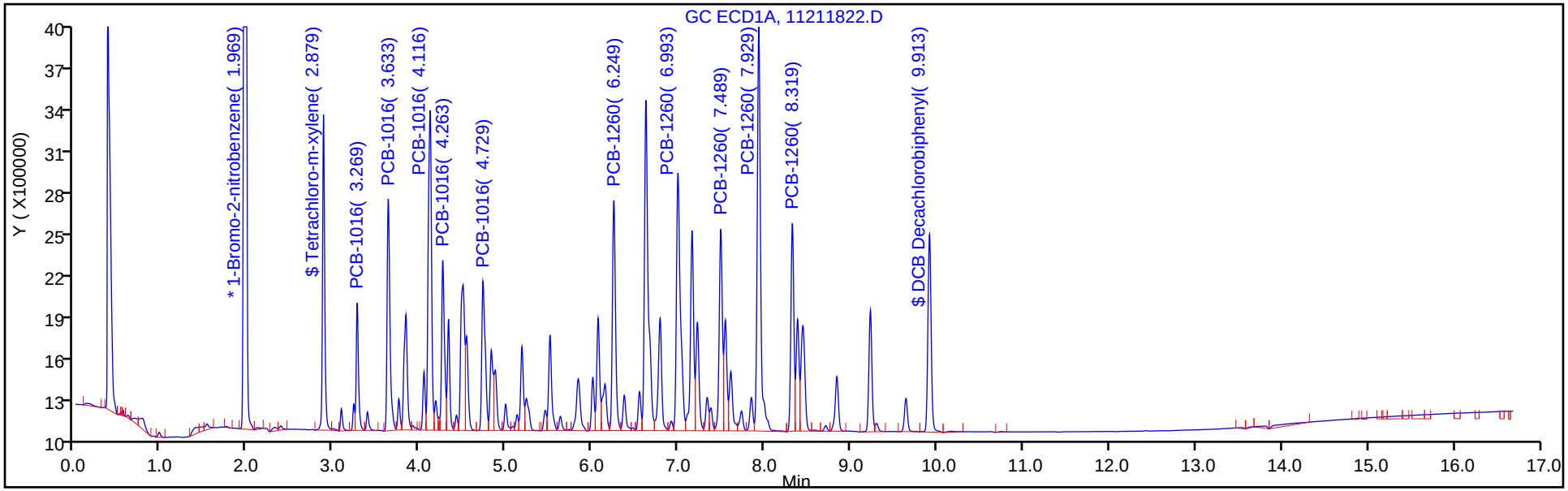
Report Date: 23-Nov-2018 11:02:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

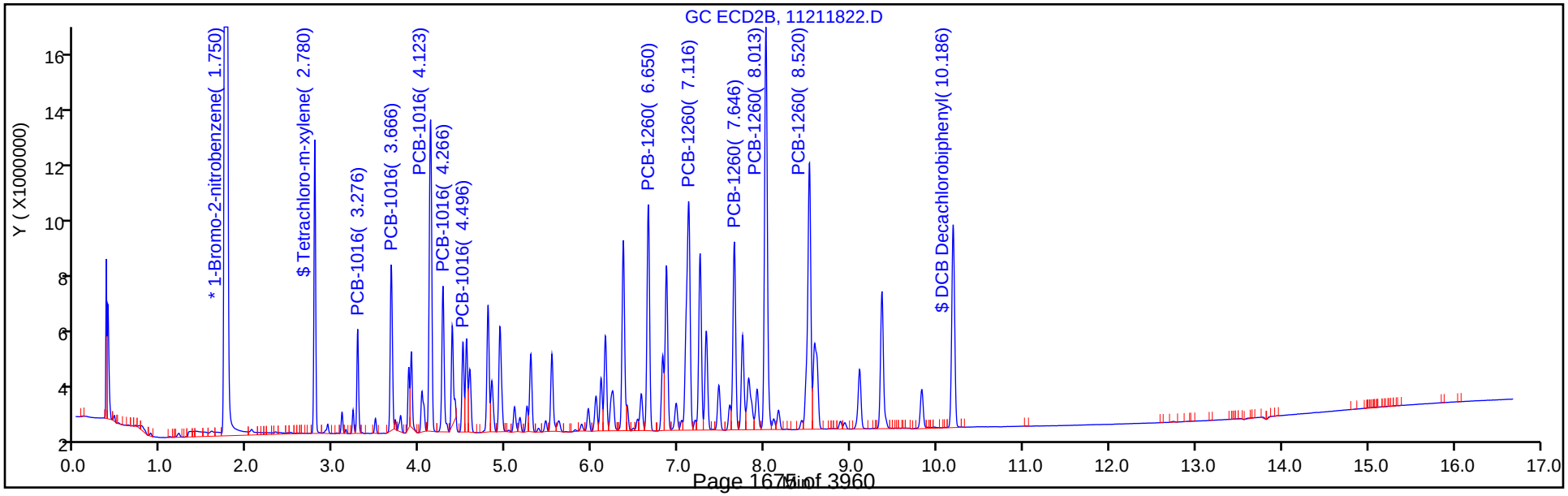
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D

Injection Date:	21-Nov-2018 16:09:34	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31660			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D
Lims ID: STDL21660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 16:30:45 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21660
Misc. Info.: 280-0076428-023
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:36 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31839217	1000.0	1000.0	
2	1.750	1.746	0.004	177179573	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	1996738	2.50	2.50	
2	2.780	2.780	0.000	7055763	2.50	2.57	
						RPD = 3.03	
1 PCB-1016							
1	3.269	3.269	0.000	883638	50.0	51.0	
1	3.629	3.633	-0.004	2058248	50.0	51.7	
1	4.116	4.116	0.000	3122897	50.0	50.5	
1	4.263	4.263	0.000	1447486	50.0	50.8	
1	4.729	4.729	0.000	1525625	50.0	50.6	
		Average of Peak Amounts =				50.9	
2	3.276	3.276	0.000	2565446	50.0	51.6	
2	3.666	3.666	0.000	5231349	50.0	50.8	
2	4.123	4.123	0.000	11249839	50.0	51.1	
2	4.266	4.266	0.000	4898205	50.0	50.4	
2	4.496	4.496	0.000	2765621	50.0	52.2	
		Average of Peak Amounts =				51.2	
						RPD = 0.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	2188444	50.0	51.5	
1	6.993	6.993	0.000	3052493	50.0	50.8	
1	7.489	7.489	0.000	1885624	50.0	50.2	
1	7.929	7.929	0.000	4026393	50.0	50.4	
1	8.319	8.319	0.000	1831626	50.0	50.6	
		Average of Peak Amounts =				50.7	
2	6.650	6.646	0.004	8418682	50.0	52.2	
2	7.116	7.116	0.000	12242650	50.0	51.8	
2	7.646	7.646	0.000	7400170	50.0	52.4	
2	8.013	8.013	0.000	16246619	50.0	51.8	
2	8.516	8.516	0.000	12553559	50.0	52.0	
		Average of Peak Amounts =				52.0	
						RPD = 2.58	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1981347	2.50	2.56	
2	10.183	10.186	-0.003	8427351	2.50	2.61	
						RPD = 1.72	
S 8 Polychlorinated biphenyls, Total							
1						101.6	
2						103.3	
						RPD = 1.59	

Reagents:

AR_1660_L2_00030	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

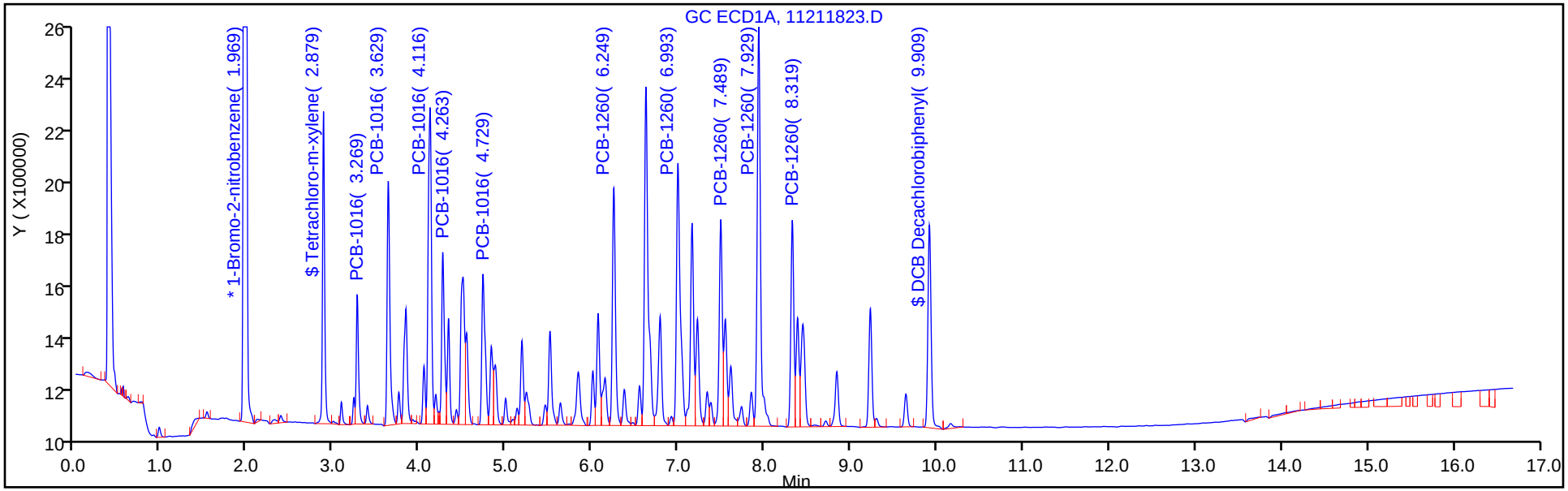
Report Date: 23-Nov-2018 11:02:38 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

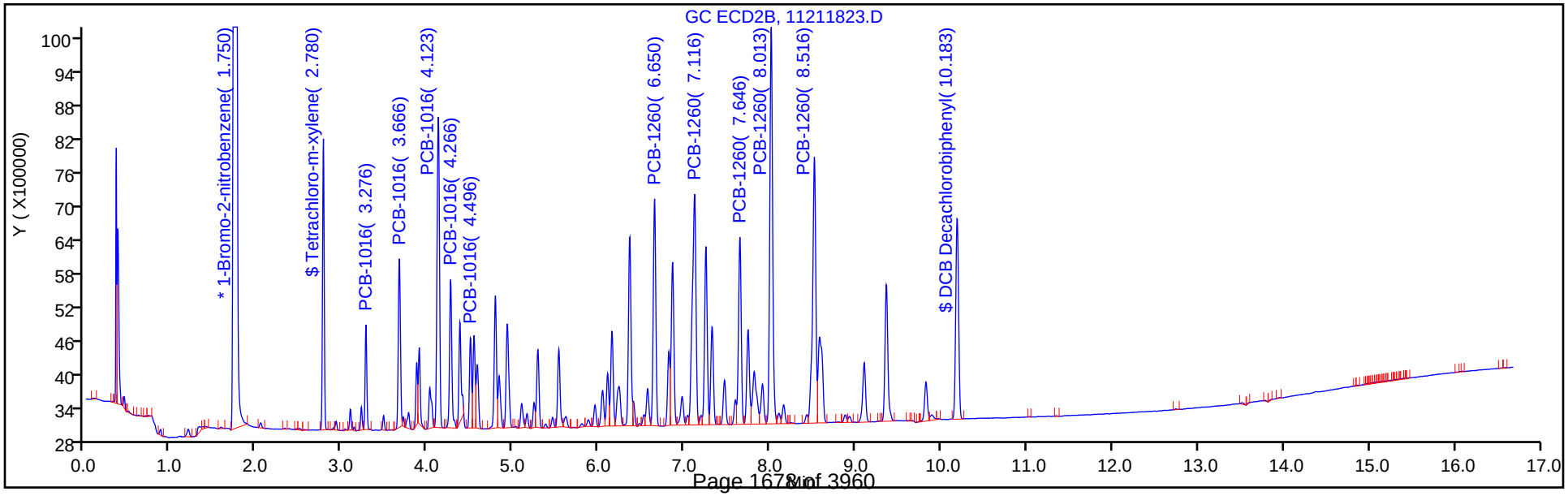
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D

Injection Date:	21-Nov-2018 16:30:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21660			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D
Lims ID: STDL11660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 16:51:56 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11660
Misc. Info.: 280-0076428-024
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:40 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	33056810	1000.0	1000.0	
2	1.749	1.746	0.003	183948370	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	998558	1.25	1.26	
2	2.779	2.780	-0.001	3780517	1.25	1.04	
						RPD = 19.58	
1 PCB-1016							
1	3.272	3.269	0.003	469132	25.0	18.7	
1	3.632	3.633	-0.001	1080310	25.0	19.2	
1	4.116	4.116	0.000	1562445	25.0	23.1	
1	4.262	4.263	-0.001	734649	25.0	20.6	
1	4.729	4.729	0.000	784034	25.0	21.6	
		Average of Peak Amounts =				20.6	
2	3.276	3.276	0.000	1402102	25.0	19.3	
2	3.666	3.666	0.000	2975533	25.0	20.4	
2	4.122	4.123	-0.001	6206319	25.0	20.7	
2	4.266	4.266	0.000	2787481	25.0	20.5	
2	4.499	4.496	0.003	1494252	25.0	18.9	
		Average of Peak Amounts =				19.9	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	1127159	25.0	21.2	
1	6.992	6.993	-0.001	1550296	25.0	23.3	
1	7.489	7.489	0.000	988085	25.0	22.3	
1	7.929	7.929	0.000	2054328	25.0	23.7	
1	8.319	8.319	0.000	929879	25.0	23.8	
		Average of Peak Amounts =				22.9	
2	6.649	6.646	0.003	4471690	25.0	20.0	
2	7.116	7.116	0.000	6532137	25.0	20.5	
2	7.646	7.646	0.000	3887676	25.0	20.3	
2	8.012	8.013	-0.001	8601587	25.0	20.6	
2	8.516	8.516	0.000	6657019	25.0	20.6	
		Average of Peak Amounts =				20.4	
						RPD = 11.35	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1072007	1.25	1.06	
2	10.186	10.186	0.000	4494073	1.25	0.99	
						RPD = 6.04	
S 8 Polychlorinated biphenyls, Total							
1						43.5	
2						40.4	
						RPD = 7.49	

Reagents:

AR_1660_L1_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

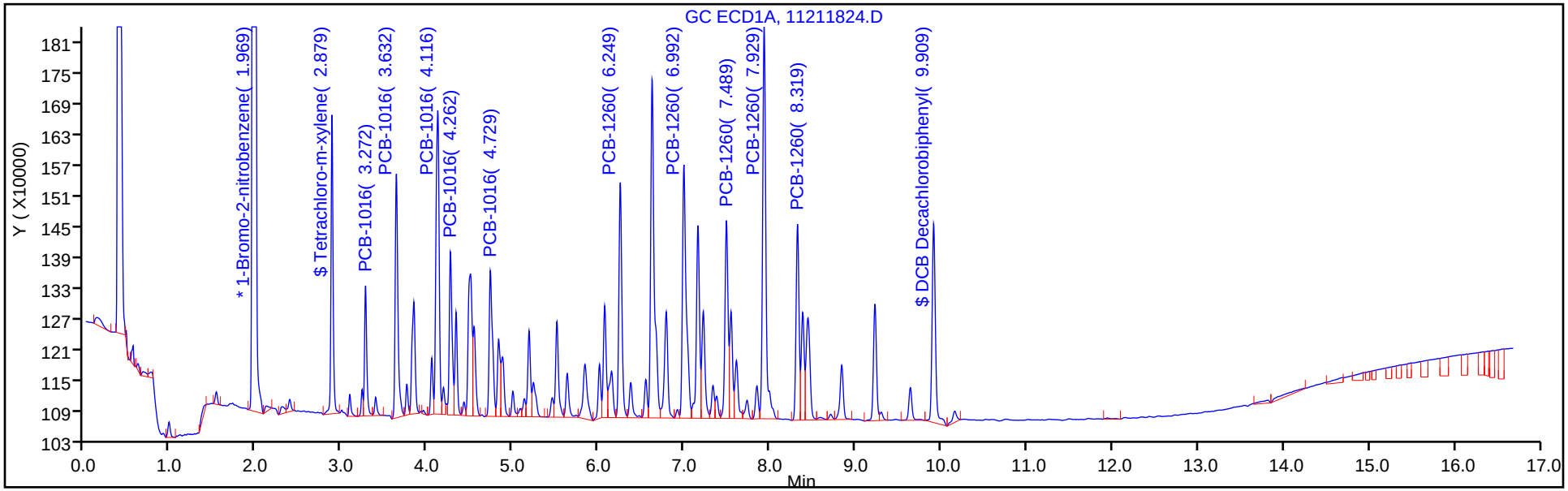
Report Date: 23-Nov-2018 11:02:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

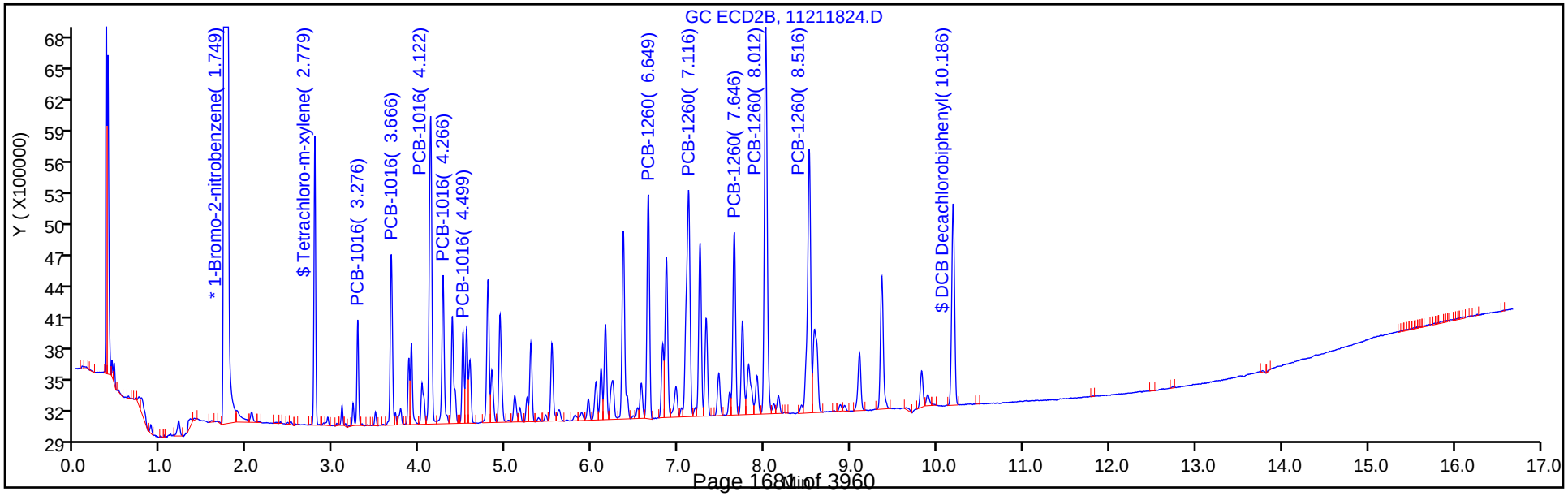
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D

Injection Date:	21-Nov-2018 16:51:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11660			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34390

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.2020 0.1716	0.2001 0.1576	0.1758	0.1799	0.1642	Lin1	1.4008	0.1631							0.9980		0.9900
PCB-1232 Peak 2	0.7316 0.5379	0.6621 0.4960	0.5963	0.5828	0.5382	Lin1	6.9182	0.5147							0.9970		0.9900
PCB-1232 Peak 3	0.8869 0.8293	0.8265 0.7752	0.7896	0.8158	0.7901	Lin1	1.9484	0.7944							0.9990		0.9900
PCB-1232 Peak 4	0.4237 0.3607	0.3807 0.3320	0.3740	0.3767	0.3499	Lin1	2.3547	0.3447							0.9980		0.9900
PCB-1232 Peak 5	0.4155 0.3609	0.3923 0.3303	0.3615	0.3738	0.3558	Lin1	2.2391	0.3450							0.9980		0.9900
PCB-1262 Peak 1	1.2460 0.9862	1.1306 0.9078	1.0330	1.0289	0.9612	Lin1	9.1979	0.9390							0.9980		0.9900
PCB-1262 Peak 2	1.9150 1.5416	1.7805 1.4315	1.5760	1.5898	1.5128	Lin1	13.088	1.4746							0.9990		0.9900
PCB-1262 Peak 3	1.6782 1.3722	1.5439 1.2785	1.3824	1.4086	1.3079	Lin1	10.443	1.3077							0.9990		0.9900
PCB-1262 Peak 4	3.2087 2.8651	2.9676 2.6722	2.6736	2.8308	2.7344	Lin1	10.149	2.7368							0.9990		0.9900
PCB-1262 Peak 5	1.0018 0.8715	0.9225 0.8216	0.8505	0.8771	0.8263	Lin1	4.1209	0.8355							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34390

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Lin1	145633 3825778	308483 4984840	547298	1392895	2583135	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 2	BNB	Lin1	527466 11992126	1020472 15689198	1856728	4511528	8464098	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 3	BNB	Lin1	639419 18488855	1273955 24520289	2458762	6315260	12426844	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 4	BNB	Lin1	305449 8040685	586726 10501101	1164474	2916425	5502198	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 5	BNB	Lin1	299569 8045853	604692 10446034	1125602	2893984	5595129	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 1	BNB	Lin1	898312 21984609	1742564 28715451	3216578	7964853	15117077	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 2	BNB	Lin1	1380613 34368147	2744291 45278660	4907514	12307287	23792647	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 3	BNB	Lin1	1209897 30590995	2379701 40438292	4304645	10904443	20569577	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 4	BNB	Lin1	2313295 63873370	4573994 84521517	8325389	21913797	43005230	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 5	BNB	Lin1	722269 19427531	1421934 25986514	2648440	6789639	12995186	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D
Lims ID: STDL73262
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 17:13:09 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL73262
Misc. Info.: 280-0076428-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:44 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:18:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31630227	1000.0	1000.0	
2	1.747	1.746	0.001	177174681	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	4984840	1000.0	957.8	
1	3.270	3.271	-0.001	15689198	1000.0	950.2	
1	4.116	4.118	-0.002	24520289	1000.0	973.4	
1	4.263	4.264	-0.001	10501101	1000.0	956.2	
1	4.730	4.731	-0.001	10446034	1000.0	950.9	M
		Average of Peak Amounts =				957.7	
2	3.277	3.275	0.002	43153197	1000.0	951.3	M
2	3.667	3.665	0.002	37154008	1000.0	967.1	M
2	4.120	4.121	-0.001	76218445	1000.0	956.2	M
2	4.267	4.265	0.002	33438438	1000.0	958.6	M
2	4.927	4.928	-0.001	28051936	1000.0	956.8	M
		Average of Peak Amounts =				958.0	
						RPD = 0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.250	6.248	0.002	28715451	1000.0	957.0	M
1	7.156	7.154	0.002	45278660	1000.0	961.9	M
1	7.490	7.488	0.002	40438292	1000.0	969.7	M
1	7.930	7.931	-0.001	84521517	1000.0	972.7	M
1	8.320	8.321	-0.001	25986514	1000.0	978.4	M
		Average of Peak Amounts =				967.9	
2	6.647	6.648	-0.001	98230933	1000.0	943.5	M
2	7.247	7.248	-0.001	138859883	1000.0	944.4	
2	7.647	7.645	0.002	137990458	1000.0	944.0	
2	8.010	8.011	-0.001	270071150	1000.0	945.2	
2	8.517	8.515	0.002	204325846	1000.0	947.3	
		Average of Peak Amounts =				944.9	
						RPD = 2.41	
S 8 Polychlorinated biphenyls, Total							
1						1925.6	
2						1902.8	
						RPD = 1.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

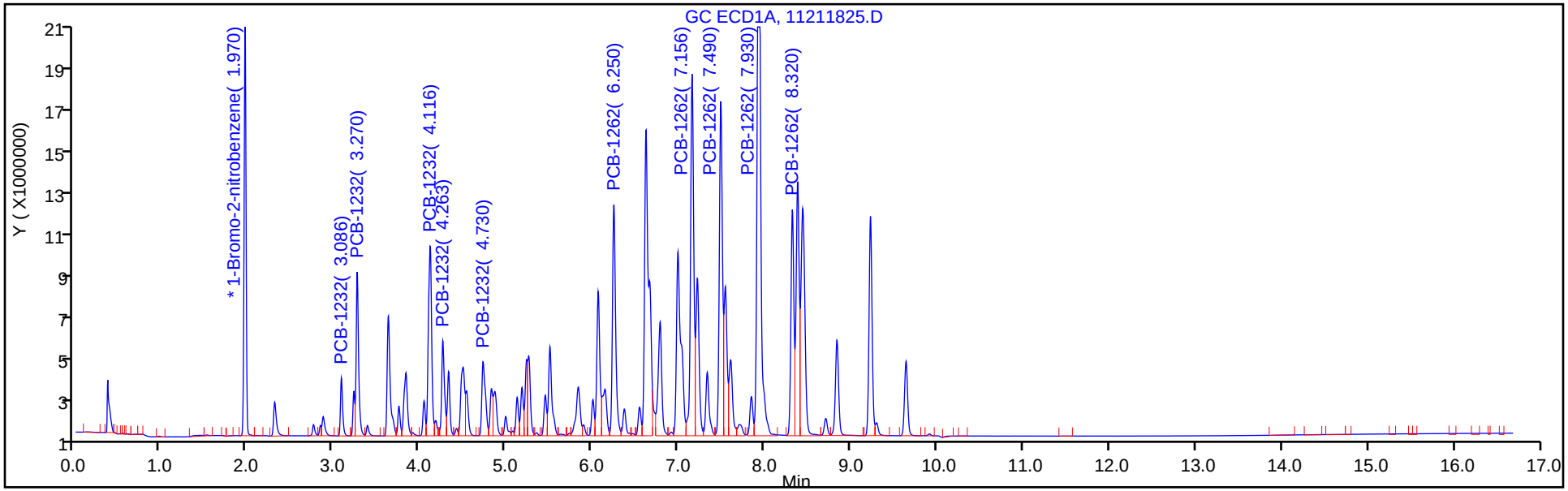
Report Date: 23-Nov-2018 11:02:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

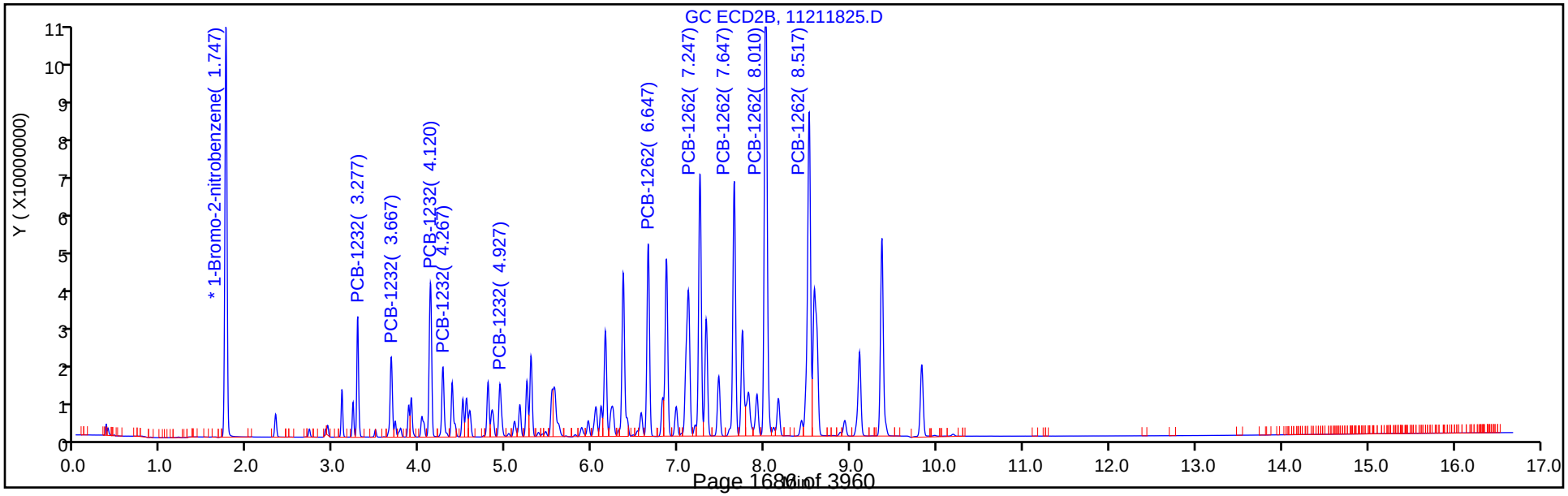
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date:	21-Nov-2018 17:13:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL73262			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

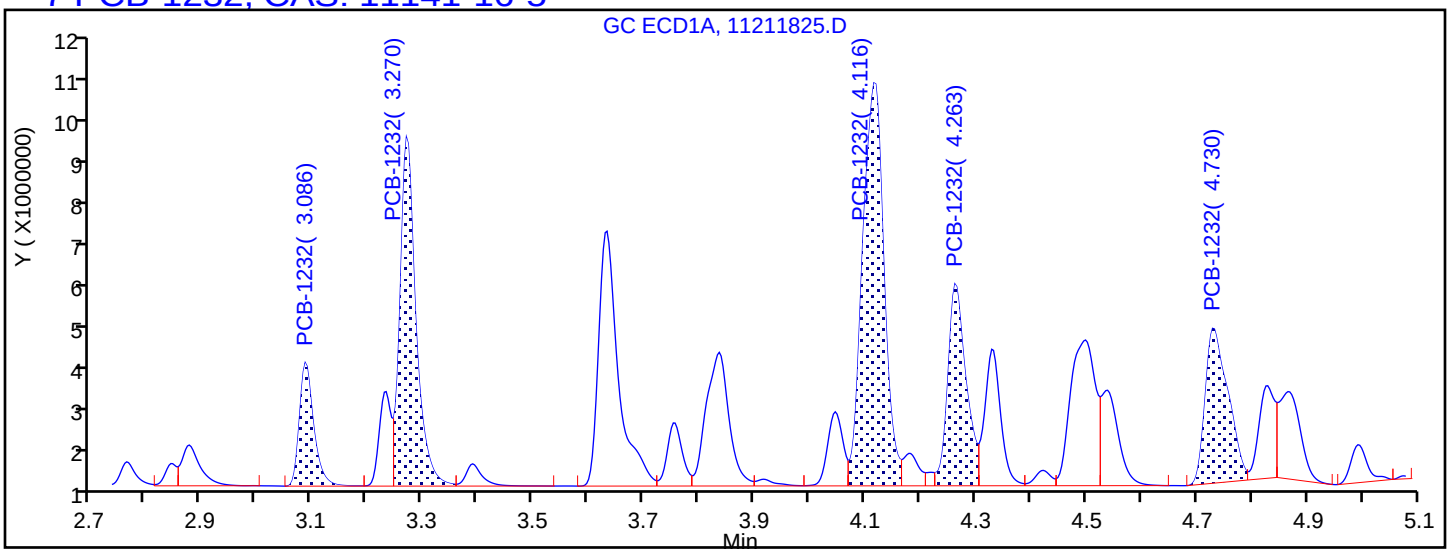
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

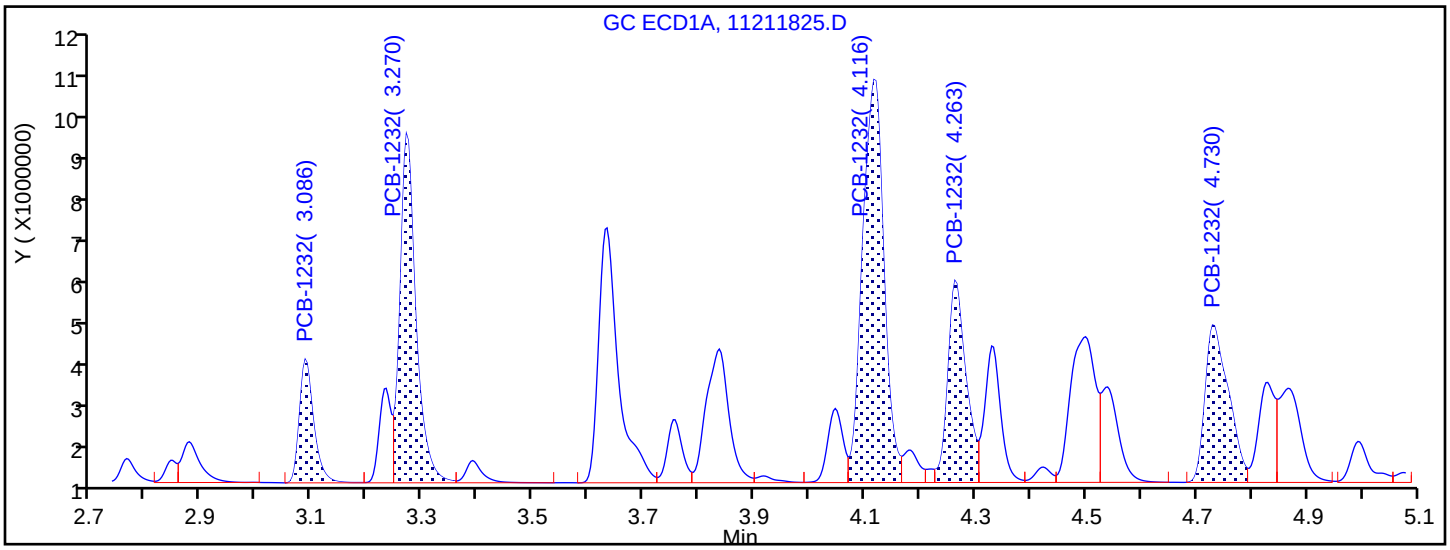
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.086	Response = 4984840
3.270	Response = 15689198
4.116	Response = 24520289
4.263	Response = 10501101
4.730	Response = 10017869



Manual Integration Results

3.086	Response = 4984840	
3.270	Response = 15689198	
4.116	Response = 24520289	
4.263	Response = 10501101	
4.730	Response = 10446034	M

Reviewer: patadiab, 23-Nov-2018 10:17:48

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

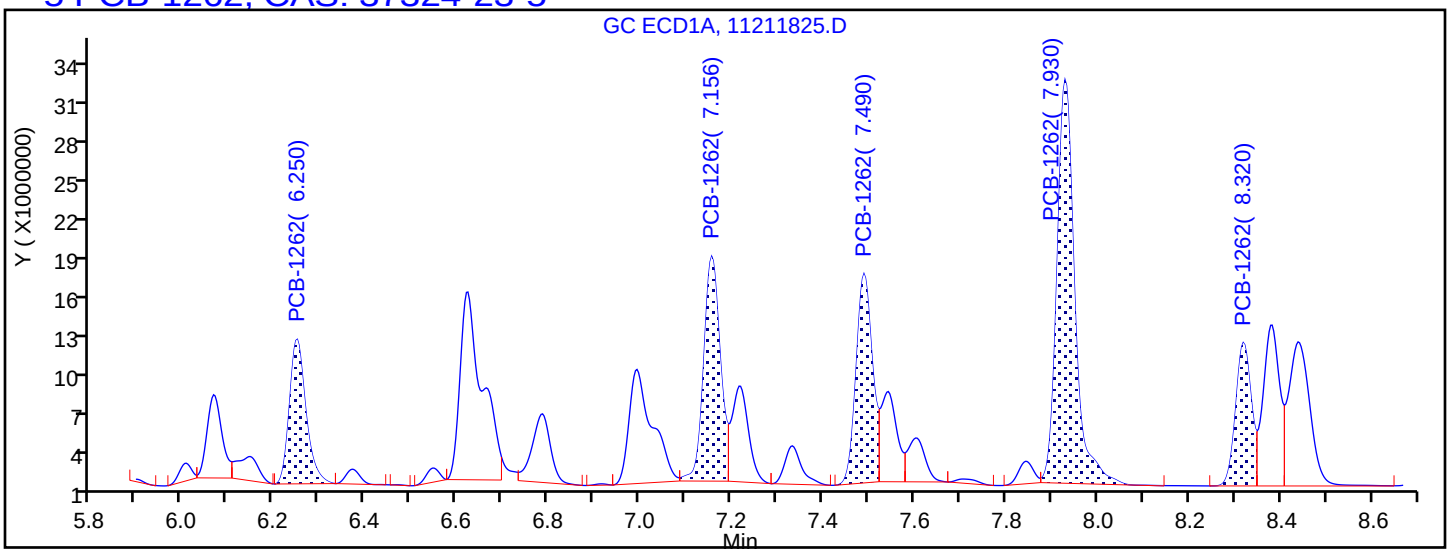
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

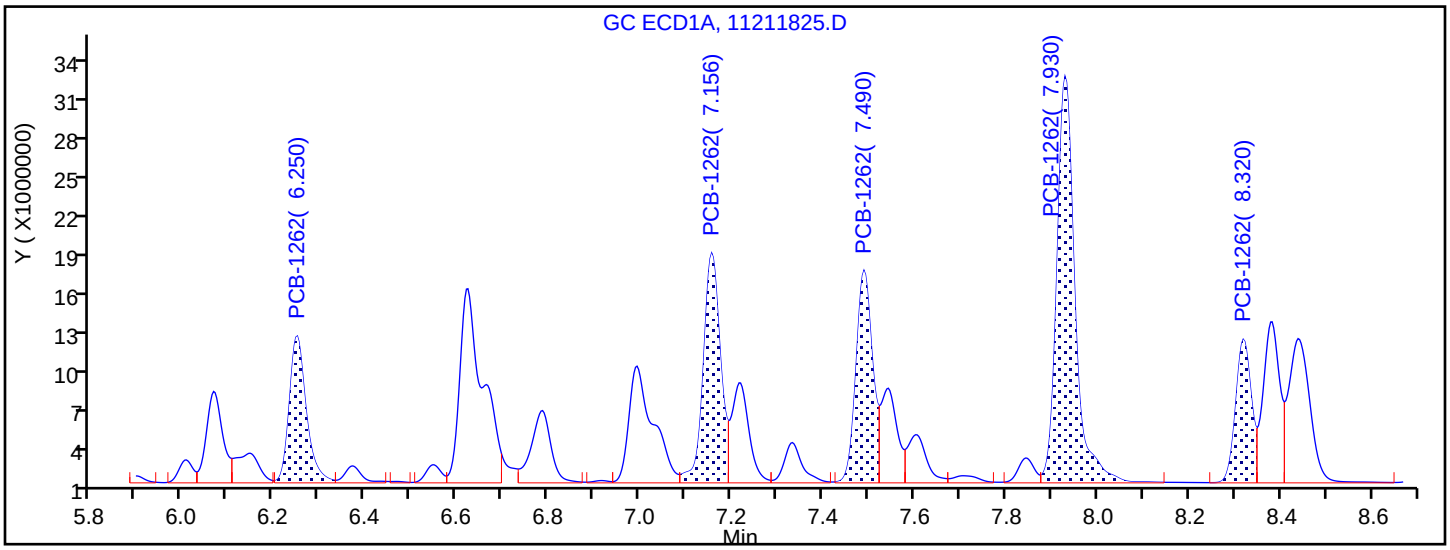
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.250	Response = 27284287
7.156	Response = 42823297
7.490	Response = 39275835
7.930	Response = 82203775
8.320	Response = 25885445



Manual Integration Results

6.250	Response = 28715451	M
7.156	Response = 45278660	M
7.490	Response = 40438292	M
7.930	Response = 84521517	M
8.320	Response = 25986514	M

Reviewer: patadiab, 23-Nov-2018 10:17:48

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D
Lims ID: STDL63262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 17:34:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL63262
Misc. Info.: 280-0076428-026
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:20:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29724345	1000.0	1000.0	
2	1.749	1.746	0.003	167597392	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	3825778	750.0	780.6	
1	3.269	3.271	-0.002	11992126	750.0	770.4	
1	4.116	4.118	-0.002	18488855	750.0	780.5	
1	4.263	4.264	-0.001	8040685	750.0	777.9	
1	4.729	4.731	-0.002	8045853	750.0	778.2	M
		Average of Peak Amounts =				777.5	
2	3.276	3.275	0.001	33236999	750.0	771.4	
2	3.666	3.665	0.001	27752244	750.0	759.9	
2	4.123	4.121	0.002	58138353	750.0	768.0	
2	4.266	4.265	0.001	25319272	750.0	764.2	
2	4.929	4.928	0.001	21128917	750.0	758.5	
		Average of Peak Amounts =				764.4	
						RPD = 1.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.249	6.248	0.001	21984609	750.0	777.9	M
1	7.156	7.154	0.002	34368147	750.0	775.2	M
1	7.489	7.488	0.001	30590995	750.0	779.0	M
1	7.929	7.931	-0.002	63873370	750.0	781.5	M
1	8.319	8.321	-0.002	19427531	750.0	777.3	M
		Average of Peak Amounts =				778.2	
2	6.649	6.648	0.001	76501019	750.0	773.9	
2	7.249	7.248	0.001	108005184	750.0	773.7	
2	7.646	7.645	0.001	107493024	750.0	774.8	
2	8.013	8.011	0.002	210407349	750.0	776.0	
2	8.516	8.515	0.001	158732369	750.0	775.3	
		Average of Peak Amounts =				774.7	
						RPD = 0.45	
S 8 Polychlorinated biphenyls, Total							
1						1555.7	
2						1539.1	
						RPD = 1.07	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

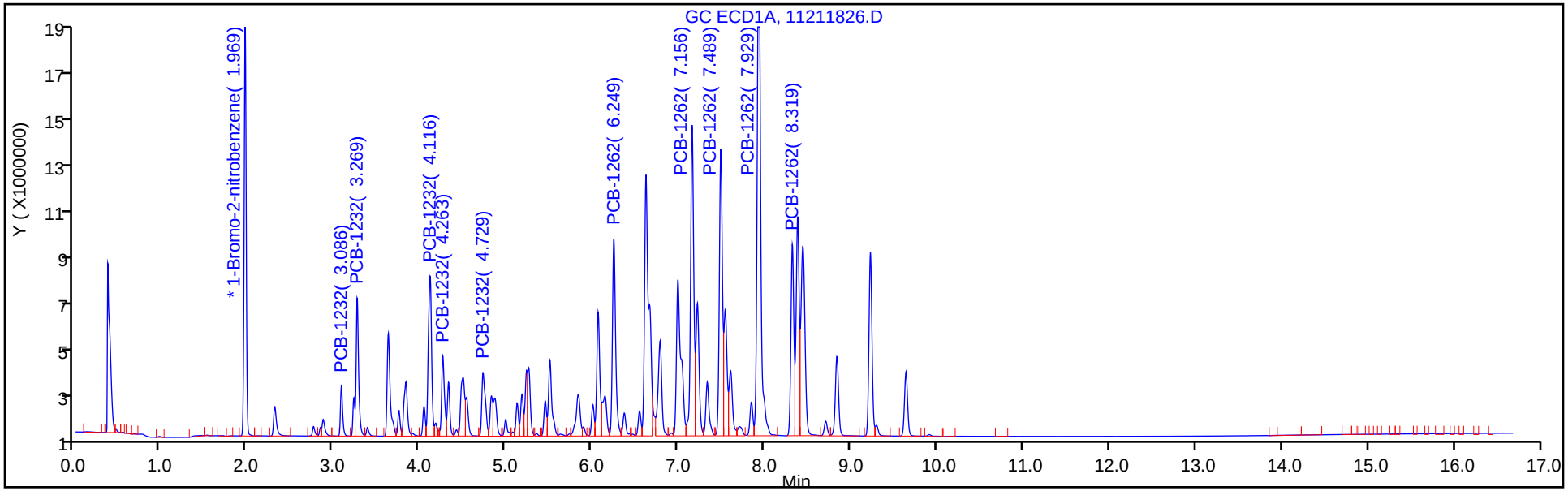
Report Date: 23-Nov-2018 11:02:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

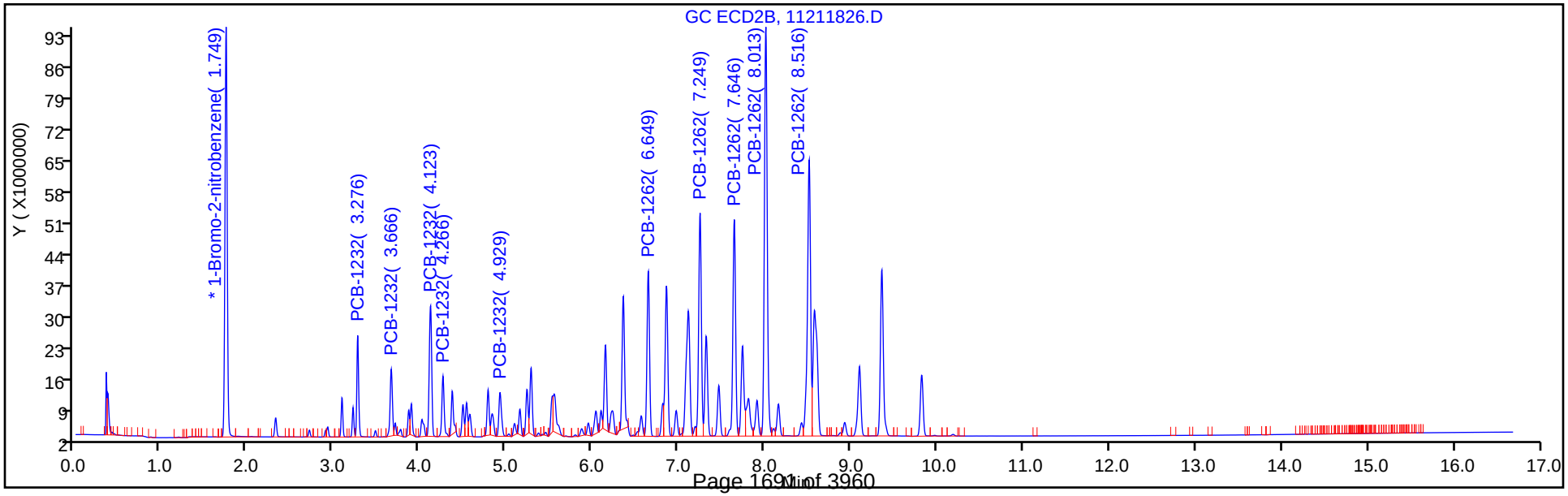
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date:	21-Nov-2018 17:34:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL63262			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date: 21-Nov-2018 17:34:18 Instrument ID: SGC_J

Lims ID: STDL63262

Client ID:

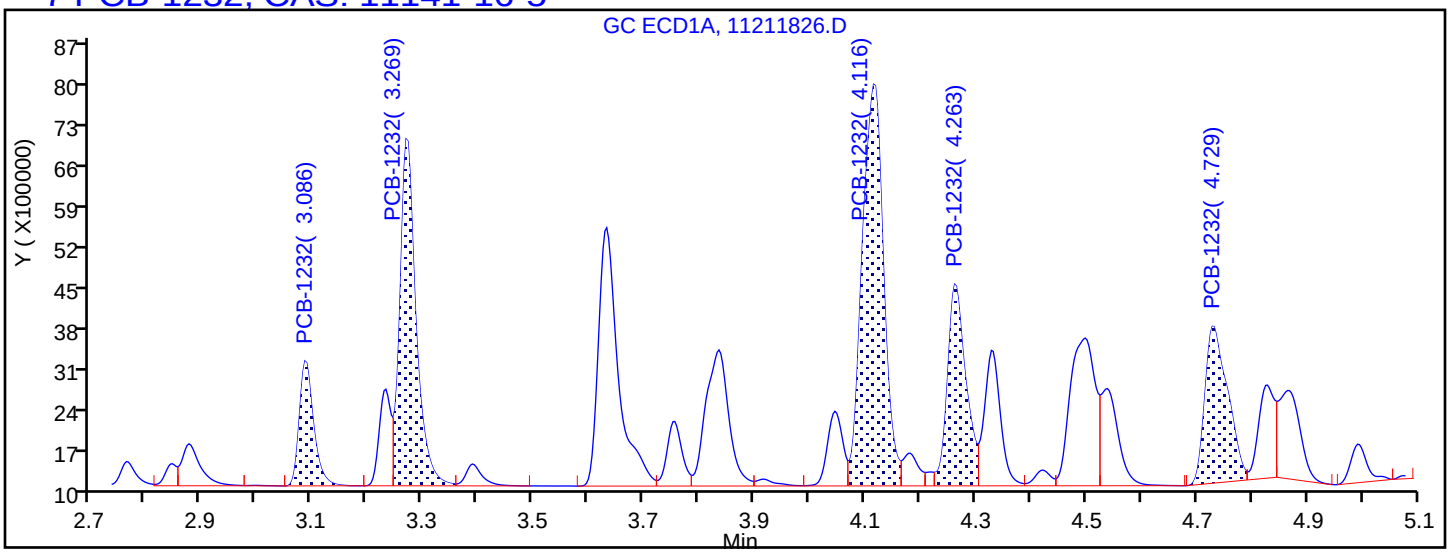
Operator ID: ALS ALS Bottle#: 26 Worklist Smp#: 26

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

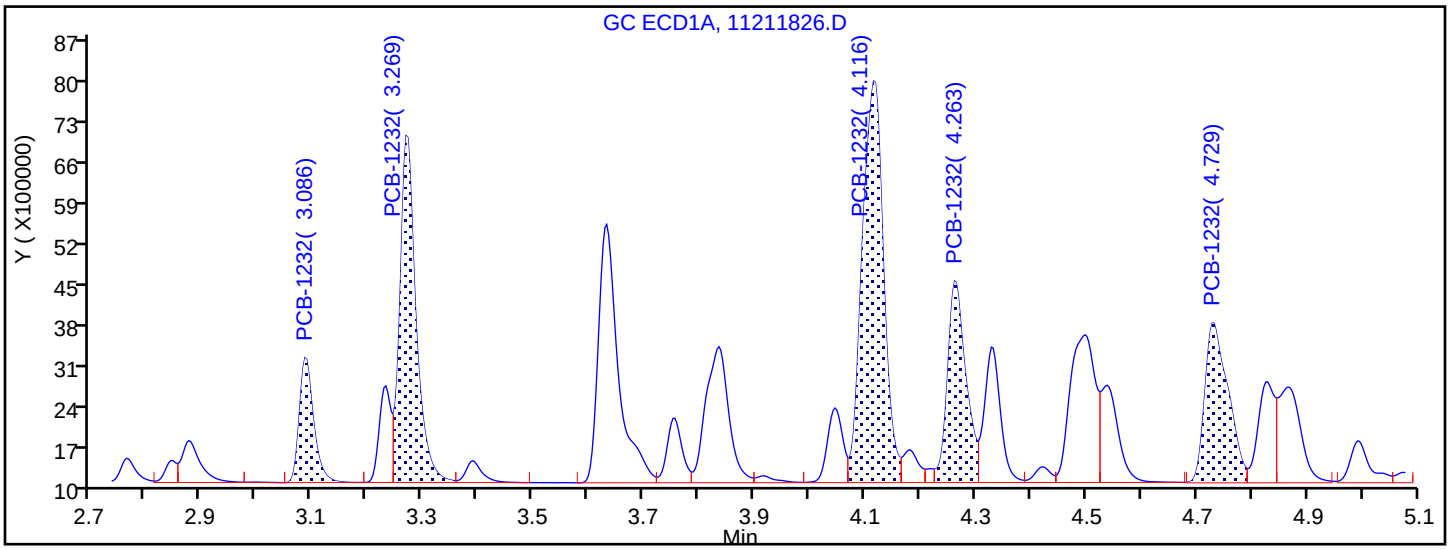
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.086	Response = 3825778
3.269	Response = 11992126
4.116	Response = 18488855
4.263	Response = 8040685
4.729	Response = 7671926



Manual Integration Results

3.086	Response = 3825778	
3.269	Response = 11992126	
4.116	Response = 18488855	
4.263	Response = 8040685	
4.729	Response = 8045853	M

Reviewer: patadiab, 23-Nov-2018 10:20:10

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date: 21-Nov-2018 17:34:18 Instrument ID: SGC_J

Lims ID: STDL63262

Client ID:

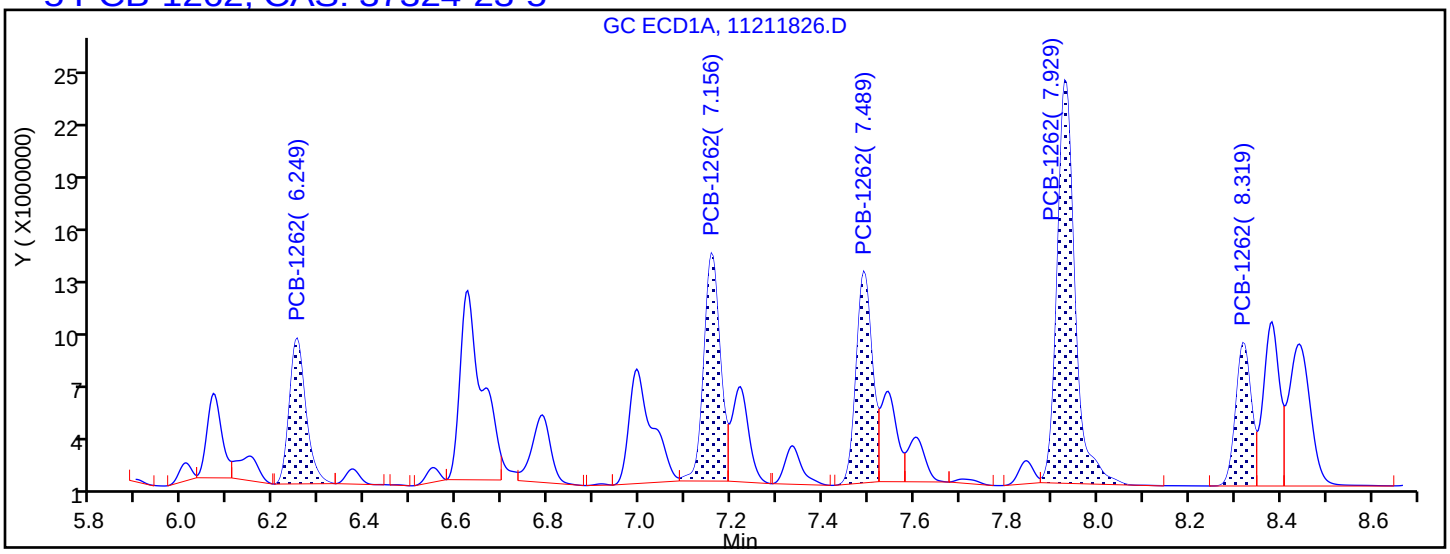
Operator ID: ALS ALS Bottle#: 26 Worklist Smp#: 26

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

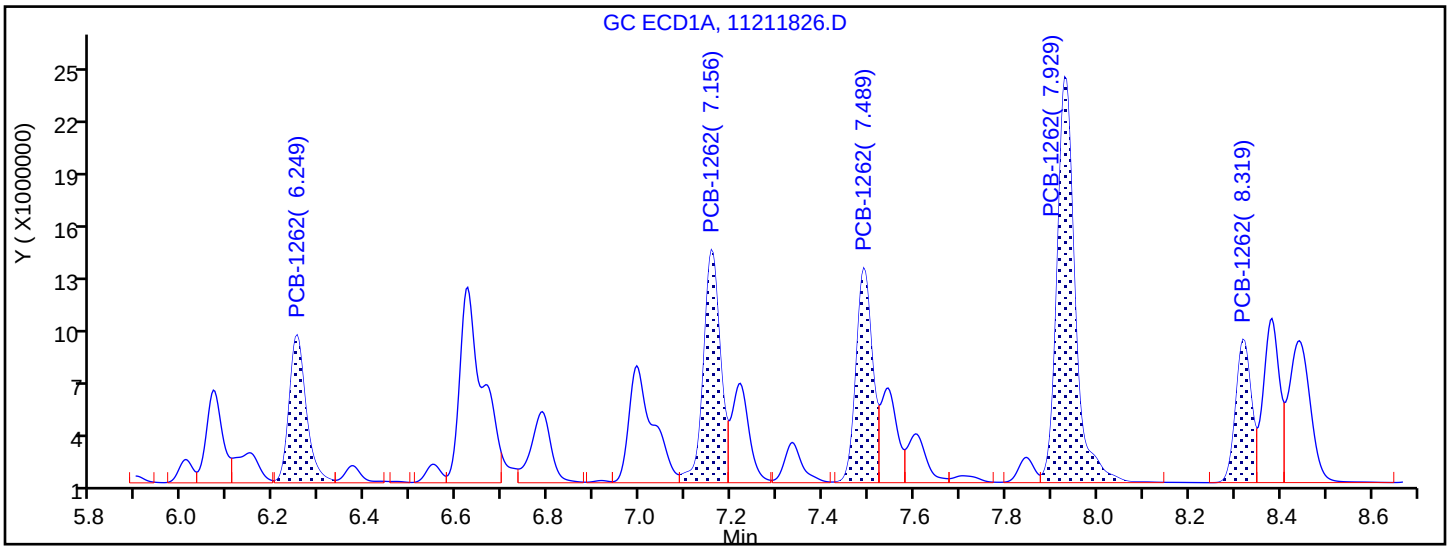
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.249	Response = 20927193
7.156	Response = 32519750
7.489	Response = 29752196
7.929	Response = 62336451
8.319	Response = 19446262



Manual Integration Results

6.249	Response = 21984609	M
7.156	Response = 34368147	M
7.489	Response = 30590995	M
7.929	Response = 63873370	M
8.319	Response = 19427531	M

Reviewer: patadiab, 23-Nov-2018 10:20:10

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D
Lims ID: STDL53262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 17:55:27 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL53262
Misc. Info.: 280-0076428-027
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:14:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	31454394	1000.0	1000.0	
2	1.748	1.748	0.000	177287409	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.088	3.088	0.000	2583135	500.0	495.0	
1	3.271	3.271	0.000	8464098	500.0	509.4	
1	4.118	4.118	0.000	12426844	500.0	494.9	M
1	4.264	4.264	0.000	5502198	500.0	500.6	M
1	4.731	4.731	0.000	5595129	500.0	509.2	M
		Average of Peak Amounts =				501.8	
2	3.275	3.275	0.000	23119208	500.0	501.5	
2	3.665	3.665	0.000	19468141	500.0	497.9	
2	4.121	4.121	0.000	40797414	500.0	504.3	
2	4.265	4.265	0.000	17838929	500.0	503.9	
2	4.928	4.928	0.000	15244324	500.0	512.0	
		Average of Peak Amounts =				503.9	
						RPD = 0.42	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.248	6.248	0.000	15117077	500.0	502.0	M
1	7.154	7.154	0.000	23792647	500.0	504.1	M
1	7.488	7.488	0.000	20569577	500.0	492.1	M
1	7.931	7.931	0.000	43005230	500.0	495.9	M
1	8.321	8.321	0.000	12995186	500.0	489.6	M
		Average of Peak Amounts =				496.7	
2	6.648	6.648	0.000	54027511	500.0	511.3	
2	7.248	7.248	0.000	76105584	500.0	510.0	
2	7.645	7.645	0.000	75571069	500.0	510.0	
2	8.011	8.011	0.000	147285972	500.0	508.7	
2	8.515	8.515	0.000	110696168	500.0	506.1	
		Average of Peak Amounts =				509.2	
						RPD = 2.49	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

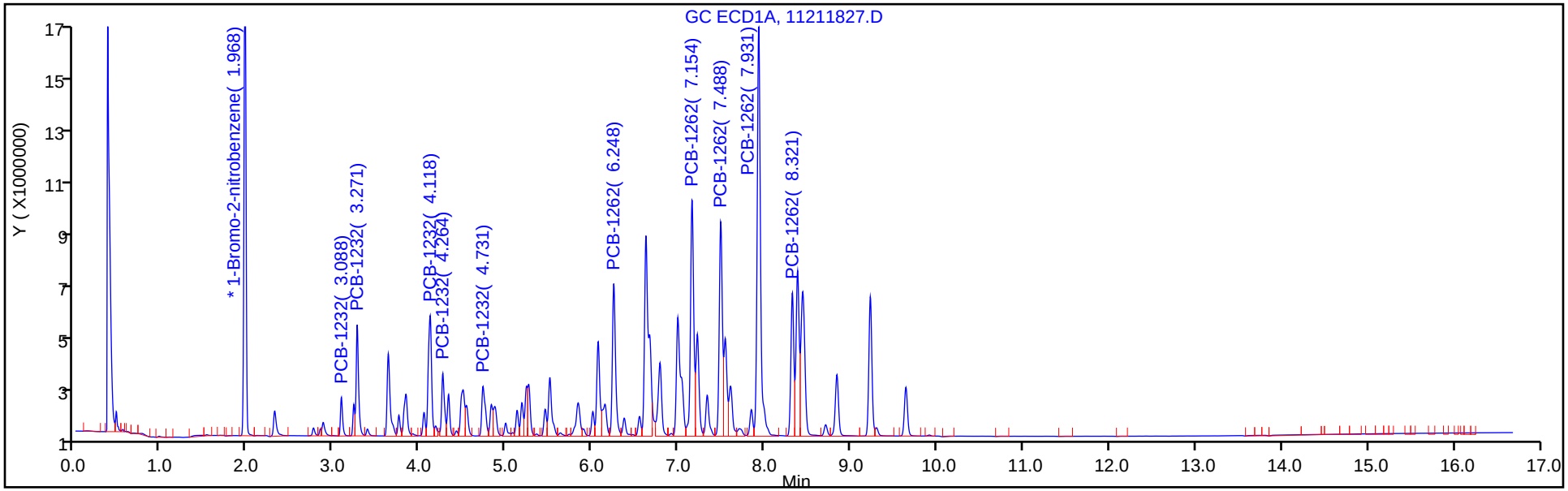
Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

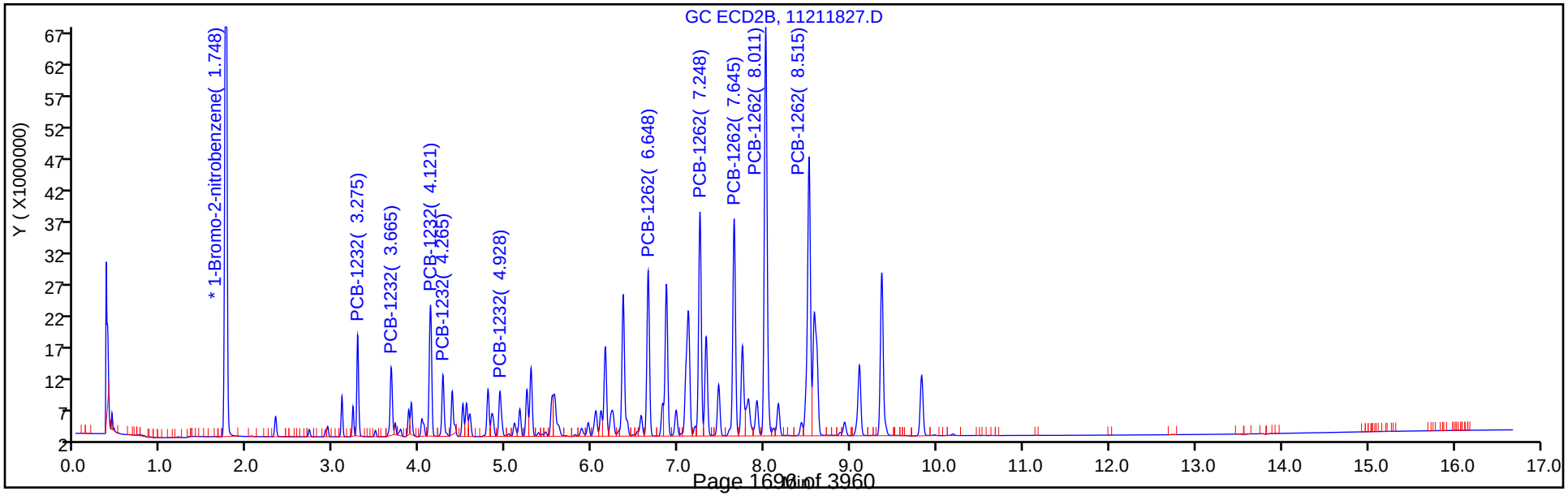
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date:	21-Nov-2018 17:55:27	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL53262			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date: 21-Nov-2018 17:55:27 Instrument ID: SGC_J

Lims ID: STDL53262

Client ID:

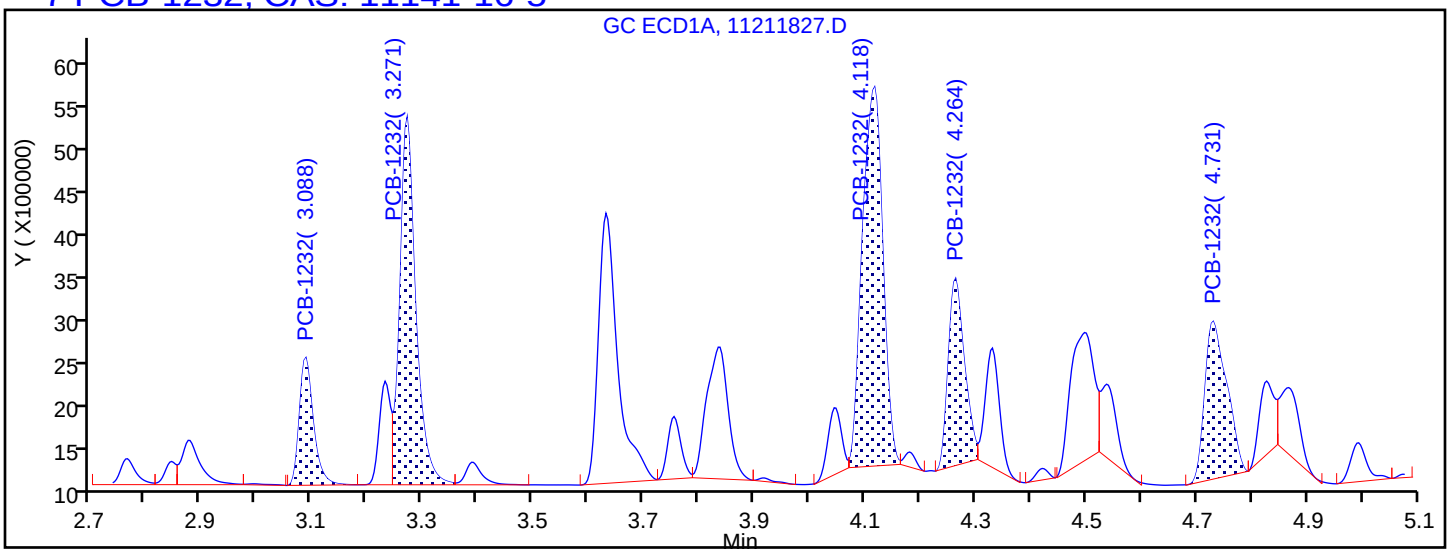
Operator ID: ALS ALS Bottle#: 27 Worklist Smp#: 27

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

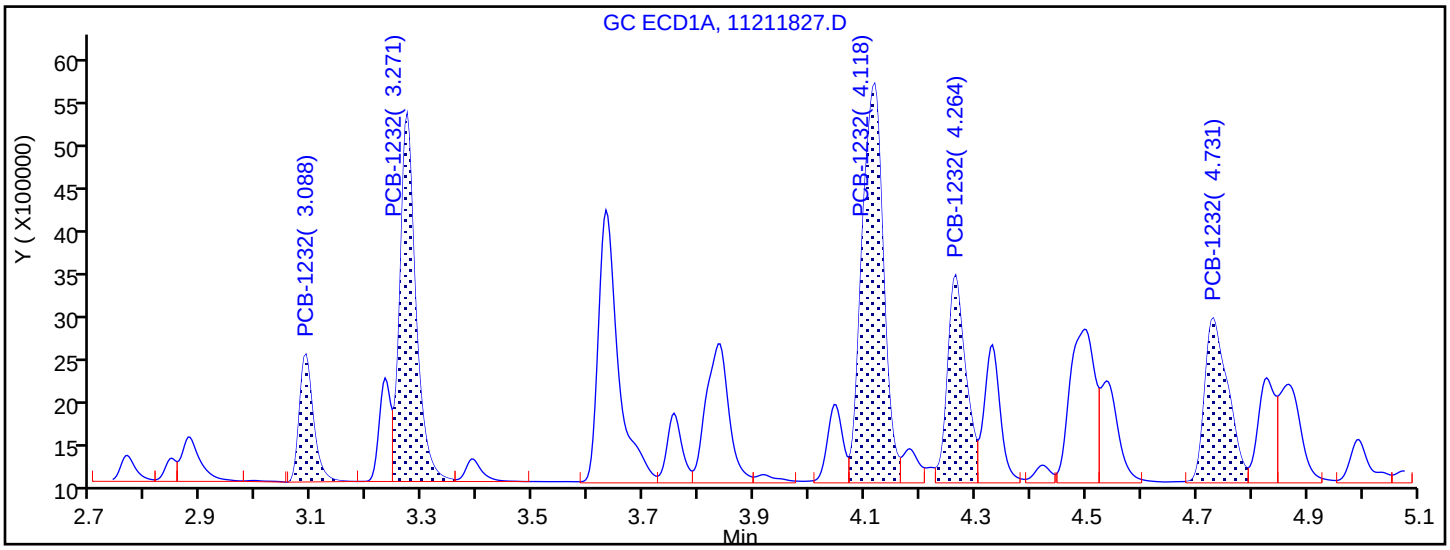
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.088	Response = 2583135
3.271	Response = 8464098
4.118	Response = 11130600
4.264	Response = 4396782
4.731	Response = 4977431



Manual Integration Results

3.088	Response = 2583135	
3.271	Response = 8464098	
4.118	Response = 12426844	M
4.264	Response = 5502198	M
4.731	Response = 5595129	M

Reviewer: patadiab, 23-Nov-2018 10:21:16

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date: 21-Nov-2018 17:55:27 Instrument ID: SGC_J

Lims ID: STDL53262

Client ID:

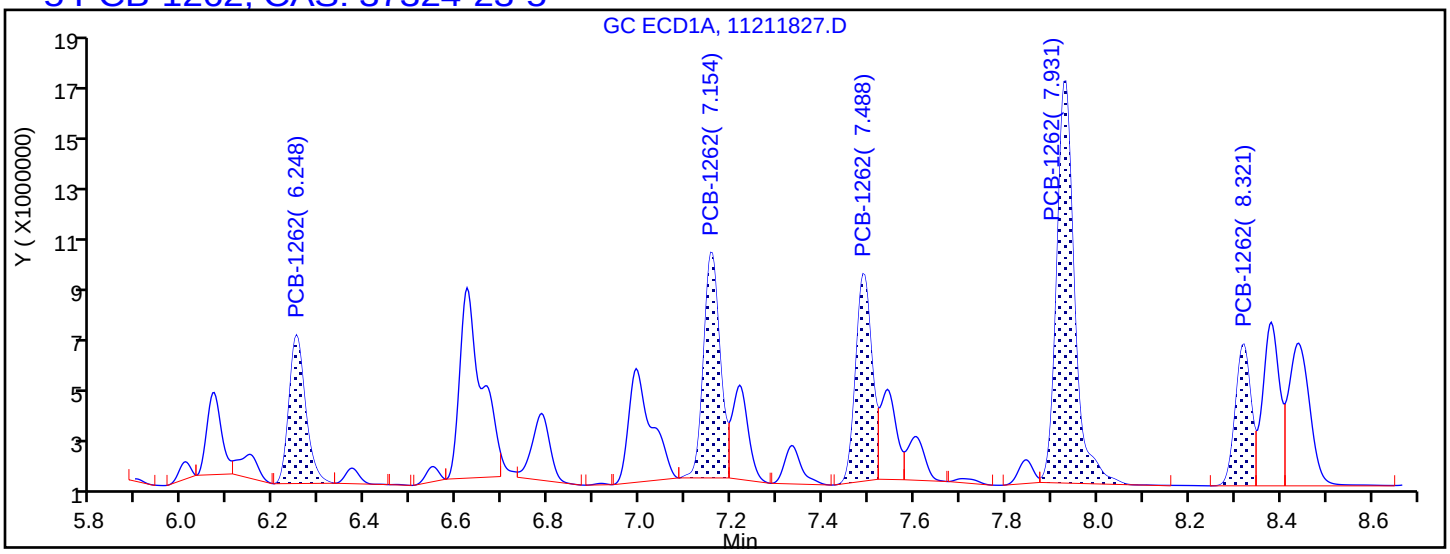
Operator ID: ALS ALS Bottle#: 27 Worklist Smp#: 27

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

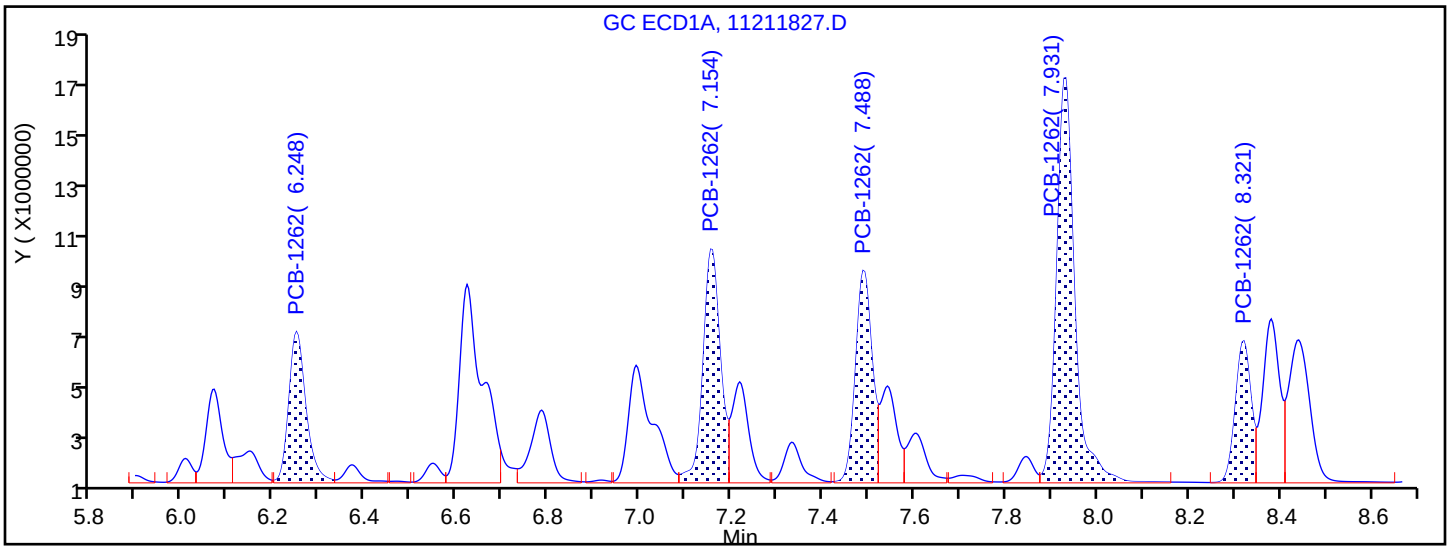
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.248	Response = 14296465
7.154	Response = 21705490
7.488	Response = 19673274
7.931	Response = 41669539
8.321	Response = 12921719



Manual Integration Results

6.248	Response = 15117077	M
7.154	Response = 23792647	M
7.488	Response = 20569577	M
7.931	Response = 43005230	M
8.321	Response = 12995186	M

Reviewer: patadiab, 23-Nov-2018 10:21:16

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D
Lims ID: STDL43262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 18:16:46 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL43262
Misc. Info.: 280-0076428-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:56 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:16:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	30965018	1000.0	1000.0	
2	1.747	1.748	-0.001	174717072	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	1392895	250.0	267.2	
1	3.270	3.271	-0.001	4511528	250.0	269.6	
1	4.117	4.118	-0.001	6315260	250.0	254.3	
1	4.263	4.264	-0.001	2916425	250.0	266.4	
1	4.730	4.731	-0.001	2893984	250.0	264.4	
		Average of Peak Amounts =				264.4	
2	3.277	3.275	0.002	12740193	250.0	272.9	
2	3.663	3.665	-0.002	10698875	250.0	269.7	
2	4.120	4.121	-0.001	21982243	250.0	268.7	
2	4.267	4.265	0.002	9641479	250.0	269.4	
2	4.927	4.928	-0.001	8096778	250.0	268.2	
		Average of Peak Amounts =				269.8	
						RPD = 2.02	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.250	6.248	0.002	7964853	250.0	264.1	
1	7.157	7.154	0.003	12307287	250.0	260.7	
1	7.490	7.488	0.002	10904443	250.0	261.3	
1	7.930	7.931	-0.001	21913797	250.0	254.9	
1	8.320	8.321	-0.001	6789639	250.0	257.5	
		Average of Peak Amounts =				259.7	
2	6.647	6.648	-0.001	28900783	250.0	270.2	
2	7.247	7.248	-0.001	40916207	250.0	271.0	
2	7.647	7.645	0.002	40467048	250.0	270.4	
2	8.010	8.011	-0.001	78867004	250.0	270.0	
2	8.513	8.515	-0.002	59822420	250.0	270.9	
		Average of Peak Amounts =				270.5	
						RPD = 4.07	
S 8 Polychlorinated biphenyls, Total							
1						524.1	
2						540.3	
						RPD = 3.04	

Reagents:

AR_3262_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

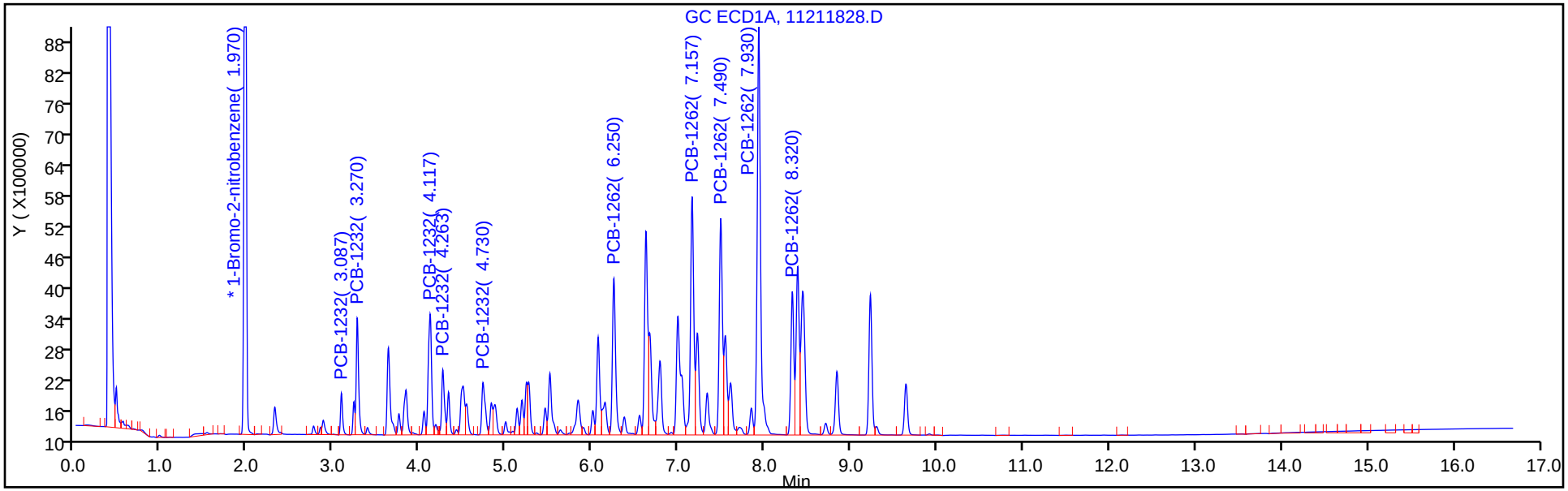
Report Date: 23-Nov-2018 11:02:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

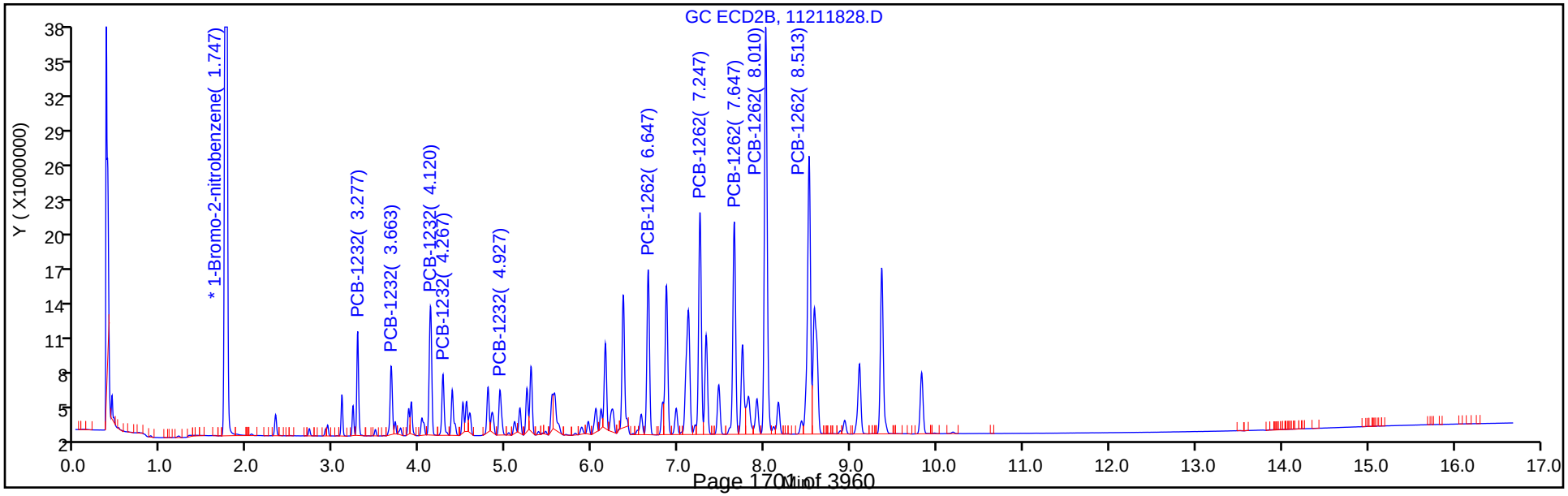
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D

Injection Date:	21-Nov-2018 18:16:46	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL43262			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D
Lims ID: STDL33262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 18:37:56 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL33262
Misc. Info.: 280-0076428-029
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.968	0.004	31139299	1000.0	1000.0	
2	1.749	1.748	0.001	176067915	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	547298	100.0	99.2	
1	3.272	3.271	0.001	1856728	100.0	102.4	
1	4.116	4.118	-0.002	2458762	100.0	96.9	
1	4.262	4.264	-0.002	1164474	100.0	101.6	
1	4.729	4.731	-0.002	1125602	100.0	98.3	
		Average of Peak Amounts =				99.7	
2	3.276	3.275	0.001	5377655	100.0	104.5	
2	3.666	3.665	0.001	4662843	100.0	106.4	
2	4.122	4.121	0.001	9281019	100.0	103.5	
2	4.266	4.265	0.001	4103159	100.0	104.9	
2	4.926	4.928	-0.002	3526090	100.0	106.4	
		Average of Peak Amounts =				105.2	
						RPD = 5.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	3216578	100.0	100.2	
1	7.156	7.154	0.002	4907514	100.0	98.0	
1	7.489	7.488	0.001	4304645	100.0	97.7	
1	7.929	7.931	-0.002	8325389	100.0	94.0	
1	8.319	8.321	-0.002	2648440	100.0	96.9	
		Average of Peak Amounts =				97.4	
2	6.646	6.648	-0.002	12068360	100.0	102.5	
2	7.249	7.248	0.001	17019760	100.0	102.5	
2	7.646	7.645	0.001	16739062	100.0	102.3	
2	8.012	8.011	0.001	32344111	100.0	101.5	
2	8.512	8.515	-0.003	24623782	100.0	101.9	
		Average of Peak Amounts =				102.2	
						RPD = 4.81	
S 8 Polychlorinated biphenyls, Total							
1						197.1	
2						207.3	
						RPD = 5.07	

Reagents:

AR_3262_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

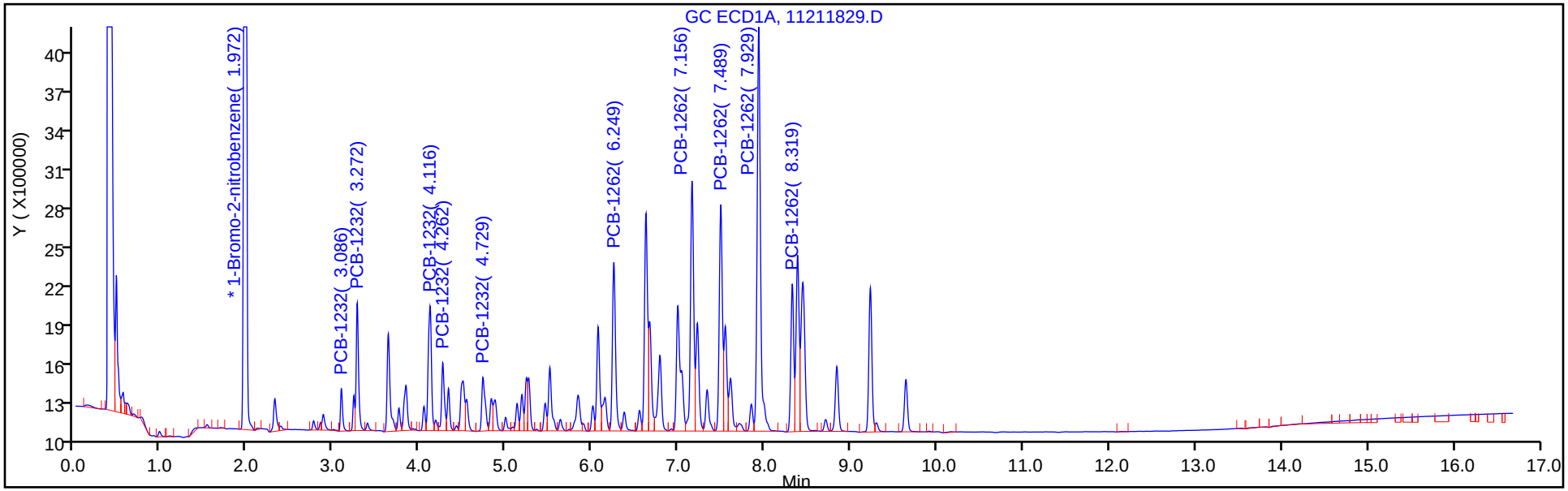
Report Date: 23-Nov-2018 11:02:59 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

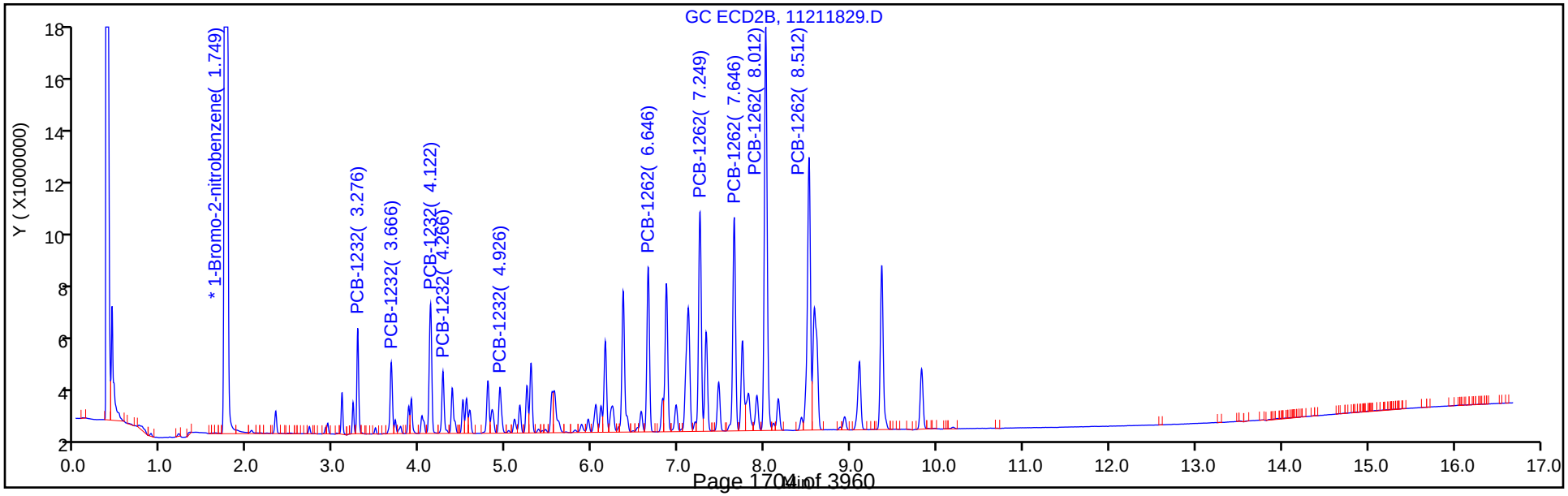
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D

Injection Date:	21-Nov-2018 18:37:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL33262			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D
Lims ID: STDL23262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 18:59:04 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL23262
Misc. Info.: 280-0076428-030
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	30826448	1000.0	1000.0	
2	1.748	1.748	0.000	173971839	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.088	3.088	0.000	308483	50.0	52.8	
1	3.271	3.271	0.000	1020472	50.0	50.9	
1	4.118	4.118	0.000	1273955	50.0	49.6	
1	4.264	4.264	0.000	586726	50.0	48.4	
1	4.731	4.731	0.000	604692	50.0	50.4	
		Average of Peak Amounts =				50.4	
2	3.274	3.275	-0.001	3052064	50.0	52.8	
2	3.664	3.665	-0.001	2666828	50.0	54.0	
2	4.121	4.121	0.000	5327006	50.0	53.6	
2	4.264	4.265	-0.001	2327446	50.0	53.7	
2	4.928	4.928	0.000	1962103	50.0	52.6	
		Average of Peak Amounts =				53.4	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.248	6.248	0.000	1742564	50.0	50.4	
1	7.154	7.154	0.000	2744291	50.0	51.5	
1	7.488	7.488	0.000	2379701	50.0	51.0	
1	7.928	7.931	-0.003	4573994	50.0	50.5	
1	8.318	8.321	-0.003	1421934	50.0	50.3	
		Average of Peak Amounts =				50.7	
2	6.648	6.648	0.000	6882439	50.0	52.4	
2	7.248	7.248	0.000	9662784	50.0	52.1	
2	7.644	7.645	-0.001	9459588	50.0	52.2	
2	8.011	8.011	0.000	18241846	50.0	51.9	
2	8.514	8.515	-0.001	13866078	50.0	51.7	
		Average of Peak Amounts =				52.1	
						RPD = 2.56	
S 8 Polychlorinated biphenyls, Total							
1						101.1	
2						105.4	
						RPD = 4.14	

Reagents:

AR_3262_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

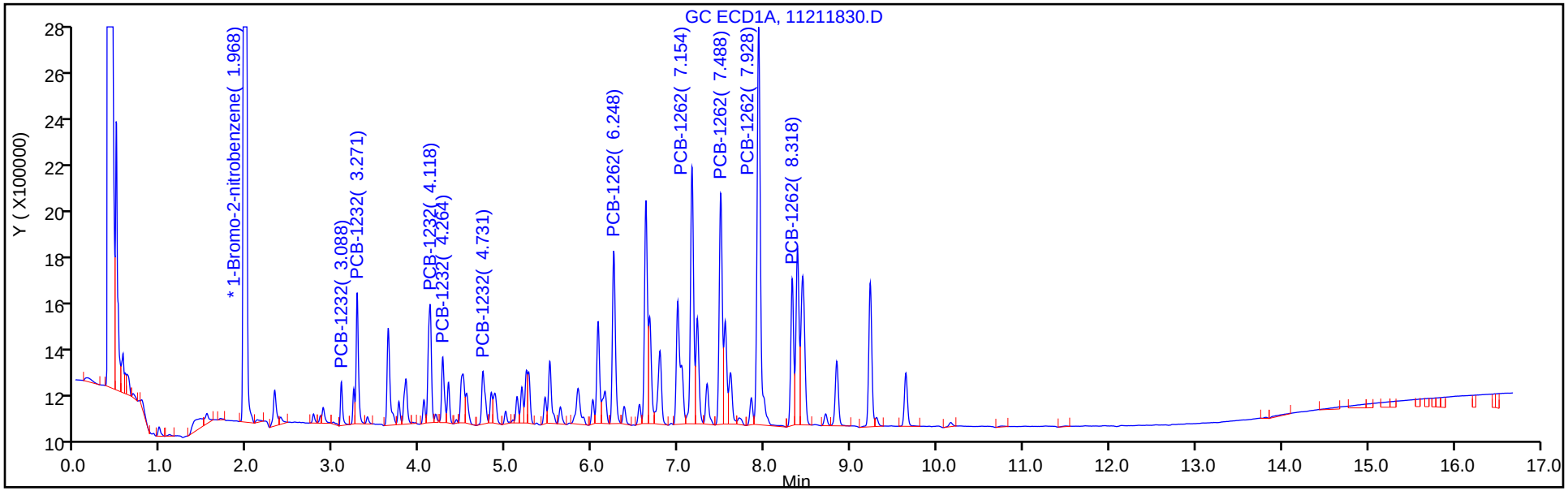
Report Date: 23-Nov-2018 11:03:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

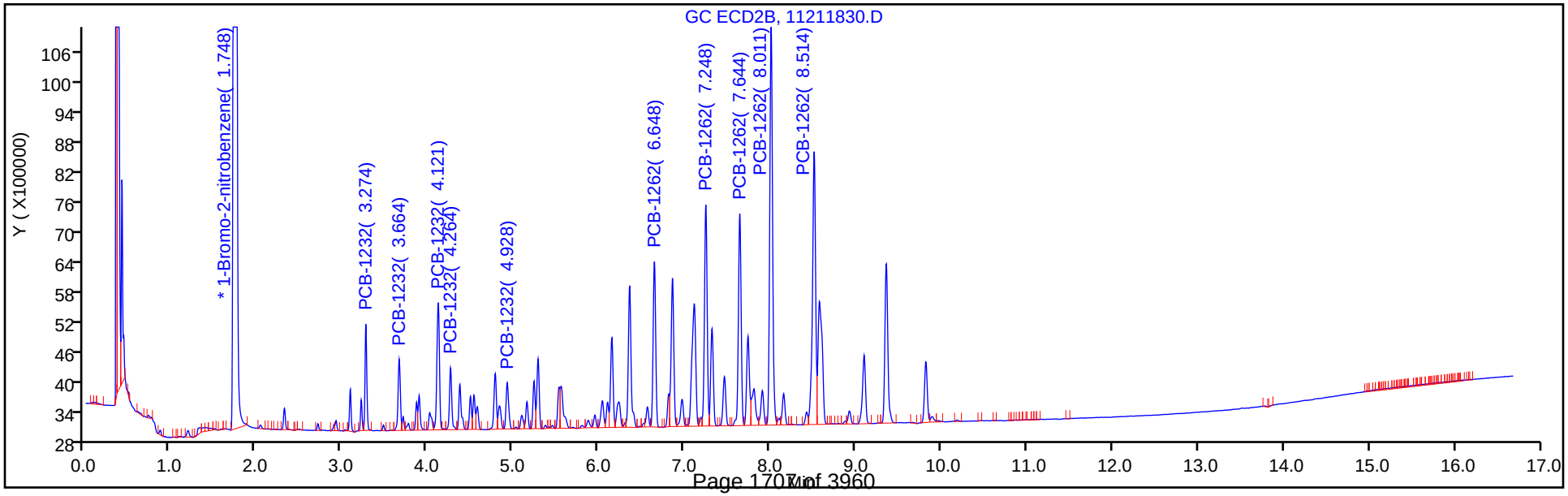
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D

Injection Date:	21-Nov-2018 18:59:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL23262			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D
Lims ID: STDL13262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 19:20:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL13262
Misc. Info.: 280-0076428-031
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:05 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:27:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	28837858	1000.0	1000.0	
2	1.747	1.748	-0.001	164029832	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	145633	25.0	22.4	
1	3.270	3.271	-0.001	527466	25.0	22.1	
1	4.117	4.118	-0.001	639419	25.0	25.5	
1	4.263	4.264	-0.001	305449	25.0	23.9	
1	4.730	4.731	-0.001	299569	25.0	23.6	
		Average of Peak Amounts =				23.5	
2	3.277	3.275	0.002	1549784	25.0	20.6	
2	3.667	3.665	0.002	1327362	25.0	20.0	
2	4.120	4.121	-0.001	2630983	25.0	20.7	
2	4.267	4.265	0.002	1136029	25.0	20.4	
2	4.927	4.928	-0.001	991404	25.0	20.5	
		Average of Peak Amounts =				20.4	
						RPD = 13.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.247	6.248	-0.001	898312	25.0	23.4	
1	7.157	7.154	0.003	1380613	25.0	23.6	
1	7.490	7.488	0.002	1209897	25.0	24.1	
1	7.930	7.931	-0.001	2313295	25.0	25.6	
1	8.320	8.321	-0.001	722269	25.0	25.0	
		Average of Peak Amounts =				24.3	
2	6.647	6.648	-0.001	3536624	25.0	21.2	
2	7.250	7.248	0.002	4988537	25.0	21.3	
2	7.647	7.645	0.002	4810570	25.0	21.4	
2	8.010	8.011	-0.001	9332035	25.0	21.7	
2	8.513	8.515	-0.002	7179707	25.0	21.7	
		Average of Peak Amounts =				21.5	
						RPD = 12.52	
S 8 Polychlorinated biphenyls, Total							
1						47.8	
2						41.9	
						RPD = 13.20	

Reagents:

AR_3262_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

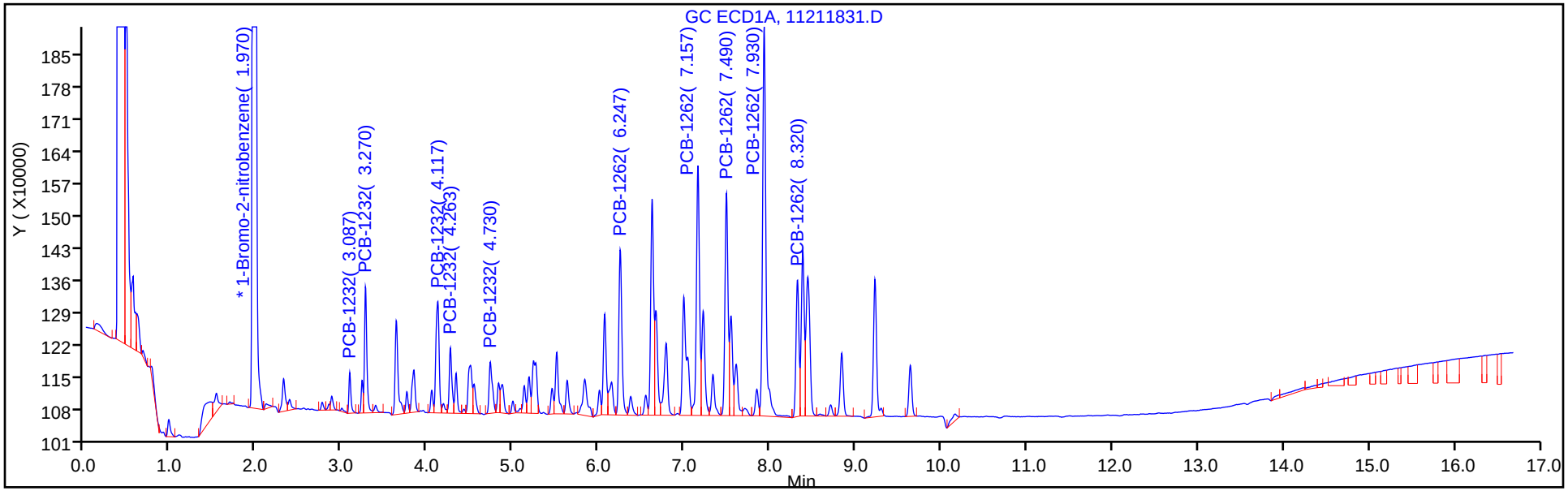
Report Date: 23-Nov-2018 11:03:06 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

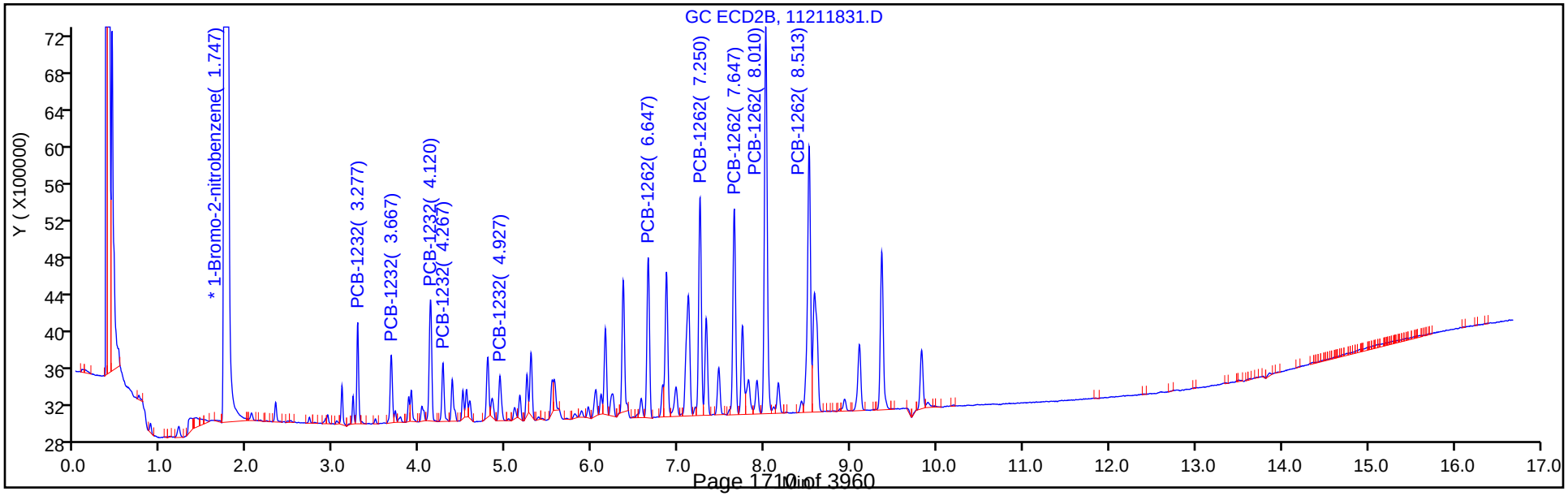
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D

Injection Date:	21-Nov-2018 19:20:15	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL13262			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34391

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.3779 0.2644	0.3509 0.2436	0.3054	0.2917	0.2608	Lin1	4.2615	0.2516							0.9970		0.9900
PCB-1232 Peak 2	0.3237 0.2208	0.3066 0.2097	0.2648	0.2449	0.2196	Lin1	3.8305	0.2129							0.9980		0.9900
PCB-1232 Peak 3	0.6416 0.4625	0.6124 0.4302	0.5271	0.5033	0.4602	Lin1	6.8713	0.4427							0.9980		0.9900
PCB-1232 Peak 4	0.2770 0.2014	0.2676 0.1887	0.2330	0.2207	0.2012	Lin1	2.9783	0.1938							0.9980		0.9900
PCB-1232 Peak 5	0.2418 0.1681	0.2256 0.1583	0.2003	0.1854	0.1720	Lin1	2.7180	0.1626							0.9980		0.9900
PCB-1262 Peak 1	0.8624 0.6086	0.7912 0.5544	0.6854	0.6617	0.6095	Lin1	9.3030	0.5778							0.9970		0.9900
PCB-1262 Peak 2	1.2165 0.8592	1.1108 0.7837	0.9667	0.9367	0.8586	Lin1	13.012	0.8161							0.9970		0.9900
PCB-1262 Peak 3	1.1731 0.8552	1.0875 0.7788	0.9507	0.9265	0.8525	Lin1	11.971	0.8124							0.9970		0.9900
PCB-1262 Peak 4	2.2757 1.6739	2.0971 1.5243	1.8370	1.8056	1.6616	Lin1	22.359	1.5891							0.9970		0.9900
PCB-1262 Peak 5	1.7508 1.2628	1.5941 1.1532	1.3985	1.3696	1.2488	Lin1	17.706	1.1987							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34391

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Lin1	1549784 33236999	3052064 43153197	5377655	12740193	23119208	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 2	BNB	Lin1	1327362 27752244	2666828 37154008	4662843	10698875	19468141	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 3	BNB	Lin1	2630983 58138353	5327006 76218445	9281019	21982243	40797414	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 4	BNB	Lin1	1136029 25319272	2327446 33438438	4103159	9641479	17838929	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 5	BNB	Lin1	991404 21128917	1962103 28051936	3526090	8096778	15244324	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 1	BNB	Lin1	3536624 76501019	6882439 98230933	12068360	28900783	54027511	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 2	BNB	Lin1	4988537 108005184	9662784 138859883	17019760	40916207	76105584	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 3	BNB	Lin1	4810570 107493024	9459588 137990458	16739062	40467048	75571069	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 4	BNB	Lin1	9332035 210407349	18241846 270071150	32344111	78867004	147285972	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 5	BNB	Lin1	7179707 158732369	13866078 204325846	24623782	59822420	110696168	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D
Lims ID: STDL73262
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 17:13:09 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL73262
Misc. Info.: 280-0076428-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:44 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:18:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31630227	1000.0	1000.0	
2	1.747	1.746	0.001	177174681	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	4984840	1000.0	957.8	
1	3.270	3.271	-0.001	15689198	1000.0	950.2	
1	4.116	4.118	-0.002	24520289	1000.0	973.4	
1	4.263	4.264	-0.001	10501101	1000.0	956.2	
1	4.730	4.731	-0.001	10446034	1000.0	950.9	M
		Average of Peak Amounts =				957.7	
2	3.277	3.275	0.002	43153197	1000.0	951.3	M
2	3.667	3.665	0.002	37154008	1000.0	967.1	M
2	4.120	4.121	-0.001	76218445	1000.0	956.2	M
2	4.267	4.265	0.002	33438438	1000.0	958.6	M
2	4.927	4.928	-0.001	28051936	1000.0	956.8	M
		Average of Peak Amounts =				958.0	
						RPD = 0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.250	6.248	0.002	28715451	1000.0	957.0	M
1	7.156	7.154	0.002	45278660	1000.0	961.9	M
1	7.490	7.488	0.002	40438292	1000.0	969.7	M
1	7.930	7.931	-0.001	84521517	1000.0	972.7	M
1	8.320	8.321	-0.001	25986514	1000.0	978.4	M
		Average of Peak Amounts =				967.9	
2	6.647	6.648	-0.001	98230933	1000.0	943.5	M
2	7.247	7.248	-0.001	138859883	1000.0	944.4	
2	7.647	7.645	0.002	137990458	1000.0	944.0	
2	8.010	8.011	-0.001	270071150	1000.0	945.2	
2	8.517	8.515	0.002	204325846	1000.0	947.3	
		Average of Peak Amounts =				944.9	
						RPD = 2.41	
S 8 Polychlorinated biphenyls, Total							
1						1925.6	
2						1902.8	
						RPD = 1.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

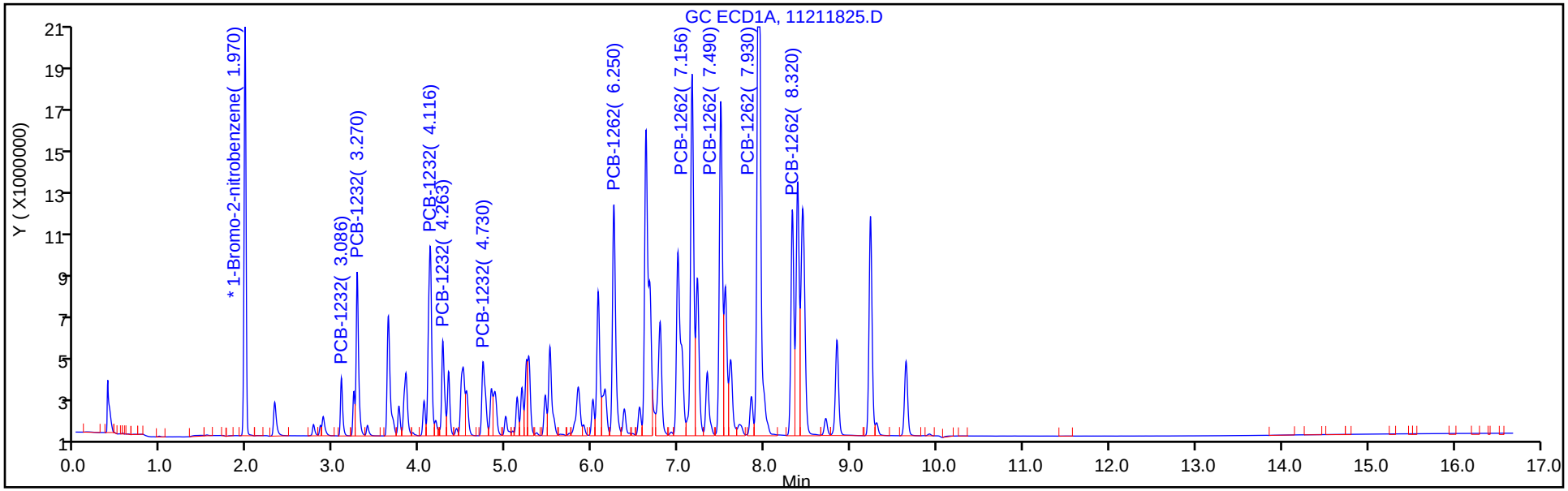
Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

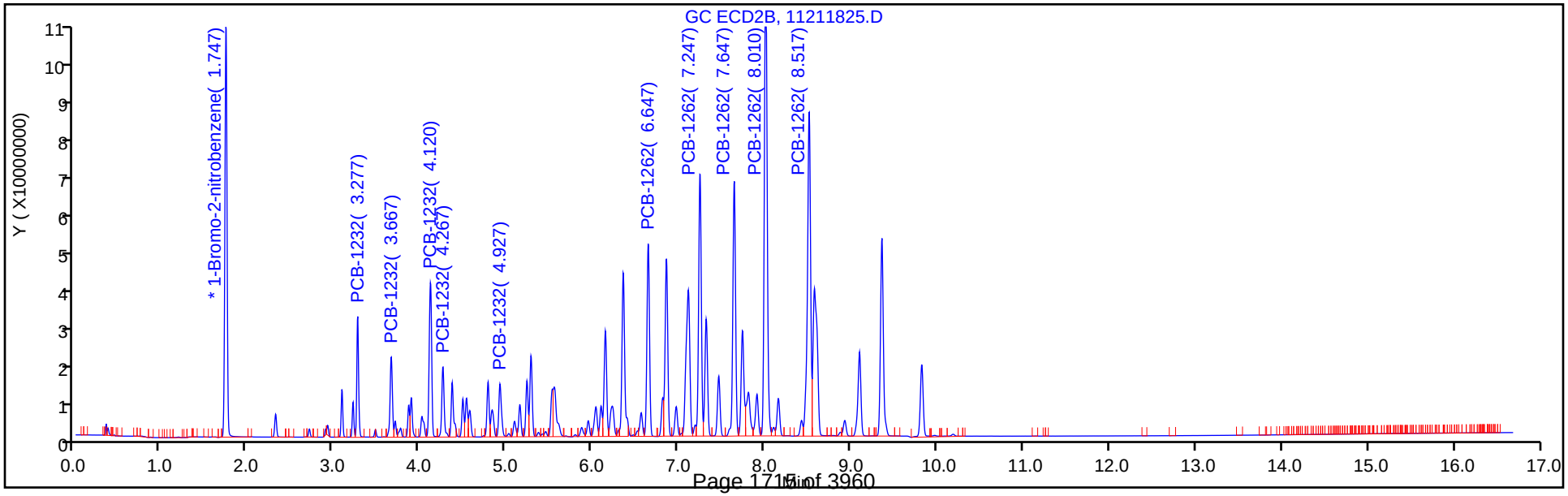
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date:	21-Nov-2018 17:13:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL73262			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

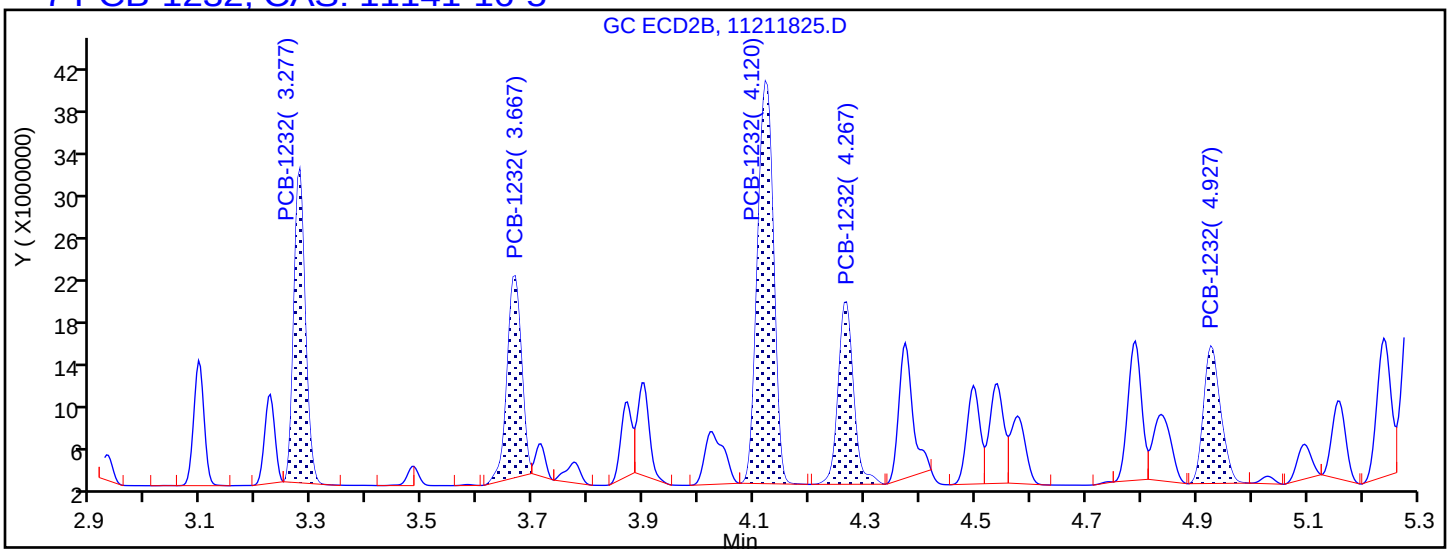
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

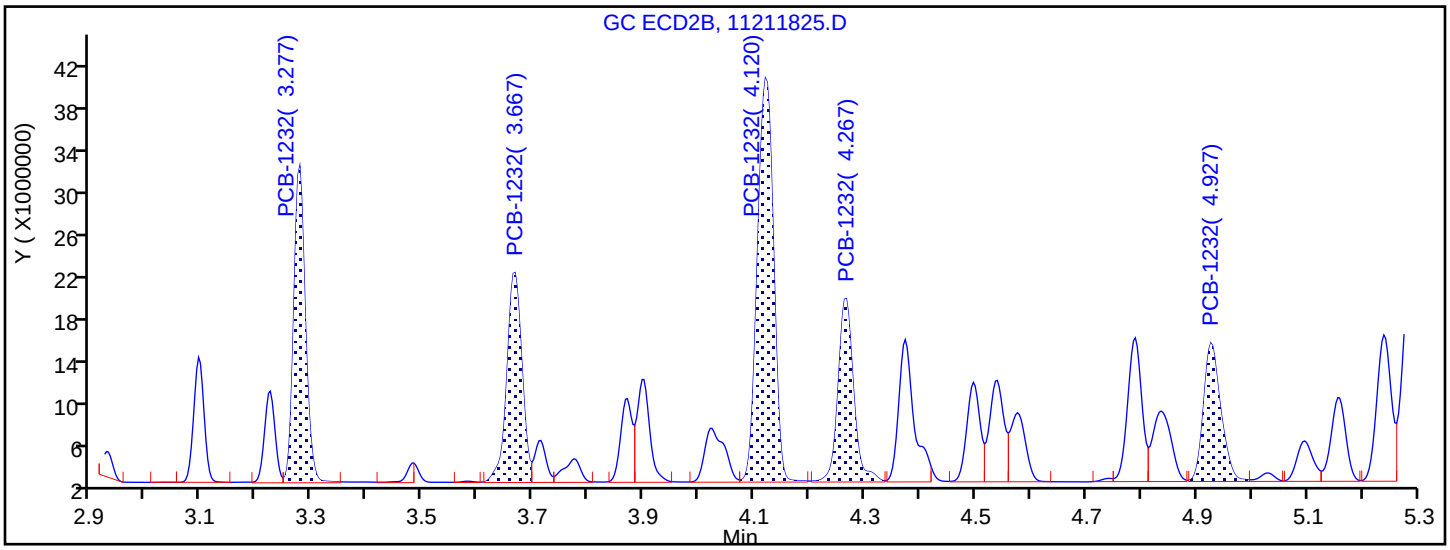
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.277	Response = 41723521
3.667	Response = 34071287
4.120	Response = 75089161
4.267	Response = 32655110
4.927	Response = 27191504



Manual Integration Results

3.277	Response = 43153197	M
3.667	Response = 37154008	M
4.120	Response = 76218445	M
4.267	Response = 33438438	M
4.927	Response = 28051936	M

Reviewer: patadiab, 23-Nov-2018 10:18:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

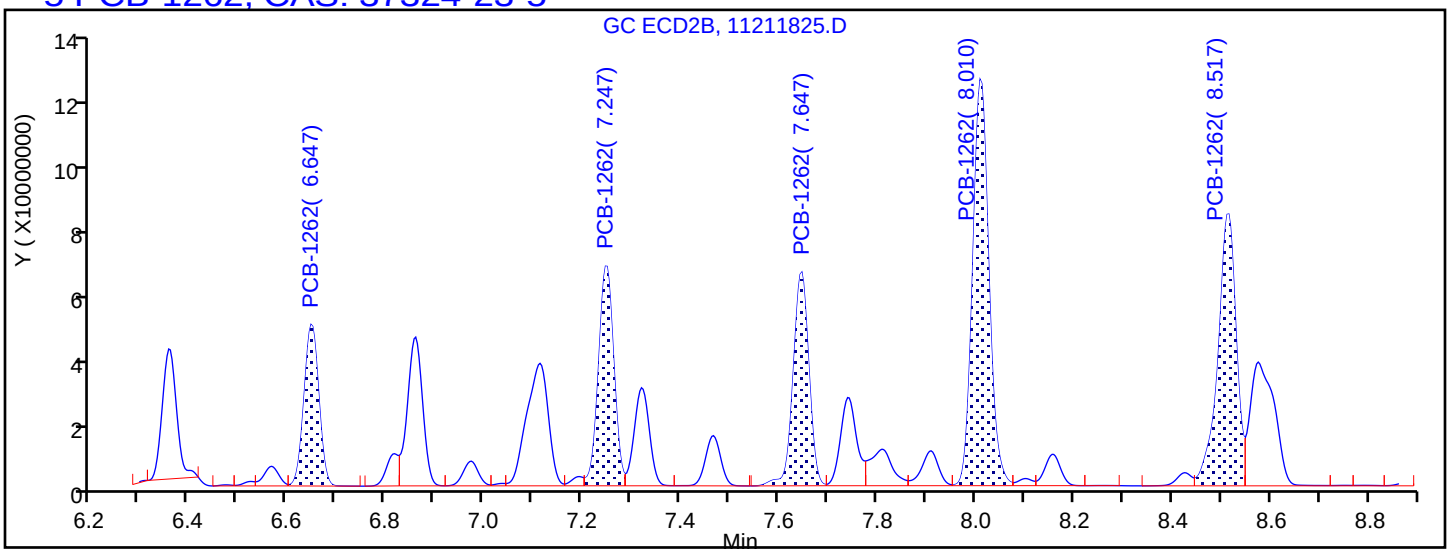
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

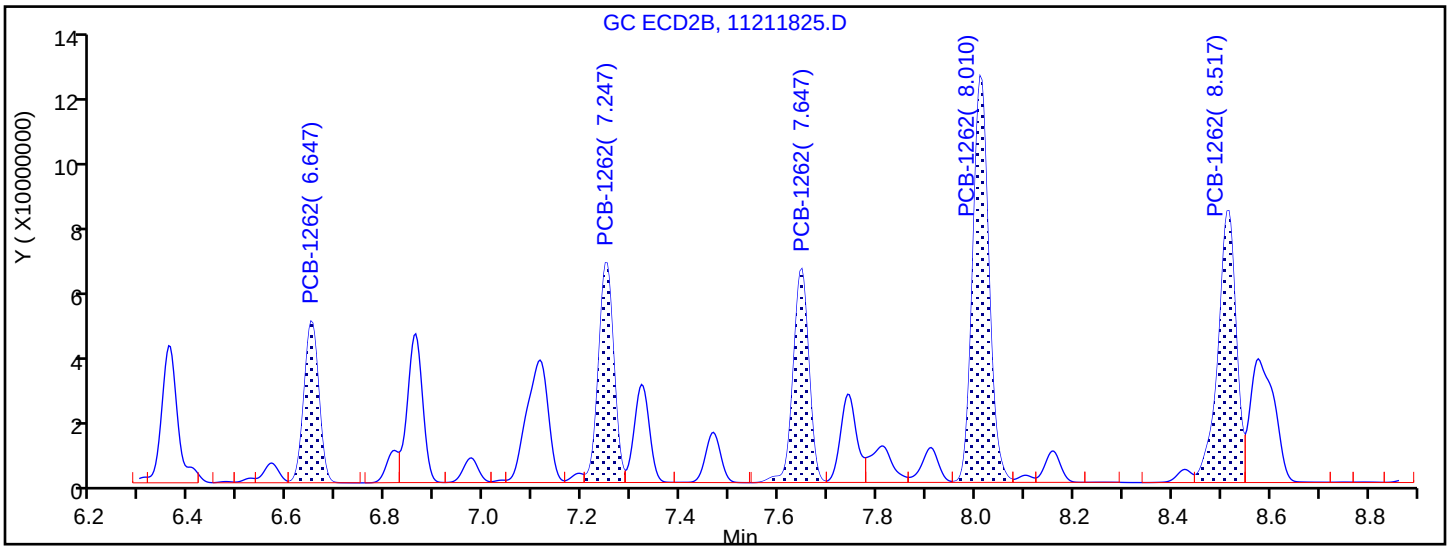
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.647	Response = 98275730
7.247	Response = 138859883
7.647	Response = 137990458
8.010	Response = 270071150
8.517	Response = 204325846



Manual Integration Results

6.647	Response = 98230933	M
7.247	Response = 138859883	
7.647	Response = 137990458	
8.010	Response = 270071150	
8.517	Response = 204325846	

Reviewer: patadiab, 23-Nov-2018 10:18:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D
Lims ID: STDL63262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 17:34:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL63262
Misc. Info.: 280-0076428-026
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:20:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29724345	1000.0	1000.0	
2	1.749	1.746	0.003	167597392	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	3825778	750.0	780.6	
1	3.269	3.271	-0.002	11992126	750.0	770.4	
1	4.116	4.118	-0.002	18488855	750.0	780.5	
1	4.263	4.264	-0.001	8040685	750.0	777.9	
1	4.729	4.731	-0.002	8045853	750.0	778.2	M
		Average of Peak Amounts =				777.5	
2	3.276	3.275	0.001	33236999	750.0	771.4	
2	3.666	3.665	0.001	27752244	750.0	759.9	
2	4.123	4.121	0.002	58138353	750.0	768.0	
2	4.266	4.265	0.001	25319272	750.0	764.2	
2	4.929	4.928	0.001	21128917	750.0	758.5	
		Average of Peak Amounts =				764.4	
						RPD = 1.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.249	6.248	0.001	21984609	750.0	777.9	M
1	7.156	7.154	0.002	34368147	750.0	775.2	M
1	7.489	7.488	0.001	30590995	750.0	779.0	M
1	7.929	7.931	-0.002	63873370	750.0	781.5	M
1	8.319	8.321	-0.002	19427531	750.0	777.3	M
		Average of Peak Amounts =				778.2	
2	6.649	6.648	0.001	76501019	750.0	773.9	
2	7.249	7.248	0.001	108005184	750.0	773.7	
2	7.646	7.645	0.001	107493024	750.0	774.8	
2	8.013	8.011	0.002	210407349	750.0	776.0	
2	8.516	8.515	0.001	158732369	750.0	775.3	
		Average of Peak Amounts =				774.7	
						RPD = 0.45	
S 8 Polychlorinated biphenyls, Total							
1						1555.7	
2						1539.1	
						RPD = 1.07	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

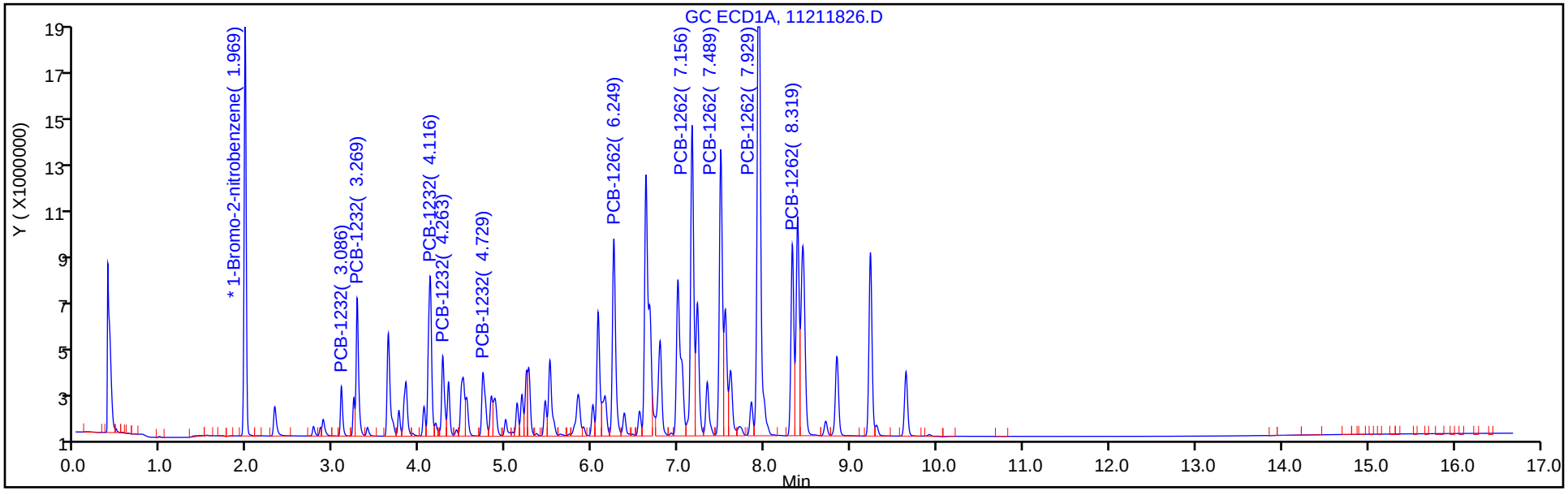
Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

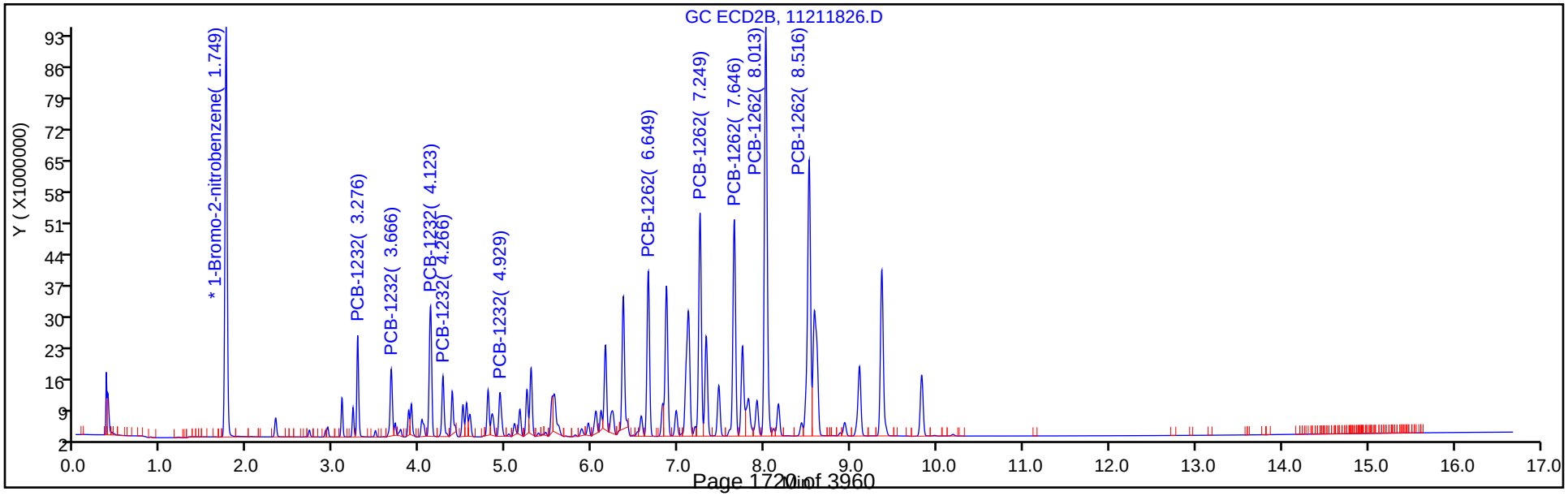
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date:	21-Nov-2018 17:34:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL63262			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D
Lims ID: STDL53262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 17:55:27 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL53262
Misc. Info.: 280-0076428-027
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:14:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	31454394	1000.0	1000.0	
2	1.748	1.748	0.000	177287409	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.088	3.088	0.000	2583135	500.0	495.0	
1	3.271	3.271	0.000	8464098	500.0	509.4	
1	4.118	4.118	0.000	12426844	500.0	494.9	M
1	4.264	4.264	0.000	5502198	500.0	500.6	M
1	4.731	4.731	0.000	5595129	500.0	509.2	M
		Average of Peak Amounts =				501.8	
2	3.275	3.275	0.000	23119208	500.0	501.5	
2	3.665	3.665	0.000	19468141	500.0	497.9	
2	4.121	4.121	0.000	40797414	500.0	504.3	
2	4.265	4.265	0.000	17838929	500.0	503.9	
2	4.928	4.928	0.000	15244324	500.0	512.0	
		Average of Peak Amounts =				503.9	
						RPD = 0.42	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.248	6.248	0.000	15117077	500.0	502.0	M
1	7.154	7.154	0.000	23792647	500.0	504.1	M
1	7.488	7.488	0.000	20569577	500.0	492.1	M
1	7.931	7.931	0.000	43005230	500.0	495.9	M
1	8.321	8.321	0.000	12995186	500.0	489.6	M
		Average of Peak Amounts =				496.7	
2	6.648	6.648	0.000	54027511	500.0	511.3	
2	7.248	7.248	0.000	76105584	500.0	510.0	
2	7.645	7.645	0.000	75571069	500.0	510.0	
2	8.011	8.011	0.000	147285972	500.0	508.7	
2	8.515	8.515	0.000	110696168	500.0	506.1	
		Average of Peak Amounts =				509.2	
						RPD = 2.49	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

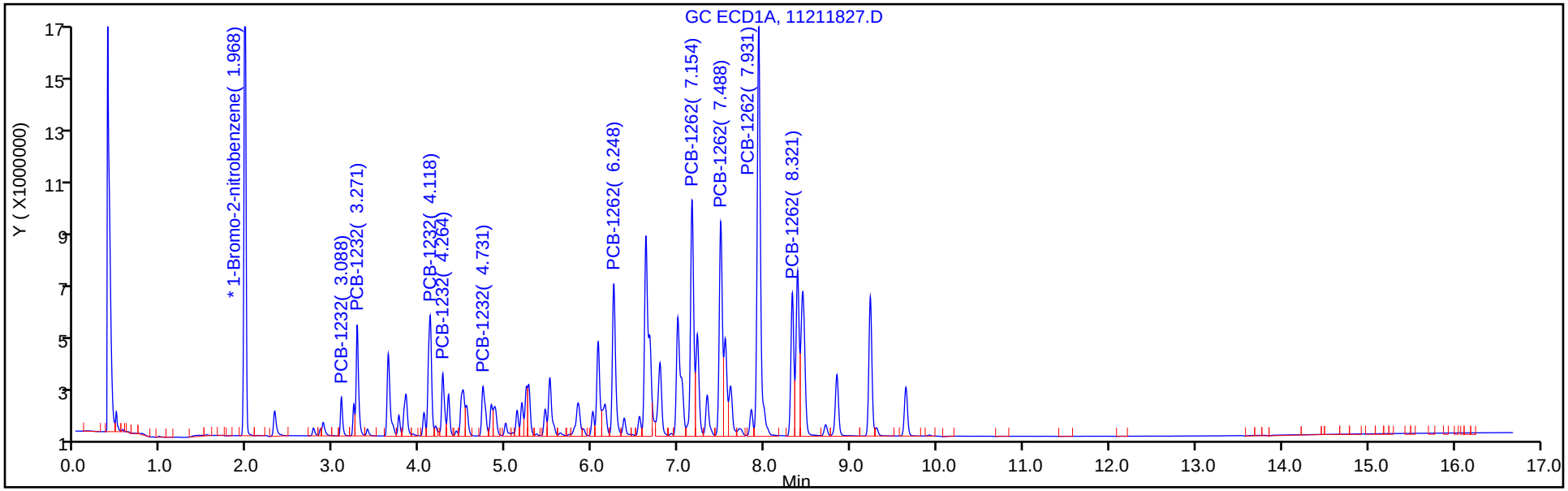
Report Date: 23-Nov-2018 11:02:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

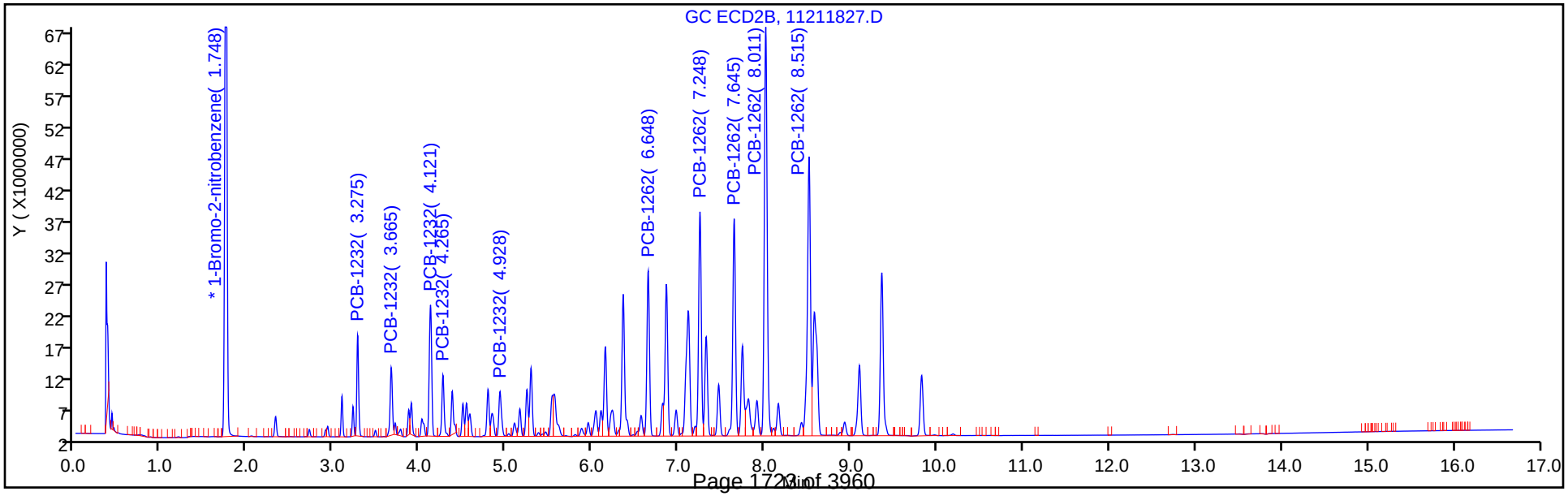
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date:	21-Nov-2018 17:55:27	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL53262			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D
Lims ID: STDL43262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 18:16:46 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL43262
Misc. Info.: 280-0076428-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:56 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:16:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	30965018	1000.0	1000.0	
2	1.747	1.748	-0.001	174717072	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	1392895	250.0	267.2	
1	3.270	3.271	-0.001	4511528	250.0	269.6	
1	4.117	4.118	-0.001	6315260	250.0	254.3	
1	4.263	4.264	-0.001	2916425	250.0	266.4	
1	4.730	4.731	-0.001	2893984	250.0	264.4	
		Average of Peak Amounts =				264.4	
2	3.277	3.275	0.002	12740193	250.0	272.9	
2	3.663	3.665	-0.002	10698875	250.0	269.7	
2	4.120	4.121	-0.001	21982243	250.0	268.7	
2	4.267	4.265	0.002	9641479	250.0	269.4	
2	4.927	4.928	-0.001	8096778	250.0	268.2	
		Average of Peak Amounts =				269.8	
						RPD = 2.02	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.250	6.248	0.002	7964853	250.0	264.1	
1	7.157	7.154	0.003	12307287	250.0	260.7	
1	7.490	7.488	0.002	10904443	250.0	261.3	
1	7.930	7.931	-0.001	21913797	250.0	254.9	
1	8.320	8.321	-0.001	6789639	250.0	257.5	
		Average of Peak Amounts =				259.7	
2	6.647	6.648	-0.001	28900783	250.0	270.2	
2	7.247	7.248	-0.001	40916207	250.0	271.0	
2	7.647	7.645	0.002	40467048	250.0	270.4	
2	8.010	8.011	-0.001	78867004	250.0	270.0	
2	8.513	8.515	-0.002	59822420	250.0	270.9	
		Average of Peak Amounts =				270.5	
						RPD = 4.07	
S 8 Polychlorinated biphenyls, Total							
1						524.1	
2						540.3	
						RPD = 3.04	

Reagents:

AR_3262_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

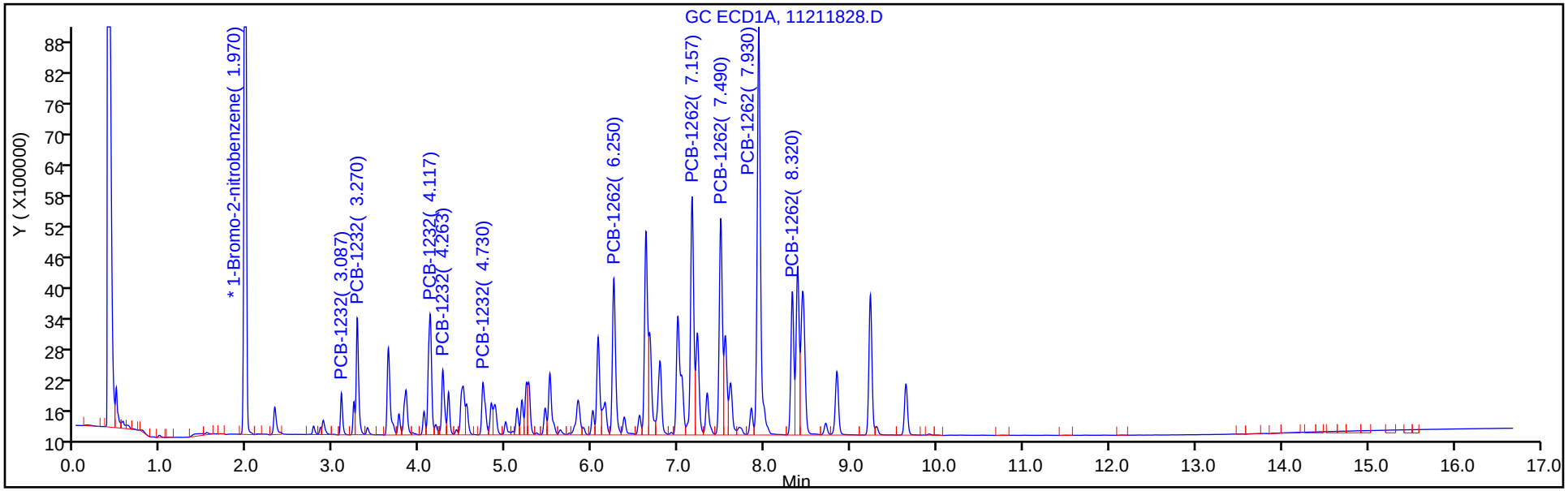
Report Date: 23-Nov-2018 11:02:57 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

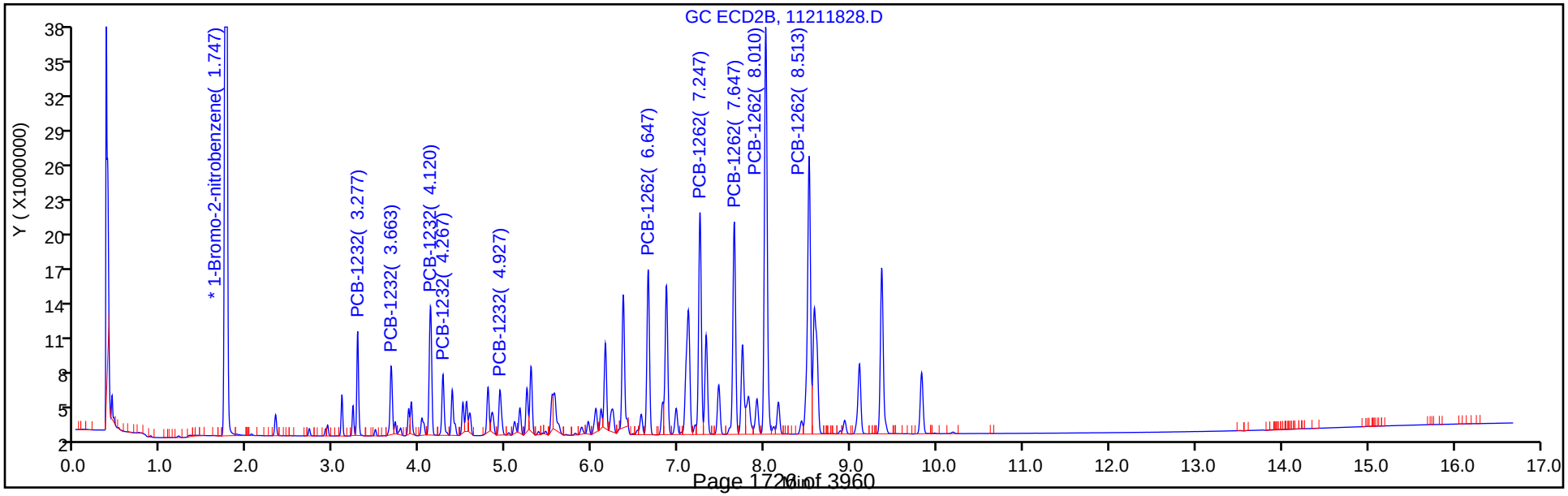
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D

Injection Date:	21-Nov-2018 18:16:46	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL43262			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D
Lims ID: STDL33262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 18:37:56 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL33262
Misc. Info.: 280-0076428-029
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.968	0.004	31139299	1000.0	1000.0	
2	1.749	1.748	0.001	176067915	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	547298	100.0	99.2	
1	3.272	3.271	0.001	1856728	100.0	102.4	
1	4.116	4.118	-0.002	2458762	100.0	96.9	
1	4.262	4.264	-0.002	1164474	100.0	101.6	
1	4.729	4.731	-0.002	1125602	100.0	98.3	
		Average of Peak Amounts =				99.7	
2	3.276	3.275	0.001	5377655	100.0	104.5	
2	3.666	3.665	0.001	4662843	100.0	106.4	
2	4.122	4.121	0.001	9281019	100.0	103.5	
2	4.266	4.265	0.001	4103159	100.0	104.9	
2	4.926	4.928	-0.002	3526090	100.0	106.4	
		Average of Peak Amounts =				105.2	
						RPD = 5.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	3216578	100.0	100.2	
1	7.156	7.154	0.002	4907514	100.0	98.0	
1	7.489	7.488	0.001	4304645	100.0	97.7	
1	7.929	7.931	-0.002	8325389	100.0	94.0	
1	8.319	8.321	-0.002	2648440	100.0	96.9	
		Average of Peak Amounts =				97.4	
2	6.646	6.648	-0.002	12068360	100.0	102.5	
2	7.249	7.248	0.001	17019760	100.0	102.5	
2	7.646	7.645	0.001	16739062	100.0	102.3	
2	8.012	8.011	0.001	32344111	100.0	101.5	
2	8.512	8.515	-0.003	24623782	100.0	101.9	
		Average of Peak Amounts =				102.2	
						RPD = 4.81	
S 8 Polychlorinated biphenyls, Total							
1						197.1	
2						207.3	
						RPD = 5.07	

Reagents:

AR_3262_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

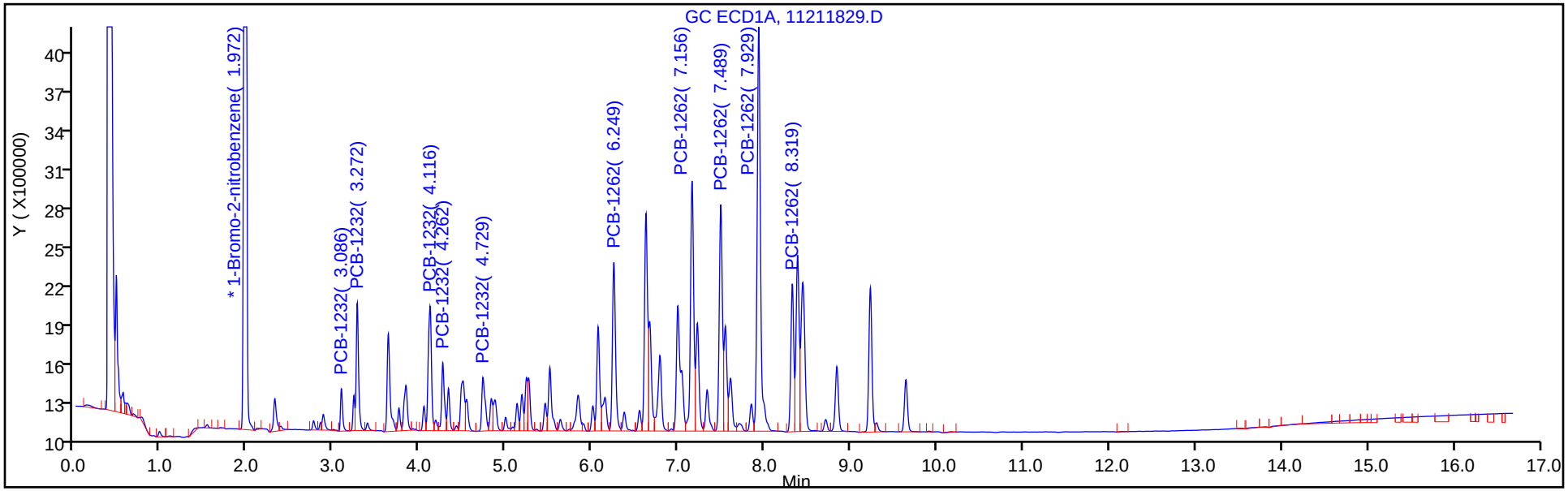
Report Date: 23-Nov-2018 11:03:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

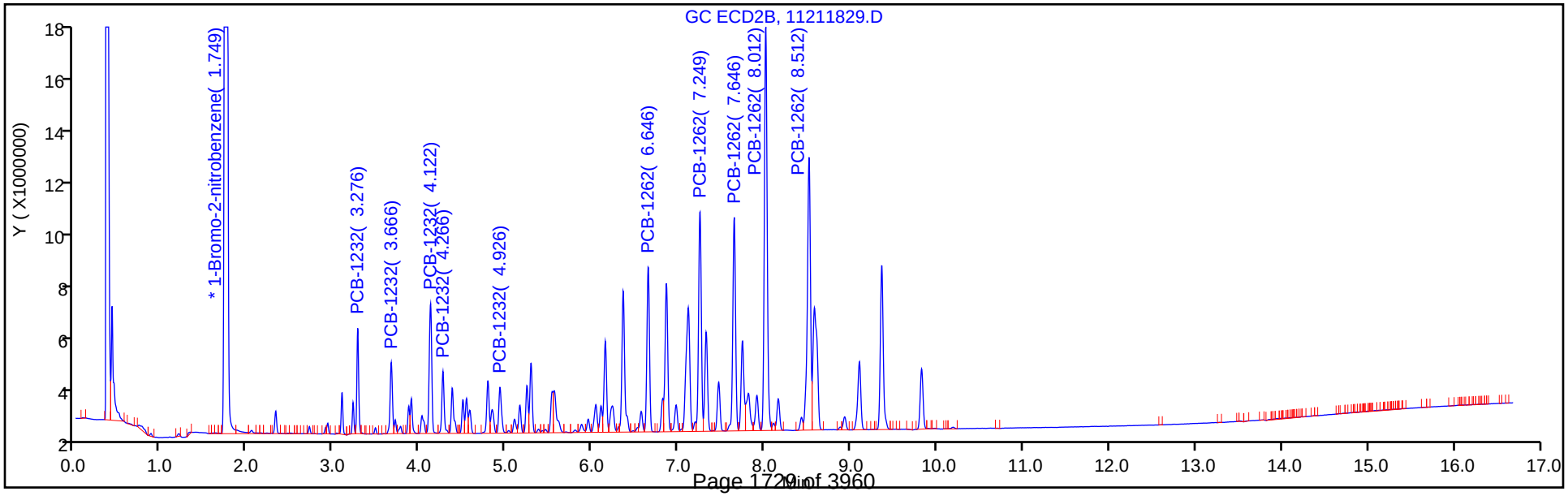
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D

Injection Date:	21-Nov-2018 18:37:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL33262			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D
Lims ID: STDL23262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 18:59:04 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL23262
Misc. Info.: 280-0076428-030
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	30826448	1000.0	1000.0	
2	1.748	1.748	0.000	173971839	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.088	3.088	0.000	308483	50.0	52.8	
1	3.271	3.271	0.000	1020472	50.0	50.9	
1	4.118	4.118	0.000	1273955	50.0	49.6	
1	4.264	4.264	0.000	586726	50.0	48.4	
1	4.731	4.731	0.000	604692	50.0	50.4	
		Average of Peak Amounts =				50.4	
2	3.274	3.275	-0.001	3052064	50.0	52.8	
2	3.664	3.665	-0.001	2666828	50.0	54.0	
2	4.121	4.121	0.000	5327006	50.0	53.6	
2	4.264	4.265	-0.001	2327446	50.0	53.7	
2	4.928	4.928	0.000	1962103	50.0	52.6	
		Average of Peak Amounts =				53.4	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.248	6.248	0.000	1742564	50.0	50.4	
1	7.154	7.154	0.000	2744291	50.0	51.5	
1	7.488	7.488	0.000	2379701	50.0	51.0	
1	7.928	7.931	-0.003	4573994	50.0	50.5	
1	8.318	8.321	-0.003	1421934	50.0	50.3	
		Average of Peak Amounts =				50.7	
2	6.648	6.648	0.000	6882439	50.0	52.4	
2	7.248	7.248	0.000	9662784	50.0	52.1	
2	7.644	7.645	-0.001	9459588	50.0	52.2	
2	8.011	8.011	0.000	18241846	50.0	51.9	
2	8.514	8.515	-0.001	13866078	50.0	51.7	
		Average of Peak Amounts =				52.1	
						RPD = 2.56	
S 8 Polychlorinated biphenyls, Total							
1						101.1	
2						105.4	
						RPD = 4.14	

Reagents:

AR_3262_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

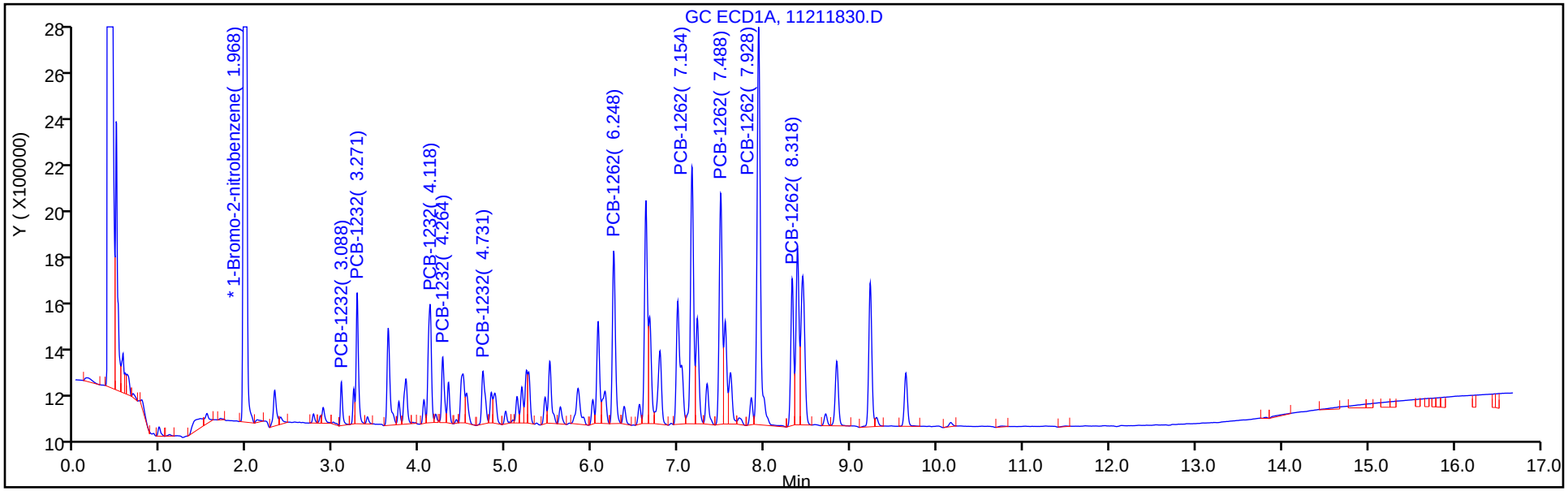
Report Date: 23-Nov-2018 11:03:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

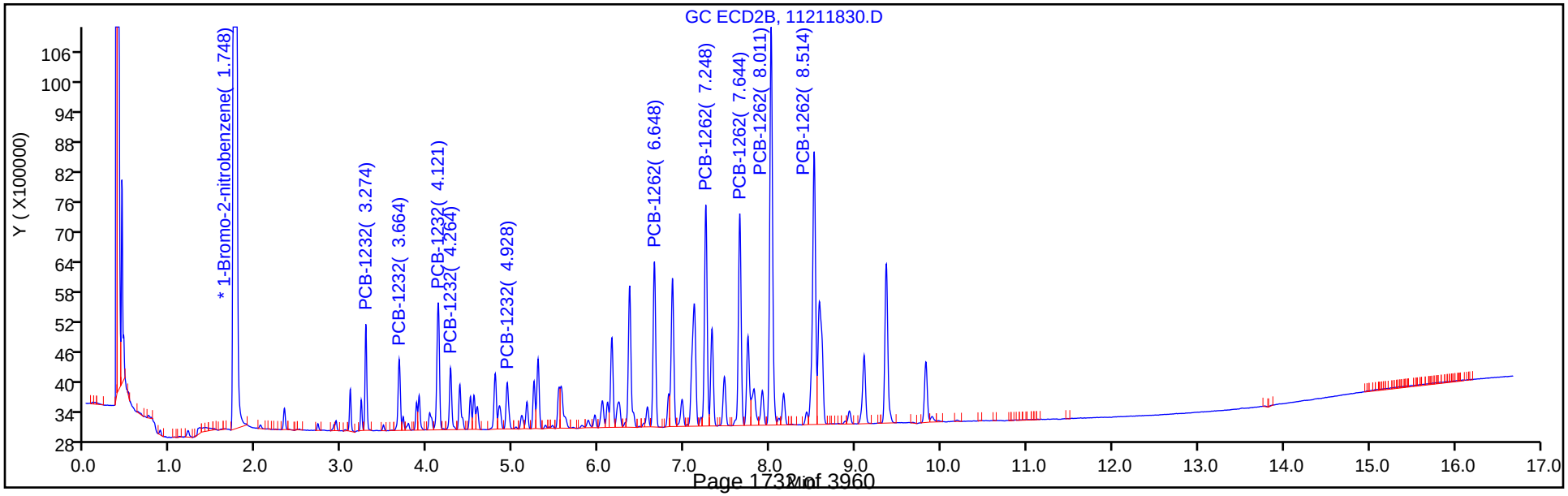
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D

Injection Date:	21-Nov-2018 18:59:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL23262			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D
Lims ID: STDL13262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 19:20:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL13262
Misc. Info.: 280-0076428-031
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:05 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:27:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	28837858	1000.0	1000.0	
2	1.747	1.748	-0.001	164029832	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	145633	25.0	22.4	
1	3.270	3.271	-0.001	527466	25.0	22.1	
1	4.117	4.118	-0.001	639419	25.0	25.5	
1	4.263	4.264	-0.001	305449	25.0	23.9	
1	4.730	4.731	-0.001	299569	25.0	23.6	
		Average of Peak Amounts =				23.5	
2	3.277	3.275	0.002	1549784	25.0	20.6	
2	3.667	3.665	0.002	1327362	25.0	20.0	
2	4.120	4.121	-0.001	2630983	25.0	20.7	
2	4.267	4.265	0.002	1136029	25.0	20.4	
2	4.927	4.928	-0.001	991404	25.0	20.5	
		Average of Peak Amounts =				20.4	
						RPD = 13.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.247	6.248	-0.001	898312	25.0	23.4	
1	7.157	7.154	0.003	1380613	25.0	23.6	
1	7.490	7.488	0.002	1209897	25.0	24.1	
1	7.930	7.931	-0.001	2313295	25.0	25.6	
1	8.320	8.321	-0.001	722269	25.0	25.0	
		Average of Peak Amounts =				24.3	
2	6.647	6.648	-0.001	3536624	25.0	21.2	
2	7.250	7.248	0.002	4988537	25.0	21.3	
2	7.647	7.645	0.002	4810570	25.0	21.4	
2	8.010	8.011	-0.001	9332035	25.0	21.7	
2	8.513	8.515	-0.002	7179707	25.0	21.7	
		Average of Peak Amounts =				21.5	
						RPD = 12.52	
S 8 Polychlorinated biphenyls, Total							
1						47.8	
2						41.9	
						RPD = 13.20	

Reagents:

AR_3262_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

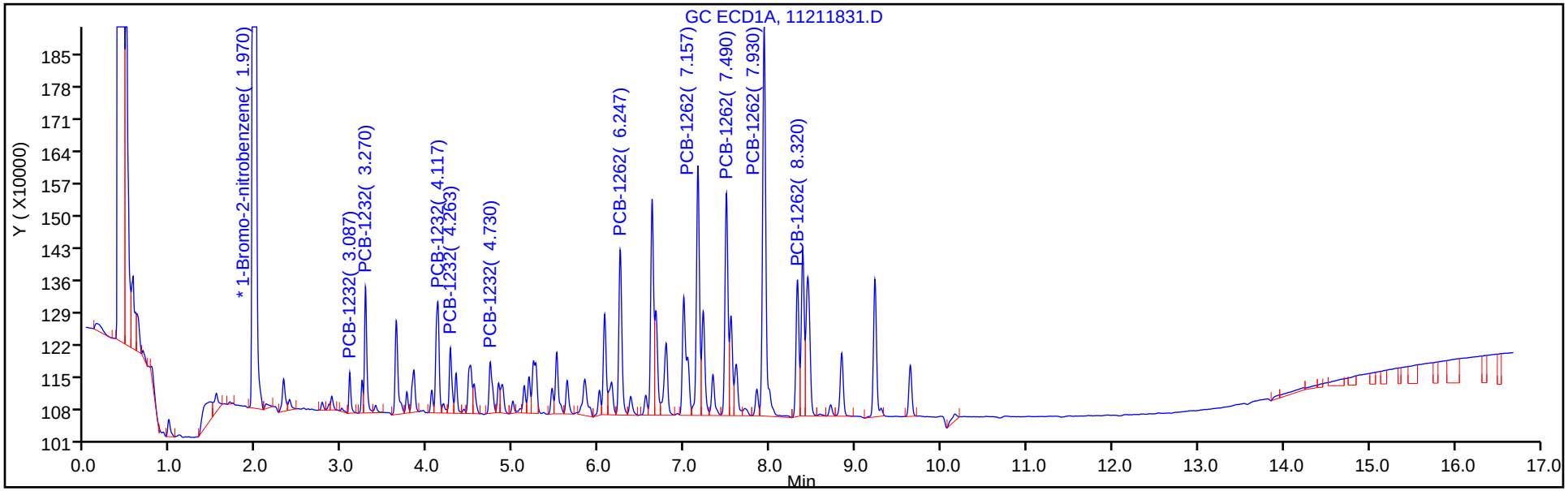
Report Date: 23-Nov-2018 11:03:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

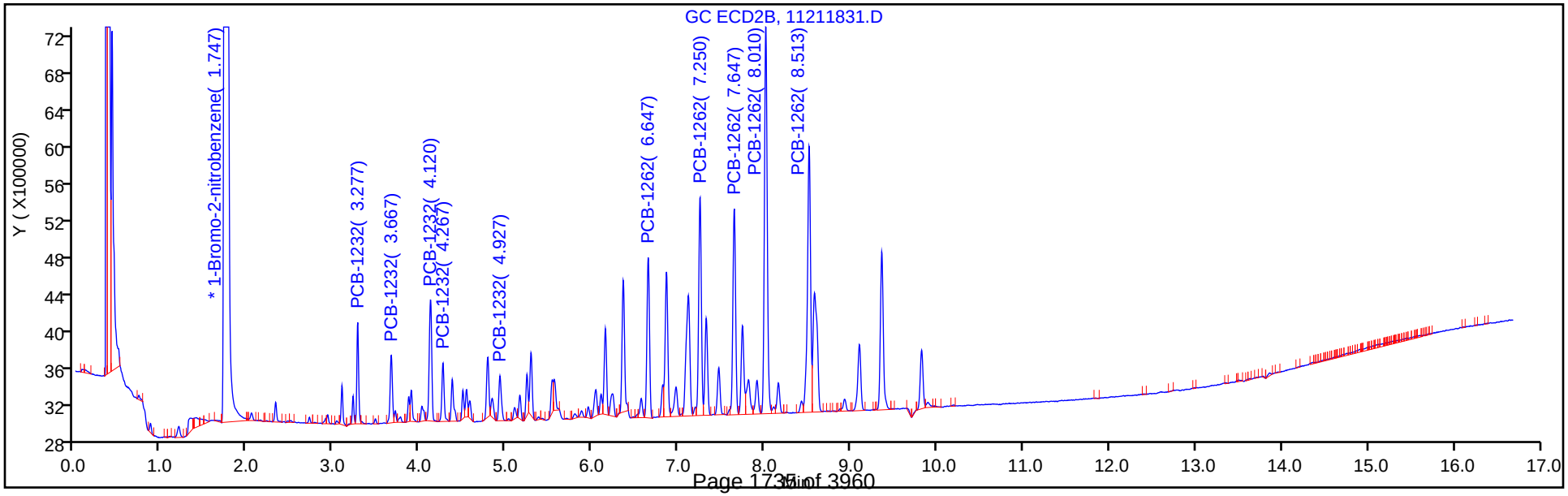
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D

Injection Date:	21-Nov-2018 19:20:15	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL13262			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	1.1005 0.7826	0.9842 0.7518	0.9316	0.8484	0.7941	Lin1	10.854	0.7633							0.9990		0.9900
PCB-1242 Peak 2	1.5351 1.4359	1.4435 1.3946	1.4192	1.3986	1.3859	Lin1	2.6035	1.4013							1.0000		0.9900
PCB-1242 Peak 3	0.7458 0.6049	0.6733 0.5795	0.6658	0.6259	0.5875	Lin1	4.8264	0.5864							0.9990		0.9900
PCB-1242 Peak 4	0.5373 0.4151	0.4846 0.3856	0.4813	0.4405	0.4151	Lin1	4.6644	0.3992							0.9980		0.9900
PCB-1242 Peak 5	0.6137 0.5483	0.5247 0.5411	0.5407	0.5157	0.5074	Lin1	0.7978	0.5327							0.9990		0.9900
PCB-1268 Peak 1	3.5642 2.9823	3.0682 2.7748	2.9905	2.8187	2.7519	Lin1	16.238	2.8112							0.9980		0.9900
PCB-1268 Peak 2	3.1918 2.9518	3.0270 2.8076	3.0783	2.8955	2.8596	Lin1	10.417	2.8565							0.9990		0.9900
PCB-1268 Peak 3	2.7905 2.3929	2.5131 2.2614	2.5155	2.3054	2.2736	Lin1	13.091	2.2896							0.9990		0.9900
PCB-1268 Peak 4	1.1823 0.9884	1.0224 0.9333	1.2421	0.9577	0.9386	Lin1	8.1973	0.9461							0.9960		0.9900
PCB-1268 Peak 5	8.0817 7.1359	7.2815 6.6759	7.5820	6.9414	6.8481	Lin1	35.077	6.8284							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Lin1	826846 18033958	1591803 23666995	2785673	6934698	12621153	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 2	BNB	Lin1	1153326 33088198	2334811 43906093	4243819	11431468	22028422	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 3	BNB	Lin1	560286 13939481	1089072 18245316	1990794	5115672	9337377	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 4	BNB	Lin1	403656 9565455	783867 12139444	1439135	3600286	6598400	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 5	BNB	Lin1	461108 12635374	848605 17036171	1616814	4215035	8065513	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 1	BNB	Lin1	2677797 68720772	4962556 87356816	8942275	23038908	43739892	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 2	BNB	Lin1	2398046 68019827	4896006 88389199	9204821	23666972	45452498	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 3	BNB	Lin1	2096540 55139677	4064693 71195019	7521874	18843418	36138239	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 4	BNB	Lin1	888286 22774873	1653587 29381338	3714053	7827884	14918235	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 5	BNB	Lin1	6071834 164433426	11777400 210173125	22672079	56736910	108847285	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D
Lims ID: STDL74268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 19:41:25 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL74268
Misc. Info.: 280-0076428-032
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:08 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.968	0.001	31482365	1000.0	1000.0	
2	1.749	1.748	0.001	176421211	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.632	3.631	0.001	23666995	1000.0	970.7	
1	4.116	4.117	-0.001	43906093	1000.0	993.4	
1	4.262	4.264	-0.002	18245316	1000.0	980.1	
1	5.239	5.237	0.002	12139444	1000.0	954.3	
1	5.259	5.261	-0.002	17036171	1000.0	1014.3	
		Average of Peak Amounts =				982.6	
2	3.666	3.664	0.002	58050740	1000.0	958.5	
2	4.122	4.121	0.001	129222617	1000.0	962.4	
2	4.266	4.264	0.002	55919168	1000.0	961.9	
2	4.789	4.788	0.001	44752744	1000.0	955.6	
2	4.926	4.928	-0.002	54422086	1000.0	963.6	
		Average of Peak Amounts =				960.4	
						RPD = 2.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.382	8.381	0.001	87356816	1000.0	981.3	
1	8.432	8.434	-0.002	88389199	1000.0	979.2	
1	8.709	8.707	0.002	71195019	1000.0	982.0	
1	9.226	9.224	0.002	29381338	1000.0	977.8	
1	9.639	9.637	0.002	210173125	1000.0	972.5	
		Average of Peak Amounts =				978.6	
2	8.512	8.511	0.001	304523679	1000.0	954.1	
2	8.576	8.574	0.002	292646780	1000.0	964.9	
2	8.929	8.928	0.001	252817304	1000.0	959.6	
2	9.359	9.358	0.001	119674966	1000.0	955.3	
2	9.819	9.821	-0.002	772165320	1000.0	960.8	
		Average of Peak Amounts =				959.0	
						RPD = 2.02	
S 8 Polychlorinated biphenyls, Total							
1						1961.1	
2						1919.4	
						RPD = 2.15	

Reagents:

AR_4268_L7_00016	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

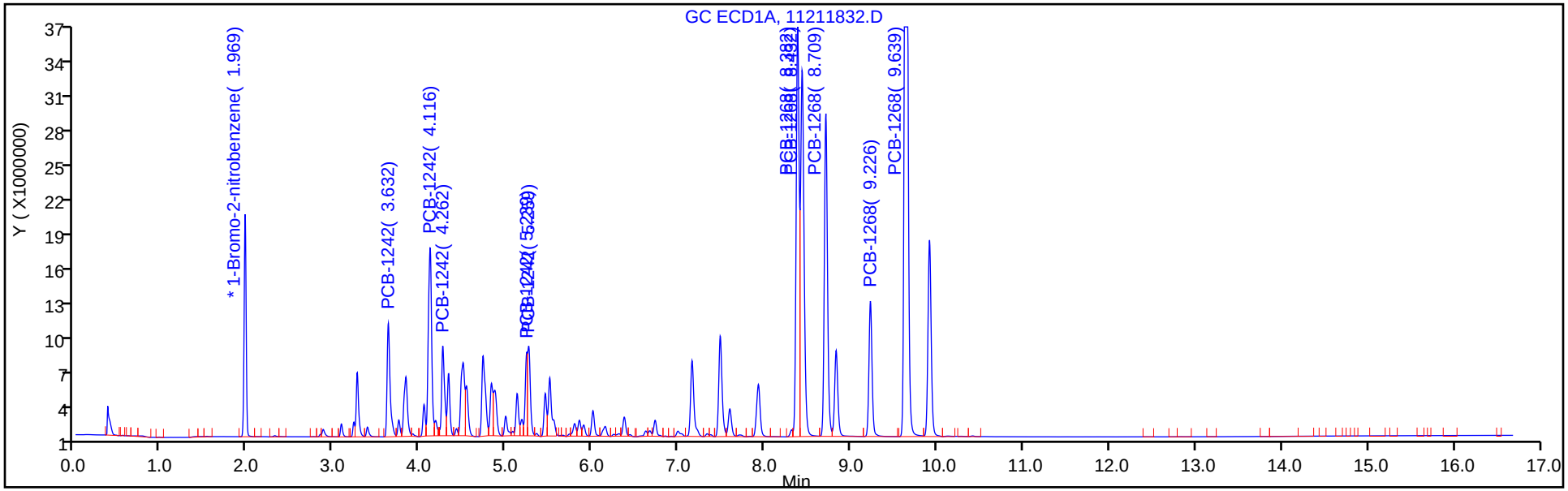
Report Date: 23-Nov-2018 11:03:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

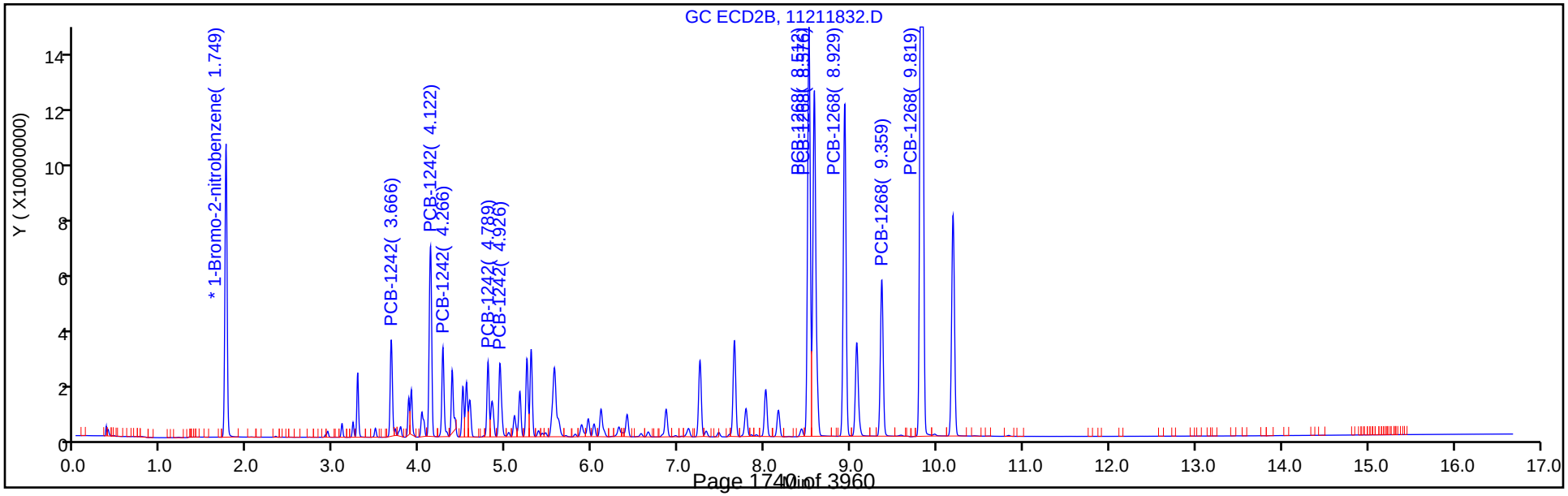
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D

Injection Date:	21-Nov-2018 19:41:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL74268			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D
Lims ID: STDL64268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 20:02:35 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL64268
Misc. Info.: 280-0076428-033
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:11 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:33:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.968	-0.002	30724311	1000.0	1000.0	
2	1.747	1.748	-0.001	172295175	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	18033958	750.0	754.8	
1	4.116	4.117	-0.001	33088198	750.0	766.7	
1	4.263	4.264	-0.001	13939481	750.0	765.5	
1	5.236	5.237	-0.001	9565455	750.0	768.3	
1	5.260	5.261	-0.001	12635374	750.0	770.5	
		Average of Peak Amounts =				765.1	
2	3.663	3.664	-0.001	44959096	750.0	756.3	
2	4.120	4.121	-0.001	100690473	750.0	764.9	
2	4.263	4.264	-0.001	43601831	750.0	764.9	
2	4.790	4.788	0.002	35305208	750.0	766.5	
2	4.927	4.928	-0.001	42582862	750.0	769.0	
		Average of Peak Amounts =				764.3	
						RPD = 0.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	68720772	750.0	789.9	
1	8.433	8.434	-0.001	68019827	750.0	771.4	
1	8.710	8.707	0.003	55139677	750.0	778.1	
1	9.226	9.224	0.002	22774873	750.0	774.9	
1	9.640	9.637	0.003	164433426	750.0	778.6	
		Average of Peak Amounts =				778.6	
2	8.513	8.511	0.002	242643975	750.0	775.8	
2	8.573	8.574	-0.001	229976284	750.0	773.9	
2	8.927	8.928	-0.001	200377742	750.0	776.3	
2	9.357	9.358	-0.001	95407700	750.0	777.4	
2	9.820	9.821	-0.001	610063306	750.0	774.7	
		Average of Peak Amounts =				775.6	
						RPD = 0.38	
S 8 Polychlorinated biphenyls, Total							
1						1543.7	
2						1540.0	
						RPD = 0.24	

Reagents:

AR_4268_L6_00018	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

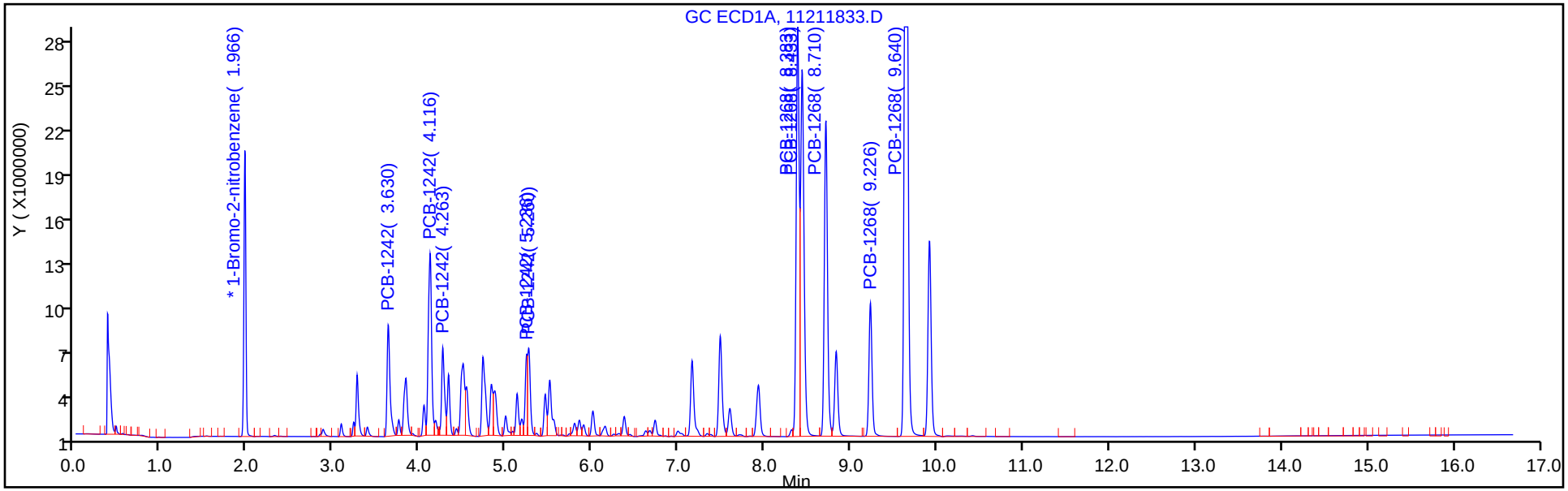
Report Date: 23-Nov-2018 11:03:12 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

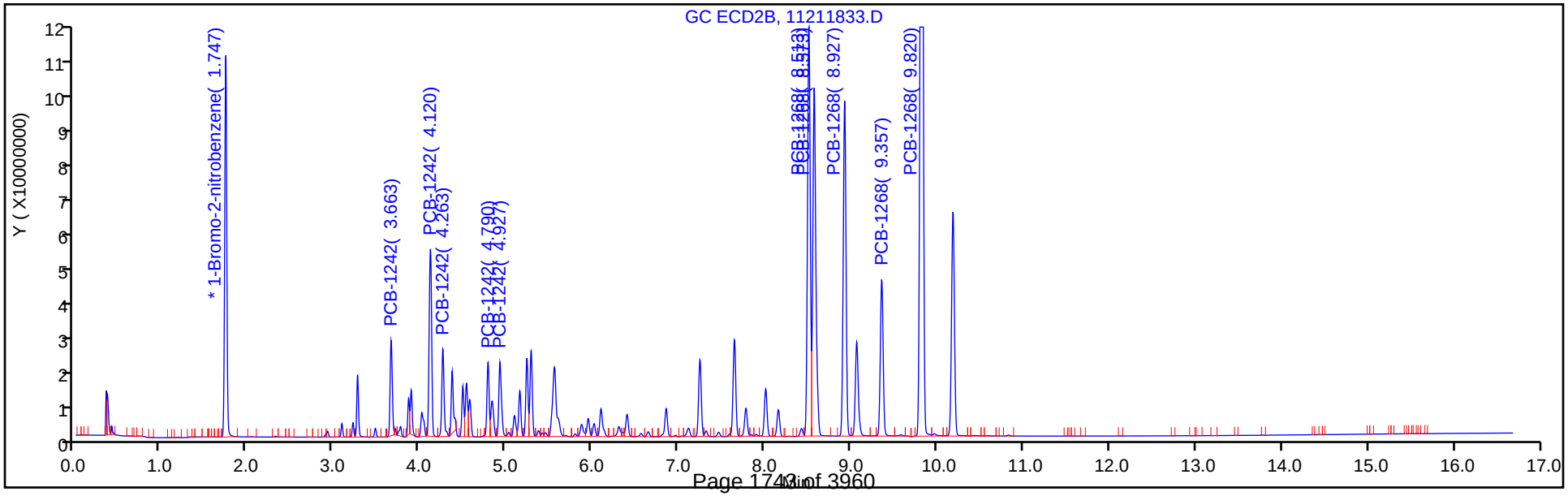
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D

Injection Date:	21-Nov-2018 20:02:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL64268			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D
Lims ID: STDL54268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 20:23:44 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL54268
Misc. Info.: 280-0076428-034
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:31:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	31789266	1000.0	1000.0	
2	1.744	1.744	0.000	178179597	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	12621153	500.0	505.9	
1	4.117	4.117	0.000	22028422	500.0	492.7	
1	4.264	4.264	0.000	9337377	500.0	492.7	
1	5.237	5.237	0.000	6598400	500.0	508.3	
1	5.261	5.261	0.000	8065513	500.0	474.8	
		Average of Peak Amounts =				494.9	
2	3.664	3.664	0.000	32047030	500.0	515.5	
2	4.121	4.121	0.000	69892795	500.0	508.6	
2	4.264	4.264	0.000	30223208	500.0	507.7	
2	4.788	4.788	0.000	24589768	500.0	507.1	
2	4.928	4.928	0.000	29090693	500.0	502.9	
		Average of Peak Amounts =				508.4	
						RPD = 2.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	43739892	500.0	483.7	
1	8.434	8.434	0.000	45452498	500.0	496.9	
1	8.707	8.707	0.000	36138239	500.0	490.8	
1	9.224	9.224	0.000	14918235	500.0	487.4	
1	9.637	9.637	0.000	108847285	500.0	496.3	
		Average of Peak Amounts =				491.0	
2	8.511	8.511	0.000	164790872	500.0	504.5	
2	8.574	8.574	0.000	154491173	500.0	498.2	
2	8.928	8.928	0.000	134857881	500.0	500.7	
2	9.358	9.358	0.000	64325885	500.0	502.2	
2	9.821	9.821	0.000	410787422	500.0	499.6	
		Average of Peak Amounts =				501.0	
						RPD = 2.02	

Reagents:

AR_4268_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

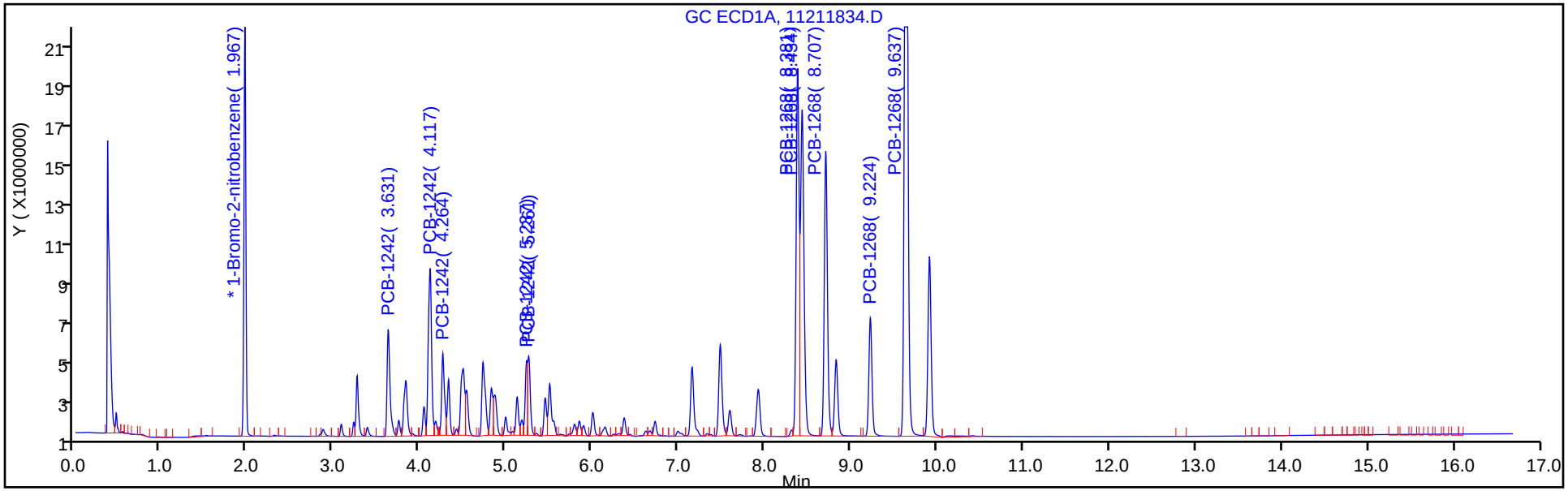
Report Date: 23-Nov-2018 11:03:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

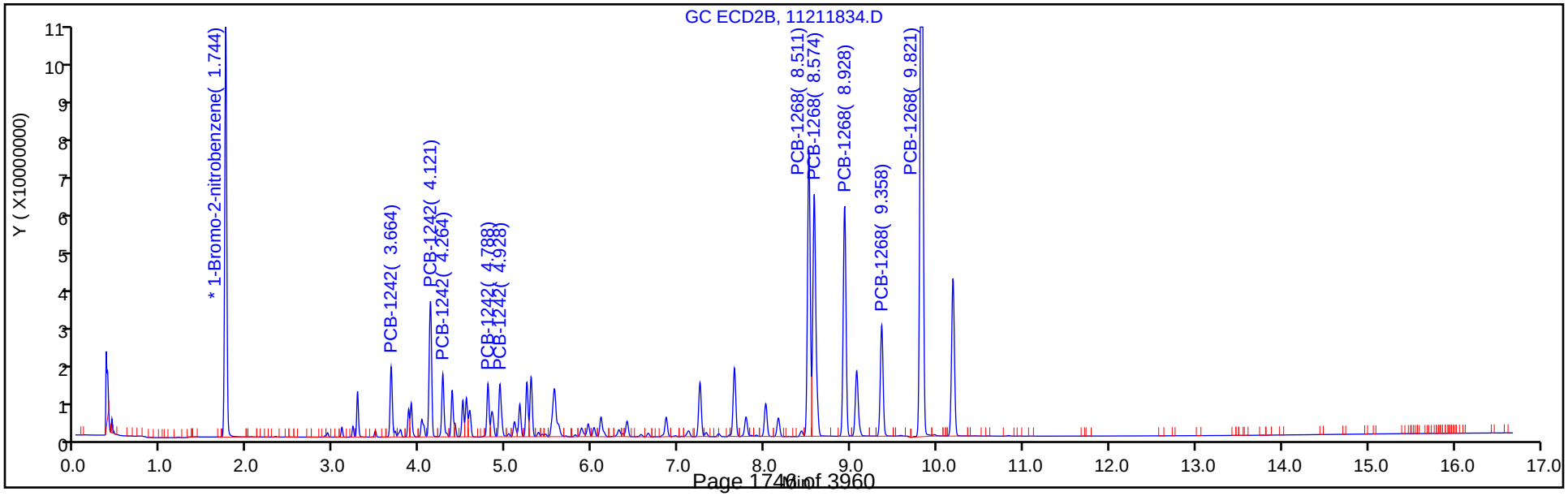
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D

Injection Date:	21-Nov-2018 20:23:44	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL54268			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D
Lims ID: STDL44268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 20:44:55 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL44268
Misc. Info.: 280-0076428-035
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32694800	1000.0	1000.0	
2	1.745	1.744	0.001	183441113	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	6934698	250.0	263.7	
1	4.118	4.117	0.001	11431468	250.0	247.7	
1	4.265	4.264	0.001	5115672	250.0	258.6	
1	5.238	5.237	0.001	3600286	250.0	264.2	
1	5.261	5.261	0.000	4215035	250.0	240.5	
		Average of Peak Amounts =				254.9	
2	3.665	3.664	0.001	17497734	250.0	264.7	
2	4.121	4.121	0.000	37814505	250.0	260.3	
2	4.265	4.264	0.001	16456921	250.0	261.4	
2	4.788	4.788	0.000	13877871	250.0	265.3	
2	4.928	4.928	0.000	15905764	250.0	260.0	
		Average of Peak Amounts =				262.4	
						RPD = 2.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	23038908	250.0	244.9	
1	8.434	8.434	0.000	23666972	250.0	249.8	
1	8.708	8.707	0.001	18843418	250.0	246.0	
1	9.224	9.224	0.000	7827884	250.0	244.4	
1	9.638	9.637	0.001	56736910	250.0	249.0	
		Average of Peak Amounts =				246.8	
2	8.511	8.511	0.000	89874672	250.0	260.4	
2	8.575	8.574	0.001	84348061	250.0	258.1	
2	8.928	8.928	0.000	73465781	250.0	258.8	
2	9.358	9.358	0.000	35091487	250.0	259.9	
2	9.821	9.821	0.000	224575190	250.0	258.9	
		Average of Peak Amounts =				259.2	
						RPD = 4.90	
S 8 Polychlorinated biphenyls, Total							
1						501.7	
2						521.6	
						RPD = 3.88	

Reagents:

AR_4268_L4_00023	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

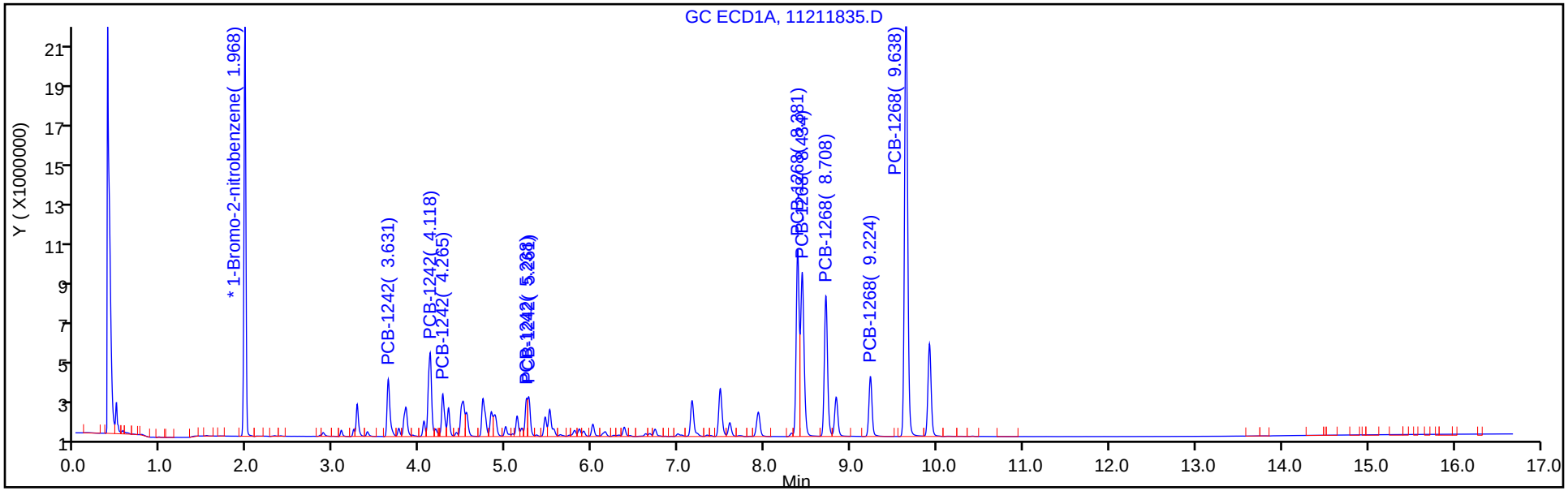
Report Date: 23-Nov-2018 11:03:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

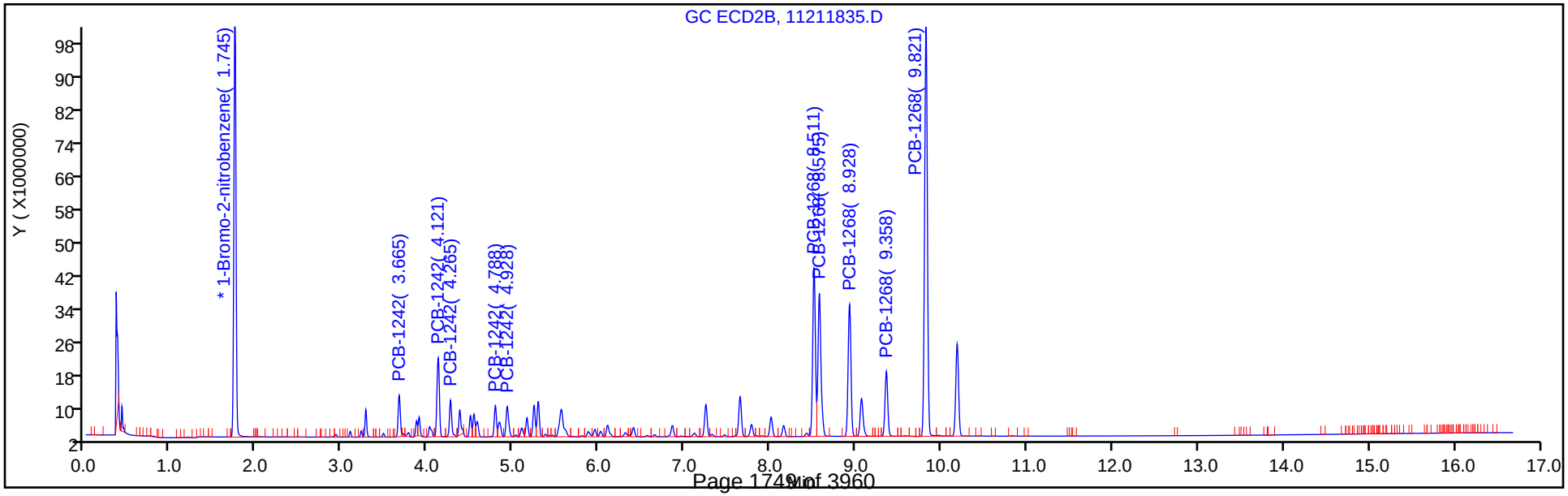
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D

Injection Date:	21-Nov-2018 20:44:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL44268			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D
Lims ID: STDL34268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 21:06:06 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL34268
Misc. Info.: 280-0076428-036
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:21 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	29902517	1000.0	1000.0	
2	1.744	1.744	0.000	169052125	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	2785673	100.0	107.8	
1	4.117	4.117	0.000	4243819	100.0	99.4	
1	4.264	4.264	0.000	1990794	100.0	105.3	
1	5.237	5.237	0.000	1439135	100.0	108.9	
1	5.261	5.261	0.000	1616814	100.0	100.0	
		Average of Peak Amounts =				104.3	
2	3.664	3.664	0.000	7236657	100.0	108.6	
2	4.121	4.121	0.000	15341647	100.0	106.4	
2	4.264	4.264	0.000	6684107	100.0	106.7	
2	4.788	4.788	0.000	5937221	100.0	108.2	
2	4.928	4.928	0.000	6462864	100.0	106.2	
		Average of Peak Amounts =				107.2	
						RPD = 2.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	8942275	100.0	100.6	
1	8.434	8.434	0.000	9204821	100.0	104.1	
1	8.707	8.707	0.000	7521874	100.0	104.1	
1	9.224	9.224	0.000	3714053	100.0	122.6	
1	9.641	9.637	0.004	22672079	100.0	105.9	
		Average of Peak Amounts =				107.5	
2	8.511	8.511	0.000	37039039	100.0	108.4	
2	8.574	8.574	0.000	34510186	100.0	107.4	
2	8.928	8.928	0.000	29936037	100.0	107.2	
2	9.358	9.358	0.000	14362338	100.0	108.0	
2	9.821	9.821	0.000	93152179	100.0	109.0	
		Average of Peak Amounts =				108.0	
						RPD = 0.49	
S 8 Polychlorinated biphenyls, Total							
1						211.8	
2						215.2	
						RPD = 1.62	

Reagents:

AR_4268_L3_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

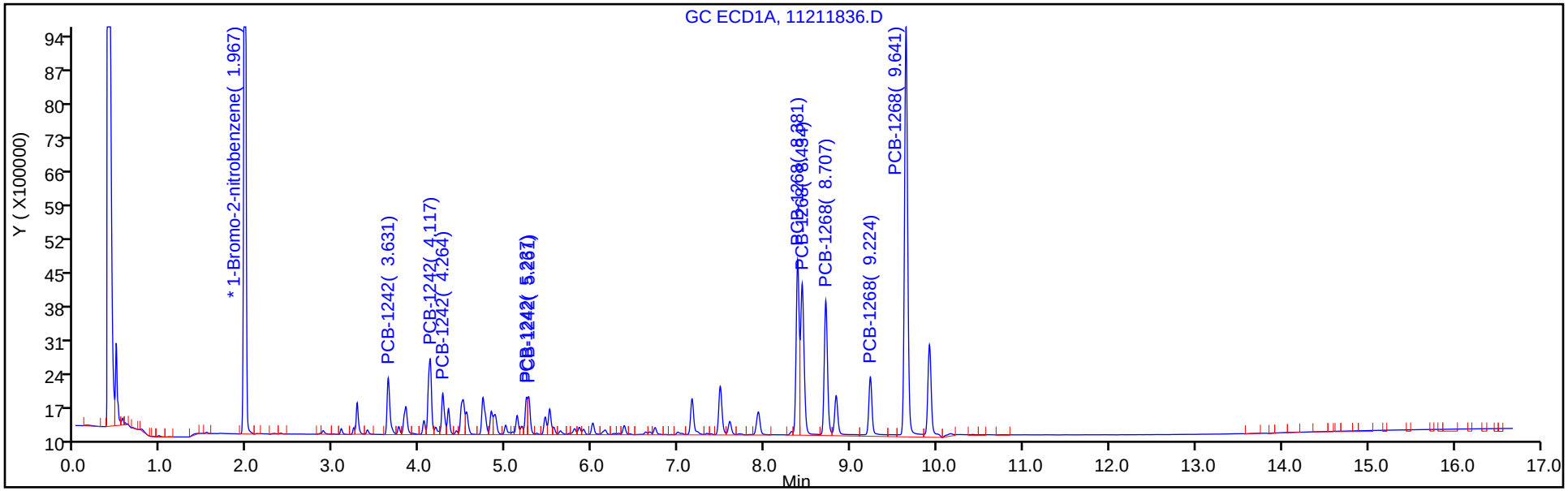
Report Date: 23-Nov-2018 11:03:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

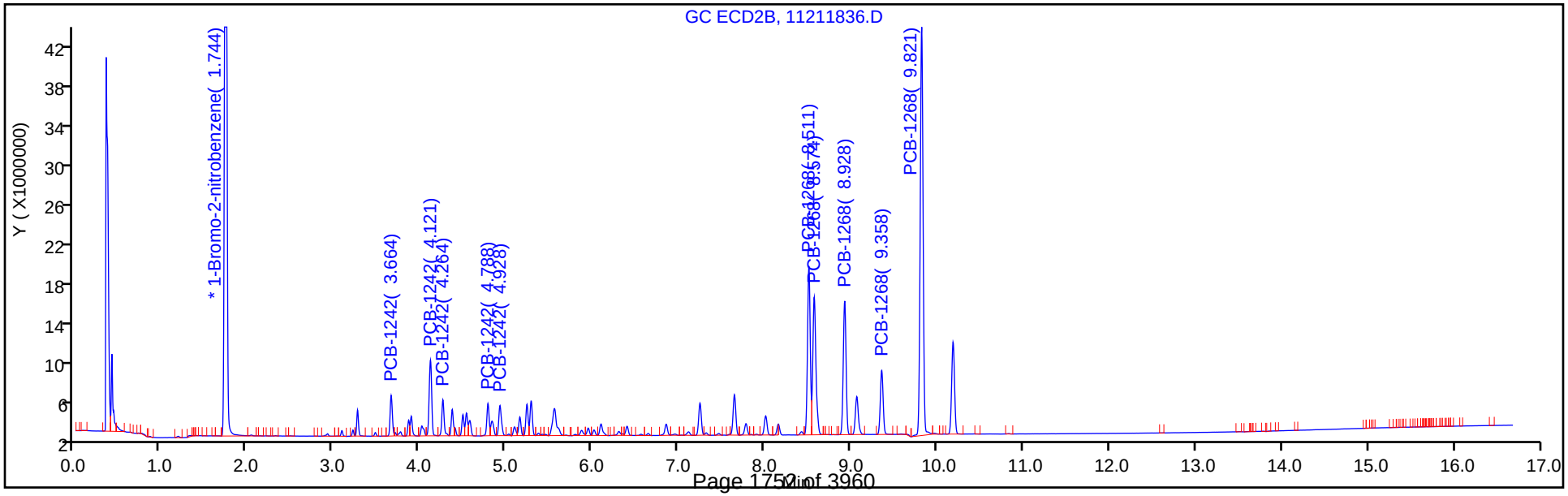
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D

Injection Date:	21-Nov-2018 21:06:06	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL34268			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D
Lims ID: STDL24268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 21:27:18 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL24268
Misc. Info.: 280-0076428-037
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:23 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32348608	1000.0	1000.0	
2	1.745	1.744	0.001	181848580	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	1591803	50.0	50.2	
1	4.118	4.117	0.001	2334811	50.0	49.6	
1	4.264	4.264	0.000	1089072	50.0	49.2	
1	5.234	5.237	-0.003	783867	50.0	49.0	
1	5.261	5.261	0.000	848605	50.0	47.7	
		Average of Peak Amounts =				49.2	
2	3.665	3.664	0.001	4196303	50.0	50.0	
2	4.121	4.121	0.000	8787056	50.0	49.8	
2	4.265	4.264	0.001	3857429	50.0	50.2	
2	4.788	4.788	0.000	3715663	50.0	51.2	
2	4.928	4.928	0.000	3803015	50.0	51.3	
		Average of Peak Amounts =				50.5	
						RPD = 2.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	4962556	50.0	48.8	
1	8.434	8.434	0.000	4896006	50.0	49.3	
1	8.708	8.707	0.001	4064693	50.0	49.2	
1	9.224	9.224	0.000	1653587	50.0	45.4	
1	9.638	9.637	0.001	11777400	50.0	48.2	
		Average of Peak Amounts =				48.2	
2	8.511	8.511	0.000	20840173	50.0	49.8	
2	8.575	8.574	0.001	19449827	50.0	50.1	
2	8.928	8.928	0.000	16824081	50.0	49.8	
2	9.358	9.358	0.000	8076058	50.0	50.1	
2	9.821	9.821	0.000	51994829	50.0	50.0	
		Average of Peak Amounts =				50.0	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						97.3	
2						100.5	
						RPD = 3.17	

Reagents:

AR_4268_L2_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

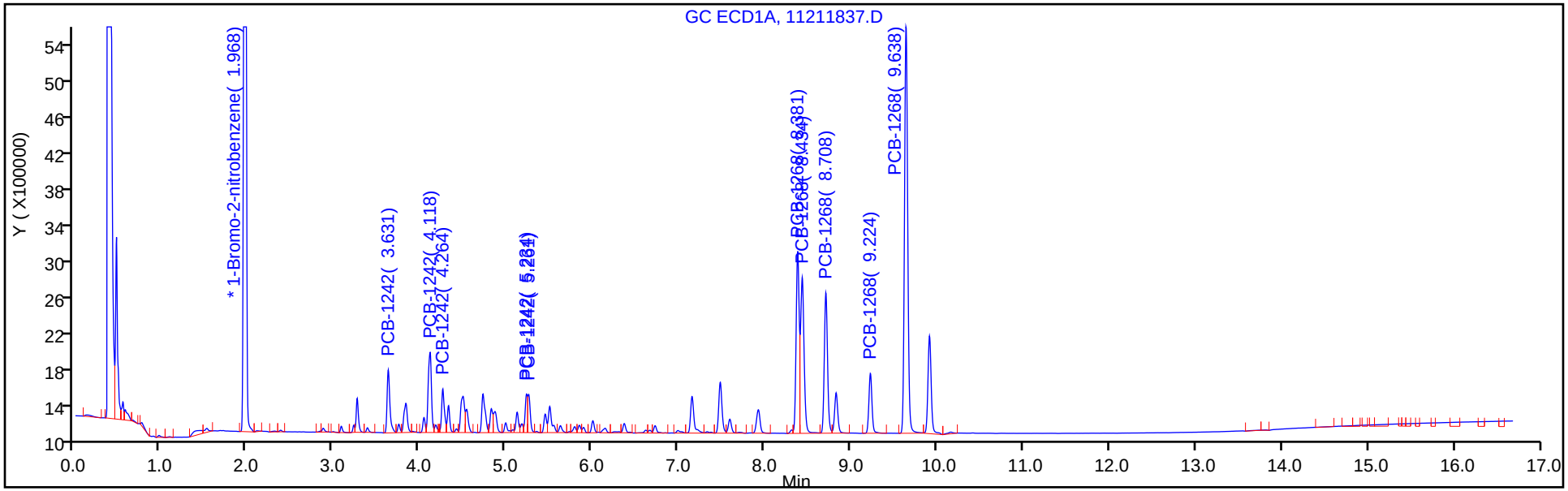
Report Date: 23-Nov-2018 11:03:24 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

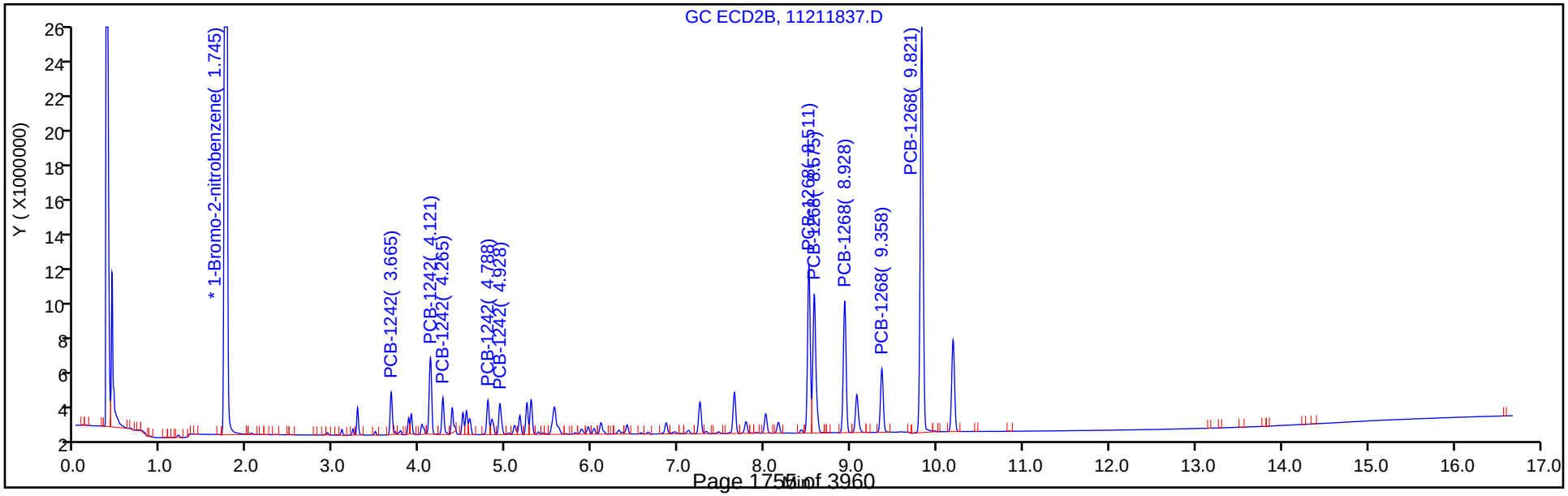
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D

Injection Date:	21-Nov-2018 21:27:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL24268			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D
Lims ID: STDL14268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 21:48:29 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL14268
Misc. Info.: 280-0076428-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:28 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:35:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30052215	1000.0	1000.0	
2	1.747	1.744	0.003	169482834	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	826846	25.0	21.8	
1	4.117	4.117	0.000	1153326	25.0	25.5	
1	4.263	4.264	-0.001	560286	25.0	23.6	
1	5.237	5.237	0.000	403656	25.0	22.0	
1	5.260	5.261	-0.001	461108	25.0	27.3	
		Average of Peak Amounts =				24.0	
2	3.663	3.664	-0.001	2277242	25.0	21.4	
2	4.120	4.121	-0.001	4714790	25.0	22.5	
2	4.267	4.264	0.003	2052043	25.0	22.1	
2	4.787	4.788	-0.001	2142202	25.0	21.0	
2	4.927	4.928	-0.001	1976394	25.0	21.9	
		Average of Peak Amounts =				21.8	
						RPD = 9.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.380	8.381	-0.001	2677797	25.0	25.9	
1	8.433	8.434	-0.001	2398046	25.0	24.3	
1	8.707	8.707	0.000	2096540	25.0	24.8	
1	9.223	9.224	-0.001	888286	25.0	22.6	
1	9.640	9.637	0.003	6071834	25.0	24.5	
		Average of Peak Amounts =				24.4	
2	8.510	8.511	-0.001	11047301	25.0	22.0	
2	8.573	8.574	-0.001	10180170	25.0	22.5	
2	8.927	8.928	-0.001	8862587	25.0	22.5	
2	9.357	9.358	-0.001	4193339	25.0	22.0	
2	9.820	9.821	-0.001	27200635	25.0	22.0	
		Average of Peak Amounts =				22.2	
						RPD = 9.35	
S 8 Polychlorinated biphenyls, Total							
1						48.4	
2						44.0	
						RPD = 9.57	

Reagents:

AR_4268_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

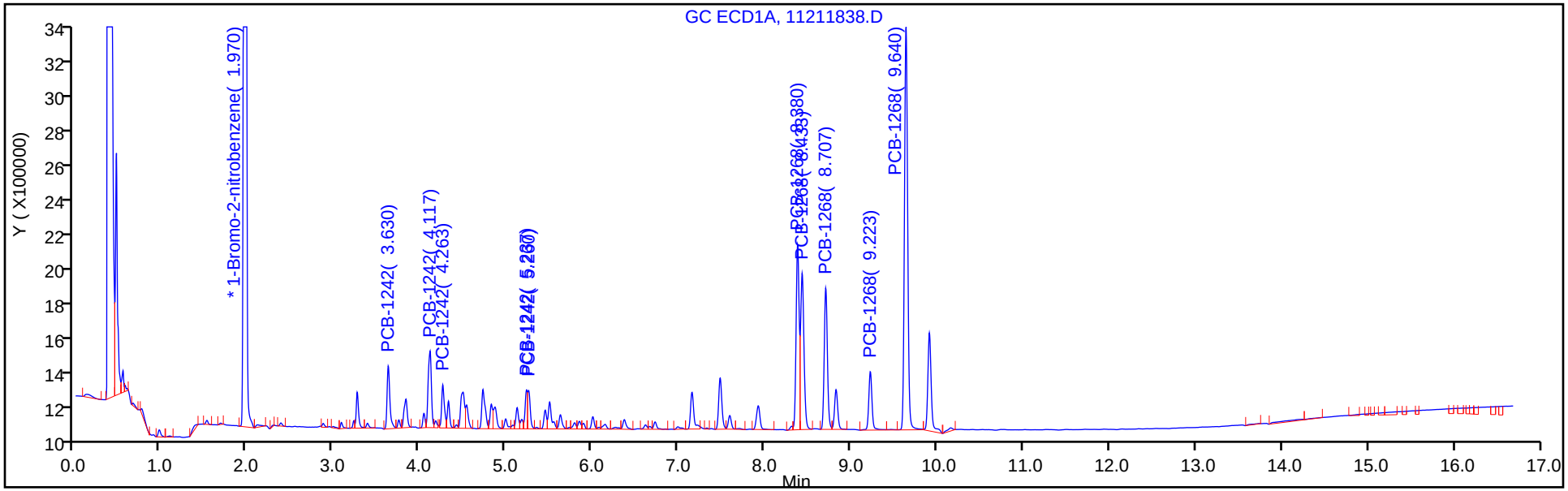
Report Date: 23-Nov-2018 11:03:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

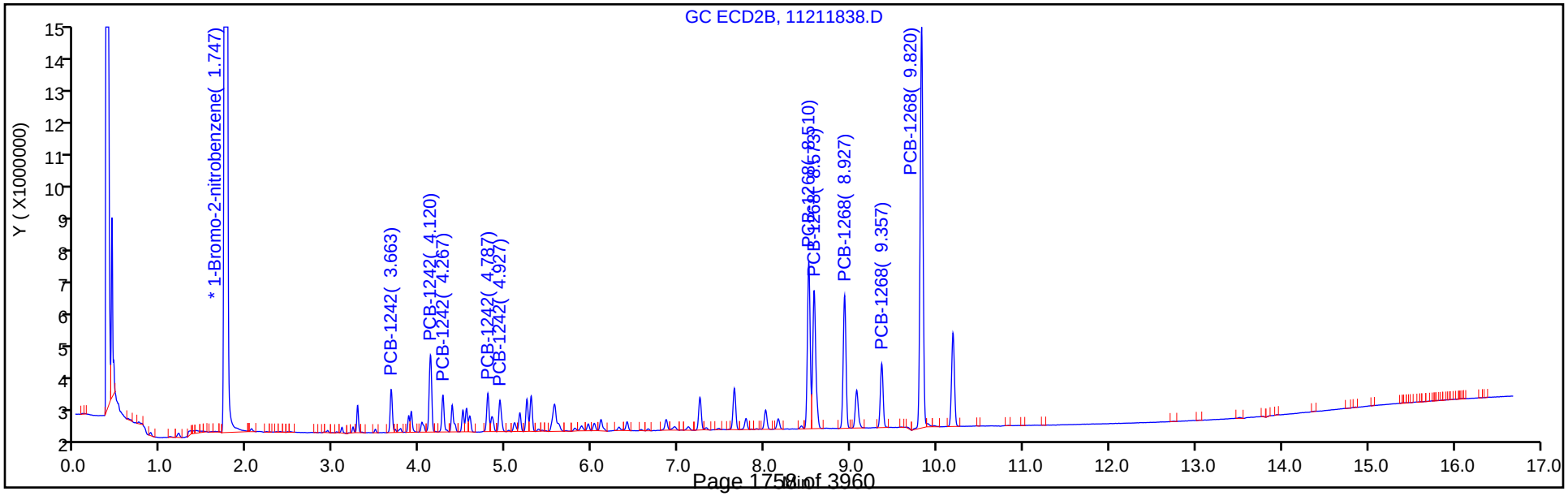
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Injection Date:	21-Nov-2018 21:48:29	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL14268			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34395

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.5375 0.3479	0.4615 0.3290	0.4281	0.3815	0.3597	Lin1	6.2242	0.3368							0.9980		0.9900
PCB-1242 Peak 2	1.1127 0.7792	0.9664 0.7325	0.9075	0.8246	0.7845	Lin1	10.977	0.7497							0.9990		0.9900
PCB-1242 Peak 3	0.4843 0.3374	0.4242 0.3170	0.3954	0.3588	0.3392	Lin1	4.9231	0.3244							0.9980		0.9900
PCB-1242 Peak 4	0.5056 0.2732	0.4087 0.2537	0.3512	0.3026	0.2760	Lin1	7.2210	0.2579							0.9980		0.9900
PCB-1242 Peak 5	0.4665 0.3295	0.4183 0.3085	0.3823	0.3468	0.3265	Lin1	4.7486	0.3152							0.9990		0.9900
PCB-1268 Peak 1	2.6073 1.8777	2.2920 1.7261	2.1910	1.9597	1.8497	Lin1	25.916	1.7819							0.9980		0.9900
PCB-1268 Peak 2	2.4026 1.7797	2.1391 1.6588	2.0414	1.8392	1.7341	Lin1	21.960	1.6964							0.9990		0.9900
PCB-1268 Peak 3	2.0917 1.5507	1.8503 1.4330	1.7708	1.6019	1.5137	Lin1	19.128	1.4734							0.9980		0.9900
PCB-1268 Peak 4	0.9897 0.7383	0.8882 0.6783	0.8496	0.7652	0.7220	Lin1	9.3078	0.7003							0.9980		0.9900
PCB-1268 Peak 5	6.4197 4.7211	5.7185 4.3768	5.5103	4.8969	4.6109	Lin1	61.458	4.4914							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34395

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Lin1	2277242 44959096	4196303 58050740	7236657	17497734	32047030	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 2	BNB	Lin1	4714790 100690473	8787056 129222617	15341647	37814505	69892795	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 3	BNB	Lin1	2052043 43601831	3857429 55919168	6684107	16456921	30223208	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 4	BNB	Lin1	2142202 35305208	3715663 44752744	5937221	13877871	24589768	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 5	BNB	Lin1	1976394 42582862	3803015 54422086	6462864	15905764	29090693	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 1	BNB	Lin1	11047301 242643975	20840173 304523679	37039039	89874672	164790872	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 2	BNB	Lin1	10180170 229976284	19449827 292646780	34510186	84348061	154491173	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 3	BNB	Lin1	8862587 200377742	16824081 252817304	29936037	73465781	134857881	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 4	BNB	Lin1	4193339 95407700	8076058 119674966	14362338	35091487	64325885	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 5	BNB	Lin1	27200635 610063306	51994829 772165320	93152179	224575190	410787422	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D
Lims ID: STDL74268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 19:41:25 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL74268
Misc. Info.: 280-0076428-032
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:08 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.968	0.001	31482365	1000.0	1000.0	
2	1.749	1.748	0.001	176421211	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.632	3.631	0.001	23666995	1000.0	970.7	
1	4.116	4.117	-0.001	43906093	1000.0	993.4	
1	4.262	4.264	-0.002	18245316	1000.0	980.1	
1	5.239	5.237	0.002	12139444	1000.0	954.3	
1	5.259	5.261	-0.002	17036171	1000.0	1014.3	
		Average of Peak Amounts =				982.6	
2	3.666	3.664	0.002	58050740	1000.0	958.5	
2	4.122	4.121	0.001	129222617	1000.0	962.4	
2	4.266	4.264	0.002	55919168	1000.0	961.9	
2	4.789	4.788	0.001	44752744	1000.0	955.6	
2	4.926	4.928	-0.002	54422086	1000.0	963.6	
		Average of Peak Amounts =				960.4	
						RPD = 2.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.382	8.381	0.001	87356816	1000.0	981.3	
1	8.432	8.434	-0.002	88389199	1000.0	979.2	
1	8.709	8.707	0.002	71195019	1000.0	982.0	
1	9.226	9.224	0.002	29381338	1000.0	977.8	
1	9.639	9.637	0.002	210173125	1000.0	972.5	
		Average of Peak Amounts =				978.6	
2	8.512	8.511	0.001	304523679	1000.0	954.1	
2	8.576	8.574	0.002	292646780	1000.0	964.9	
2	8.929	8.928	0.001	252817304	1000.0	959.6	
2	9.359	9.358	0.001	119674966	1000.0	955.3	
2	9.819	9.821	-0.002	772165320	1000.0	960.8	
		Average of Peak Amounts =				959.0	
						RPD = 2.02	
S 8 Polychlorinated biphenyls, Total							
1						1961.1	
2						1919.4	
						RPD = 2.15	

Reagents:

AR_4268_L7_00016	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

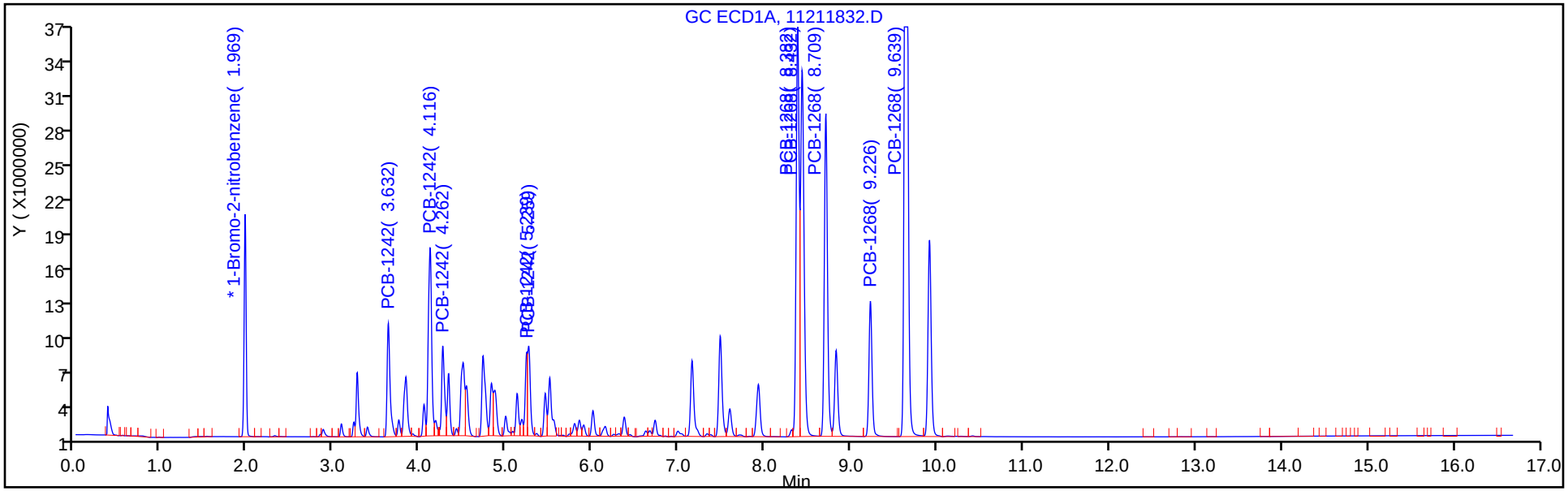
Report Date: 23-Nov-2018 11:03:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

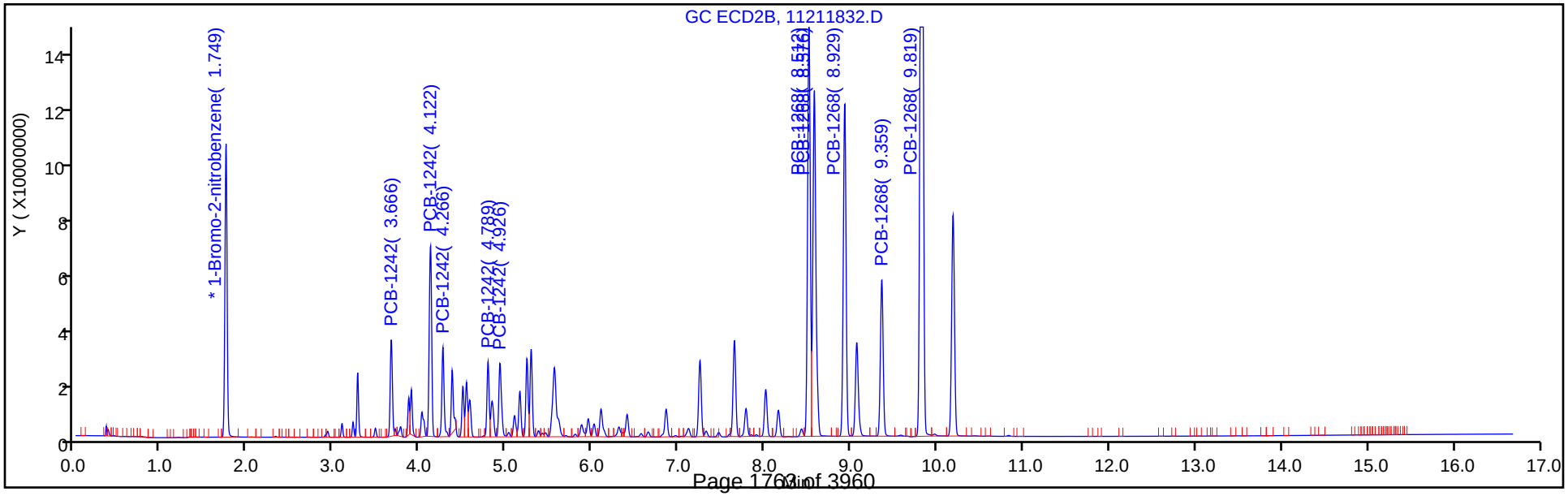
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D

Injection Date:	21-Nov-2018 19:41:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL74268			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D
Lims ID: STDL64268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 20:02:35 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL64268
Misc. Info.: 280-0076428-033
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:11 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:33:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.968	-0.002	30724311	1000.0	1000.0	
2	1.747	1.748	-0.001	172295175	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	18033958	750.0	754.8	
1	4.116	4.117	-0.001	33088198	750.0	766.7	
1	4.263	4.264	-0.001	13939481	750.0	765.5	
1	5.236	5.237	-0.001	9565455	750.0	768.3	
1	5.260	5.261	-0.001	12635374	750.0	770.5	
		Average of Peak Amounts =				765.1	
2	3.663	3.664	-0.001	44959096	750.0	756.3	
2	4.120	4.121	-0.001	100690473	750.0	764.9	
2	4.263	4.264	-0.001	43601831	750.0	764.9	
2	4.790	4.788	0.002	35305208	750.0	766.5	
2	4.927	4.928	-0.001	42582862	750.0	769.0	
		Average of Peak Amounts =				764.3	
						RPD = 0.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	68720772	750.0	789.9	
1	8.433	8.434	-0.001	68019827	750.0	771.4	
1	8.710	8.707	0.003	55139677	750.0	778.1	
1	9.226	9.224	0.002	22774873	750.0	774.9	
1	9.640	9.637	0.003	164433426	750.0	778.6	
		Average of Peak Amounts =				778.6	
2	8.513	8.511	0.002	242643975	750.0	775.8	
2	8.573	8.574	-0.001	229976284	750.0	773.9	
2	8.927	8.928	-0.001	200377742	750.0	776.3	
2	9.357	9.358	-0.001	95407700	750.0	777.4	
2	9.820	9.821	-0.001	610063306	750.0	774.7	
		Average of Peak Amounts =				775.6	
						RPD = 0.38	
S 8 Polychlorinated biphenyls, Total							
1						1543.7	
2						1540.0	
						RPD = 0.24	

Reagents:

AR_4268_L6_00018	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

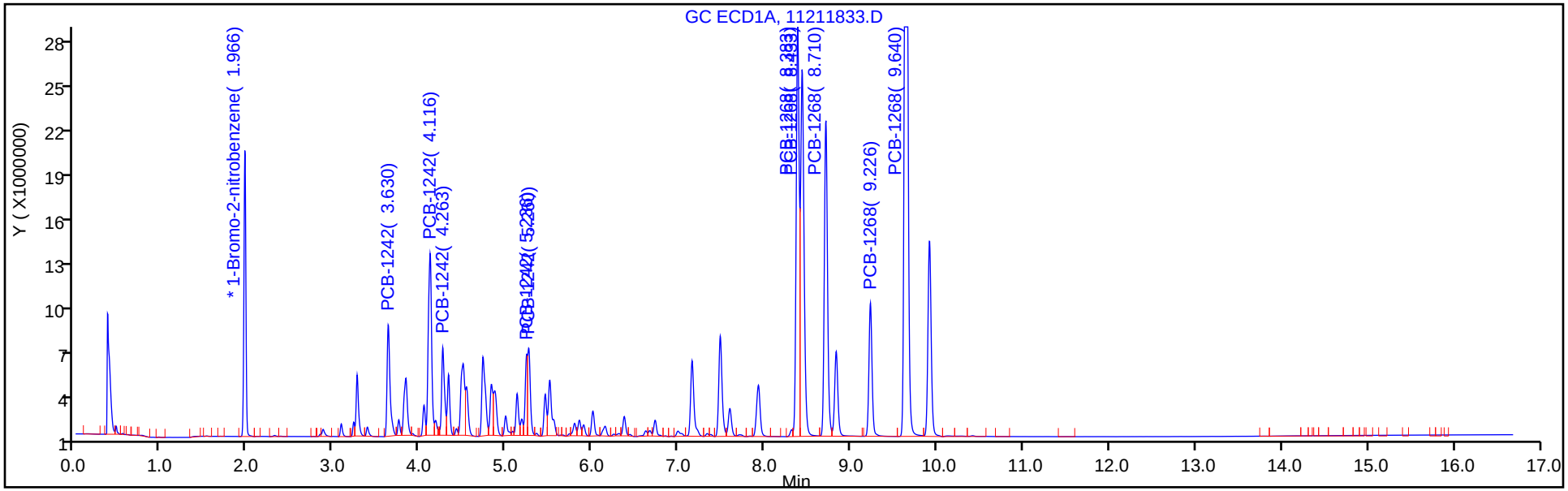
Report Date: 23-Nov-2018 11:03:12 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

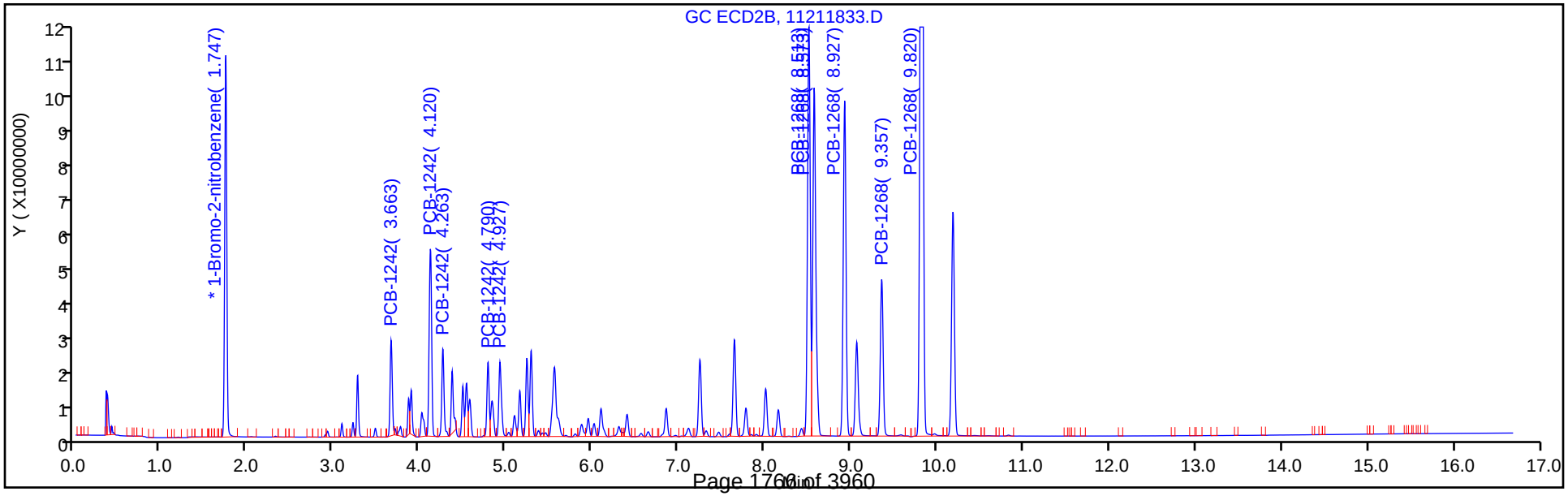
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D

Injection Date:	21-Nov-2018 20:02:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL64268			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D
Lims ID: STDL54268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 20:23:44 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL54268
Misc. Info.: 280-0076428-034
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:31:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	31789266	1000.0	1000.0	
2	1.744	1.744	0.000	178179597	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	12621153	500.0	505.9	
1	4.117	4.117	0.000	22028422	500.0	492.7	
1	4.264	4.264	0.000	9337377	500.0	492.7	
1	5.237	5.237	0.000	6598400	500.0	508.3	
1	5.261	5.261	0.000	8065513	500.0	474.8	
		Average of Peak Amounts =				494.9	
2	3.664	3.664	0.000	32047030	500.0	515.5	
2	4.121	4.121	0.000	69892795	500.0	508.6	
2	4.264	4.264	0.000	30223208	500.0	507.7	
2	4.788	4.788	0.000	24589768	500.0	507.1	
2	4.928	4.928	0.000	29090693	500.0	502.9	
		Average of Peak Amounts =				508.4	
						RPD = 2.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	43739892	500.0	483.7	
1	8.434	8.434	0.000	45452498	500.0	496.9	
1	8.707	8.707	0.000	36138239	500.0	490.8	
1	9.224	9.224	0.000	14918235	500.0	487.4	
1	9.637	9.637	0.000	108847285	500.0	496.3	
		Average of Peak Amounts =				491.0	
2	8.511	8.511	0.000	164790872	500.0	504.5	
2	8.574	8.574	0.000	154491173	500.0	498.2	
2	8.928	8.928	0.000	134857881	500.0	500.7	
2	9.358	9.358	0.000	64325885	500.0	502.2	
2	9.821	9.821	0.000	410787422	500.0	499.6	
		Average of Peak Amounts =				501.0	
						RPD = 2.02	

Reagents:

AR_4268_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

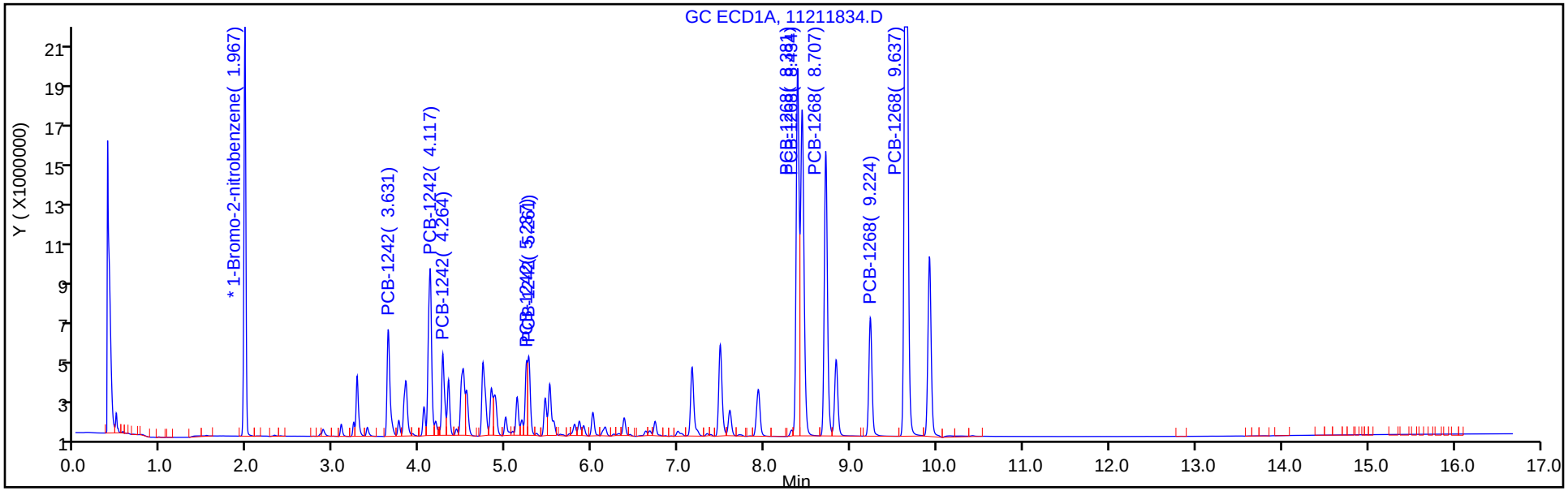
Report Date: 23-Nov-2018 11:03:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

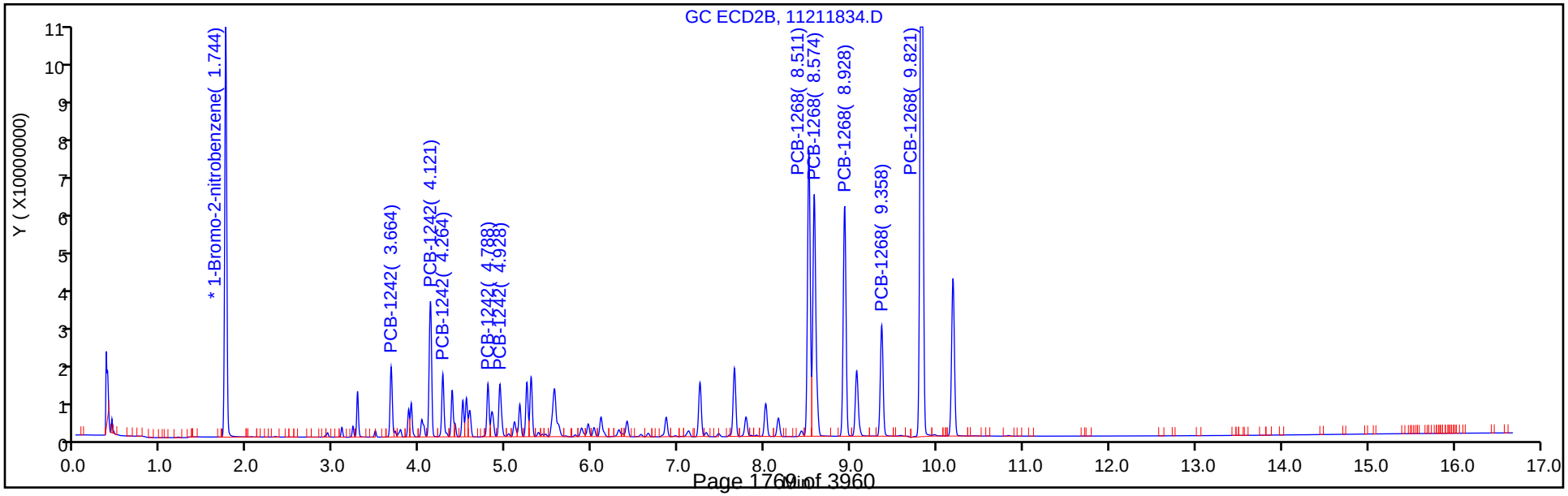
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D

Injection Date:	21-Nov-2018 20:23:44	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL54268			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D
Lims ID: STDL44268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 20:44:55 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL44268
Misc. Info.: 280-0076428-035
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32694800	1000.0	1000.0	
2	1.745	1.744	0.001	183441113	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	6934698	250.0	263.7	
1	4.118	4.117	0.001	11431468	250.0	247.7	
1	4.265	4.264	0.001	5115672	250.0	258.6	
1	5.238	5.237	0.001	3600286	250.0	264.2	
1	5.261	5.261	0.000	4215035	250.0	240.5	
		Average of Peak Amounts =				254.9	
2	3.665	3.664	0.001	17497734	250.0	264.7	
2	4.121	4.121	0.000	37814505	250.0	260.3	
2	4.265	4.264	0.001	16456921	250.0	261.4	
2	4.788	4.788	0.000	13877871	250.0	265.3	
2	4.928	4.928	0.000	15905764	250.0	260.0	
		Average of Peak Amounts =				262.4	
						RPD = 2.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	23038908	250.0	244.9	
1	8.434	8.434	0.000	23666972	250.0	249.8	
1	8.708	8.707	0.001	18843418	250.0	246.0	
1	9.224	9.224	0.000	7827884	250.0	244.4	
1	9.638	9.637	0.001	56736910	250.0	249.0	
		Average of Peak Amounts =				246.8	
2	8.511	8.511	0.000	89874672	250.0	260.4	
2	8.575	8.574	0.001	84348061	250.0	258.1	
2	8.928	8.928	0.000	73465781	250.0	258.8	
2	9.358	9.358	0.000	35091487	250.0	259.9	
2	9.821	9.821	0.000	224575190	250.0	258.9	
		Average of Peak Amounts =				259.2	
						RPD = 4.90	
S 8 Polychlorinated biphenyls, Total							
1						501.7	
2						521.6	
						RPD = 3.88	

Reagents:

AR_4268_L4_00023	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

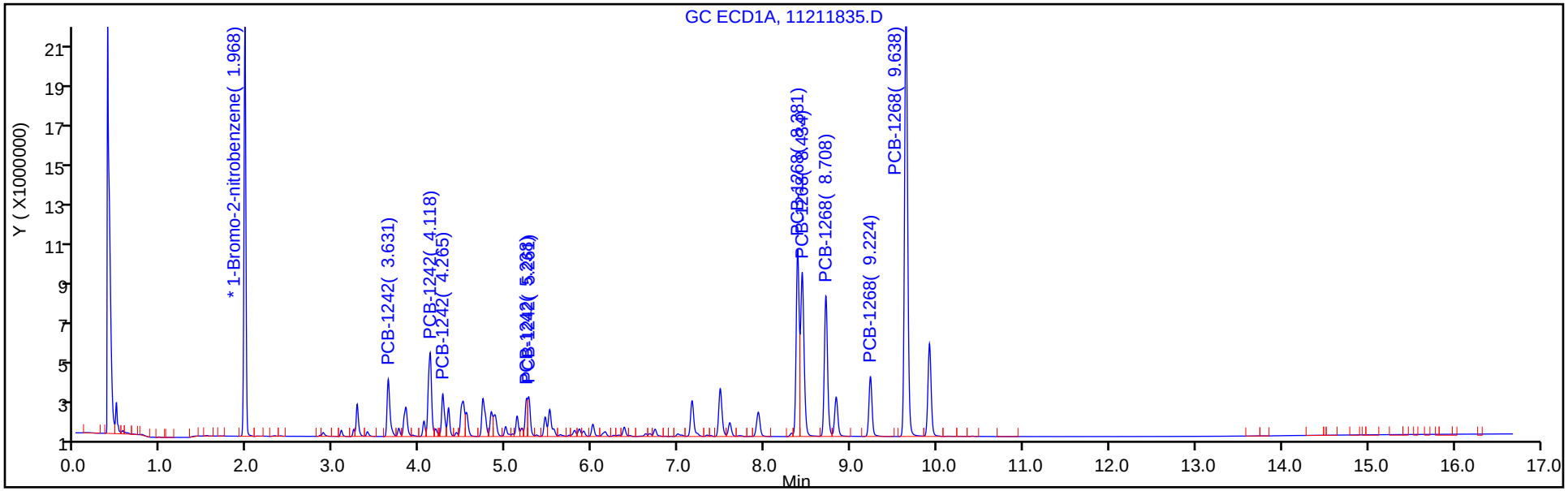
Report Date: 23-Nov-2018 11:03:19 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

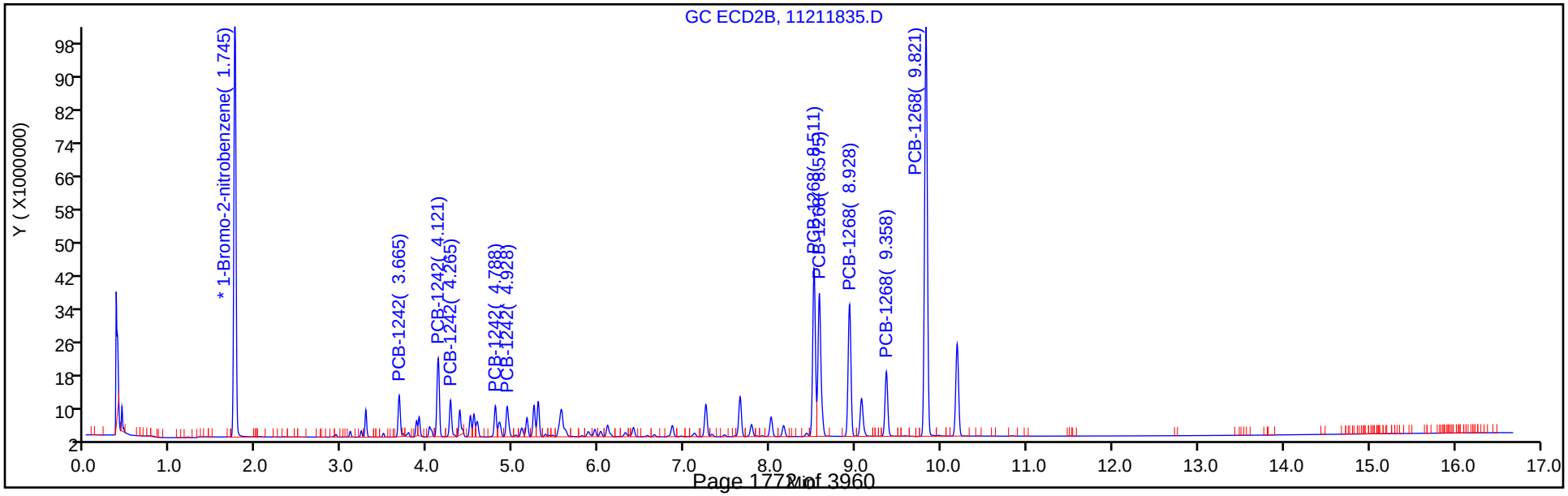
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D

Injection Date:	21-Nov-2018 20:44:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL44268			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D
Lims ID: STDL34268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 21:06:06 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL34268
Misc. Info.: 280-0076428-036
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:21 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	29902517	1000.0	1000.0	
2	1.744	1.744	0.000	169052125	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	2785673	100.0	107.8	
1	4.117	4.117	0.000	4243819	100.0	99.4	
1	4.264	4.264	0.000	1990794	100.0	105.3	
1	5.237	5.237	0.000	1439135	100.0	108.9	
1	5.261	5.261	0.000	1616814	100.0	100.0	
		Average of Peak Amounts =				104.3	
2	3.664	3.664	0.000	7236657	100.0	108.6	
2	4.121	4.121	0.000	15341647	100.0	106.4	
2	4.264	4.264	0.000	6684107	100.0	106.7	
2	4.788	4.788	0.000	5937221	100.0	108.2	
2	4.928	4.928	0.000	6462864	100.0	106.2	
		Average of Peak Amounts =				107.2	
						RPD = 2.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	8942275	100.0	100.6	
1	8.434	8.434	0.000	9204821	100.0	104.1	
1	8.707	8.707	0.000	7521874	100.0	104.1	
1	9.224	9.224	0.000	3714053	100.0	122.6	
1	9.641	9.637	0.004	22672079	100.0	105.9	
		Average of Peak Amounts =				107.5	
2	8.511	8.511	0.000	37039039	100.0	108.4	
2	8.574	8.574	0.000	34510186	100.0	107.4	
2	8.928	8.928	0.000	29936037	100.0	107.2	
2	9.358	9.358	0.000	14362338	100.0	108.0	
2	9.821	9.821	0.000	93152179	100.0	109.0	
		Average of Peak Amounts =				108.0	
						RPD = 0.49	
S 8 Polychlorinated biphenyls, Total							
1						211.8	
2						215.2	
						RPD = 1.62	

Reagents:

AR_4268_L3_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

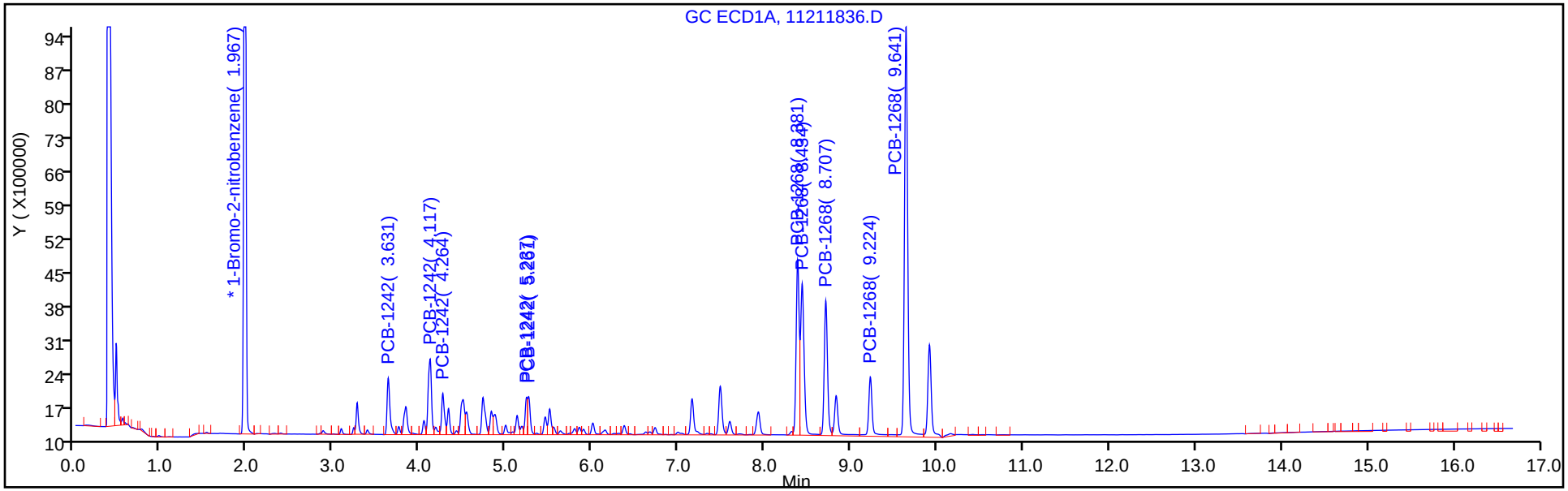
Report Date: 23-Nov-2018 11:03:22 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

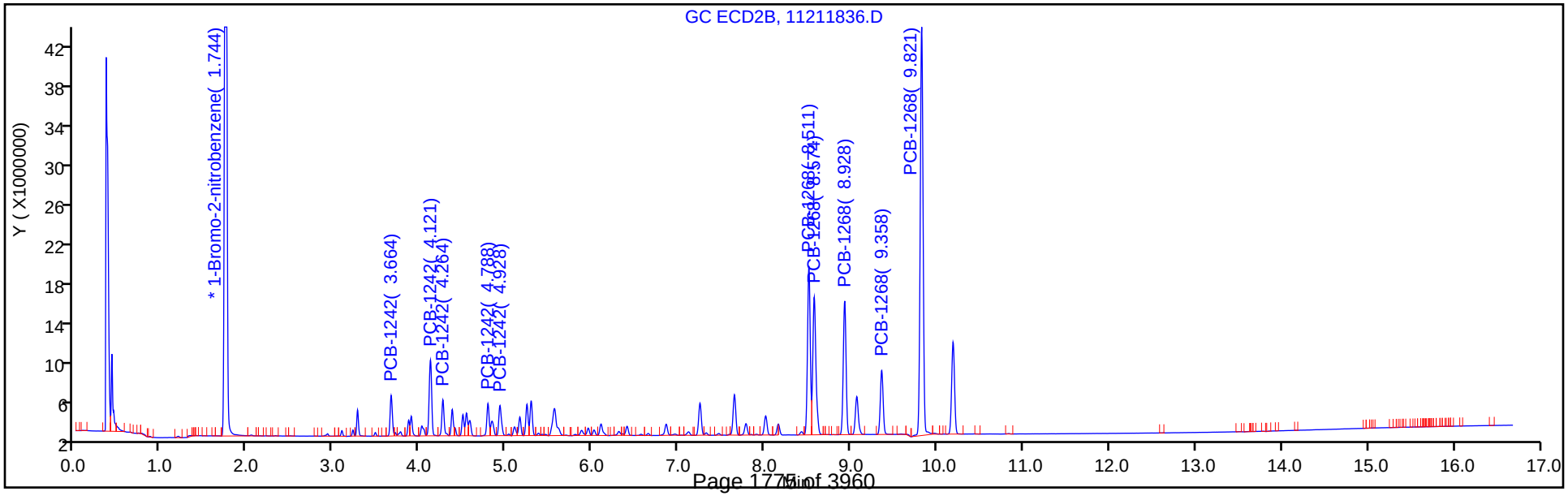
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D

Injection Date:	21-Nov-2018 21:06:06	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL34268			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D
Lims ID: STDL24268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 21:27:18 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL24268
Misc. Info.: 280-0076428-037
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:23 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32348608	1000.0	1000.0	
2	1.745	1.744	0.001	181848580	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	1591803	50.0	50.2	
1	4.118	4.117	0.001	2334811	50.0	49.6	
1	4.264	4.264	0.000	1089072	50.0	49.2	
1	5.234	5.237	-0.003	783867	50.0	49.0	
1	5.261	5.261	0.000	848605	50.0	47.7	
		Average of Peak Amounts =				49.2	
2	3.665	3.664	0.001	4196303	50.0	50.0	
2	4.121	4.121	0.000	8787056	50.0	49.8	
2	4.265	4.264	0.001	3857429	50.0	50.2	
2	4.788	4.788	0.000	3715663	50.0	51.2	
2	4.928	4.928	0.000	3803015	50.0	51.3	
		Average of Peak Amounts =				50.5	
						RPD = 2.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	4962556	50.0	48.8	
1	8.434	8.434	0.000	4896006	50.0	49.3	
1	8.708	8.707	0.001	4064693	50.0	49.2	
1	9.224	9.224	0.000	1653587	50.0	45.4	
1	9.638	9.637	0.001	11777400	50.0	48.2	
		Average of Peak Amounts =				48.2	
2	8.511	8.511	0.000	20840173	50.0	49.8	
2	8.575	8.574	0.001	19449827	50.0	50.1	
2	8.928	8.928	0.000	16824081	50.0	49.8	
2	9.358	9.358	0.000	8076058	50.0	50.1	
2	9.821	9.821	0.000	51994829	50.0	50.0	
		Average of Peak Amounts =				50.0	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						97.3	
2						100.5	
						RPD = 3.17	

Reagents:

AR_4268_L2_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

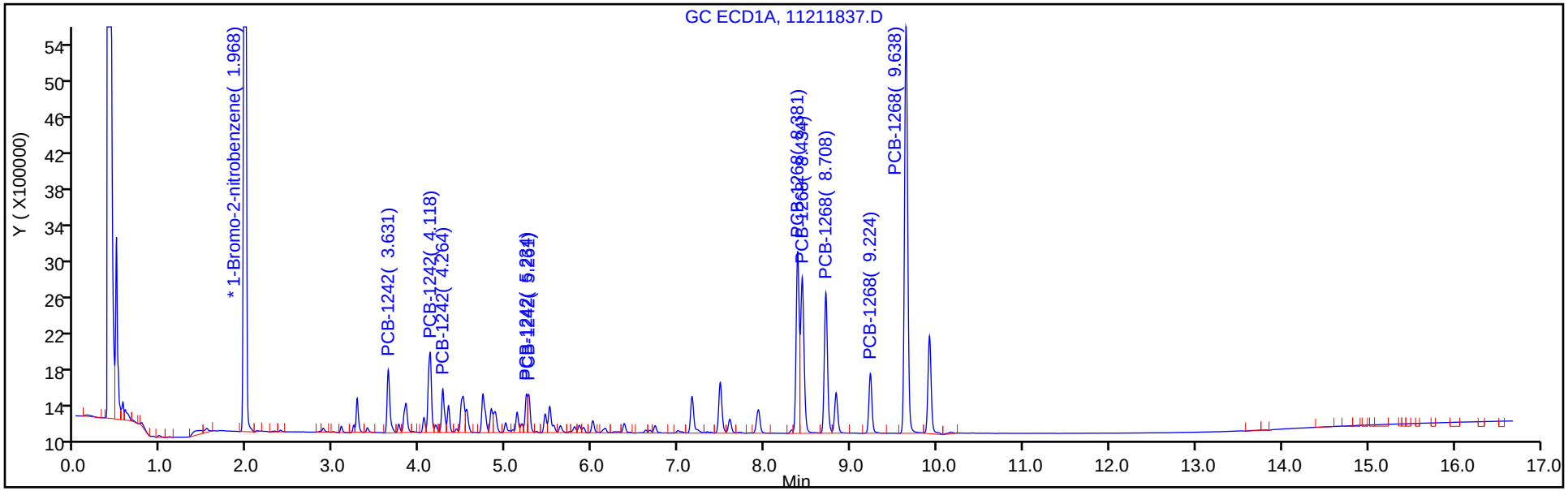
Report Date: 23-Nov-2018 11:03:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

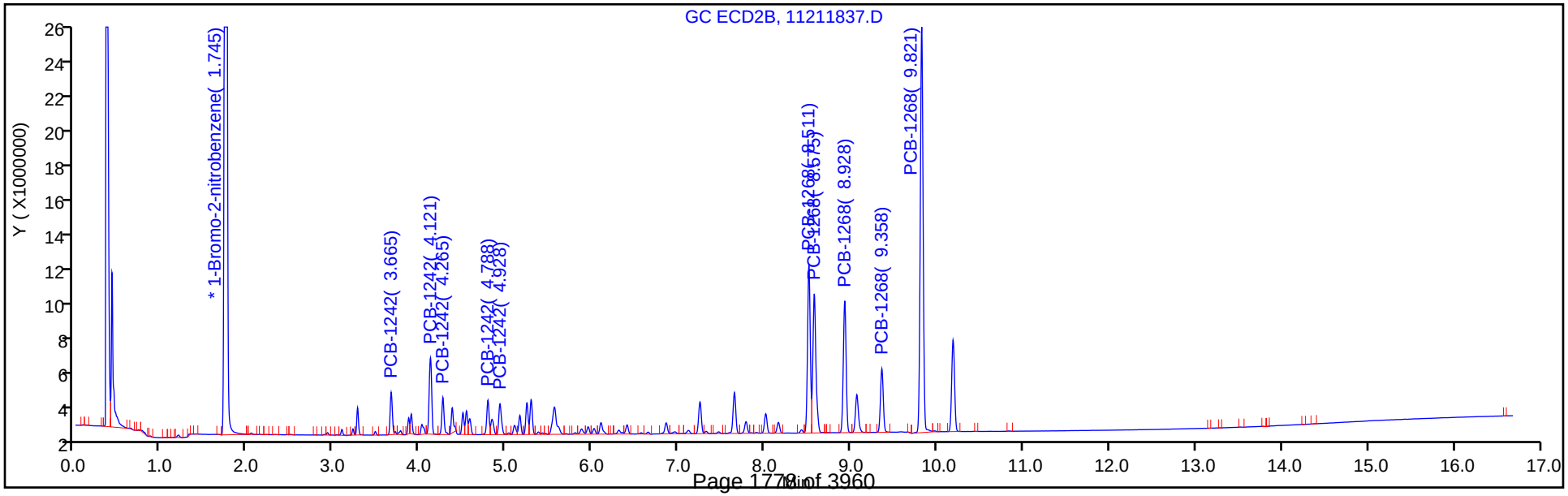
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D

Injection Date:	21-Nov-2018 21:27:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL24268			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D
Lims ID: STDL14268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 21:48:29 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL14268
Misc. Info.: 280-0076428-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:28 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:35:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30052215	1000.0	1000.0	
2	1.747	1.744	0.003	169482834	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	826846	25.0	21.8	
1	4.117	4.117	0.000	1153326	25.0	25.5	
1	4.263	4.264	-0.001	560286	25.0	23.6	
1	5.237	5.237	0.000	403656	25.0	22.0	
1	5.260	5.261	-0.001	461108	25.0	27.3	
		Average of Peak Amounts =				24.0	
2	3.663	3.664	-0.001	2277242	25.0	21.4	
2	4.120	4.121	-0.001	4714790	25.0	22.5	
2	4.267	4.264	0.003	2052043	25.0	22.1	
2	4.787	4.788	-0.001	2142202	25.0	21.0	
2	4.927	4.928	-0.001	1976394	25.0	21.9	
		Average of Peak Amounts =				21.8	
						RPD = 9.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.380	8.381	-0.001	2677797	25.0	25.9	
1	8.433	8.434	-0.001	2398046	25.0	24.3	
1	8.707	8.707	0.000	2096540	25.0	24.8	
1	9.223	9.224	-0.001	888286	25.0	22.6	
1	9.640	9.637	0.003	6071834	25.0	24.5	
		Average of Peak Amounts =				24.4	
2	8.510	8.511	-0.001	11047301	25.0	22.0	
2	8.573	8.574	-0.001	10180170	25.0	22.5	
2	8.927	8.928	-0.001	8862587	25.0	22.5	
2	9.357	9.358	-0.001	4193339	25.0	22.0	
2	9.820	9.821	-0.001	27200635	25.0	22.0	
		Average of Peak Amounts =				22.2	
						RPD = 9.35	
S 8 Polychlorinated biphenyls, Total							
1						48.4	
2						44.0	
						RPD = 9.57	

Reagents:

AR_4268_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

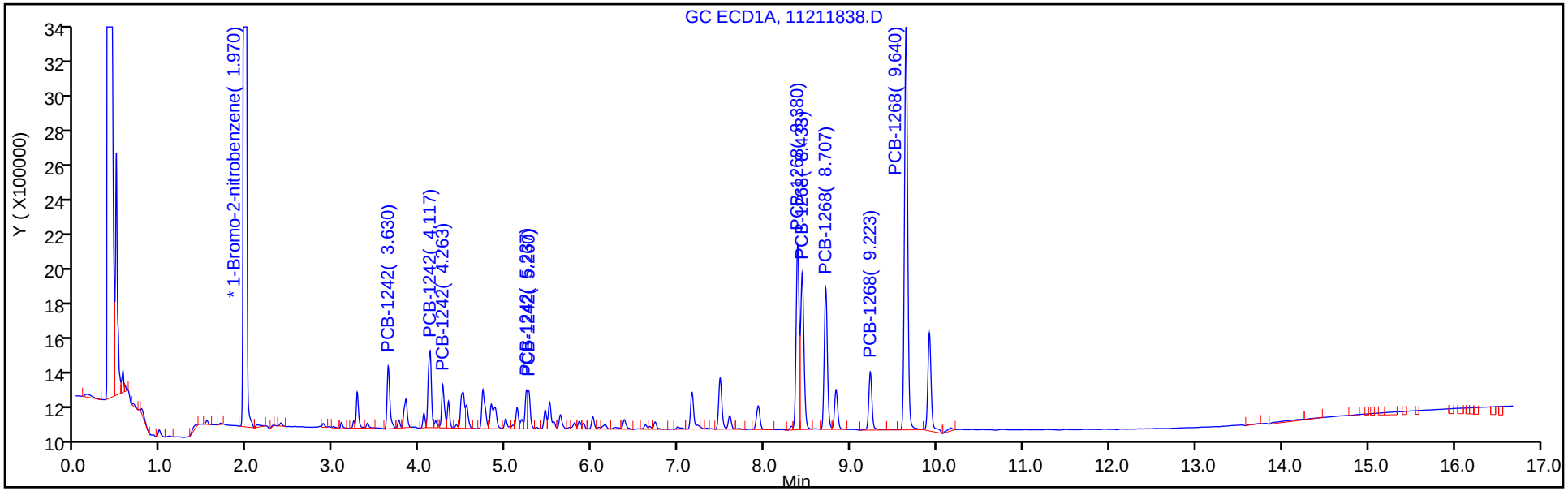
Report Date: 23-Nov-2018 11:03:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

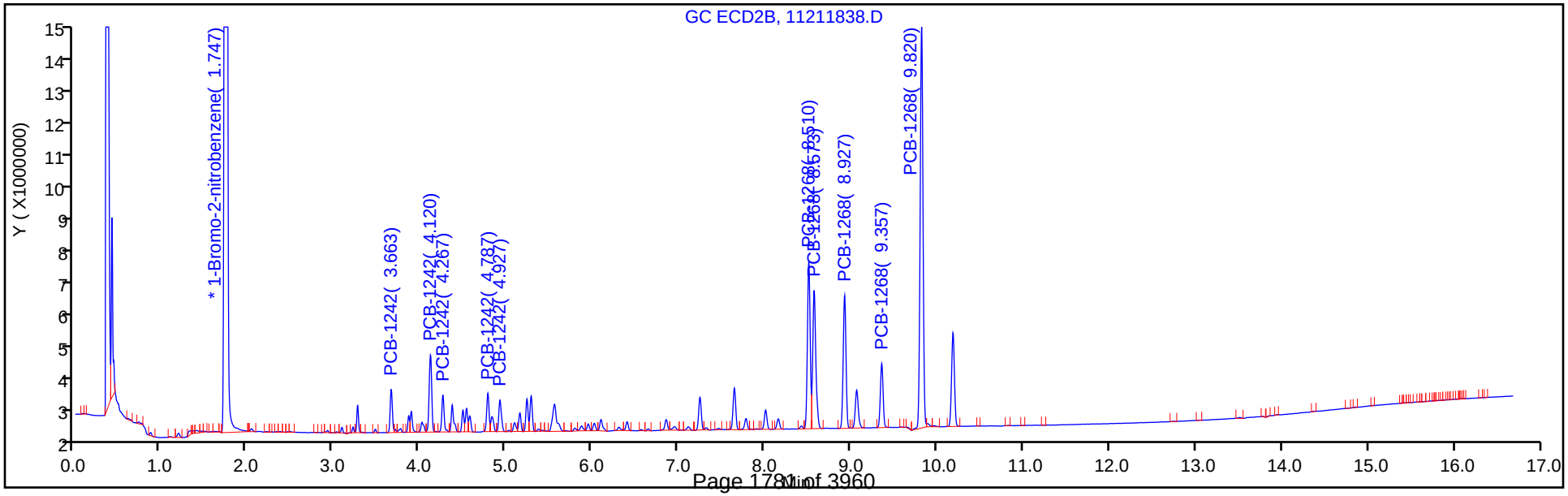
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Injection Date:	21-Nov-2018 21:48:29	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL14268			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Lin1		0.4808		271	250	8.3	20.0
PCB-1248 Peak 2	Lin1		1.136		313	250	25.2*	20.0
PCB-1248 Peak 3	Lin1		1.211		291	250	16.4	20.0
PCB-1248 Peak 4	Lin1		0.8706		299	250	19.6	20.0
PCB-1248 Peak 5	Lin1		0.5227		274	250	9.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	3.63	3.38	3.88
PCB-1248 Peak 2	4.12	3.87	4.37
PCB-1248 Peak 3	4.73	4.48	4.98
PCB-1248 Peak 4	5.51	5.26	5.76
PCB-1248 Peak 5	6.01	5.76	6.26

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:09:37 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-039
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 16:31:48 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

First Level Reviewer: patadiab Date: 23-Nov-2018 10:36:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.967	0.005	27962663	1000.0	1000.0	
2	1.749	1.744	0.005	158680424	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.629	3.629	0.000	3361129	250.0	270.7	
1	4.116	4.115	0.001	7939440	250.0	313.1	
1	4.729	4.729	0.000	8467096	250.0	291.0	
1	5.506	5.505	0.001	6086245	250.0	298.9	
1	6.006	6.005	0.001	3653650	250.0	274.3	
		Average of Peak Amounts =				289.6	
2	4.119	4.119	0.000	27239499	250.0	322.7	
2	4.499	4.499	0.000	14508774	250.0	290.5	
2	4.789	4.789	0.000	20289286	250.0	294.8	
2	4.926	4.929	-0.003	23450109	250.0	310.7	
2	6.099	6.102	-0.003	14715297	250.0	283.0	
		Average of Peak Amounts =				300.3	
						RPD = 3.64	

Reagents:

AR_1248_ICV_00013 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

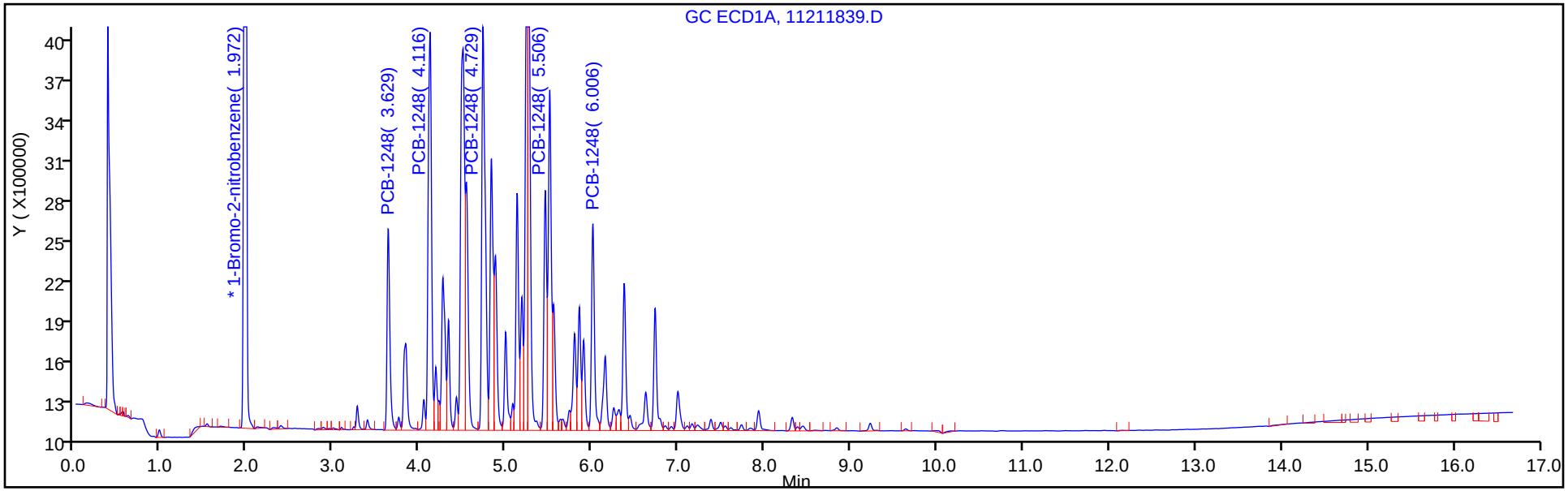
Report Date: 29-Nov-2018 16:31:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

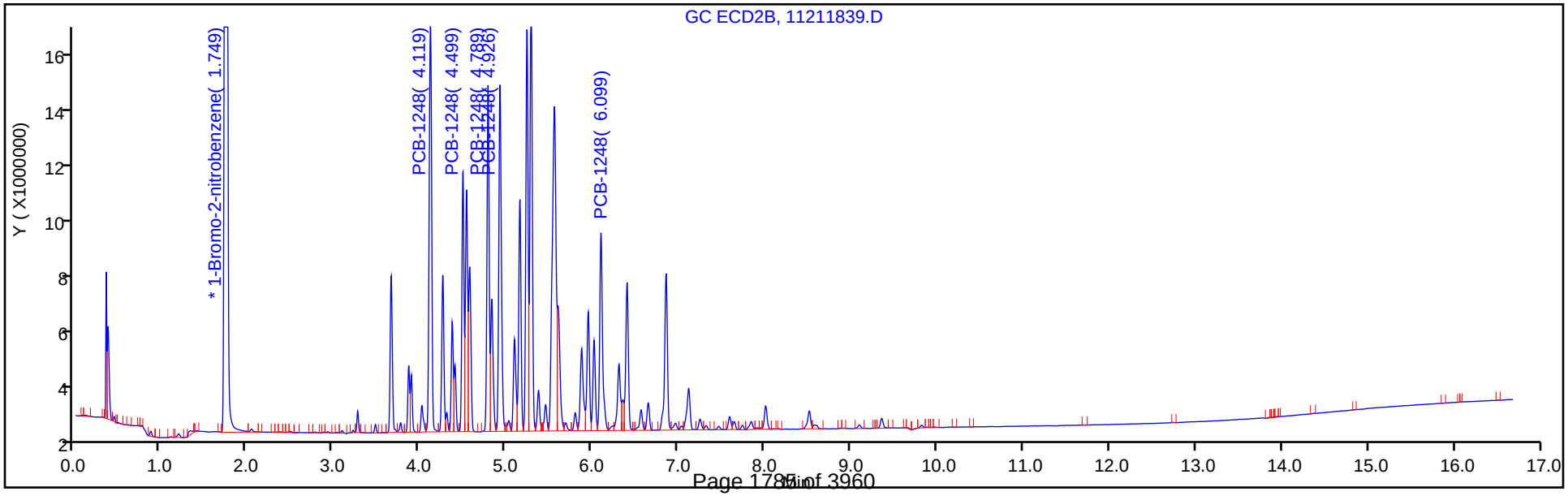
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D

Injection Date:	21-Nov-2018 22:09:37	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Lin1		0.6867		323	250	29.1*	20.0
PCB-1248 Peak 2	Lin1		0.3657		290	250	16.2	20.0
PCB-1248 Peak 3	Lin1		0.5115		295	250	17.9	20.0
PCB-1248 Peak 4	Lin1		0.5911		311	250	24.3*	20.0
PCB-1248 Peak 5	Lin1		0.3709		283	250	13.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	4.12	3.87	4.37
PCB-1248 Peak 2	4.50	4.25	4.75
PCB-1248 Peak 3	4.79	4.54	5.04
PCB-1248 Peak 4	4.93	4.68	5.18
PCB-1248 Peak 5	6.10	5.85	6.35

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:09:37 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-039
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 16:31:48 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

First Level Reviewer: patadiab Date: 23-Nov-2018 10:36:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.967	0.005	27962663	1000.0	1000.0	
2	1.749	1.744	0.005	158680424	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.629	3.629	0.000	3361129	250.0	270.7	
1	4.116	4.115	0.001	7939440	250.0	313.1	
1	4.729	4.729	0.000	8467096	250.0	291.0	
1	5.506	5.505	0.001	6086245	250.0	298.9	
1	6.006	6.005	0.001	3653650	250.0	274.3	
		Average of Peak Amounts =				289.6	
2	4.119	4.119	0.000	27239499	250.0	322.7	
2	4.499	4.499	0.000	14508774	250.0	290.5	
2	4.789	4.789	0.000	20289286	250.0	294.8	
2	4.926	4.929	-0.003	23450109	250.0	310.7	
2	6.099	6.102	-0.003	14715297	250.0	283.0	
		Average of Peak Amounts =				300.3	
						RPD = 3.64	

Reagents:

AR_1248_ICV_00013 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

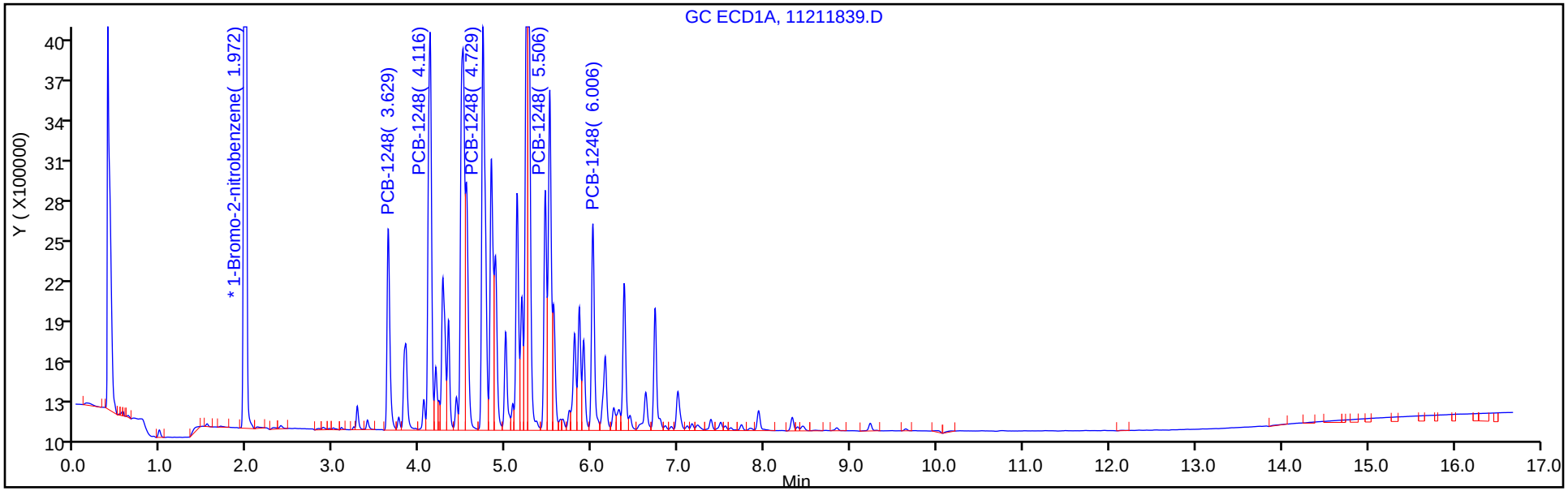
Report Date: 29-Nov-2018 16:31:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

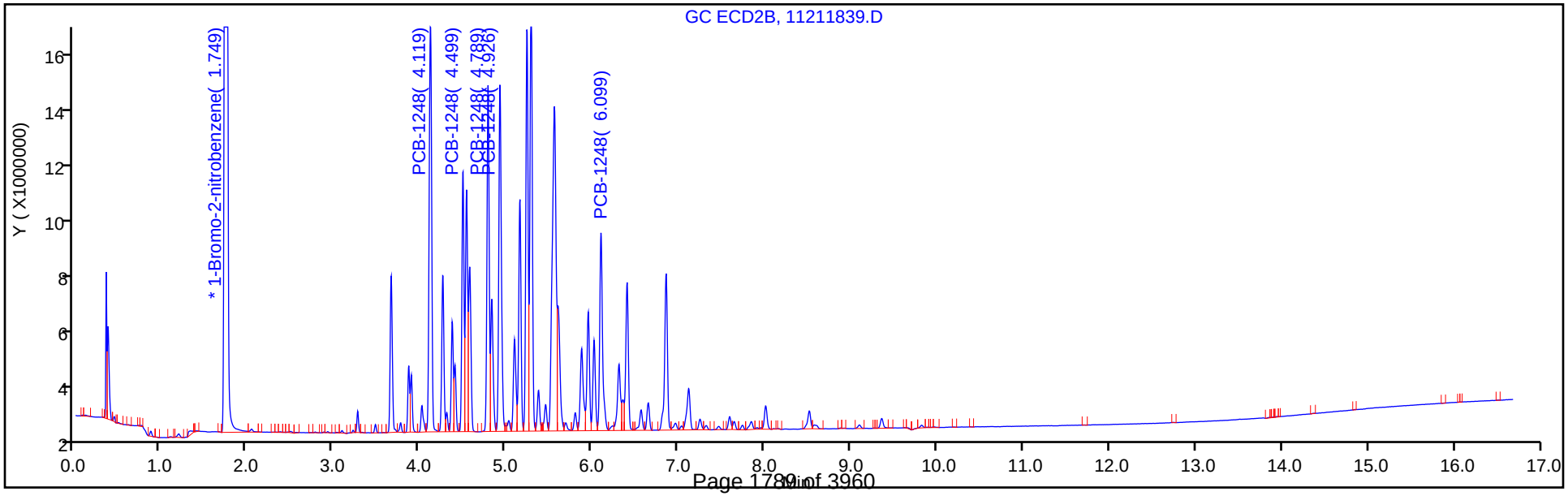
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D

Injection Date:	21-Nov-2018 22:09:37	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.2728		265	250	6.0	20.0
PCB-1221 Peak 2	Lin1		0.1654		276	250	10.5	20.0
PCB-1221 Peak 3	Lin1		0.7152		278	250	11.4	20.0
PCB-1254 Peak 1	Lin1		0.9104		288	250	15.3	20.0
PCB-1254 Peak 2	Lin1		1.319		288	250	15.2	20.0
PCB-1254 Peak 3	Lin1		0.9352		275	250	10.0	20.0
PCB-1254 Peak 4	Lin1		1.226		293	250	17.0	20.0
PCB-1254 Peak 5	Lin1		1.628		284	250	13.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.23	2.98	3.48
PCB-1221 Peak 3	3.27	3.02	3.52
PCB-1254 Peak 1	5.18	4.93	5.43
PCB-1254 Peak 2	5.51	5.26	5.76
PCB-1254 Peak 3	5.85	5.60	6.10
PCB-1254 Peak 4	6.62	6.37	6.87
PCB-1254 Peak 5	6.99	6.75	7.25

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:30:47 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-040
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:39:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	29773128	1000.0	1000.0	
2	1.750	1.744	0.006	167287659	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2030793	250.0	264.9	
1	3.233	3.232	0.001	1231106	250.0	276.2	
1	3.270	3.269	0.001	5323184	250.0	278.4	
		Average of Peak Amounts =				273.2	
2	3.093	3.092	0.001	6568563	250.0	271.6	
2	3.223	3.222	0.001	4336984	250.0	278.2	
2	3.276	3.276	0.000	15187978	250.0	275.8	
		Average of Peak Amounts =				275.2	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6776240	250.0	288.3	M
1	5.510	5.509	0.001	9816035	250.0	287.9	M
1	5.850	5.849	0.001	6960594	250.0	275.0	M
1	6.620	6.622	-0.002	9128323	250.0	292.6	M
1	6.993	6.995	-0.002	12116804	250.0	284.4	M
		Average of Peak Amounts =				285.6	
2	5.530	5.529	0.001	28299329	250.0	280.6	
2	5.950	5.952	-0.002	22018407	250.0	278.8	
2	6.403	6.402	0.001	29793523	250.0	276.3	
2	6.646	6.649	-0.003	18699912	250.0	293.3	
2	7.116	7.119	-0.003	45648192	250.0	294.6	
		Average of Peak Amounts =				284.7	
						RPD = 0.31	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

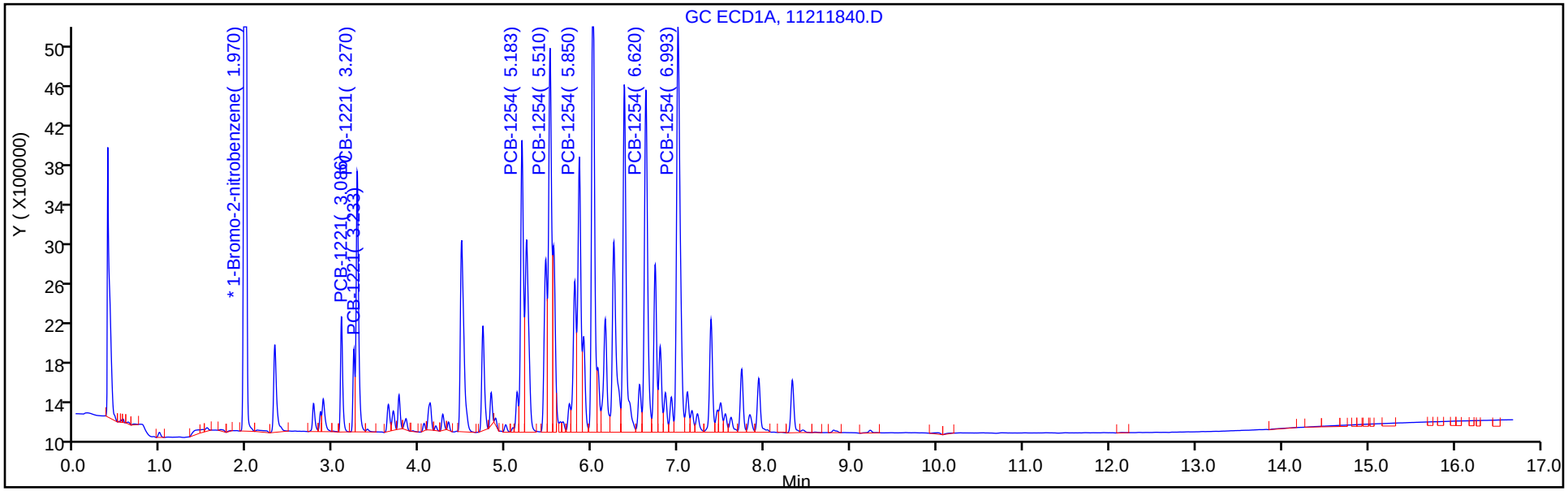
Report Date: 23-Nov-2018 10:58:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

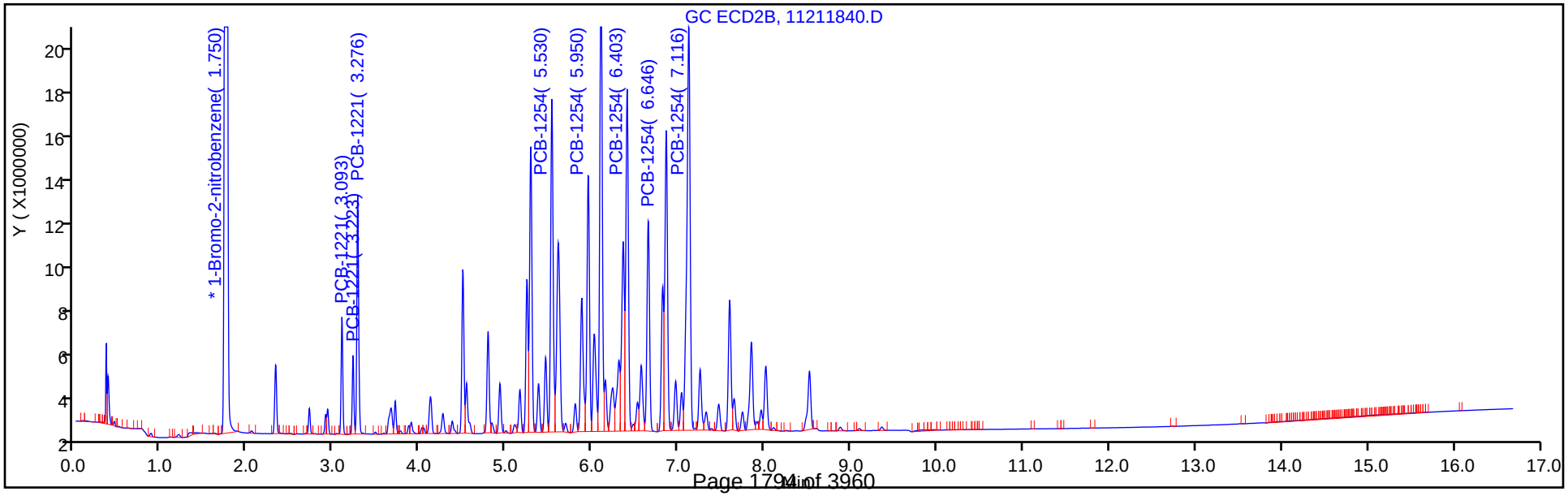
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date:	21-Nov-2018 22:30:47	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 10:58:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date: 21-Nov-2018 22:30:47 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

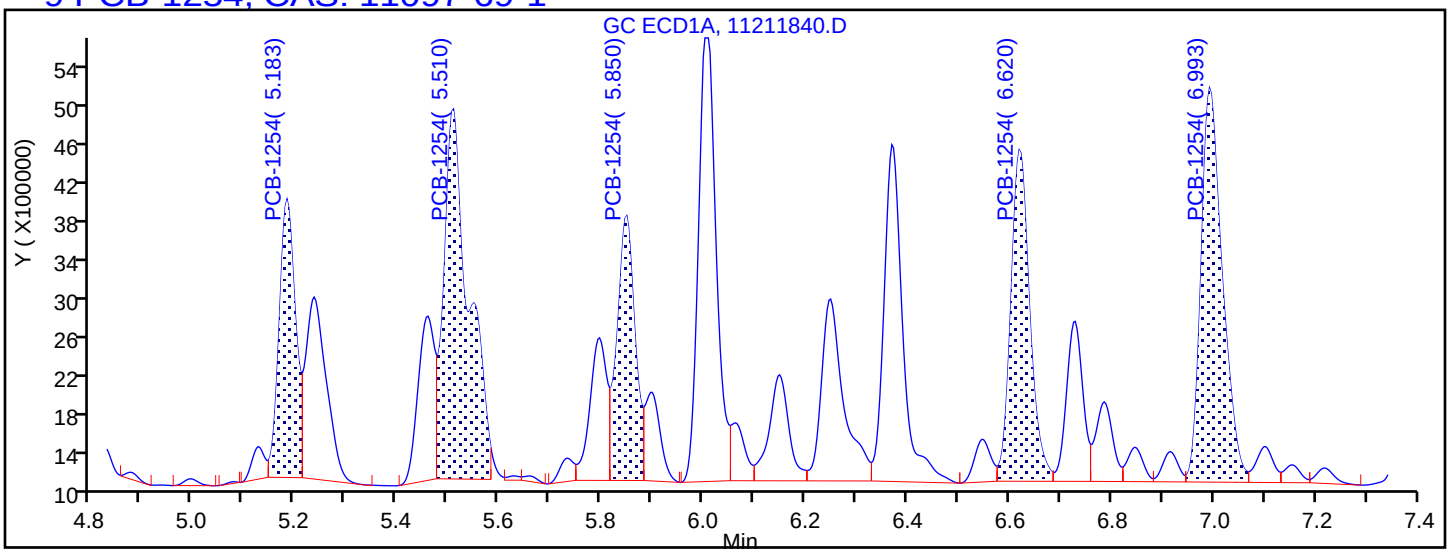
Operator ID: ALS ALS Bottle#: 40 Worklist Smp#: 40

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

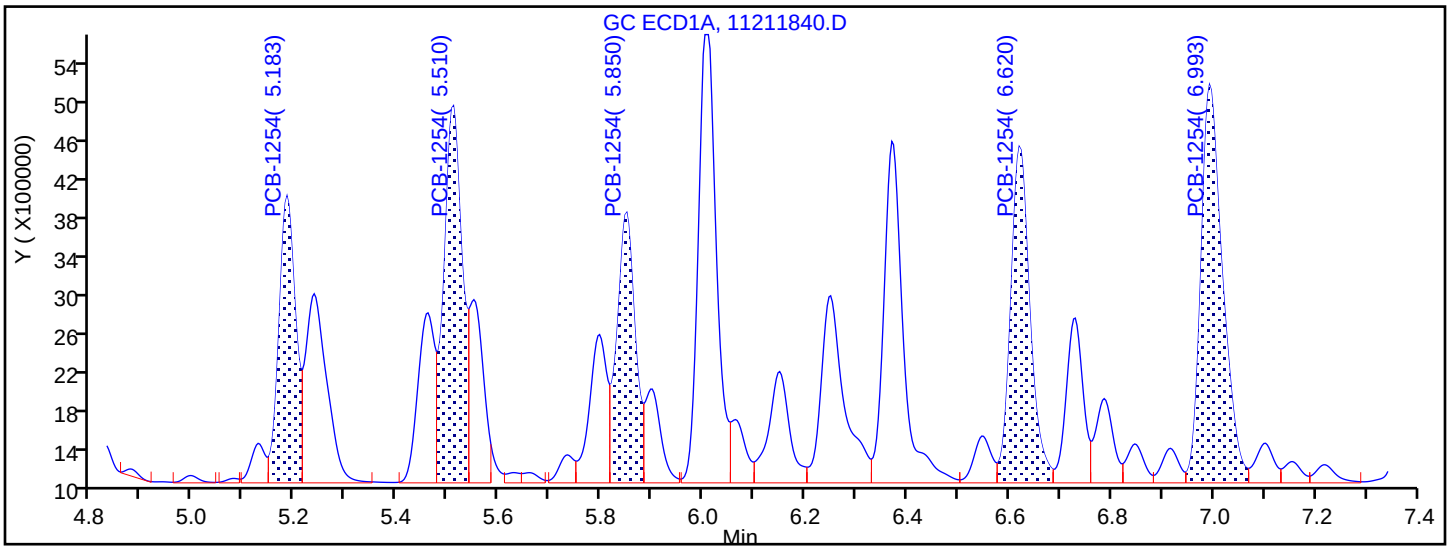
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 6417706
5.510	Response = 12898723
5.850	Response = 6726142
6.620	Response = 8795667
6.993	Response = 11812043



Manual Integration Results

5.183	Response = 6776240	M
5.510	Response = 9816035	M
5.850	Response = 6960594	M
6.620	Response = 9128323	M
6.993	Response = 12116804	M

Reviewer: patadiab, 23-Nov-2018 10:39:30

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.1571		272	250	8.6	20.0
PCB-1221 Peak 2	Lin1		0.1037		278	250	11.3	20.0
PCB-1221 Peak 3	Lin1		0.3632		276	250	10.3	20.0
PCB-1254 Peak 1	Lin1		0.6767		281	250	12.2	20.0
PCB-1254 Peak 2	Lin1		0.5265		279	250	11.5	20.0
PCB-1254 Peak 3	Lin1		0.7124		276	250	10.5	20.0
PCB-1254 Peak 4	Lin1		0.4471		293	250	17.3	20.0
PCB-1254 Peak 5	Lin1		1.091		295	250	17.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.22	2.97	3.47
PCB-1221 Peak 3	3.28	3.03	3.53
PCB-1254 Peak 1	5.53	5.28	5.78
PCB-1254 Peak 2	5.95	5.70	6.20
PCB-1254 Peak 3	6.40	6.15	6.65
PCB-1254 Peak 4	6.65	6.40	6.90
PCB-1254 Peak 5	7.12	6.87	7.37

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:30:47 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-040
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:39:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	29773128	1000.0	1000.0	
2	1.750	1.744	0.006	167287659	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2030793	250.0	264.9	
1	3.233	3.232	0.001	1231106	250.0	276.2	
1	3.270	3.269	0.001	5323184	250.0	278.4	
		Average of Peak Amounts =				273.2	
2	3.093	3.092	0.001	6568563	250.0	271.6	
2	3.223	3.222	0.001	4336984	250.0	278.2	
2	3.276	3.276	0.000	15187978	250.0	275.8	
		Average of Peak Amounts =				275.2	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6776240	250.0	288.3	M
1	5.510	5.509	0.001	9816035	250.0	287.9	M
1	5.850	5.849	0.001	6960594	250.0	275.0	M
1	6.620	6.622	-0.002	9128323	250.0	292.6	M
1	6.993	6.995	-0.002	12116804	250.0	284.4	M
		Average of Peak Amounts =				285.6	
2	5.530	5.529	0.001	28299329	250.0	280.6	
2	5.950	5.952	-0.002	22018407	250.0	278.8	
2	6.403	6.402	0.001	29793523	250.0	276.3	
2	6.646	6.649	-0.003	18699912	250.0	293.3	
2	7.116	7.119	-0.003	45648192	250.0	294.6	
		Average of Peak Amounts =				284.7	
						RPD = 0.31	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

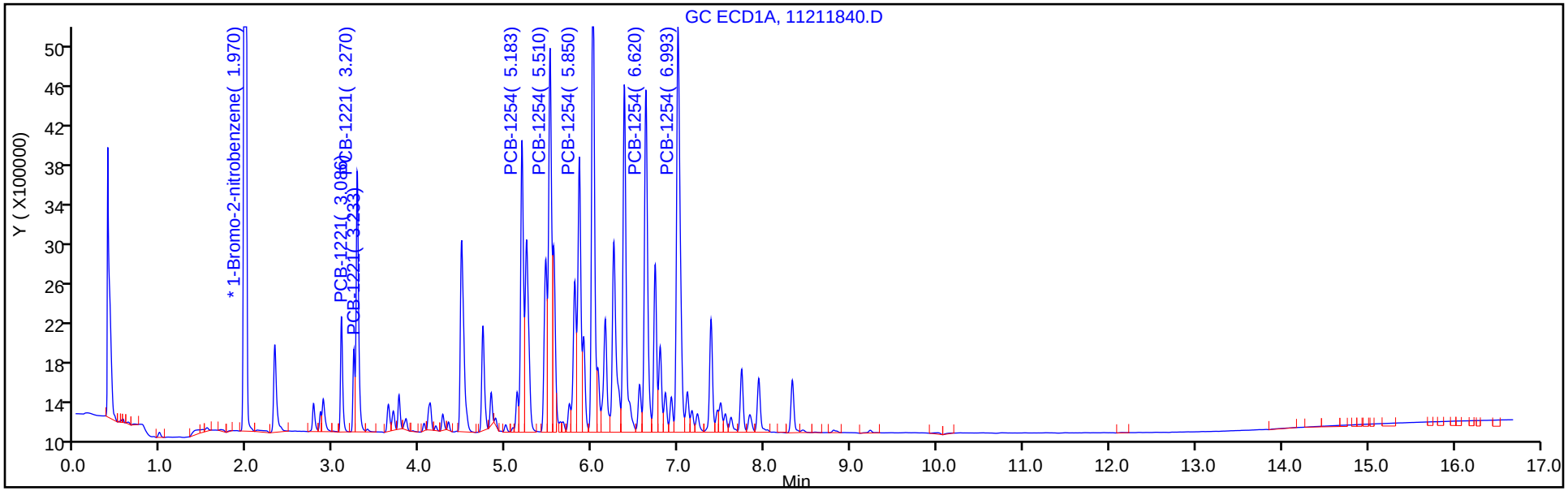
Report Date: 23-Nov-2018 10:58:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

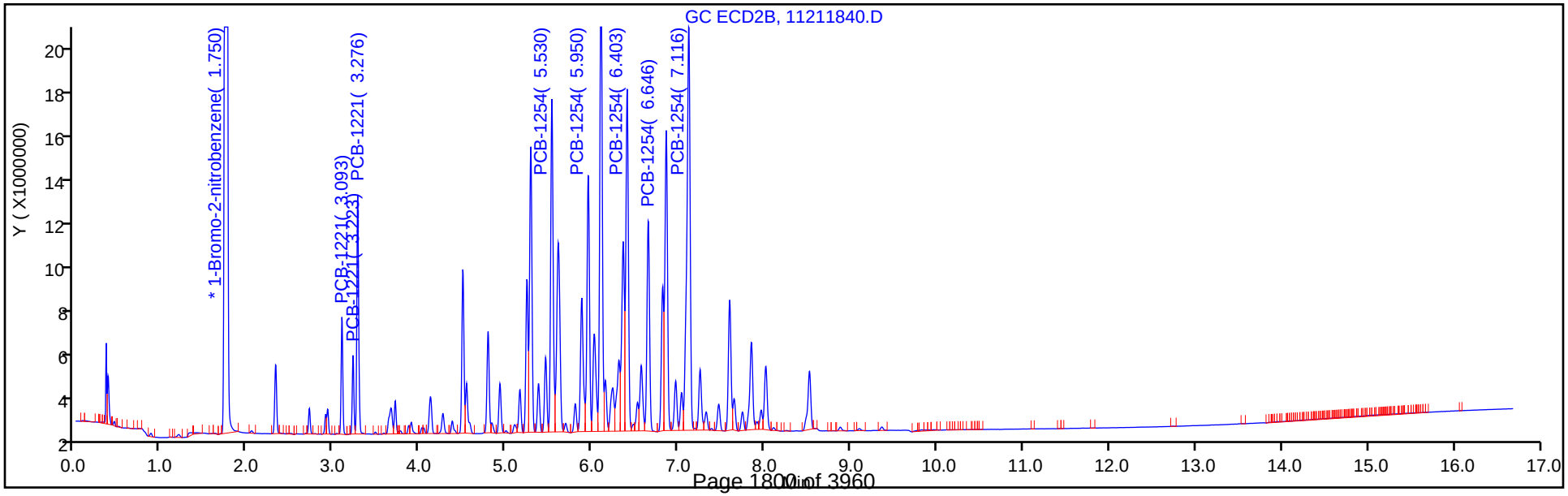
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date:	21-Nov-2018 22:30:47	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.5269		299	250	19.4	20.0
PCB-1016 Peak 2	Lin1		1.179		286	250	14.5	20.0
PCB-1016 Peak 3	Lin1		1.998		267	250	7.0	20.0
PCB-1016 Peak 4	Lin1		0.8836		279	250	11.5	20.0
PCB-1016 Peak 5	Lin1		0.9456		276	250	10.6	20.0
PCB-1260 Peak 1	Lin1		1.407		299	250	19.6	20.0
PCB-1260 Peak 2	Lin1		1.987		275	250	10.1	20.0
PCB-1260 Peak 3	Lin1		1.244		289	250	15.7	20.0
PCB-1260 Peak 4	Lin1		2.774		286	250	14.5	20.0
PCB-1260 Peak 5	Lin1		1.255		284	250	13.8	20.0
Tetrachloro-m-xylene	Lin1		26.07		12.5	12.5	-0.2	20.0
DCB Decachlorobiphenyl	Lin1		25.43		15.5	12.5	24.0*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.01	4.51
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.74	7.24
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.66	10.16

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:51:54 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-041
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:41:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26927485	1000.0	1000.0	
2	1.749	1.744	0.005	153501296	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	8774677	12.5	12.5	
2	2.779	2.780	-0.001	27009747	12.5	13.4	
						RPD = 7.29	
1 PCB-1016							M
1	3.272	3.269	0.003	3547242	250.0	298.5	
1	3.632	3.633	-0.001	7938090	250.0	286.1	
1	4.119	4.116	0.003	13448891	250.0	267.4	
1	4.265	4.263	0.002	5948063	250.0	278.7	
1	4.732	4.729	0.003	6365519	250.0	276.4	
		Average of Peak Amounts =				281.4	
2	3.275	3.276	-0.001	9601034	250.0	278.3	
2	3.665	3.666	-0.001	20402534	250.0	286.8	M
2	4.122	4.123	-0.001	44757622	250.0	284.8	M
2	4.265	4.266	-0.001	19470165	250.0	287.3	M
2	4.495	4.496	-0.001	9779283	250.0	266.3	M
		Average of Peak Amounts =				280.7	
						RPD = 0.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9472536	250.0	299.0	
1	6.992	6.993	-0.001	13373866	250.0	275.2	
1	7.492	7.489	0.003	8372131	250.0	289.3	
1	7.932	7.929	0.003	18676866	250.0	286.2	
1	8.322	8.319	0.003	8448030	250.0	284.4	
		Average of Peak Amounts =				286.8	
2	6.649	6.646	0.003	34912578	250.0	301.4	
2	7.115	7.116	-0.001	49684454	250.0	289.1	
2	7.645	7.646	-0.001	31194035	250.0	303.3	
2	8.012	8.013	-0.001	69380727	250.0	301.4	
2	8.515	8.516	-0.001	51465391	250.0	291.5	
		Average of Peak Amounts =				297.3	
						RPD = 3.60	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8559166	12.5	15.5	
2	10.185	10.186	-0.001	34784121	12.5	15.1	
						RPD = 2.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

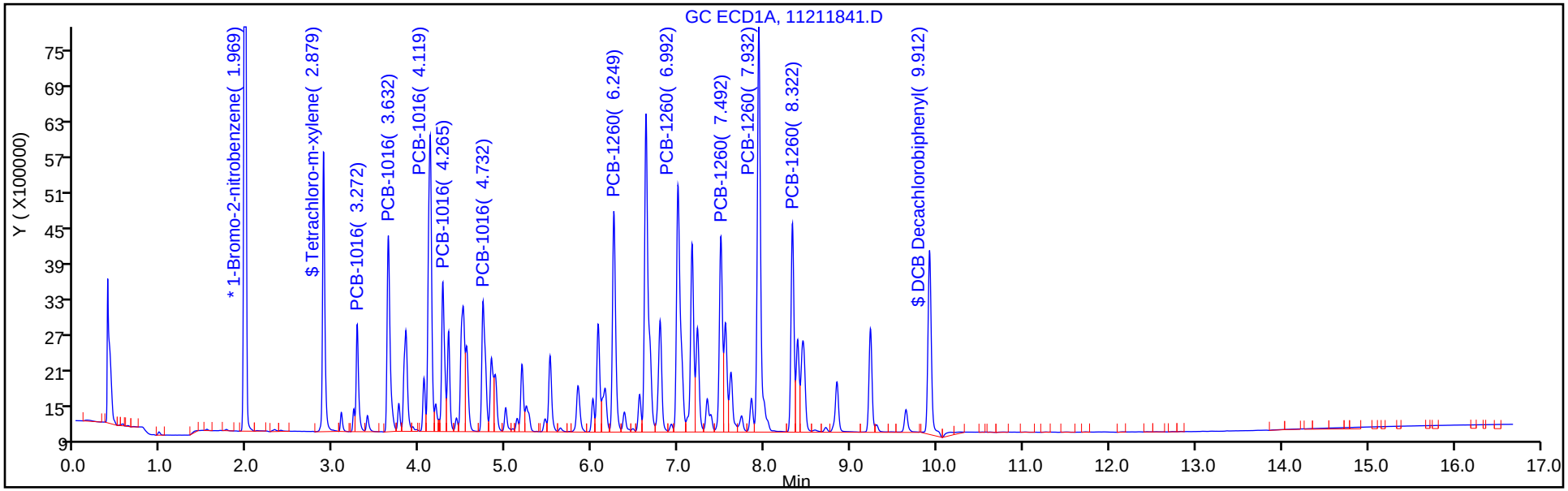
Report Date: 23-Nov-2018 10:58:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

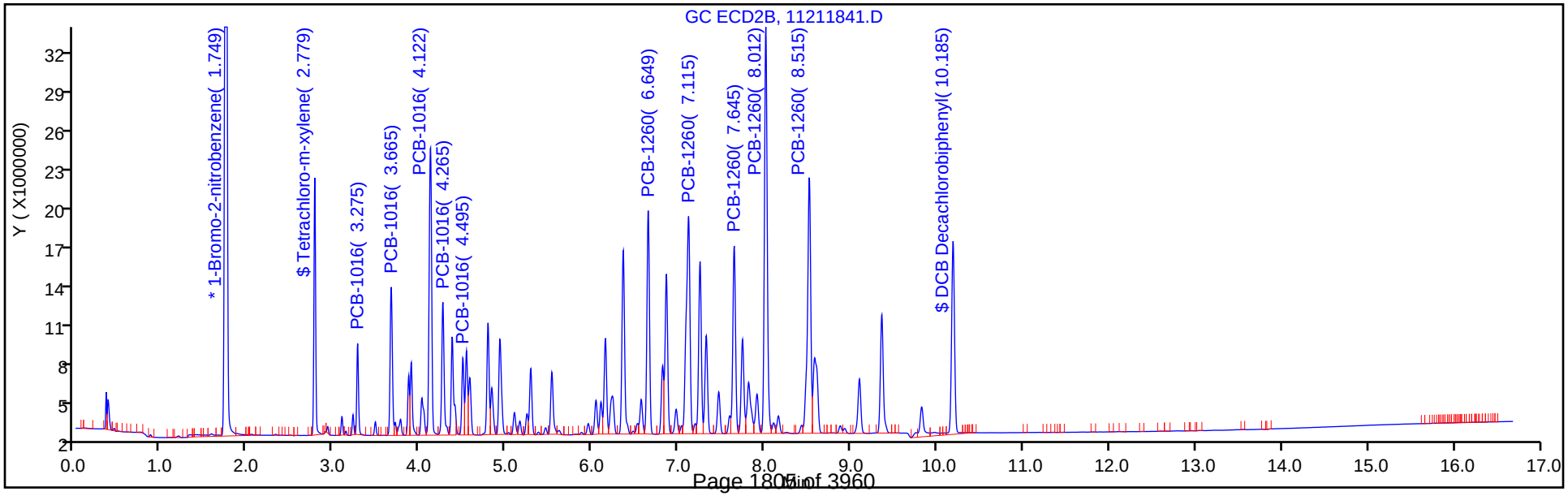
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date:	21-Nov-2018 22:51:54	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2502		278	250	11.3	20.0
PCB-1016 Peak 2	Lin1		0.5317		287	250	14.7	20.0
PCB-1016 Peak 3	Lin1		1.166		285	250	13.9	20.0
PCB-1016 Peak 4	Lin1		0.5074		287	250	14.9	20.0
PCB-1016 Peak 5	Lin1		0.2548		266	250	6.5	20.0
PCB-1260 Peak 1	Lin1		0.9098		301	250	20.6*	20.0
PCB-1260 Peak 2	Lin1		1.295		289	250	15.6	20.0
PCB-1260 Peak 3	Lin1		0.8129		303	250	21.3*	20.0
PCB-1260 Peak 4	Lin1		1.808		301	250	20.5*	20.0
PCB-1260 Peak 5	Lin1		1.341		292	250	16.6	20.0
Tetrachloro-m-xylene	Lin1		14.08		13.4	12.5	7.3	20.0
DCB Decachlorobiphenyl	Lin1		18.13		15.1	12.5	20.8*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.28	3.03	3.53
PCB-1016 Peak 2	3.67	3.42	3.92
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.02	4.52
PCB-1016 Peak 5	4.50	4.25	4.75
PCB-1260 Peak 1	6.65	6.40	6.90
PCB-1260 Peak 2	7.12	6.87	7.37
PCB-1260 Peak 3	7.65	7.40	7.90
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.52	8.27	8.77
Tetrachloro-m-xylene	2.78	2.53	3.03
DCB Decachlorobiphenyl	10.19	9.94	10.44

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:51:54 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-041
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:41:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26927485	1000.0	1000.0	
2	1.749	1.744	0.005	153501296	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	8774677	12.5	12.5	
2	2.779	2.780	-0.001	27009747	12.5	13.4	
						RPD = 7.29	
1 PCB-1016							M
1	3.272	3.269	0.003	3547242	250.0	298.5	
1	3.632	3.633	-0.001	7938090	250.0	286.1	
1	4.119	4.116	0.003	13448891	250.0	267.4	
1	4.265	4.263	0.002	5948063	250.0	278.7	
1	4.732	4.729	0.003	6365519	250.0	276.4	
		Average of Peak Amounts =				281.4	
2	3.275	3.276	-0.001	9601034	250.0	278.3	
2	3.665	3.666	-0.001	20402534	250.0	286.8	M
2	4.122	4.123	-0.001	44757622	250.0	284.8	M
2	4.265	4.266	-0.001	19470165	250.0	287.3	M
2	4.495	4.496	-0.001	9779283	250.0	266.3	M
		Average of Peak Amounts =				280.7	
						RPD = 0.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9472536	250.0	299.0	
1	6.992	6.993	-0.001	13373866	250.0	275.2	
1	7.492	7.489	0.003	8372131	250.0	289.3	
1	7.932	7.929	0.003	18676866	250.0	286.2	
1	8.322	8.319	0.003	8448030	250.0	284.4	
		Average of Peak Amounts =				286.8	
2	6.649	6.646	0.003	34912578	250.0	301.4	
2	7.115	7.116	-0.001	49684454	250.0	289.1	
2	7.645	7.646	-0.001	31194035	250.0	303.3	
2	8.012	8.013	-0.001	69380727	250.0	301.4	
2	8.515	8.516	-0.001	51465391	250.0	291.5	
		Average of Peak Amounts =				297.3	
						RPD = 3.60	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8559166	12.5	15.5	
2	10.185	10.186	-0.001	34784121	12.5	15.1	
						RPD = 2.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

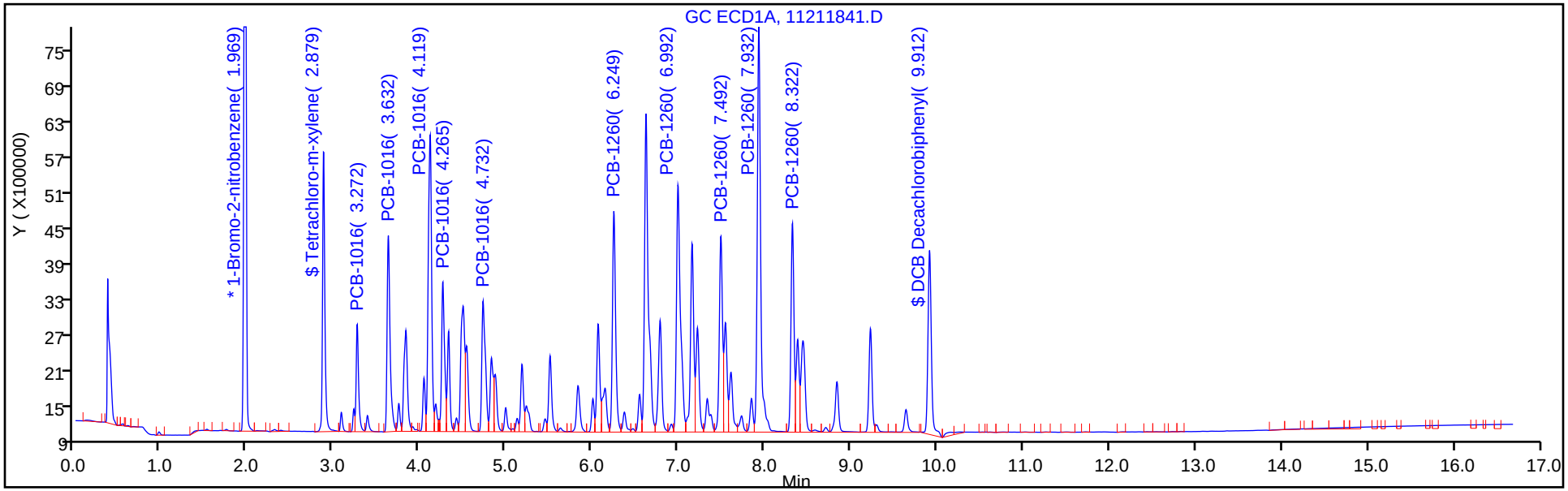
Report Date: 23-Nov-2018 10:58:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

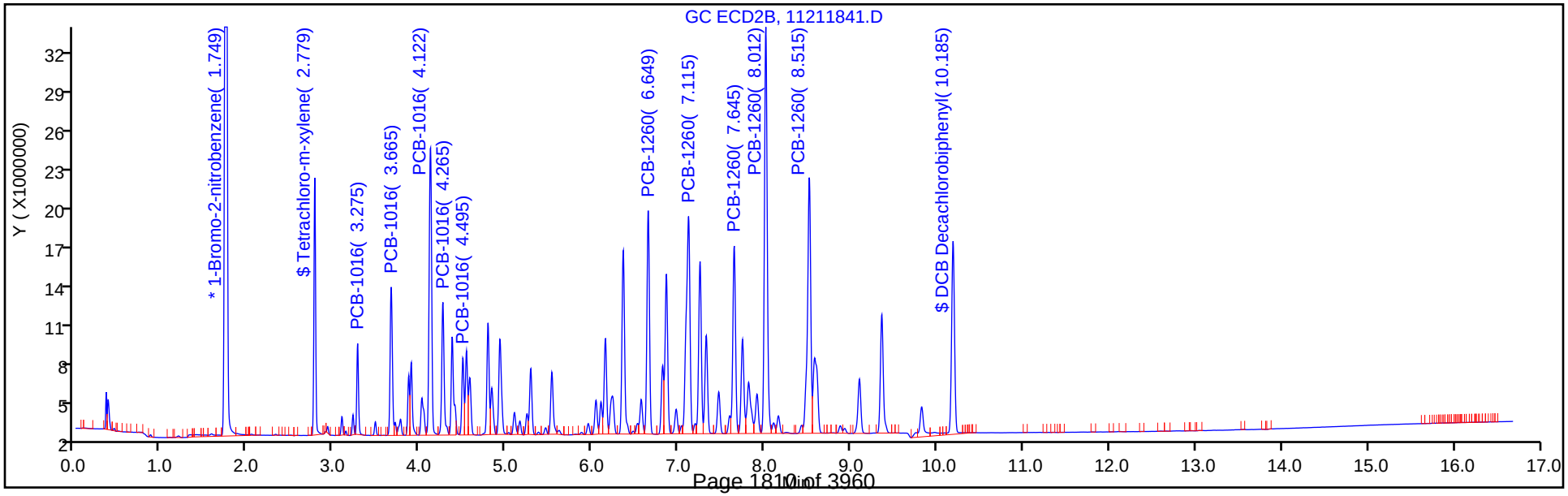
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date:	21-Nov-2018 22:51:54	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 10:58:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date: 21-Nov-2018 22:51:54 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

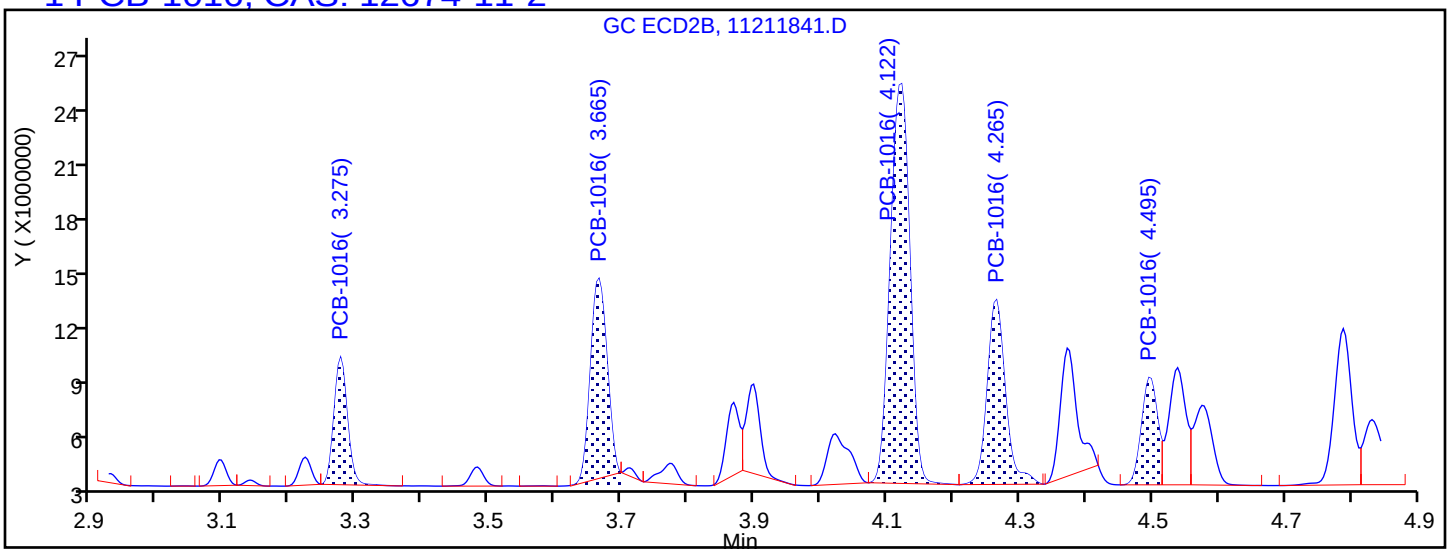
Operator ID: ALS ALS Bottle#: 41 Worklist Smp#: 41

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

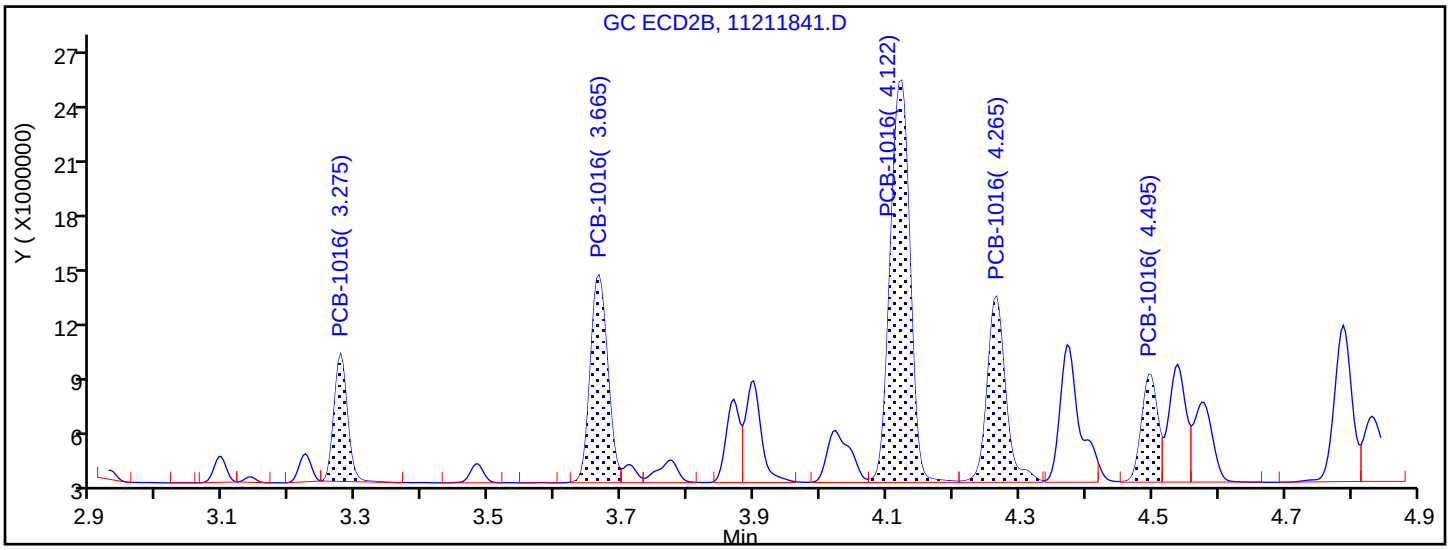
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.275	Response = 9601034	
3.665	Response = 18727987	
4.122	Response = 43874781	
4.265	Response = 18984635	
4.495	Response = 9655763	



Manual Integration Results

3.275	Response = 9601034	
3.665	Response = 20402534	M
4.122	Response = 44757622	M
4.265	Response = 19470165	M
4.495	Response = 9779283	M

Reviewer: patadiab, 23-Nov-2018 10:41:22

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Lin1		0.1706		253	250	1.2	20.0
PCB-1232 Peak 2	Lin1		0.5805		269	250	7.4	20.0
PCB-1232 Peak 3	Lin1		0.8455		264	250	5.4	20.0
PCB-1232 Peak 4	Lin1		0.3874		274	250	9.6	20.0
PCB-1232 Peak 5	Lin1		0.4202		298	250	19.2	20.0
PCB-1262 Peak 1	Lin1		1.153		297	250	18.8	20.0
PCB-1262 Peak 2	Lin1		1.659		272	250	9.0	20.0
PCB-1262 Peak 3	Lin1		1.483		276	250	10.2	20.0
PCB-1262 Peak 4	Lin1		3.241		292	250	17.0	20.0
PCB-1262 Peak 5	Lin1		1.059		312	250	24.8*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.09	2.84	3.34
PCB-1232 Peak 2	3.27	3.02	3.52
PCB-1232 Peak 3	4.12	3.87	4.37
PCB-1232 Peak 4	4.26	4.01	4.51
PCB-1232 Peak 5	4.73	4.48	4.98
PCB-1262 Peak 1	6.25	6.00	6.50
PCB-1262 Peak 2	7.16	6.90	7.40
PCB-1262 Peak 3	7.49	7.24	7.74
PCB-1262 Peak 4	7.93	7.68	8.18
PCB-1262 Peak 5	8.32	8.07	8.57

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:13:05 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-042
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:43:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26954302	1000.0	1000.0	
2	1.746	1.744	0.002	152978208	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	1149502	250.0	252.9	
1	3.269	3.271	-0.002	3911724	250.0	268.5	
1	4.116	4.118	-0.002	5697150	250.0	263.6	
1	4.262	4.264	-0.002	2610317	250.0	274.1	
1	4.729	4.731	-0.002	2831763	250.0	298.1	
		Average of Peak Amounts =				271.4	
2	3.276	3.275	0.001	11159015	250.0	273.0	
2	3.666	3.665	0.001	9939804	250.0	287.2	
2	4.123	4.121	0.002	20391815	250.0	285.6	
2	4.266	4.265	0.001	9058511	250.0	290.2	
2	4.926	4.928	-0.002	8279557	250.0	316.1	
		Average of Peak Amounts =				290.4	
						RPD = 6.76	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	7767201	250.0	297.1	
1	7.156	7.154	0.002	11179510	250.0	272.4	
1	7.489	7.488	0.001	9995072	250.0	275.6	
1	7.929	7.931	-0.002	21842740	250.0	292.4	
1	8.322	8.321	0.001	7135112	250.0	311.9	
		Average of Peak Amounts =				289.9	
2	6.646	6.648	-0.002	29328487	250.0	315.7	
2	7.249	7.248	0.001	37737006	250.0	286.3	
2	7.646	7.645	0.001	38058721	250.0	291.5	
2	8.009	8.011	-0.002	78979247	250.0	310.8	
2	8.516	8.515	0.001	60581655	250.0	315.6	
		Average of Peak Amounts =				304.0	
						RPD = 4.75	

Reagents:

AR_3262_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

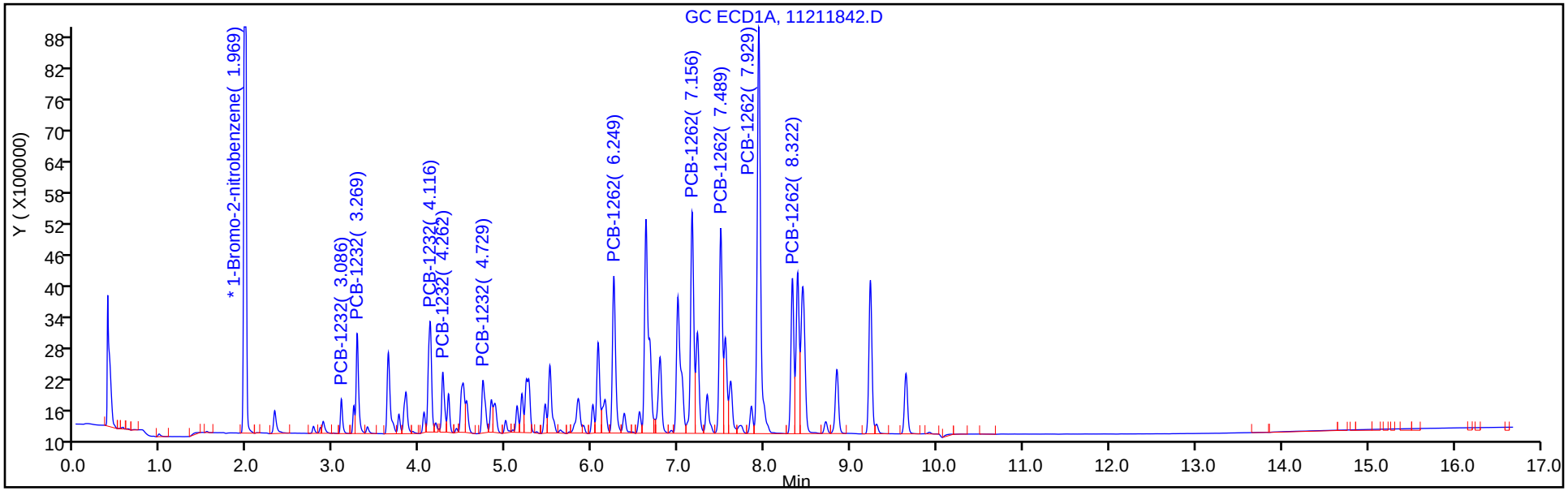
Report Date: 23-Nov-2018 10:58:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

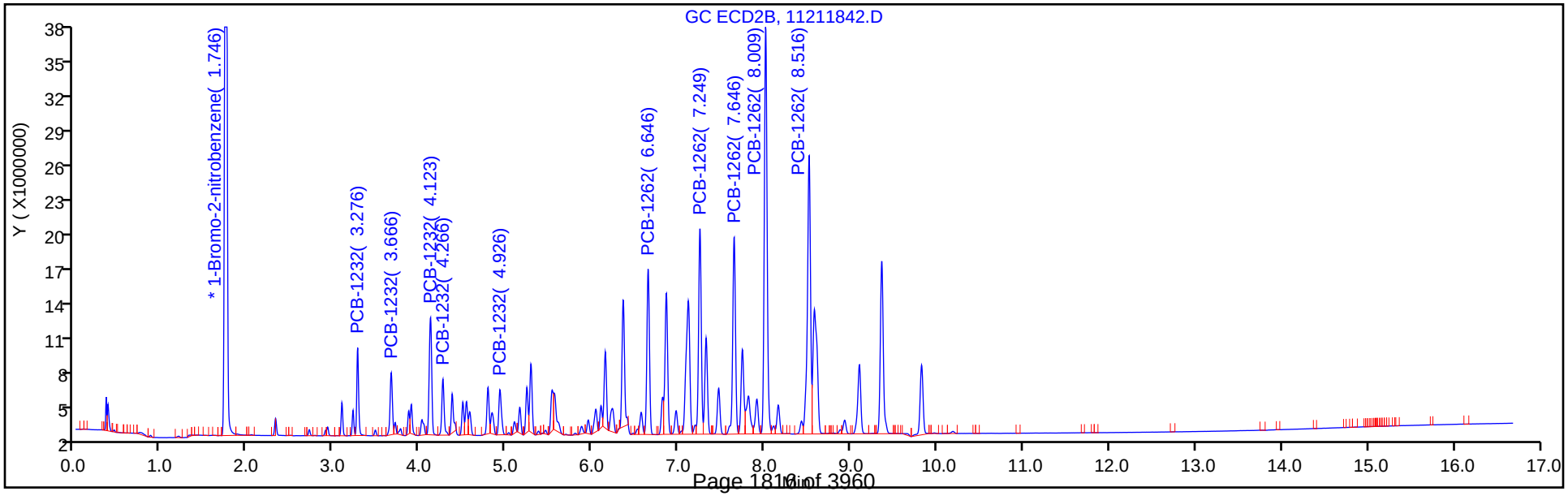
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D

Injection Date:	21-Nov-2018 23:13:05	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Lin1		0.2918		273	250	9.2	20.0
PCB-1232 Peak 2	Lin1		0.2599		287	250	14.9	20.0
PCB-1232 Peak 3	Lin1		0.5332		286	250	14.2	20.0
PCB-1232 Peak 4	Lin1		0.2369		290	250	16.1	20.0
PCB-1232 Peak 5	Lin1		0.2165		316	250	26.4*	20.0
PCB-1262 Peak 1	Lin1		0.7669		316	250	26.3*	20.0
PCB-1262 Peak 2	Lin1		0.9867		286	250	14.5	20.0
PCB-1262 Peak 3	Lin1		0.995		292	250	16.6	20.0
PCB-1262 Peak 4	Lin1		2.065		311	250	24.3*	20.0
PCB-1262 Peak 5	Lin1		1.584		316	250	26.2*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.28	3.03	3.53
PCB-1232 Peak 2	3.67	3.42	3.92
PCB-1232 Peak 3	4.12	3.87	4.37
PCB-1232 Peak 4	4.27	4.02	4.52
PCB-1232 Peak 5	4.93	4.68	5.18
PCB-1262 Peak 1	6.65	6.40	6.90
PCB-1262 Peak 2	7.25	7.00	7.50
PCB-1262 Peak 3	7.65	7.40	7.90
PCB-1262 Peak 4	8.01	7.76	8.26
PCB-1262 Peak 5	8.52	8.27	8.77

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:13:05 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-042
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:43:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26954302	1000.0	1000.0	
2	1.746	1.744	0.002	152978208	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	1149502	250.0	252.9	
1	3.269	3.271	-0.002	3911724	250.0	268.5	
1	4.116	4.118	-0.002	5697150	250.0	263.6	
1	4.262	4.264	-0.002	2610317	250.0	274.1	
1	4.729	4.731	-0.002	2831763	250.0	298.1	
		Average of Peak Amounts =				271.4	
2	3.276	3.275	0.001	11159015	250.0	273.0	
2	3.666	3.665	0.001	9939804	250.0	287.2	
2	4.123	4.121	0.002	20391815	250.0	285.6	
2	4.266	4.265	0.001	9058511	250.0	290.2	
2	4.926	4.928	-0.002	8279557	250.0	316.1	
		Average of Peak Amounts =				290.4	
						RPD = 6.76	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	7767201	250.0	297.1	
1	7.156	7.154	0.002	11179510	250.0	272.4	
1	7.489	7.488	0.001	9995072	250.0	275.6	
1	7.929	7.931	-0.002	21842740	250.0	292.4	
1	8.322	8.321	0.001	7135112	250.0	311.9	
		Average of Peak Amounts =				289.9	
2	6.646	6.648	-0.002	29328487	250.0	315.7	
2	7.249	7.248	0.001	37737006	250.0	286.3	
2	7.646	7.645	0.001	38058721	250.0	291.5	
2	8.009	8.011	-0.002	78979247	250.0	310.8	
2	8.516	8.515	0.001	60581655	250.0	315.6	
		Average of Peak Amounts =				304.0	
						RPD = 4.75	

Reagents:

AR_3262_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

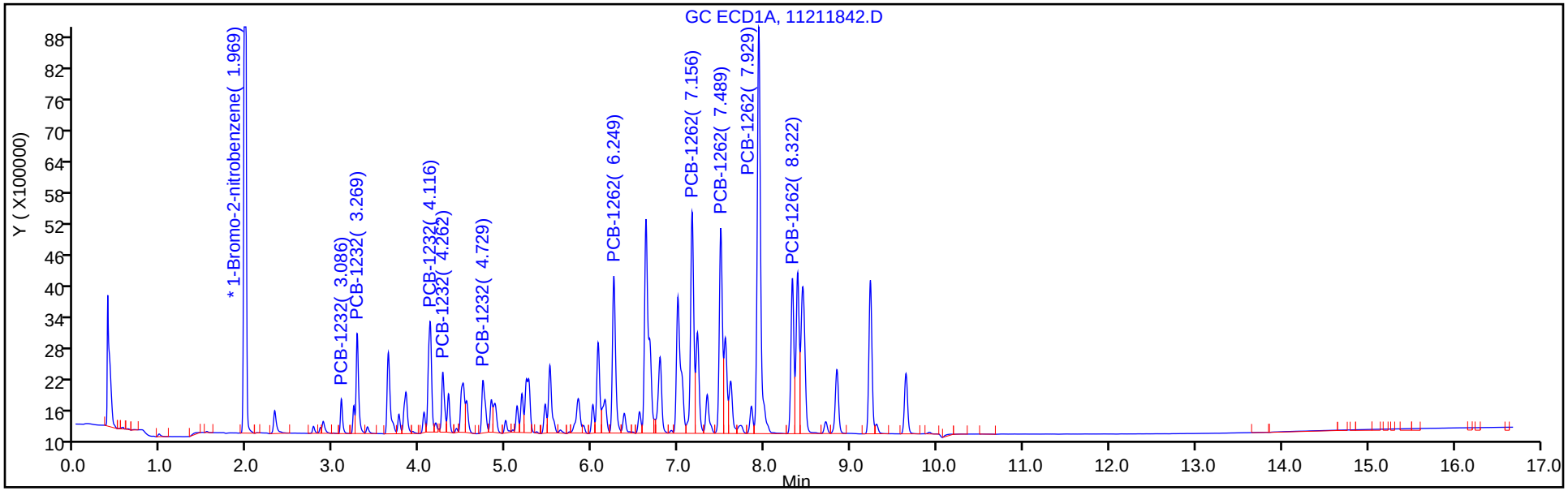
Report Date: 23-Nov-2018 10:58:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

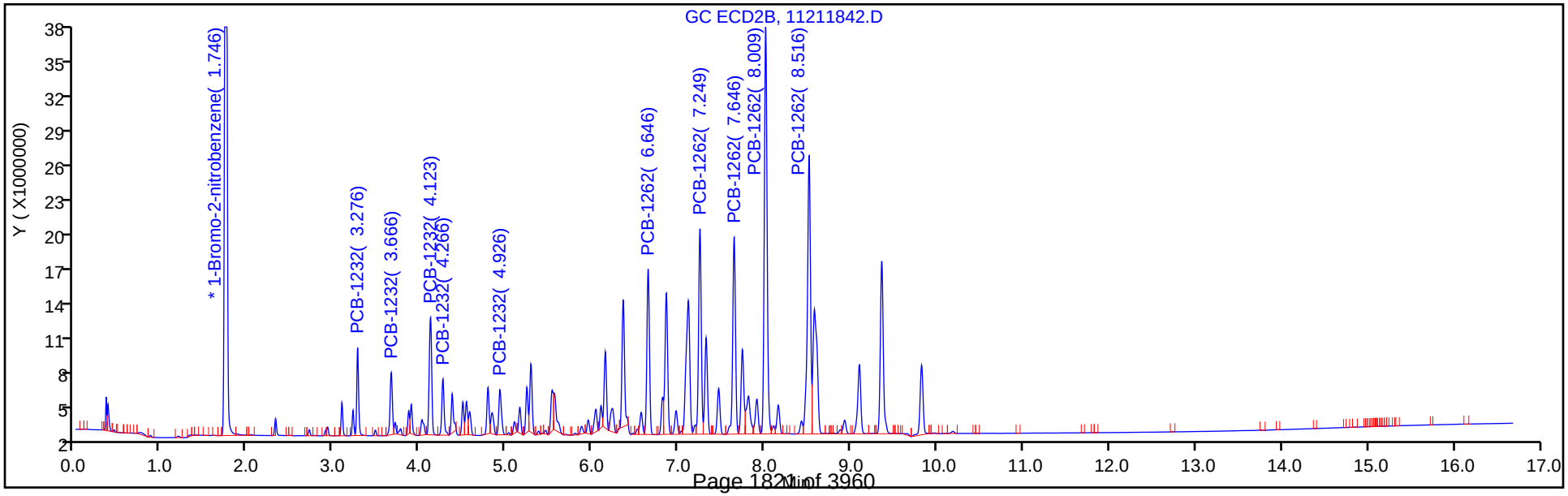
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D

Injection Date:	21-Nov-2018 23:13:05	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Lin1		0.8653		269	250	7.7	20.0
PCB-1242 Peak 2	Lin1		1.375		243	250	-2.6	20.0
PCB-1242 Peak 3	Lin1		0.6023		249	250	-0.6	20.0
PCB-1242 Peak 4	Lin1		0.4112		246	250	-1.7	20.0
PCB-1242 Peak 5	Lin1		0.4807		224	250	-10.4	20.0
PCB-1268 Peak 1	Lin1		3.171		276	250	10.5	20.0
PCB-1268 Peak 2	Lin1		3.065		265	250	5.8	20.0
PCB-1268 Peak 3	Lin1		2.752		295	250	17.9	20.0
PCB-1268 Peak 4	Lin1		0.7383		186	250	-25.4*	20.0
PCB-1268 Peak 5	Lin1		6.803		244	250	-2.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.63	3.38	3.88
PCB-1242 Peak 2	4.12	3.87	4.37
PCB-1242 Peak 3	4.26	4.01	4.51
PCB-1242 Peak 4	5.24	4.99	5.49
PCB-1242 Peak 5	5.26	5.01	5.51
PCB-1268 Peak 1	8.38	8.13	8.63
PCB-1268 Peak 2	8.43	8.18	8.68
PCB-1268 Peak 3	8.71	8.46	8.96
PCB-1268 Peak 4	9.23	8.97	9.47
PCB-1268 Peak 5	9.64	9.39	9.89

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:34:12 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-043
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:09:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:44:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30567576	1000.0	1000.0	
2	1.747	1.744	0.003	172646811	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							Ma
1	3.630	3.631	-0.001	6612174	250.0	269.2	
1	4.117	4.117	0.000	10505144	250.0	243.4	
1	4.263	4.264	-0.001	4602961	250.0	248.6	
1	5.237	5.237	0.000	3142547	250.0	245.9	M
1	5.260	5.261	-0.001	3673495	250.0	224.1	M
		Average of Peak Amounts =				246.2	
2	3.664	3.664	0.000	16978060	250.0	273.5	
2	4.120	4.121	-0.001	36272110	250.0	265.6	
2	4.264	4.264	0.000	15836385	250.0	267.6	
2	4.787	4.788	-0.001	13494422	250.0	275.1	
2	4.927	4.928	-0.001	15331263	250.0	266.7	
		Average of Peak Amounts =				269.7	
						RPD = 9.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	24235953	250.0	276.3	
1	8.433	8.434	-0.001	23424284	250.0	264.6	
1	8.710	8.707	0.003	21027004	250.0	294.7	
1	9.227	9.224	0.003	5641852	250.0	186.4	
1	9.640	9.637	0.003	51985946	250.0	243.9	
		Average of Peak Amounts =				253.2	
2	8.510	8.511	-0.001	92658099	250.0	286.6	
2	8.574	8.574	0.000	85134666	250.0	277.7	
2	8.927	8.928	-0.001	81954946	250.0	309.2	
2	9.357	9.358	-0.001	25443183	250.0	197.1	
2	9.820	9.821	-0.001	205859923	250.0	251.8	
		Average of Peak Amounts =				264.5	
						RPD = 4.37	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

AR_4268_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

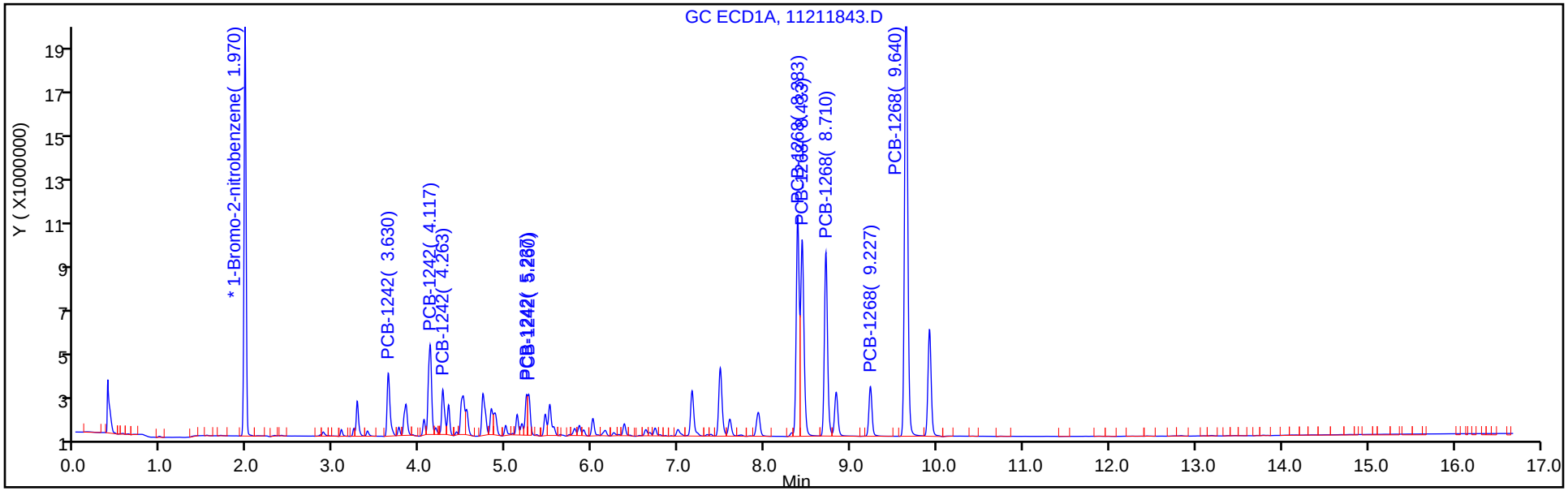
Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

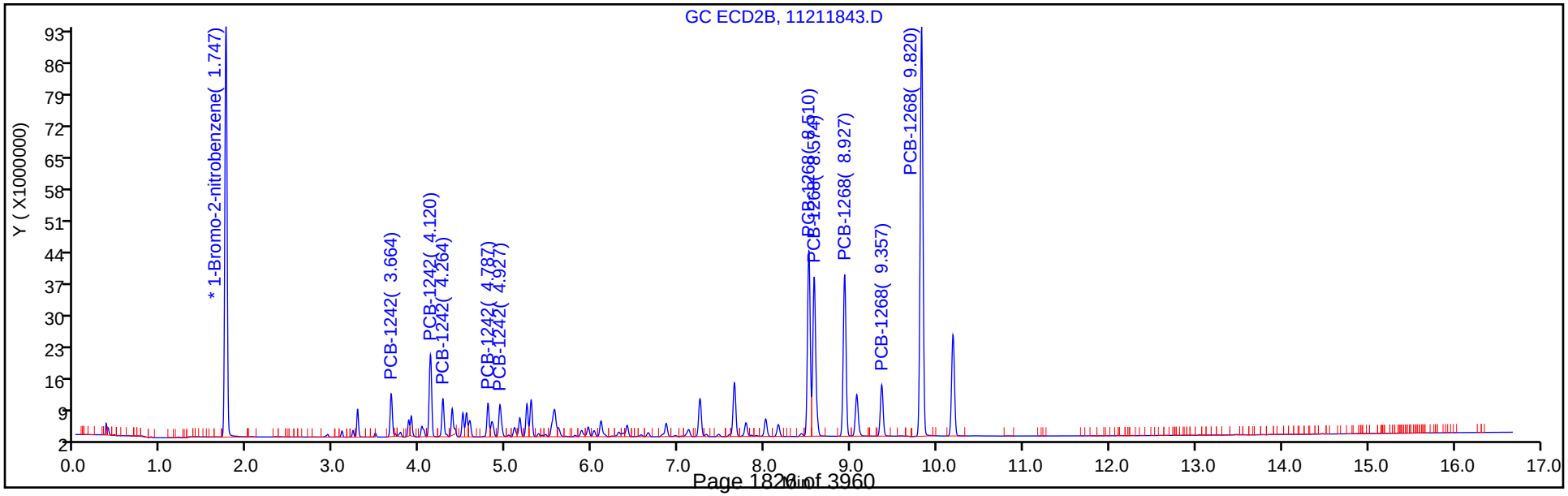
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date:	21-Nov-2018 23:34:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



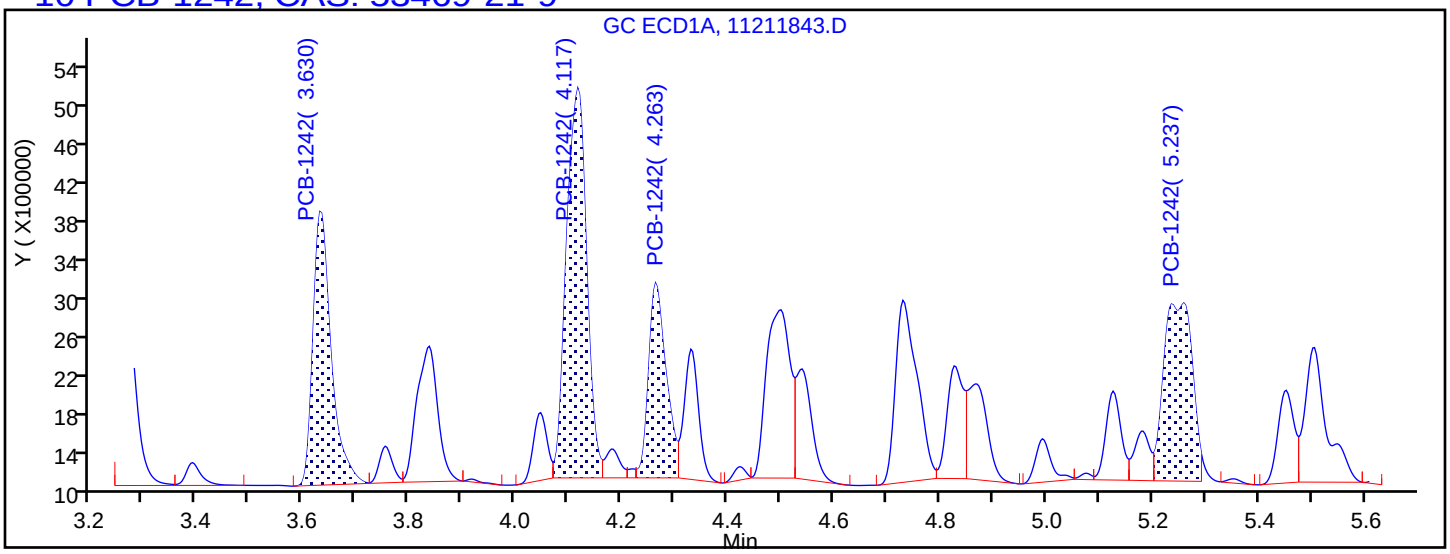
Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

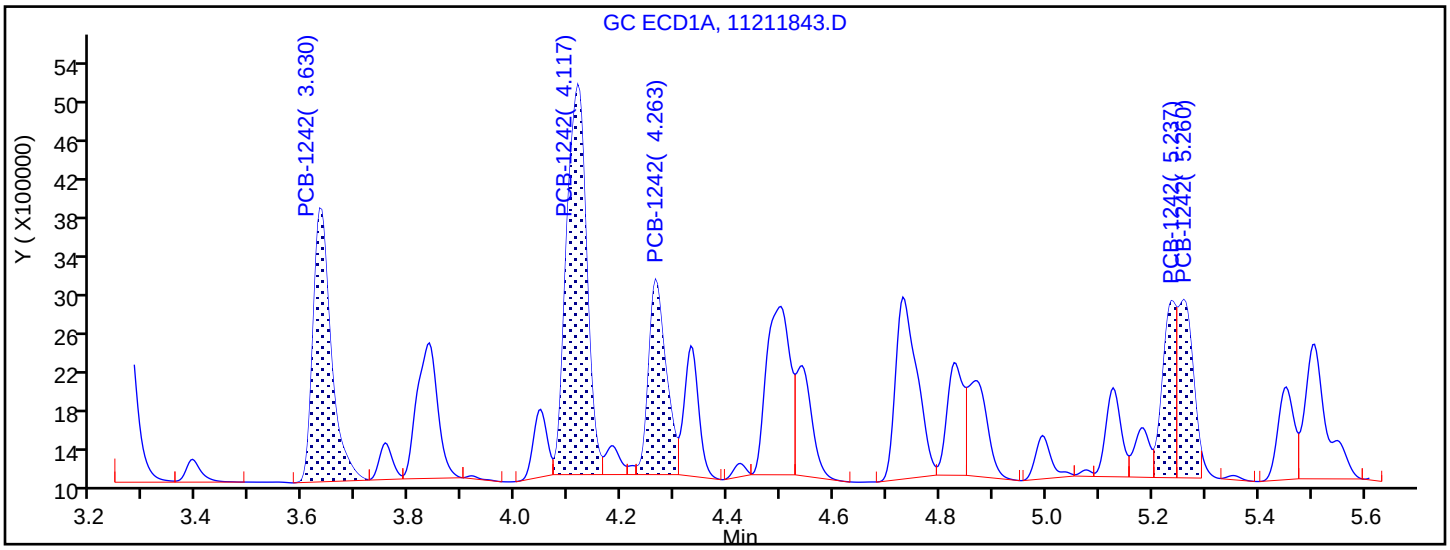
Injection Date:	21-Nov-2018 23:34:12	Instrument ID:	SGC_J		
Lims ID:	ICV				
Client ID:					
Operator ID:	ALS	ALS Bottle#:	43	Worklist Smp#:	43
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		
Column:	CLP1 Pesticides Column 1 (0.32 mm)	Detector	GC ECD1A		

10 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.630	Response = 6612174
4.117	Response = 10505144
4.263	Response = 4602961
5.237	Response = 6815903
5.261	Response = 0



Manual Integration Results

3.630	Response = 6612174	
4.117	Response = 10505144	
4.263	Response = 4602961	
5.237	Response = 3142547	M
5.260	Response = 3673495	M

Reviewer: patadiab, 23-Nov-2018 11:08:36

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Lin1		0.3934		273	250	9.4	20.0
PCB-1242 Peak 2	Lin1		0.8404		266	250	6.2	20.0
PCB-1242 Peak 3	Lin1		0.3669		268	250	7.0	20.0
PCB-1242 Peak 4	Lin1		0.3127		275	250	10.0	20.0
PCB-1242 Peak 5	Lin1		0.3552		267	250	6.7	20.0
PCB-1268 Peak 1	Lin1		2.147		287	250	14.7	20.0
PCB-1268 Peak 2	Lin1		1.972		278	250	11.1	20.0
PCB-1268 Peak 3	Lin1		1.899		309	250	23.7*	20.0
PCB-1268 Peak 4	Lin1		0.5895		197	250	-21.1*	20.0
PCB-1268 Peak 5	Lin1		4.770		252	250	0.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.66	3.41	3.91
PCB-1242 Peak 2	4.12	3.87	4.37
PCB-1242 Peak 3	4.26	4.01	4.51
PCB-1242 Peak 4	4.79	4.54	5.04
PCB-1242 Peak 5	4.93	4.68	5.18
PCB-1268 Peak 1	8.51	8.26	8.76
PCB-1268 Peak 2	8.57	8.32	8.82
PCB-1268 Peak 3	8.93	8.68	9.18
PCB-1268 Peak 4	9.36	9.11	9.61
PCB-1268 Peak 5	9.82	9.57	10.07

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:34:12 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-043
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:09:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:44:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30567576	1000.0	1000.0	
2	1.747	1.744	0.003	172646811	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							Ma
1	3.630	3.631	-0.001	6612174	250.0	269.2	
1	4.117	4.117	0.000	10505144	250.0	243.4	
1	4.263	4.264	-0.001	4602961	250.0	248.6	
1	5.237	5.237	0.000	3142547	250.0	245.9	M
1	5.260	5.261	-0.001	3673495	250.0	224.1	M
		Average of Peak Amounts =				246.2	
2	3.664	3.664	0.000	16978060	250.0	273.5	
2	4.120	4.121	-0.001	36272110	250.0	265.6	
2	4.264	4.264	0.000	15836385	250.0	267.6	
2	4.787	4.788	-0.001	13494422	250.0	275.1	
2	4.927	4.928	-0.001	15331263	250.0	266.7	
		Average of Peak Amounts =				269.7	
						RPD = 9.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	24235953	250.0	276.3	
1	8.433	8.434	-0.001	23424284	250.0	264.6	
1	8.710	8.707	0.003	21027004	250.0	294.7	
1	9.227	9.224	0.003	5641852	250.0	186.4	
1	9.640	9.637	0.003	51985946	250.0	243.9	
		Average of Peak Amounts =				253.2	
2	8.510	8.511	-0.001	92658099	250.0	286.6	
2	8.574	8.574	0.000	85134666	250.0	277.7	
2	8.927	8.928	-0.001	81954946	250.0	309.2	
2	9.357	9.358	-0.001	25443183	250.0	197.1	
2	9.820	9.821	-0.001	205859923	250.0	251.8	
		Average of Peak Amounts =				264.5	
						RPD = 4.37	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

AR_4268_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

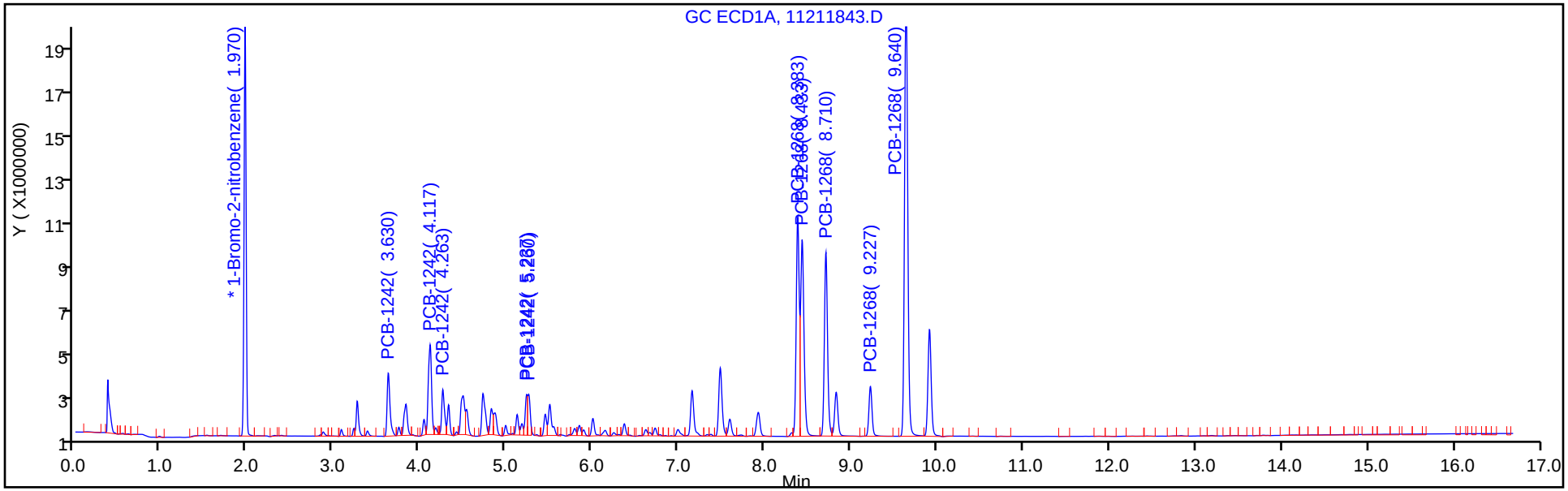
Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

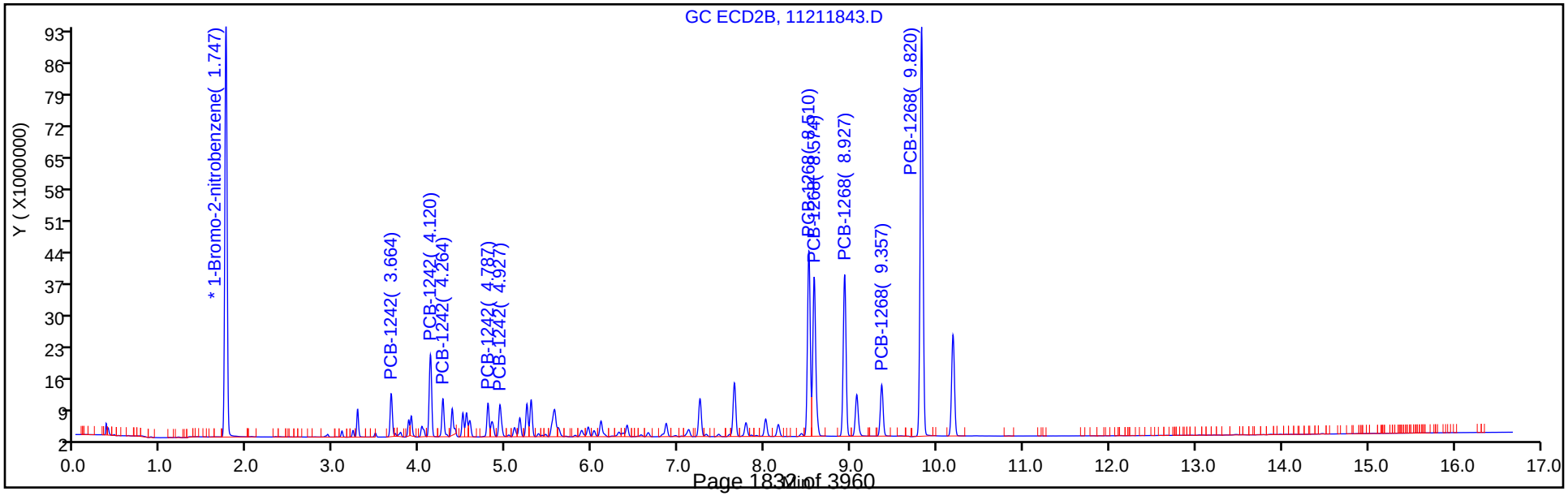
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date:	21-Nov-2018 23:34:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-438794/4 Calibration Date: 11/26/2018 17:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261804.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.4233		489	500	-2.2	20.0
PCB-1016 Peak 2	Lin1		0.9449		467	500	-6.6	20.0
PCB-1016 Peak 3	Lin1		1.655		445	500	-11.0	20.0
PCB-1016 Peak 4	Lin1		0.7110		454	500	-9.3	20.0
PCB-1016 Peak 5	Lin1		0.7689		454	500	-9.2	20.0
PCB-1260 Peak 1	Lin1		1.068		458	500	-8.4	20.0
PCB-1260 Peak 2	Lin1		1.646		458	500	-8.4	20.0
PCB-1260 Peak 3	Lin1		1.004		471	500	-5.8	20.0
PCB-1260 Peak 4	Lin1		2.278		471	500	-5.7	20.0
PCB-1260 Peak 5	Lin1		1.042		474	500	-5.3	20.0
Tetrachloro-m-xylene	Lin1		23.62		22.5	25.0	-10.0	20.0
DCB Decachlorobiphenyl	Lin1		18.06		22.3	25.0	-10.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-438794/4 Calibration Date: 11/26/2018 17:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261804.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.02	4.52
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	7.00	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.92	9.67	10.17

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261804.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 26-Nov-2018 17:11:39 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0076546-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:16 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:21:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.965	1.965	0.000	34956215	1000.0	1000.0	
2	1.742	1.742	0.000	178044551	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.878	2.878	0.000	20641200	25.0	22.5	
2	2.775	2.775	0.000	58029329	25.0	25.4	
						RPD = 11.94	
1 PCB-1016							
1	3.268	3.268	0.000	7398425	500.0	488.8	
1	3.631	3.631	0.000	16514182	500.0	467.1	
1	4.118	4.118	0.000	28932298	500.0	444.8	
1	4.265	4.265	0.000	12427524	500.0	453.5	
1	4.731	4.731	0.000	13439633	500.0	453.8	
		Average of Peak Amounts =				461.6	
2	3.272	3.272	0.000	20334526	500.0	521.9	
2	3.662	3.662	0.000	40874754	500.0	507.4	
2	4.118	4.118	0.000	87421147	500.0	489.1	
2	4.262	4.262	0.000	38480676	500.0	500.7	
2	4.495	4.495	0.000	20247918	500.0	488.9	
		Average of Peak Amounts =				501.6	
						RPD = 8.31	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.248	0.000	18663889	500.0	458.2	
1	6.995	6.995	0.000	28773241	500.0	458.0	
1	7.491	7.491	0.000	17548279	500.0	470.9	
1	7.931	7.931	0.000	39821527	500.0	471.5	
1	8.321	8.321	0.000	18217123	500.0	473.7	
		Average of Peak Amounts =				466.5	
2	6.645	6.645	0.000	66040822	500.0	500.2	
2	7.115	7.115	0.000	98459176	500.0	502.9	
2	7.642	7.642	0.000	59765530	500.0	509.1	
2	8.008	8.008	0.000	135144460	500.0	514.1	
2	8.515	8.515	0.000	103687257	500.0	515.3	
		Average of Peak Amounts =				508.3	
						RPD = 8.59	
$ 15 DCB Decachlorobiphenyl							
1	9.915	9.915	0.000	15783786	25.0	22.3	
2	10.182	10.182	0.000	70906268	25.0	27.1	
						RPD = 19.53	
19 1260 Res 1							
1	8.321	8.321	0.000	18217123	NR	NR	
16 1260 Res 2							
1	8.381	8.381	0.000	8986192	NR	NR	
18 1260 Res 3							
1	8.445	8.445	0.000	11729827	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

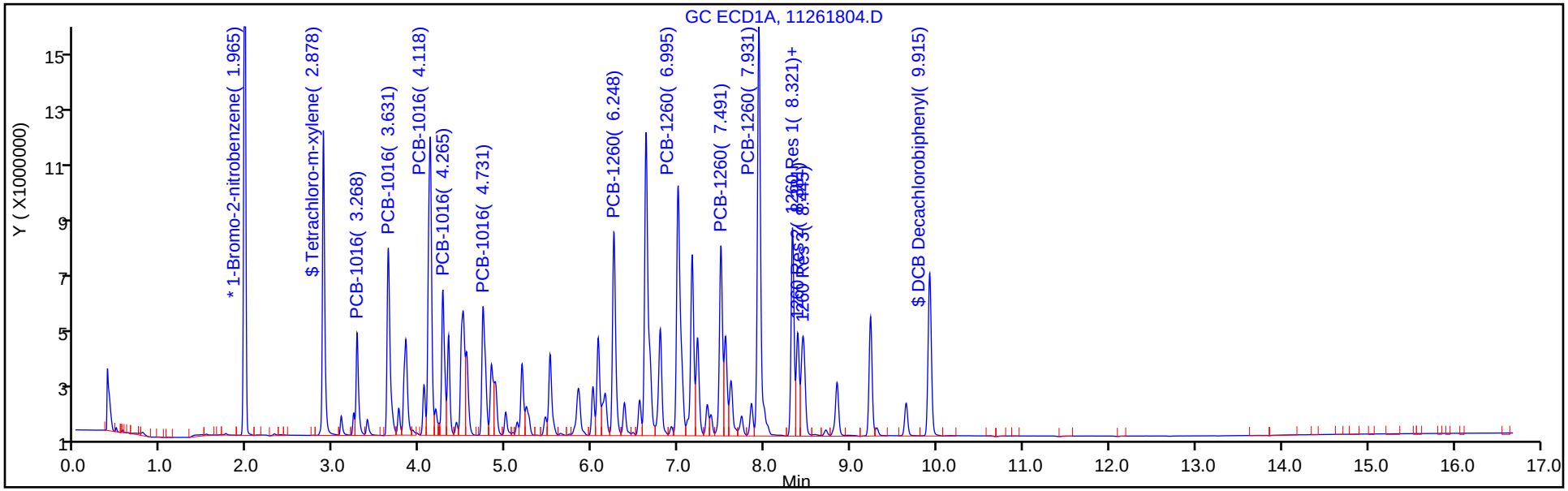
Report Date: 28-Nov-2018 13:12:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

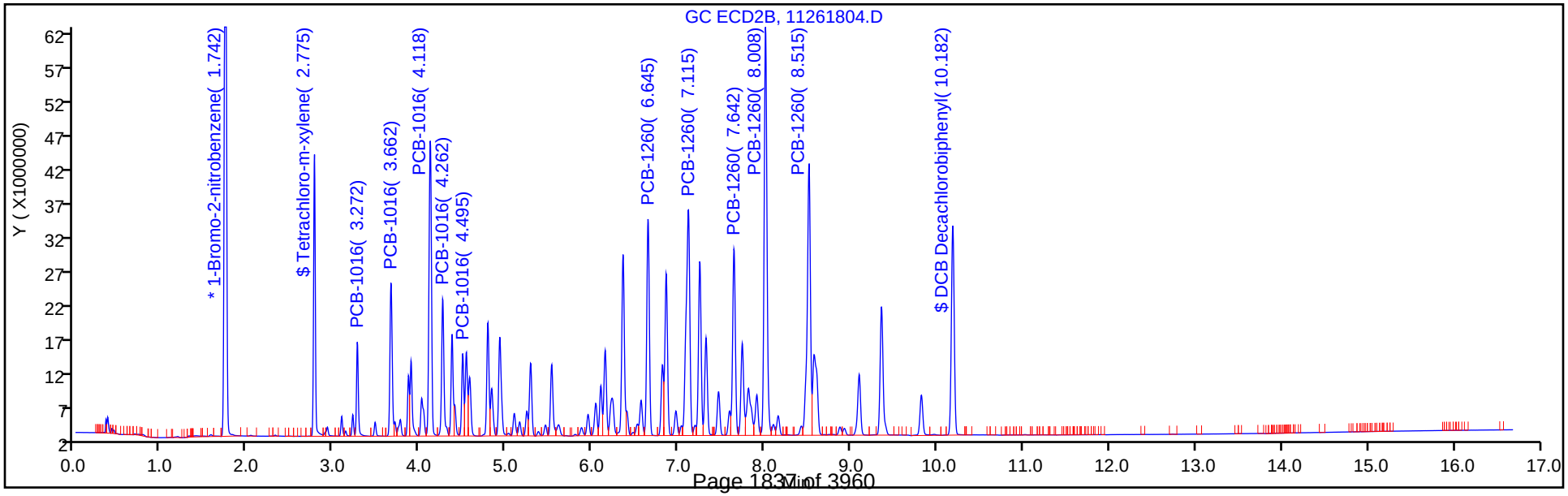
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261804.D

Injection Date:	26-Nov-2018 17:11:39	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-438794/4 Calibration Date: 11/26/2018 17:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261804.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2284		522	500	4.4	20.0
PCB-1016 Peak 2	Lin1		0.4592		507	500	1.5	20.0
PCB-1016 Peak 3	Lin1		0.9820		489	500	-2.2	20.0
PCB-1016 Peak 4	Lin1		0.4323		501	500	0.1	20.0
PCB-1016 Peak 5	Lin1		0.2275		489	500	-2.2	20.0
PCB-1260 Peak 1	Lin1		0.7419		500	500	0.0	20.0
PCB-1260 Peak 2	Lin1		1.106		503	500	0.6	20.0
PCB-1260 Peak 3	Lin1		0.6714		509	500	1.8	20.0
PCB-1260 Peak 4	Lin1		1.518		514	500	2.8	20.0
PCB-1260 Peak 5	Lin1		1.165		515	500	3.1	20.0
Tetrachloro-m-xylene	Lin1		13.04		25.4	25.0	1.4	20.0
DCB Decachlorobiphenyl	Lin1		15.93		27.1	25.0	8.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCVIS 280-438794/4 Calibration Date: 11/26/2018 17:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261804.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.50	4.25	4.75
PCB-1260 Peak 1	6.65	6.40	6.90
PCB-1260 Peak 2	7.12	6.87	7.37
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.52	8.27	8.77
Tetrachloro-m-xylene	2.78	2.53	3.03
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261804.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 26-Nov-2018 17:11:39 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0076546-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:16 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:21:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.965	1.965	0.000	34956215	1000.0	1000.0	
2	1.742	1.742	0.000	178044551	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.878	2.878	0.000	20641200	25.0	22.5	
2	2.775	2.775	0.000	58029329	25.0	25.4	
						RPD = 11.94	
1 PCB-1016							
1	3.268	3.268	0.000	7398425	500.0	488.8	
1	3.631	3.631	0.000	16514182	500.0	467.1	
1	4.118	4.118	0.000	28932298	500.0	444.8	
1	4.265	4.265	0.000	12427524	500.0	453.5	
1	4.731	4.731	0.000	13439633	500.0	453.8	
		Average of Peak Amounts =				461.6	
2	3.272	3.272	0.000	20334526	500.0	521.9	
2	3.662	3.662	0.000	40874754	500.0	507.4	
2	4.118	4.118	0.000	87421147	500.0	489.1	
2	4.262	4.262	0.000	38480676	500.0	500.7	
2	4.495	4.495	0.000	20247918	500.0	488.9	
		Average of Peak Amounts =				501.6	
						RPD = 8.31	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.248	0.000	18663889	500.0	458.2	
1	6.995	6.995	0.000	28773241	500.0	458.0	
1	7.491	7.491	0.000	17548279	500.0	470.9	
1	7.931	7.931	0.000	39821527	500.0	471.5	
1	8.321	8.321	0.000	18217123	500.0	473.7	
		Average of Peak Amounts =				466.5	
2	6.645	6.645	0.000	66040822	500.0	500.2	
2	7.115	7.115	0.000	98459176	500.0	502.9	
2	7.642	7.642	0.000	59765530	500.0	509.1	
2	8.008	8.008	0.000	135144460	500.0	514.1	
2	8.515	8.515	0.000	103687257	500.0	515.3	
		Average of Peak Amounts =				508.3	
						RPD = 8.59	
$ 15 DCB Decachlorobiphenyl							
1	9.915	9.915	0.000	15783786	25.0	22.3	
2	10.182	10.182	0.000	70906268	25.0	27.1	
						RPD = 19.53	
19 1260 Res 1							
1	8.321	8.321	0.000	18217123	NR	NR	
16 1260 Res 2							
1	8.381	8.381	0.000	8986192	NR	NR	
18 1260 Res 3							
1	8.445	8.445	0.000	11729827	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

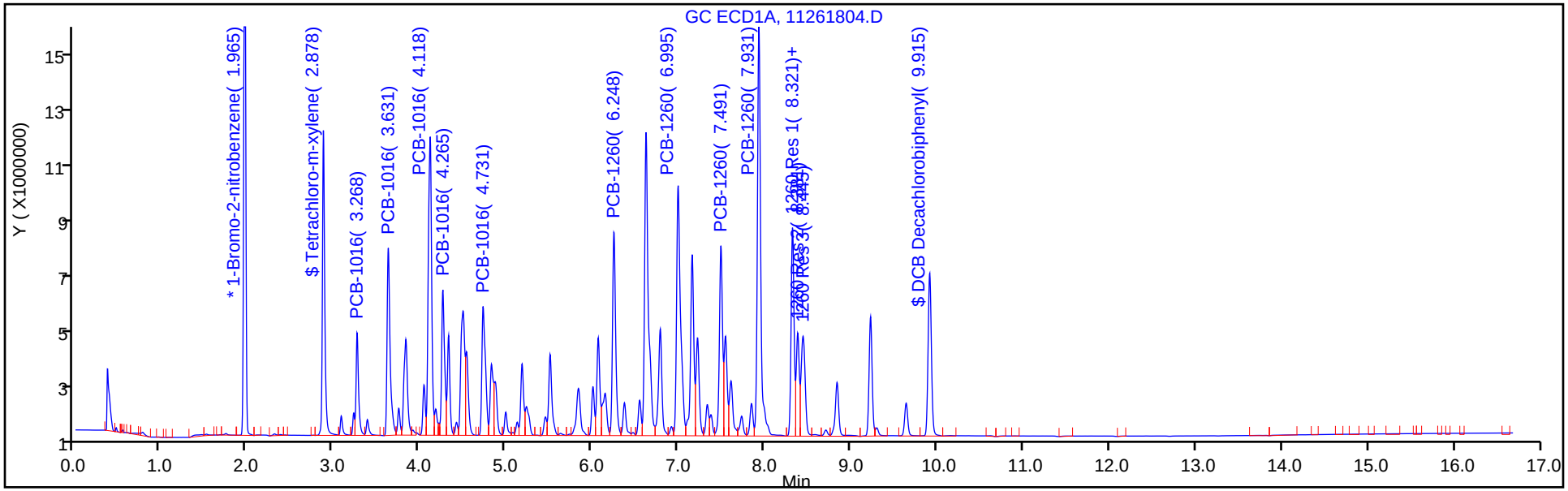
Report Date: 28-Nov-2018 13:12:17 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

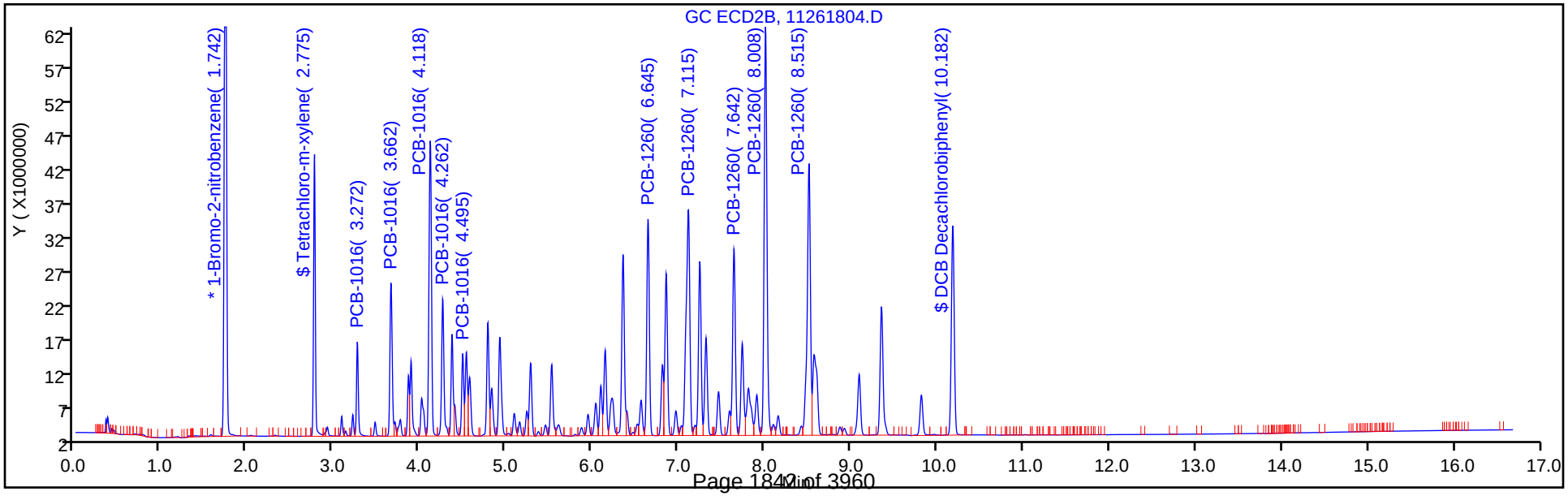
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261804.D

Injection Date:	26-Nov-2018 17:11:39	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/18 Calibration Date: 11/26/2018 22:08

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261818.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.4272		493	500	-1.3	20.0
PCB-1016 Peak 2	Lin1		0.9704		480	500	-4.0	20.0
PCB-1016 Peak 3	Lin1		1.795		482	500	-3.5	20.0
PCB-1016 Peak 4	Lin1		0.7676		490	500	-1.9	20.0
PCB-1016 Peak 5	Lin1		0.8206		485	500	-3.0	20.0
PCB-1260 Peak 1	Lin1		1.137		489	500	-2.3	20.0
PCB-1260 Peak 2	Lin1		1.761		490	500	-2.0	20.0
PCB-1260 Peak 3	Lin1		1.050		492	500	-1.5	20.0
PCB-1260 Peak 4	Lin1		2.389		495	500	-1.1	20.0
PCB-1260 Peak 5	Lin1		1.079		490	500	-1.9	20.0
Tetrachloro-m-xylene	Lin1		24.42		23.3	25.0	-6.9	20.0
DCB Decachlorobiphenyl	Lin1		17.91		22.1	25.0	-11.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/18 Calibration Date: 11/26/2018 22:08

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261818.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.02	4.52
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.67	10.17

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261818.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Nov-2018 22:08:24 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:34 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:34:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.965	0.002	38359891	1000.0	1000.0	
2	1.741	1.742	-0.001	189595870	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.877	2.878	-0.001	23418586	25.0	23.3	
2	2.774	2.775	-0.001	64365096	25.0	26.4	
						RPD = 12.79	
1 PCB-1016							
1	3.271	3.268	0.003	8194535	500.0	493.5	
1	3.631	3.631	0.000	18612285	500.0	480.1	
1	4.117	4.118	-0.001	34423650	500.0	482.5	
1	4.264	4.265	-0.001	14722244	500.0	490.3	
1	4.731	4.731	0.000	15739510	500.0	484.8	
		Average of Peak Amounts =				486.2	
2	3.274	3.272	0.002	22225509	500.0	536.1	
2	3.661	3.662	-0.001	46258180	500.0	540.3	
2	4.118	4.118	0.000	101364375	500.0	533.8	
2	4.264	4.262	0.002	44356820	500.0	543.2	
2	4.494	4.495	-0.001	23344034	500.0	530.8	
		Average of Peak Amounts =				536.8	
						RPD = 9.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.251	6.248	0.003	21814232	500.0	488.6	
1	6.994	6.995	-0.001	33774247	500.0	490.2	
1	7.491	7.491	0.000	20130723	500.0	492.5	
1	7.934	7.931	0.003	45824818	500.0	494.5	
1	8.324	8.321	0.003	20696325	500.0	490.4	
		Average of Peak Amounts =				491.2	
2	6.644	6.645	-0.001	76371726	500.0	544.4	
2	7.114	7.115	-0.001	113455212	500.0	545.2	
2	7.641	7.642	-0.001	68330218	500.0	547.5	
2	8.008	8.008	0.000	153312826	500.0	548.4	
2	8.514	8.515	-0.001	116512002	500.0	544.4	
		Average of Peak Amounts =				546.0	
						RPD = 10.56	
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.915	-0.001	17179466	25.0	22.1	
2	10.184	10.182	0.002	77618497	25.0	27.9	
						RPD = 23.16	
S 8 Polychlorinated biphenyls, Total							
1						977.4	
2						1082.8	
						RPD = 10.23	
19 1260 Res 1							
1	8.324	8.321	0.003	20696325	NR	NR	
16 1260 Res 2							
1	8.381	8.381	-0.001	10187583	NR	NR	
18 1260 Res 3							
1	8.444	8.445	-0.001	13366695	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

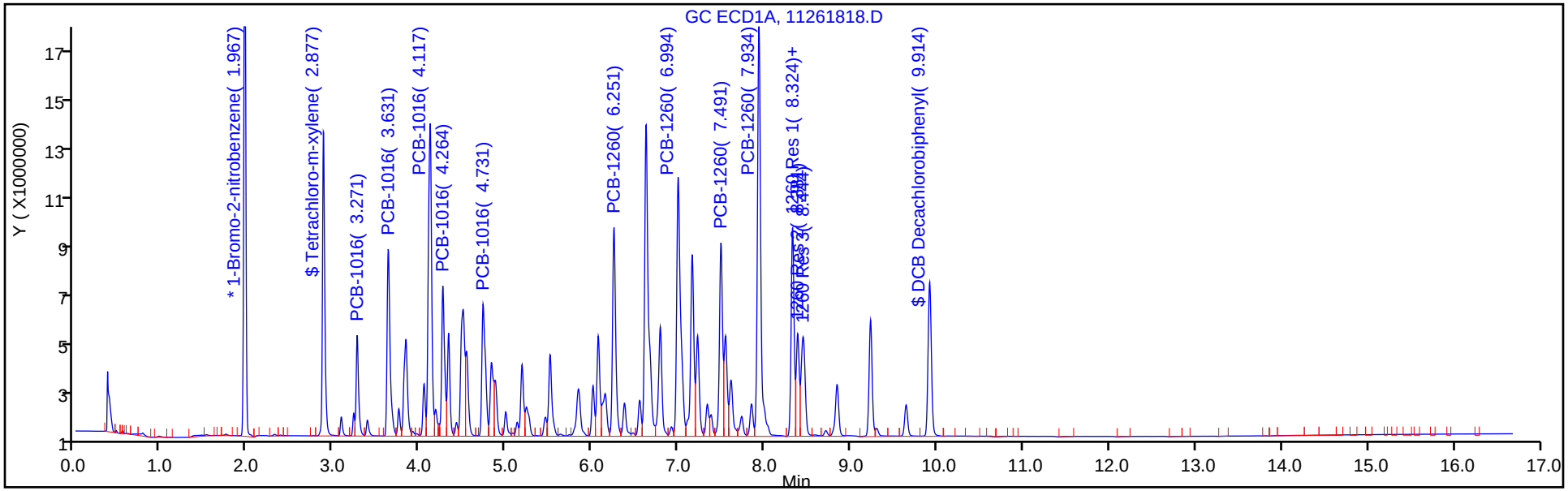
Report Date: 28-Nov-2018 13:12:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

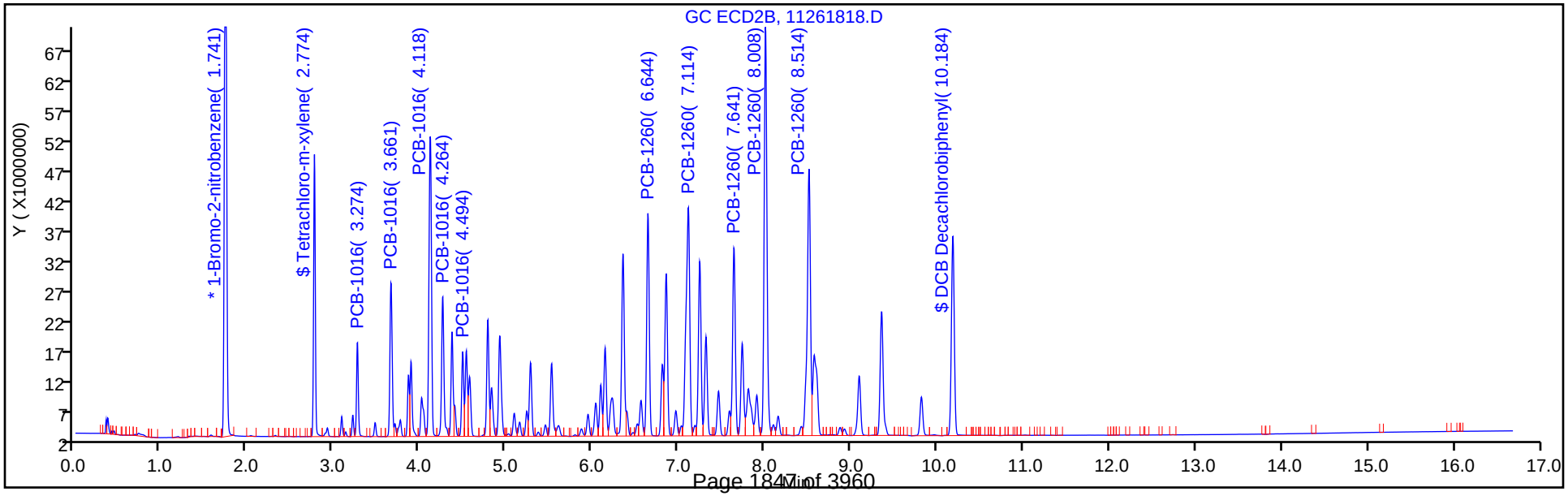
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261818.D

Injection Date:	26-Nov-2018 22:08:24	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/18 Calibration Date: 11/26/2018 22:08

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261818.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2345		536	500	7.2	20.0
PCB-1016 Peak 2	Lin1		0.4880		540	500	8.1	20.0
PCB-1016 Peak 3	Lin1		1.069		534	500	6.8	20.0
PCB-1016 Peak 4	Lin1		0.4679		543	500	8.6	20.0
PCB-1016 Peak 5	Lin1		0.2463		531	500	6.2	20.0
PCB-1260 Peak 1	Lin1		0.8056		544	500	8.9	20.0
PCB-1260 Peak 2	Lin1		1.197		545	500	9.0	20.0
PCB-1260 Peak 3	Lin1		0.7208		548	500	9.5	20.0
PCB-1260 Peak 4	Lin1		1.617		548	500	9.7	20.0
PCB-1260 Peak 5	Lin1		1.229		544	500	8.9	20.0
Tetrachloro-m-xylene	Lin1		13.58		26.4	25.0	5.8	20.0
DCB Decachlorobiphenyl	Lin1		16.38		27.9	25.0	11.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/18 Calibration Date: 11/26/2018 22:08

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261818.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.49	4.25	4.75
PCB-1260 Peak 1	6.64	6.40	6.90
PCB-1260 Peak 2	7.11	6.87	7.37
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.51	8.27	8.77
Tetrachloro-m-xylene	2.77	2.53	3.03
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261818.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Nov-2018 22:08:24 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:34 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:34:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.965	0.002	38359891	1000.0	1000.0	
2	1.741	1.742	-0.001	189595870	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.877	2.878	-0.001	23418586	25.0	23.3	
2	2.774	2.775	-0.001	64365096	25.0	26.4	
						RPD = 12.79	
1 PCB-1016							
1	3.271	3.268	0.003	8194535	500.0	493.5	
1	3.631	3.631	0.000	18612285	500.0	480.1	
1	4.117	4.118	-0.001	34423650	500.0	482.5	
1	4.264	4.265	-0.001	14722244	500.0	490.3	
1	4.731	4.731	0.000	15739510	500.0	484.8	
		Average of Peak Amounts =				486.2	
2	3.274	3.272	0.002	22225509	500.0	536.1	
2	3.661	3.662	-0.001	46258180	500.0	540.3	
2	4.118	4.118	0.000	101364375	500.0	533.8	
2	4.264	4.262	0.002	44356820	500.0	543.2	
2	4.494	4.495	-0.001	23344034	500.0	530.8	
		Average of Peak Amounts =				536.8	
						RPD = 9.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.251	6.248	0.003	21814232	500.0	488.6	
1	6.994	6.995	-0.001	33774247	500.0	490.2	
1	7.491	7.491	0.000	20130723	500.0	492.5	
1	7.934	7.931	0.003	45824818	500.0	494.5	
1	8.324	8.321	0.003	20696325	500.0	490.4	
		Average of Peak Amounts =				491.2	
2	6.644	6.645	-0.001	76371726	500.0	544.4	
2	7.114	7.115	-0.001	113455212	500.0	545.2	
2	7.641	7.642	-0.001	68330218	500.0	547.5	
2	8.008	8.008	0.000	153312826	500.0	548.4	
2	8.514	8.515	-0.001	116512002	500.0	544.4	
		Average of Peak Amounts =				546.0	
						RPD = 10.56	
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.915	-0.001	17179466	25.0	22.1	
2	10.184	10.182	0.002	77618497	25.0	27.9	
						RPD = 23.16	
S 8 Polychlorinated biphenyls, Total							
1						977.4	
2						1082.8	
						RPD = 10.23	
19 1260 Res 1							
1	8.324	8.321	0.003	20696325	NR	NR	
16 1260 Res 2							
1	8.381	8.381	-0.001	10187583	NR	NR	
18 1260 Res 3							
1	8.444	8.445	-0.001	13366695	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

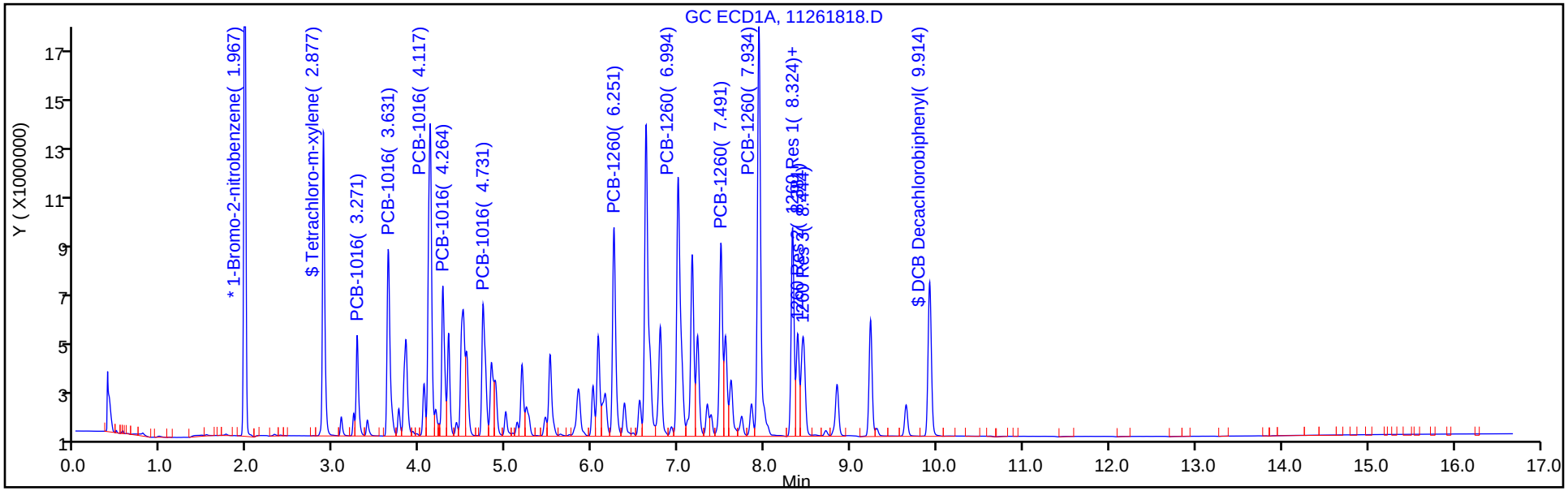
Report Date: 28-Nov-2018 13:12:35 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

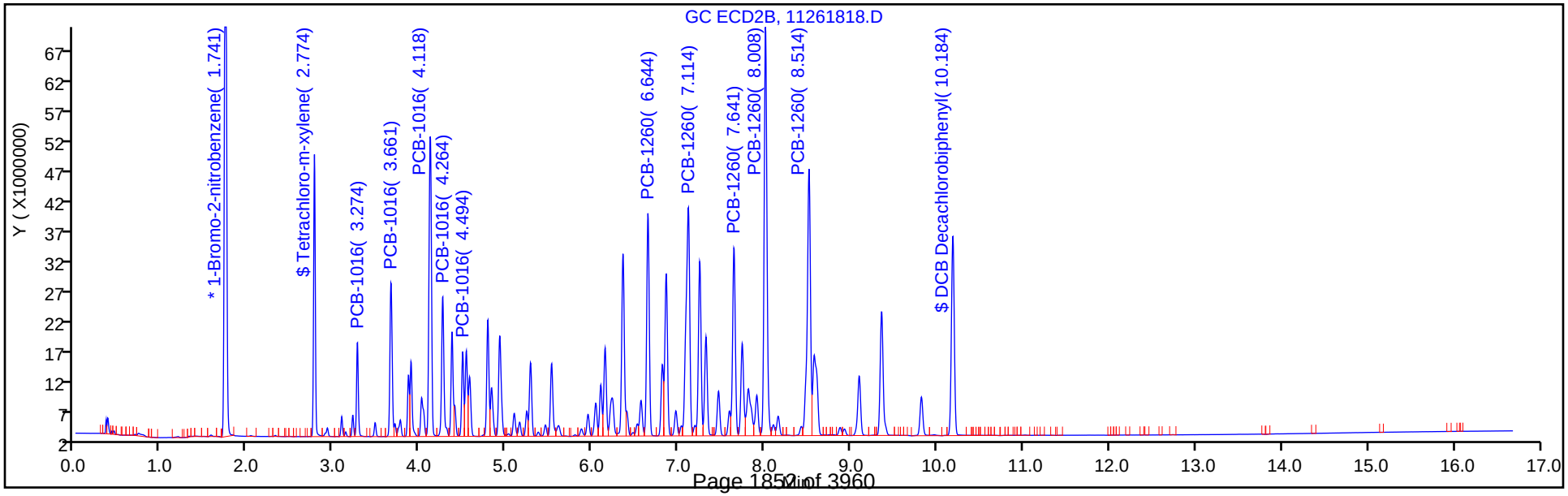
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261818.D

Injection Date:	26-Nov-2018 22:08:24	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/28 Calibration Date: 11/27/2018 01:40

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261828.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.4312		498	500	-0.4	20.0
PCB-1016 Peak 2	Lin1		0.9643		477	500	-4.6	20.0
PCB-1016 Peak 3	Lin1		1.800		484	500	-3.2	20.0
PCB-1016 Peak 4	Lin1		0.7550		482	500	-3.6	20.0
PCB-1016 Peak 5	Lin1		0.8186		484	500	-3.3	20.0
PCB-1260 Peak 1	Lin1		1.133		487	500	-2.7	20.0
PCB-1260 Peak 2	Lin1		1.765		491	500	-1.7	20.0
PCB-1260 Peak 3	Lin1		1.047		491	500	-1.8	20.0
PCB-1260 Peak 4	Lin1		2.391		495	500	-1.0	20.0
PCB-1260 Peak 5	Lin1		1.080		491	500	-1.9	20.0
Tetrachloro-m-xylene	Lin1		24.26		23.1	25.0	-7.6	20.0
DCB Decachlorobiphenyl	Lin1		18.27		22.5	25.0	-9.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/28 Calibration Date: 11/27/2018 01:40

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261828.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.02	4.52
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	7.00	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.92	9.67	10.17

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261828.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 01:40:09 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:47:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.965	0.003	39694392	1000.0	1000.0	
2	1.741	1.742	-0.001	195974164	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.878	2.878	0.000	24072829	25.0	23.1	
2	2.775	2.775	0.000	65670607	25.0	26.1	
						RPD = 12.12	
1 PCB-1016							
1	3.271	3.268	0.003	8558742	500.0	498.2	
1	3.631	3.631	0.000	19138991	500.0	477.0	
1	4.118	4.118	0.000	35734171	500.0	484.0	
1	4.265	4.265	0.000	14983907	500.0	482.1	
1	4.731	4.731	0.000	16247699	500.0	483.6	
		Average of Peak Amounts =				485.0	
2	3.275	3.272	0.003	22708563	500.0	529.7	
2	3.661	3.662	-0.001	47123142	500.0	532.2	
2	4.118	4.118	0.000	103635069	500.0	527.8	
2	4.261	4.262	-0.001	45044951	500.0	533.4	
2	4.495	4.495	0.000	24016708	500.0	528.2	
		Average of Peak Amounts =				530.3	
						RPD = 8.93	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.251	6.248	0.003	22486201	500.0	486.7	
1	6.995	6.995	0.000	35035352	500.0	491.4	
1	7.491	7.491	0.000	20778047	500.0	491.2	
1	7.931	7.931	0.000	47458939	500.0	494.9	
1	8.321	8.321	0.000	21428680	500.0	490.7	
		Average of Peak Amounts =				491.0	
2	6.645	6.645	0.000	77498265	500.0	534.2	
2	7.111	7.115	-0.004	115046832	500.0	534.6	
2	7.641	7.642	-0.001	69171104	500.0	536.0	
2	8.008	8.008	0.000	155121536	500.0	536.6	
2	8.511	8.515	-0.004	118387423	500.0	535.0	
		Average of Peak Amounts =				535.3	
						RPD = 8.63	
$ 15 DCB Decachlorobiphenyl							
1	9.915	9.915	0.000	18132678	25.0	22.5	
2	10.181	10.182	-0.001	77070641	25.0	26.7	
						RPD = 17.06	
S 8 Polychlorinated biphenyls, Total							
1						976.0	
2						1065.6	
						RPD = 8.78	
19 1260 Res 1							
1	8.321	8.321	0.000	21428680	NR	NR	
16 1260 Res 2							
1	8.381	8.381	0.000	10455197	NR	NR	
18 1260 Res 3							
1	8.445	8.445	0.000	13753991	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

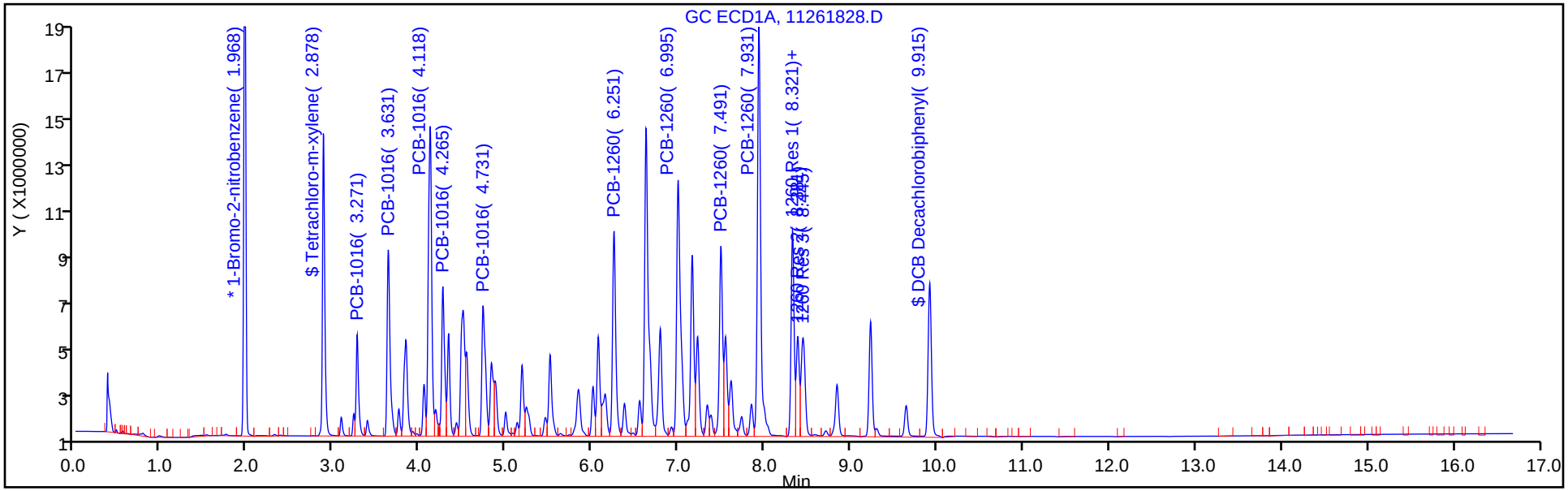
Report Date: 28-Nov-2018 13:12:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

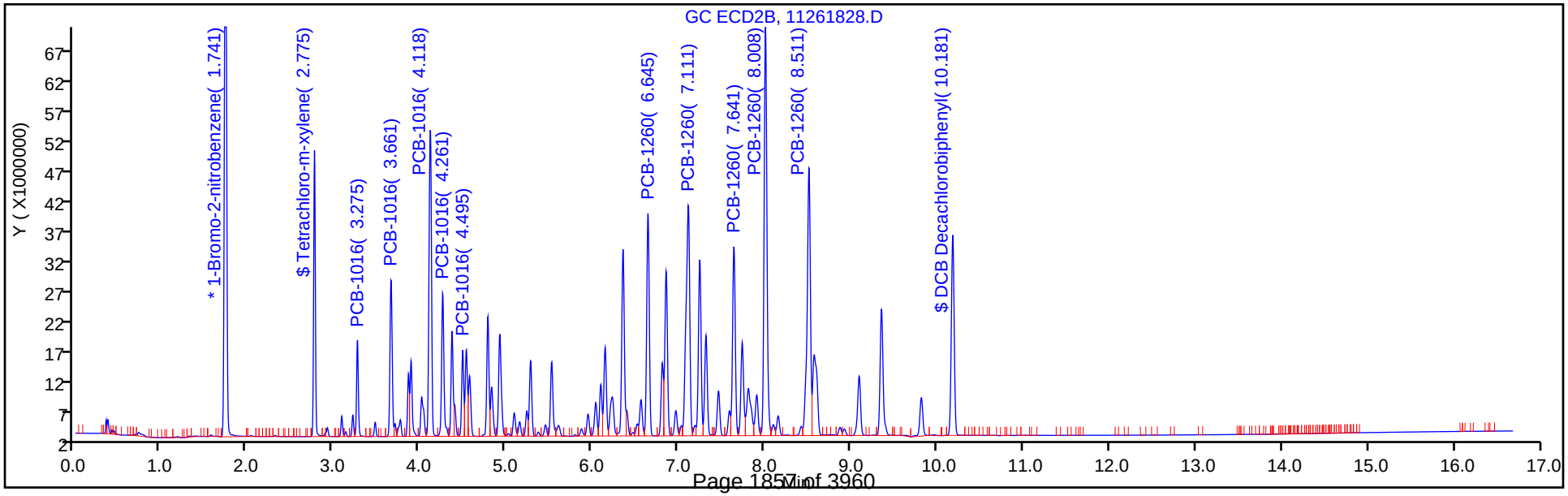
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261828.D

Injection Date:	27-Nov-2018 01:40:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/28 Calibration Date: 11/27/2018 01:40

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261828.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2318		530	500	5.9	20.0
PCB-1016 Peak 2	Lin1		0.4809		532	500	6.4	20.0
PCB-1016 Peak 3	Lin1		1.058		528	500	5.6	20.0
PCB-1016 Peak 4	Lin1		0.4597		533	500	6.7	20.0
PCB-1016 Peak 5	Lin1		0.2451		528	500	5.6	20.0
PCB-1260 Peak 1	Lin1		0.7909		534	500	6.8	20.0
PCB-1260 Peak 2	Lin1		1.174		535	500	6.9	20.0
PCB-1260 Peak 3	Lin1		0.7059		536	500	7.2	20.0
PCB-1260 Peak 4	Lin1		1.583		537	500	7.3	20.0
PCB-1260 Peak 5	Lin1		1.208		535	500	7.0	20.0
Tetrachloro-m-xylene	Lin1		13.40		26.1	25.0	4.4	20.0
DCB Decachlorobiphenyl	Lin1		15.73		26.7	25.0	6.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/28 Calibration Date: 11/27/2018 01:40

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261828.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.28	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.50	4.25	4.75
PCB-1260 Peak 1	6.65	6.40	6.90
PCB-1260 Peak 2	7.11	6.87	7.37
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.51	8.27	8.77
Tetrachloro-m-xylene	2.78	2.53	3.03
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261828.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 01:40:09 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:47:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.965	0.003	39694392	1000.0	1000.0	
2	1.741	1.742	-0.001	195974164	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.878	2.878	0.000	24072829	25.0	23.1	
2	2.775	2.775	0.000	65670607	25.0	26.1	
						RPD = 12.12	
1 PCB-1016							
1	3.271	3.268	0.003	8558742	500.0	498.2	
1	3.631	3.631	0.000	19138991	500.0	477.0	
1	4.118	4.118	0.000	35734171	500.0	484.0	
1	4.265	4.265	0.000	14983907	500.0	482.1	
1	4.731	4.731	0.000	16247699	500.0	483.6	
		Average of Peak Amounts =				485.0	
2	3.275	3.272	0.003	22708563	500.0	529.7	
2	3.661	3.662	-0.001	47123142	500.0	532.2	
2	4.118	4.118	0.000	103635069	500.0	527.8	
2	4.261	4.262	-0.001	45044951	500.0	533.4	
2	4.495	4.495	0.000	24016708	500.0	528.2	
		Average of Peak Amounts =				530.3	
						RPD = 8.93	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.251	6.248	0.003	22486201	500.0	486.7	
1	6.995	6.995	0.000	35035352	500.0	491.4	
1	7.491	7.491	0.000	20778047	500.0	491.2	
1	7.931	7.931	0.000	47458939	500.0	494.9	
1	8.321	8.321	0.000	21428680	500.0	490.7	
		Average of Peak Amounts =				491.0	
2	6.645	6.645	0.000	77498265	500.0	534.2	
2	7.111	7.115	-0.004	115046832	500.0	534.6	
2	7.641	7.642	-0.001	69171104	500.0	536.0	
2	8.008	8.008	0.000	155121536	500.0	536.6	
2	8.511	8.515	-0.004	118387423	500.0	535.0	
		Average of Peak Amounts =				535.3	
						RPD = 8.63	
$ 15 DCB Decachlorobiphenyl							
1	9.915	9.915	0.000	18132678	25.0	22.5	
2	10.181	10.182	-0.001	77070641	25.0	26.7	
						RPD = 17.06	
S 8 Polychlorinated biphenyls, Total							
1						976.0	
2						1065.6	
						RPD = 8.78	
19 1260 Res 1							
1	8.321	8.321	0.000	21428680	NR	NR	
16 1260 Res 2							
1	8.381	8.381	0.000	10455197	NR	NR	
18 1260 Res 3							
1	8.445	8.445	0.000	13753991	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

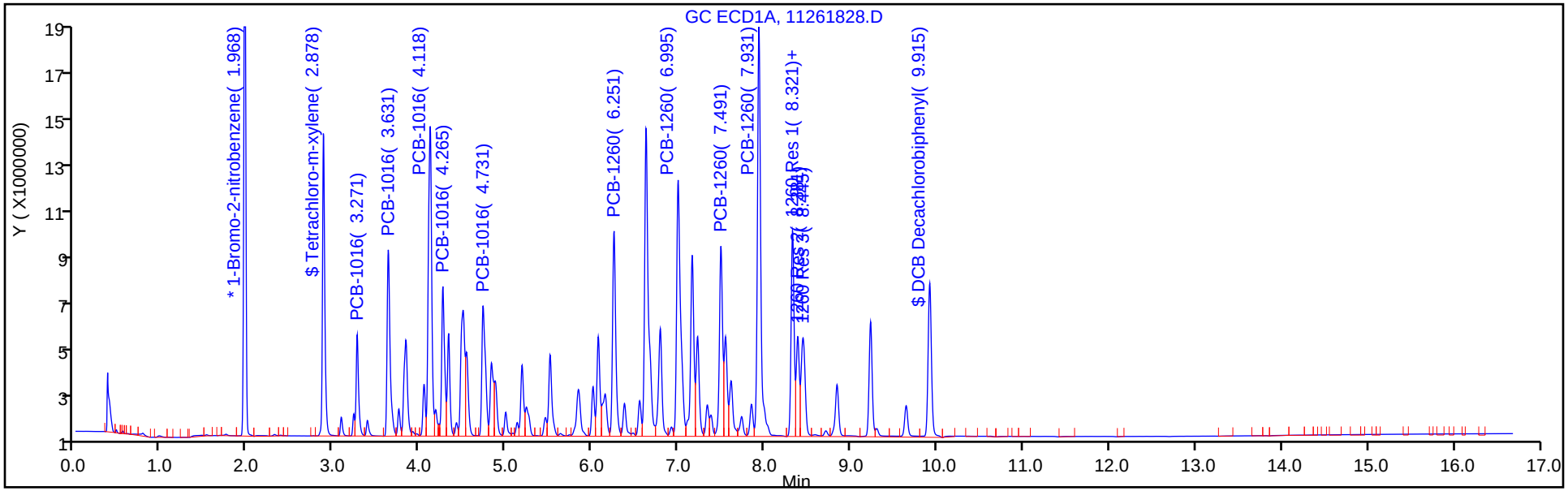
Report Date: 28-Nov-2018 13:12:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

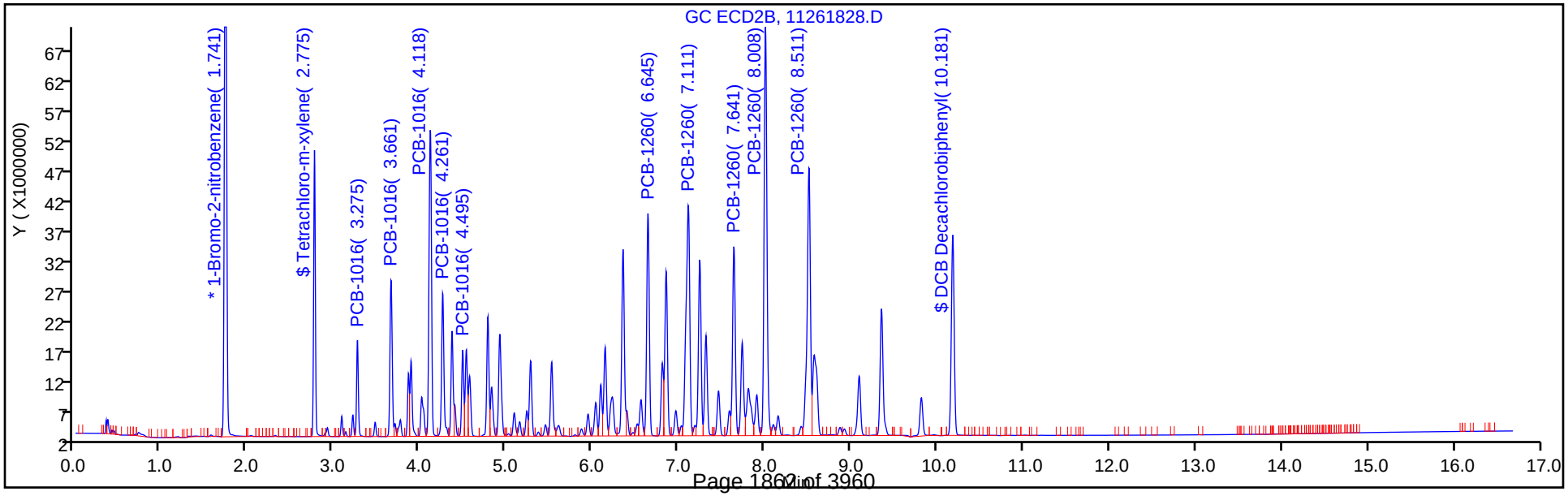
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261828.D

Injection Date:	27-Nov-2018 01:40:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/38 Calibration Date: 11/27/2018 05:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261838.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.4371		505	500	1.0	20.0
PCB-1016 Peak 2	Lin1		0.9718		481	500	-3.8	20.0
PCB-1016 Peak 3	Lin1		1.761		473	500	-5.3	20.0
PCB-1016 Peak 4	Lin1		0.7525		480	500	-3.9	20.0
PCB-1016 Peak 5	Lin1		0.8021		474	500	-5.3	20.0
PCB-1260 Peak 1	Lin1		1.104		474	500	-5.2	20.0
PCB-1260 Peak 2	Lin1		1.706		475	500	-5.0	20.0
PCB-1260 Peak 3	Lin1		1.012		474	500	-5.1	20.0
PCB-1260 Peak 4	Lin1		2.323		481	500	-3.9	20.0
PCB-1260 Peak 5	Lin1		1.059		481	500	-3.8	20.0
Tetrachloro-m-xylene	Lin1		24.56		23.4	25.0	-6.4	20.0
DCB Decachlorobiphenyl	Lin1		18.88		23.3	25.0	-6.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/38 Calibration Date: 11/27/2018 05:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261838.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.02	4.52
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.67	10.17

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261838.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 05:11:45 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:13:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 27-Nov-2018 07:02:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.965	0.001	37791074	1000.0	1000.0	
2	1.743	1.742	0.001	189317567	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.878	0.001	23201206	25.0	23.4	
2	2.773	2.775	-0.002	63577966	25.0	26.2	
						RPD = 11.13	
1 PCB-1016							M
1	3.269	3.268	0.001	8259860	500.0	505.2	M
1	3.629	3.631	-0.002	18363154	500.0	480.8	M
1	4.116	4.118	-0.002	33283772	500.0	473.5	M
1	4.262	4.265	-0.003	14219023	500.0	480.5	M
1	4.732	4.731	0.001	15155615	500.0	473.7	M
		Average of Peak Amounts =				482.7	
2	3.273	3.272	0.001	21456203	500.0	517.8	
2	3.663	3.662	0.001	42278301	500.0	493.1	
2	4.119	4.118	0.001	97662969	500.0	514.6	
2	4.263	4.262	0.001	42405082	500.0	519.4	
2	4.493	4.495	-0.002	22103181	500.0	502.4	
		Average of Peak Amounts =				509.5	
						RPD = 5.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.248	0.001	20861509	500.0	474.0	
1	6.992	6.995	-0.003	32243056	500.0	474.9	
1	7.492	7.491	0.001	19116083	500.0	474.5	
1	7.932	7.931	0.001	43885161	500.0	480.7	
1	8.322	8.321	0.001	20004186	500.0	481.1	
		Average of Peak Amounts =				477.0	
2	6.643	6.645	-0.002	73186807	500.0	521.9	
2	7.113	7.115	-0.002	108961145	500.0	523.9	
2	7.643	7.642	0.001	66044751	500.0	529.6	
2	8.006	8.008	-0.002	148617757	500.0	532.1	
2	8.513	8.515	-0.002	113891109	500.0	532.7	
		Average of Peak Amounts =				528.0	
						RPD = 10.15	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.915	-0.003	17837998	25.0	23.3	
2	10.179	10.182	-0.003	77771761	25.0	28.0	
						RPD = 18.17	
S 8 Polychlorinated biphenyls, Total							
1						959.8	
2						1037.5	
						RPD = 7.78	
19 1260 Res 1							
1	8.322	8.321	0.001	20004186	NR	NR	
16 1260 Res 2							
1	8.382	8.381	0.001	10355246	NR	NR	
18 1260 Res 3							
1	8.446	8.445	0.001	12851699	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

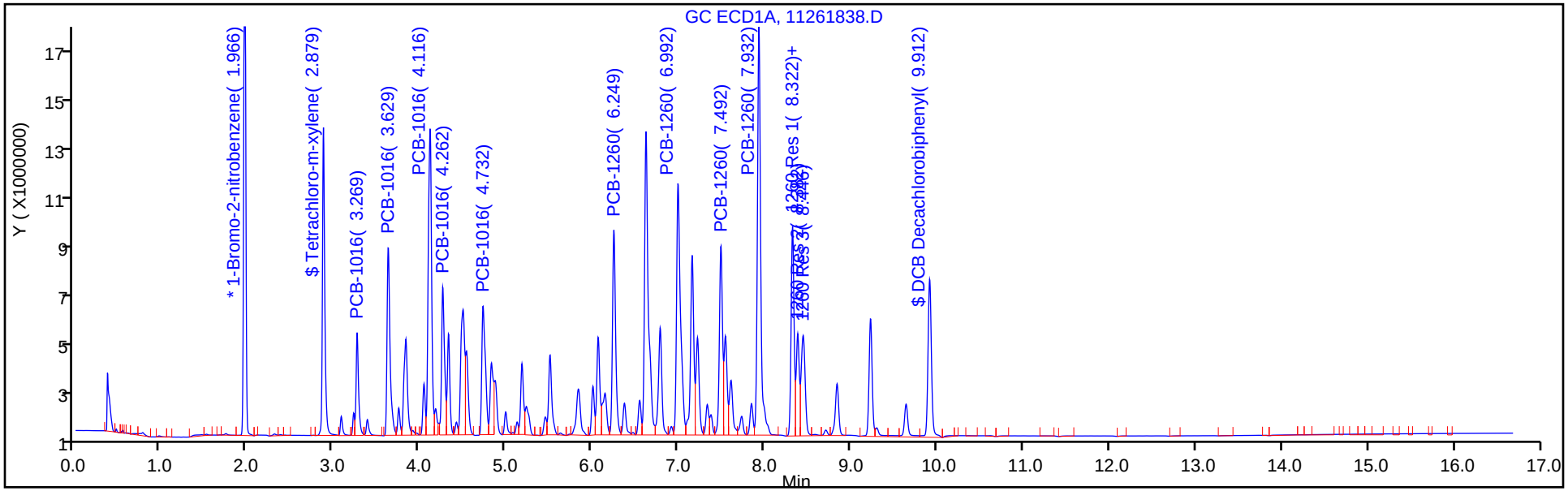
Report Date: 28-Nov-2018 13:13:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

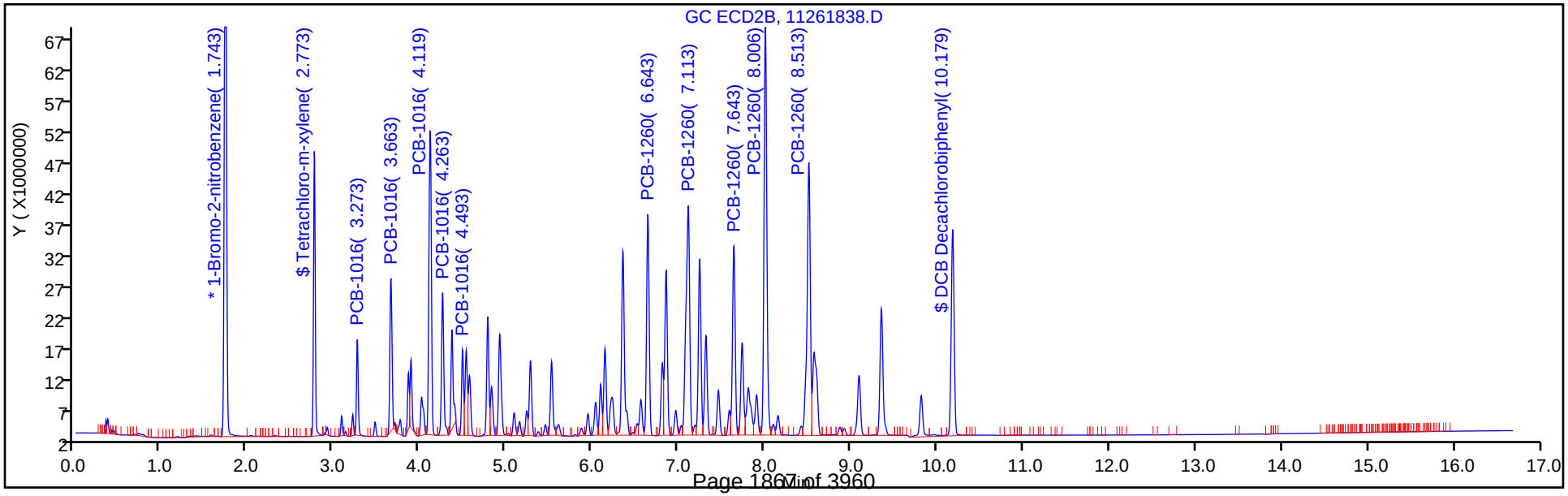
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261838.D

Injection Date:	27-Nov-2018 05:11:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 28-Nov-2018 13:13:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261838.D

Injection Date: 27-Nov-2018 05:11:45 Instrument ID: SGC_J

Lims ID: CCV

Client ID:

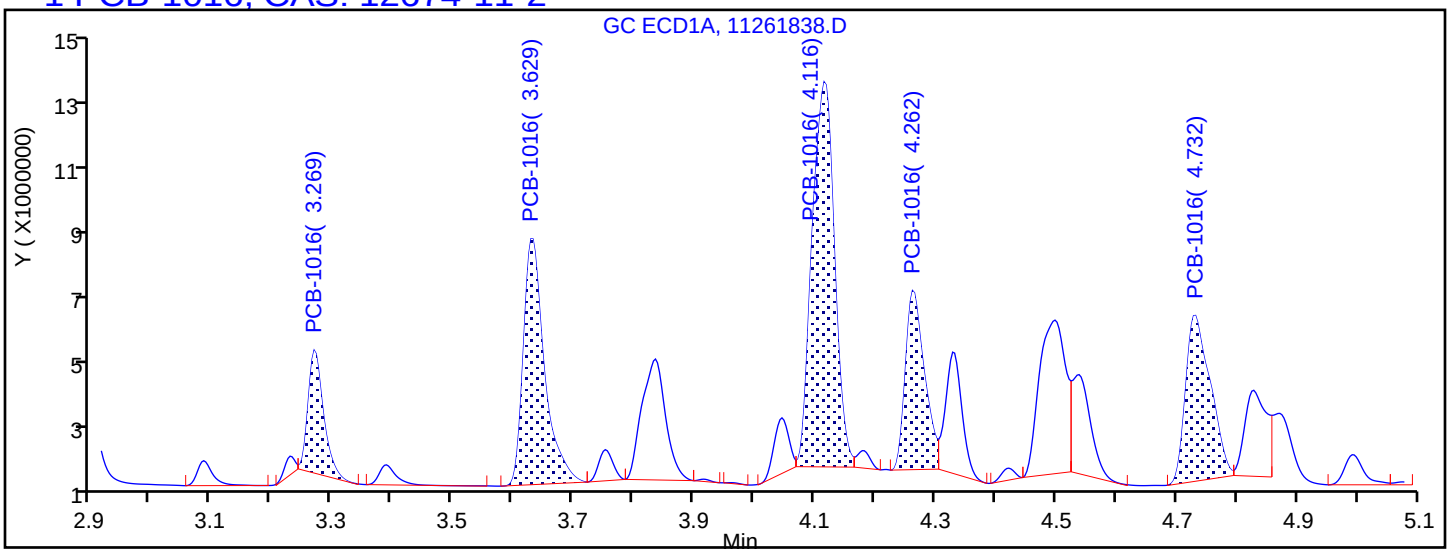
Operator ID: ALS ALS Bottle#: 38 Worklist Smp#: 38

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

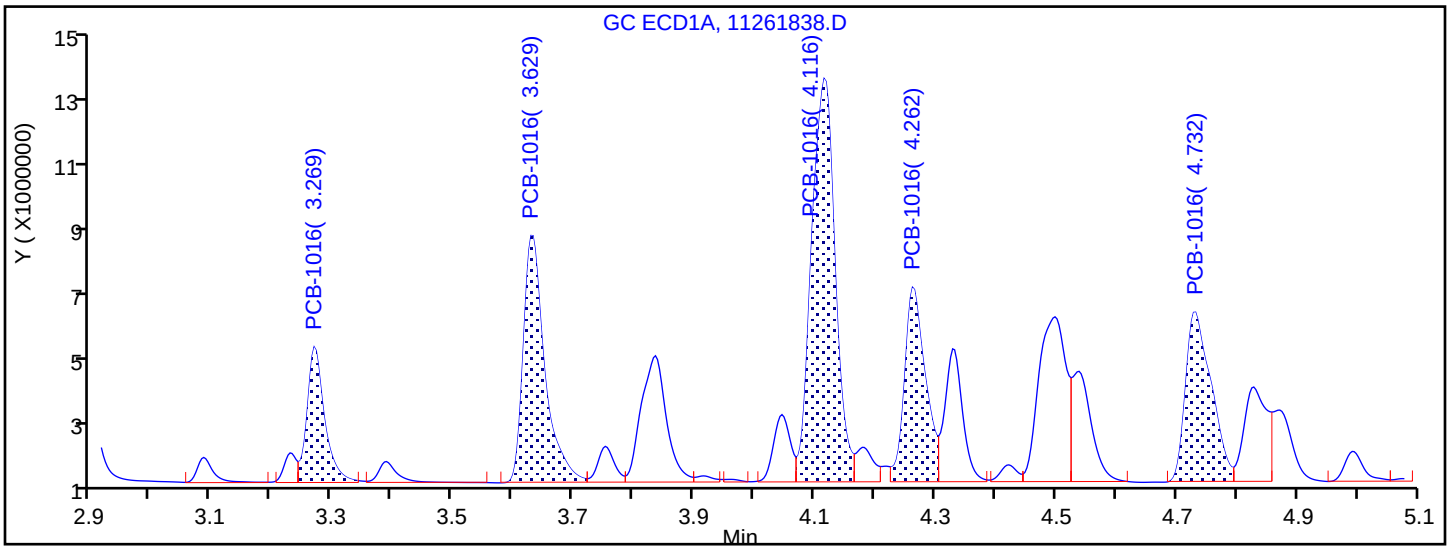
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

1 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.269	Response = 6613745
3.629	Response = 18000479
4.116	Response = 30070250
4.262	Response = 11972599
4.732	Response = 14313102



Manual Integration Results

3.269	Response = 8259860	M
3.629	Response = 18363154	M
4.116	Response = 33283772	M
4.262	Response = 14219023	M
4.732	Response = 15155615	M

Reviewer: patadiab, 27-Nov-2018 07:02:45

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/38 Calibration Date: 11/27/2018 05:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261838.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2267		518	500	3.6	20.0
PCB-1016 Peak 2	Lin1		0.4466		493	500	-1.4	20.0
PCB-1016 Peak 3	Lin1		1.032		515	500	2.9	20.0
PCB-1016 Peak 4	Lin1		0.4480		519	500	3.9	20.0
PCB-1016 Peak 5	Lin1		0.2335		502	500	0.5	20.0
PCB-1260 Peak 1	Lin1		0.7732		522	500	4.4	20.0
PCB-1260 Peak 2	Lin1		1.151		524	500	4.8	20.0
PCB-1260 Peak 3	Lin1		0.6977		530	500	5.9	20.0
PCB-1260 Peak 4	Lin1		1.570		532	500	6.4	20.0
PCB-1260 Peak 5	Lin1		1.203		533	500	6.5	20.0
Tetrachloro-m-xylene	Lin1		13.43		26.2	25.0	4.6	20.0
DCB Decachlorobiphenyl	Lin1		16.43		28.0	25.0	11.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/38 Calibration Date: 11/27/2018 05:11

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261838.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.49	4.25	4.75
PCB-1260 Peak 1	6.64	6.40	6.90
PCB-1260 Peak 2	7.11	6.87	7.37
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.51	8.27	8.77
Tetrachloro-m-xylene	2.77	2.53	3.03
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261838.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 05:11:45 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:13:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 27-Nov-2018 07:02:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.965	0.001	37791074	1000.0	1000.0	
2	1.743	1.742	0.001	189317567	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.878	0.001	23201206	25.0	23.4	
2	2.773	2.775	-0.002	63577966	25.0	26.2	
						RPD = 11.13	
1 PCB-1016							M
1	3.269	3.268	0.001	8259860	500.0	505.2	M
1	3.629	3.631	-0.002	18363154	500.0	480.8	M
1	4.116	4.118	-0.002	33283772	500.0	473.5	M
1	4.262	4.265	-0.003	14219023	500.0	480.5	M
1	4.732	4.731	0.001	15155615	500.0	473.7	M
		Average of Peak Amounts =				482.7	
2	3.273	3.272	0.001	21456203	500.0	517.8	
2	3.663	3.662	0.001	42278301	500.0	493.1	
2	4.119	4.118	0.001	97662969	500.0	514.6	
2	4.263	4.262	0.001	42405082	500.0	519.4	
2	4.493	4.495	-0.002	22103181	500.0	502.4	
		Average of Peak Amounts =				509.5	
						RPD = 5.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.248	0.001	20861509	500.0	474.0	
1	6.992	6.995	-0.003	32243056	500.0	474.9	
1	7.492	7.491	0.001	19116083	500.0	474.5	
1	7.932	7.931	0.001	43885161	500.0	480.7	
1	8.322	8.321	0.001	20004186	500.0	481.1	
		Average of Peak Amounts =				477.0	
2	6.643	6.645	-0.002	73186807	500.0	521.9	
2	7.113	7.115	-0.002	108961145	500.0	523.9	
2	7.643	7.642	0.001	66044751	500.0	529.6	
2	8.006	8.008	-0.002	148617757	500.0	532.1	
2	8.513	8.515	-0.002	113891109	500.0	532.7	
		Average of Peak Amounts =				528.0	
						RPD = 10.15	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.915	-0.003	17837998	25.0	23.3	
2	10.179	10.182	-0.003	77771761	25.0	28.0	
						RPD = 18.17	
S 8 Polychlorinated biphenyls, Total							
1						959.8	
2						1037.5	
						RPD = 7.78	
19 1260 Res 1							
1	8.322	8.321	0.001	20004186	NR	NR	
16 1260 Res 2							
1	8.382	8.381	0.001	10355246	NR	NR	
18 1260 Res 3							
1	8.446	8.445	0.001	12851699	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

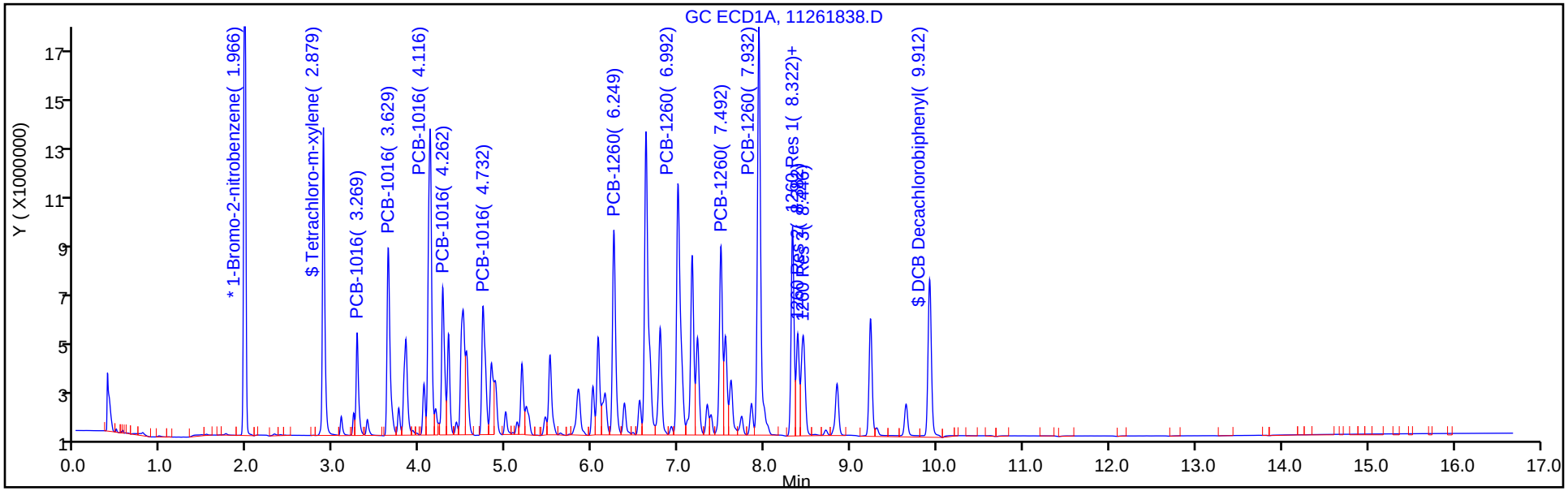
Report Date: 28-Nov-2018 13:13:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

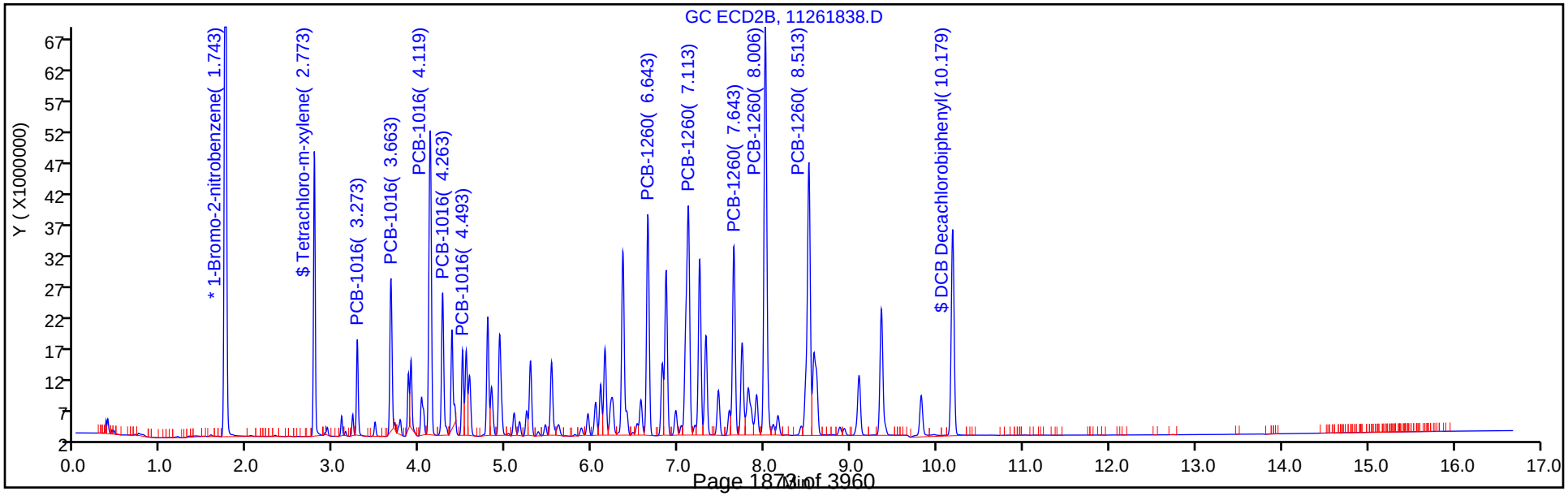
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261838.D

Injection Date:	27-Nov-2018 05:11:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/46 Calibration Date: 11/27/2018 08:01

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261846.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.4044		466	500	-6.7	20.0
PCB-1016 Peak 2	Lin1		0.9716		481	500	-3.9	20.0
PCB-1016 Peak 3	Lin1		1.781		479	500	-4.2	20.0
PCB-1016 Peak 4	Lin1		0.7449		476	500	-4.9	20.0
PCB-1016 Peak 5	Lin1		0.8171		483	500	-3.5	20.0
PCB-1260 Peak 1	Lin1		1.143		491	500	-1.8	20.0
PCB-1260 Peak 2	Lin1		1.777		495	500	-1.1	20.0
PCB-1260 Peak 3	Lin1		1.051		493	500	-1.3	20.0
PCB-1260 Peak 4	Lin1		2.399		497	500	-0.7	20.0
PCB-1260 Peak 5	Lin1		1.098		499	500	-0.2	20.0
Tetrachloro-m-xylene	Lin1		24.97		23.8	25.0	-4.9	20.0
DCB Decachlorobiphenyl	Lin1		18.46		22.8	25.0	-8.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/46 Calibration Date: 11/27/2018 08:01

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261846.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.02	4.52
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.67	10.17

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261846.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 08:01:04 ALS Bottle#: 46 Worklist Smp#: 46
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-046
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:13:24 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 13:11:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.965	0.001	38094644	1000.0	1000.0	
2	1.743	1.742	0.001	190336249	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.878	0.002	23775965	25.0	23.8	
2	2.773	2.775	-0.002	65749315	25.0	26.9	
						RPD = 12.37	
1 PCB-1016							
1	3.270	3.268	0.002	7702839	500.0	466.3	
1	3.630	3.631	-0.001	18506456	500.0	480.7	
1	4.116	4.118	-0.002	33925172	500.0	478.8	
1	4.263	4.265	-0.002	14188205	500.0	475.5	
1	4.730	4.731	-0.001	15564159	500.0	482.7	
		Average of Peak Amounts =				476.8	
2	3.273	3.272	0.001	22181088	500.0	532.9	
2	3.663	3.662	0.001	43881644	500.0	509.6	
2	4.117	4.118	-0.001	102494200	500.0	537.7	
2	4.260	4.262	-0.002	44224358	500.0	539.4	
2	4.493	4.495	-0.002	23537961	500.0	533.2	
		Average of Peak Amounts =				530.6	
						RPD = 10.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.248	0.002	21770961	500.0	491.1	
1	6.993	6.995	-0.002	33849859	500.0	494.7	
1	7.493	7.491	0.002	20024021	500.0	493.3	
1	7.933	7.931	0.002	45692229	500.0	496.5	
1	8.323	8.321	0.002	20920249	500.0	499.2	
		Average of Peak Amounts =				495.0	
2	6.643	6.645	-0.002	77010745	500.0	546.9	
2	7.110	7.115	-0.005	114523568	500.0	548.2	
2	7.640	7.642	-0.002	68905879	500.0	550.1	
2	8.007	8.008	-0.001	154898927	500.0	552.0	
2	8.513	8.515	-0.002	118636307	500.0	552.4	
		Average of Peak Amounts =				549.9	
						RPD = 10.52	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.915	-0.002	17577875	25.0	22.8	
2	10.180	10.182	-0.002	78888777	25.0	28.2	
						RPD = 21.38	
S 8 Polychlorinated biphenyls, Total							
1						971.8	
2						1080.5	
						RPD = 10.60	
19 1260 Res 1							
1	8.323	8.321	0.002	20920249	NR	NR	
16 1260 Res 2							
1	8.383	8.381	0.002	10233899	NR	NR	
18 1260 Res 3							
1	8.443	8.445	-0.002	13633793	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

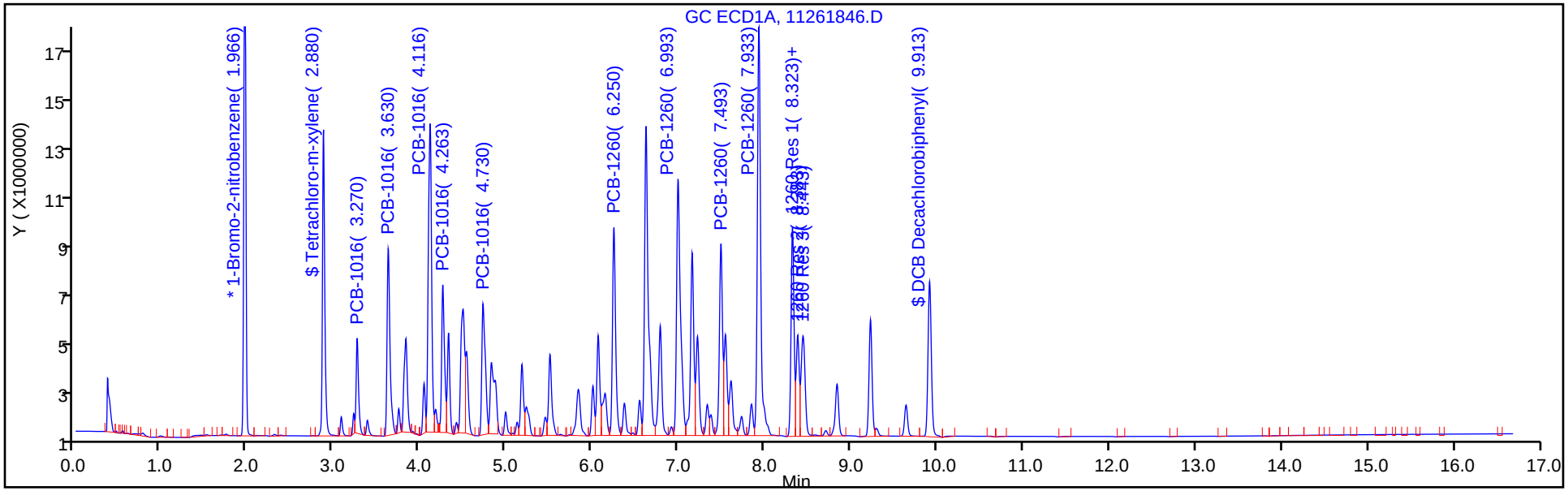
Report Date: 28-Nov-2018 13:13:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

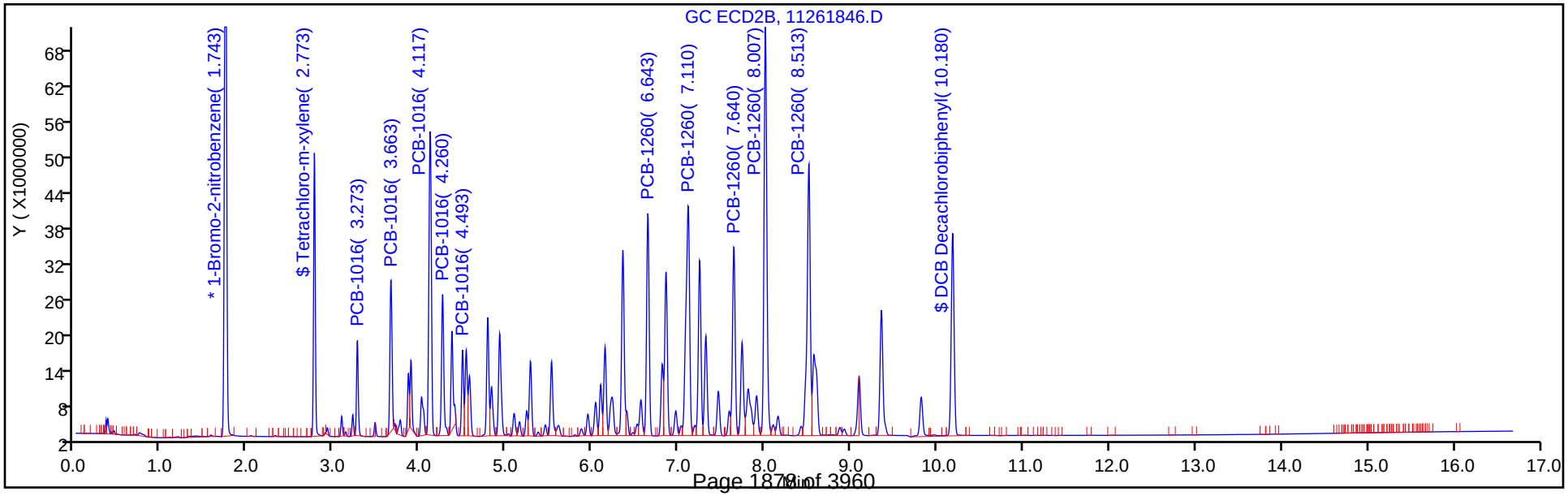
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261846.D

Injection Date:	27-Nov-2018 08:01:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	46
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	46
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/46 Calibration Date: 11/27/2018 08:01

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261846.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2331		533	500	6.6	20.0
PCB-1016 Peak 2	Lin1		0.4611		510	500	1.9	20.0
PCB-1016 Peak 3	Lin1		1.077		538	500	7.5	20.0
PCB-1016 Peak 4	Lin1		0.4647		539	500	7.9	20.0
PCB-1016 Peak 5	Lin1		0.2473		533	500	6.6	20.0
PCB-1260 Peak 1	Lin1		0.8092		547	500	9.4	20.0
PCB-1260 Peak 2	Lin1		1.203		548	500	9.6	20.0
PCB-1260 Peak 3	Lin1		0.7240		550	500	10.0	20.0
PCB-1260 Peak 4	Lin1		1.628		552	500	10.4	20.0
PCB-1260 Peak 5	Lin1		1.247		552	500	10.5	20.0
Tetrachloro-m-xylene	Lin1		13.82		26.9	25.0	7.7	20.0
DCB Decachlorobiphenyl	Lin1		16.58		28.2	25.0	12.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/46 Calibration Date: 11/27/2018 08:01

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11261846.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.49	4.25	4.75
PCB-1260 Peak 1	6.64	6.40	6.90
PCB-1260 Peak 2	7.11	6.87	7.37
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.51	8.27	8.77
Tetrachloro-m-xylene	2.77	2.53	3.03
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261846.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 08:01:04 ALS Bottle#: 46 Worklist Smp#: 46
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-046
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:13:24 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 13:11:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.965	0.001	38094644	1000.0	1000.0	
2	1.743	1.742	0.001	190336249	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.878	0.002	23775965	25.0	23.8	
2	2.773	2.775	-0.002	65749315	25.0	26.9	
						RPD = 12.37	
1 PCB-1016							
1	3.270	3.268	0.002	7702839	500.0	466.3	
1	3.630	3.631	-0.001	18506456	500.0	480.7	
1	4.116	4.118	-0.002	33925172	500.0	478.8	
1	4.263	4.265	-0.002	14188205	500.0	475.5	
1	4.730	4.731	-0.001	15564159	500.0	482.7	
		Average of Peak Amounts =				476.8	
2	3.273	3.272	0.001	22181088	500.0	532.9	
2	3.663	3.662	0.001	43881644	500.0	509.6	
2	4.117	4.118	-0.001	102494200	500.0	537.7	
2	4.260	4.262	-0.002	44224358	500.0	539.4	
2	4.493	4.495	-0.002	23537961	500.0	533.2	
		Average of Peak Amounts =				530.6	
						RPD = 10.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.248	0.002	21770961	500.0	491.1	
1	6.993	6.995	-0.002	33849859	500.0	494.7	
1	7.493	7.491	0.002	20024021	500.0	493.3	
1	7.933	7.931	0.002	45692229	500.0	496.5	
1	8.323	8.321	0.002	20920249	500.0	499.2	
		Average of Peak Amounts =				495.0	
2	6.643	6.645	-0.002	77010745	500.0	546.9	
2	7.110	7.115	-0.005	114523568	500.0	548.2	
2	7.640	7.642	-0.002	68905879	500.0	550.1	
2	8.007	8.008	-0.001	154898927	500.0	552.0	
2	8.513	8.515	-0.002	118636307	500.0	552.4	
		Average of Peak Amounts =				549.9	
						RPD = 10.52	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.915	-0.002	17577875	25.0	22.8	
2	10.180	10.182	-0.002	78888777	25.0	28.2	
						RPD = 21.38	
S 8 Polychlorinated biphenyls, Total							
1						971.8	
2						1080.5	
						RPD = 10.60	
19 1260 Res 1							
1	8.323	8.321	0.002	20920249	NR	NR	
16 1260 Res 2							
1	8.383	8.381	0.002	10233899	NR	NR	
18 1260 Res 3							
1	8.443	8.445	-0.002	13633793	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

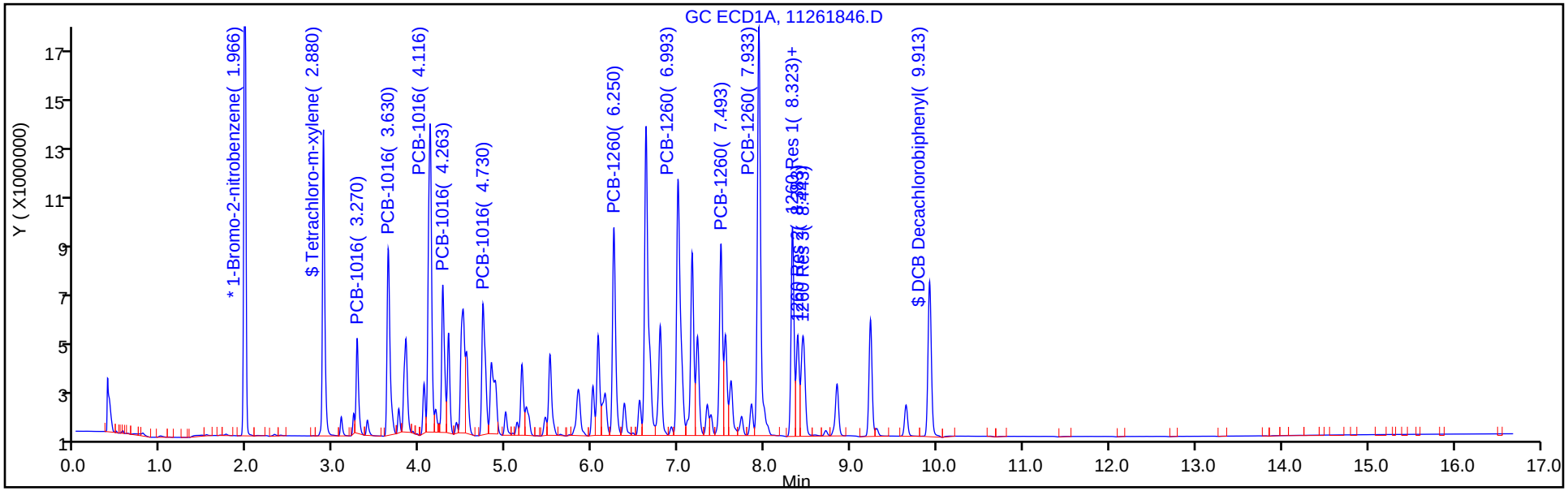
Report Date: 28-Nov-2018 13:13:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

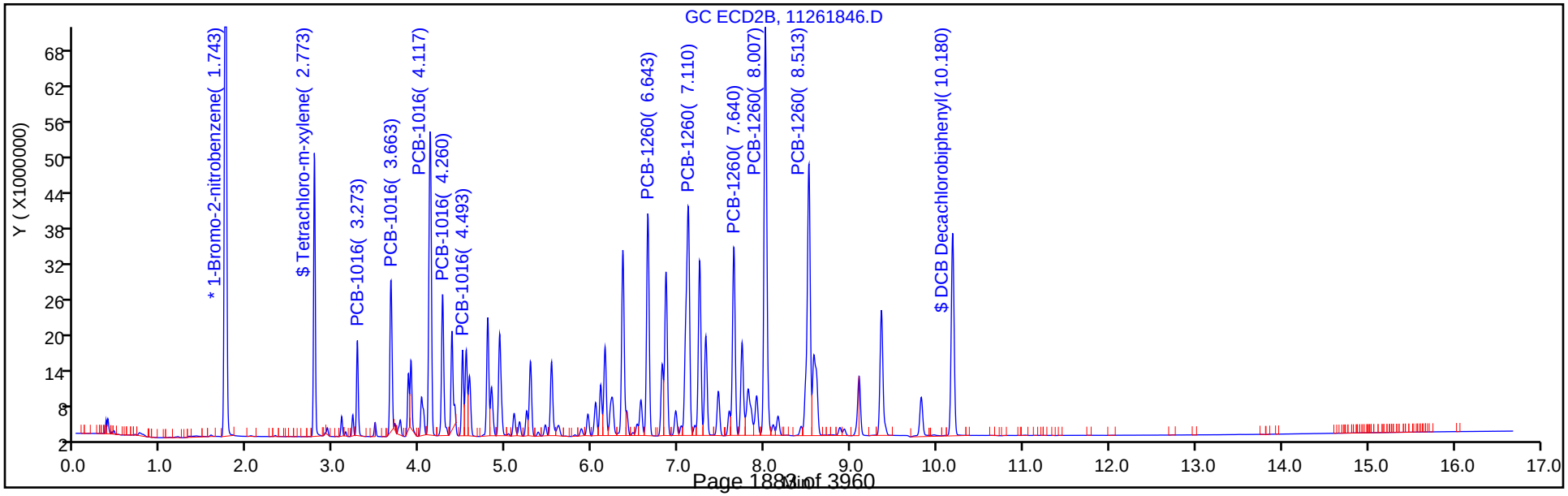
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261846.D

Injection Date:	27-Nov-2018 08:01:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	46
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	46
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/47 Calibration Date: 11/27/2018 08:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11261847.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.2245		443	500	-11.3	20.0
PCB-1221 Peak 2	Lin1		0.1258		429	500	-14.2	20.0
PCB-1221 Peak 3	Lin1		0.5938		470	500	-6.0	20.0
PCB-1254 Peak 1	Lin1		0.7028		454	500	-9.3	20.0
PCB-1254 Peak 2	Lin1		1.057		469	500	-6.2	20.0
PCB-1254 Peak 3	Lin1		0.7613		452	500	-9.6	20.0
PCB-1254 Peak 4	Lin1		0.9429		456	500	-8.7	20.0
PCB-1254 Peak 5	Lin1		1.283		452	500	-9.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/47 Calibration Date: 11/27/2018 08:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11261847.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.23	2.98	3.48
PCB-1221 Peak 3	3.27	3.02	3.52
PCB-1254 Peak 1	5.18	4.93	5.43
PCB-1254 Peak 2	5.51	5.26	5.76
PCB-1254 Peak 3	5.85	5.60	6.10
PCB-1254 Peak 4	6.62	6.37	6.87
PCB-1254 Peak 5	6.99	6.75	7.25

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261847.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 08:22:12 ALS Bottle#: 47 Worklist Smp#: 47
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-047
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 18:12:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.965	0.002	36425447	1000.0	1000.0	
2	1.744	1.742	0.002	186006437	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.087	3.085	0.002	4088376	500.0	443.3	
1	3.230	3.232	-0.002	2291004	500.0	428.8	
1	3.270	3.269	0.001	10814584	500.0	469.9	
		Average of Peak Amounts =				447.3	
2	3.090	3.092	-0.002	12797167	500.0	491.7	
2	3.220	3.222	-0.002	8354006	500.0	492.2	
2	3.274	3.276	-0.002	29917639	500.0	502.0	
		Average of Peak Amounts =				495.3	
						RPD = 10.18	
9 PCB-1254							
1	5.184	5.182	0.002	12800314	500.0	453.7	
1	5.507	5.509	-0.002	19247937	500.0	468.8	
1	5.850	5.849	0.001	13865842	500.0	452.1	
1	6.620	6.622	-0.002	17172004	500.0	456.3	
1	6.994	6.995	-0.001	23365199	500.0	452.4	
		Average of Peak Amounts =				456.7	
2	5.527	5.529	-0.002	53183194	500.0	487.2	
2	5.947	5.952	-0.005	41285347	500.0	481.9	
2	6.400	6.402	-0.002	56187582	500.0	481.2	
2	6.644	6.649	-0.005	33638804	500.0	485.7	
2	7.114	7.119	-0.005	82642325	500.0	490.5	
		Average of Peak Amounts =				485.3	
						RPD = 6.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
S 8 Polychlorinated biphenyls, Total							
1						904.0	
2						980.6	
						RPD = 8.13	

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

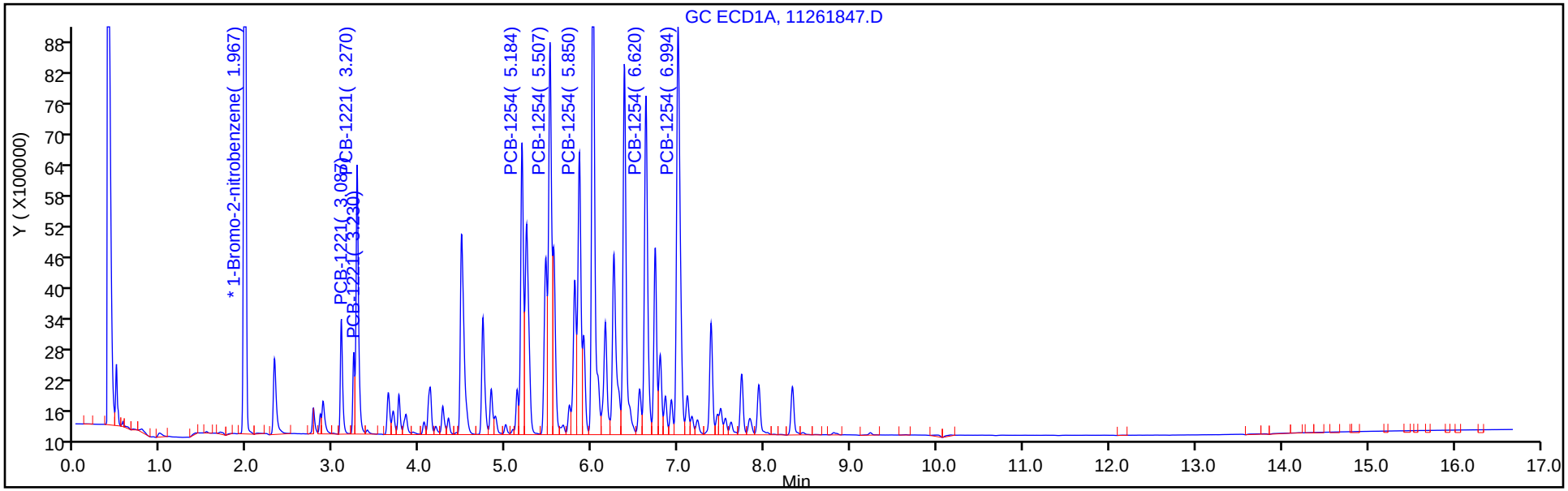
Report Date: 29-Nov-2018 18:12:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

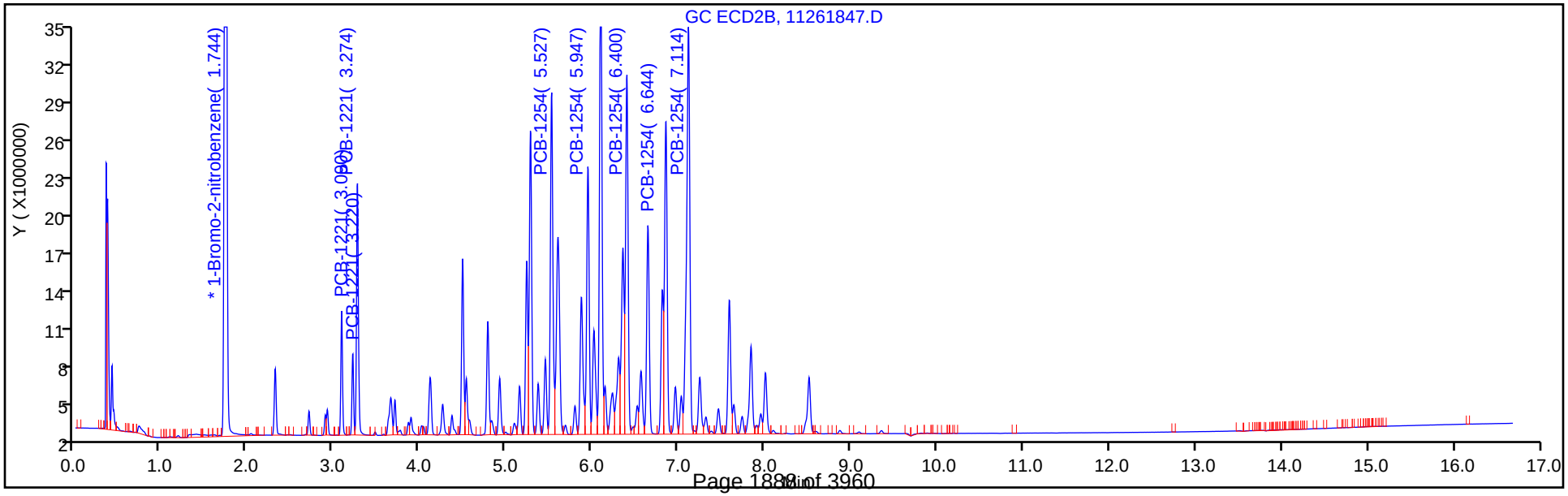
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261847.D

Injection Date:	27-Nov-2018 08:22:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	47
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	47
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/47 Calibration Date: 11/27/2018 08:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11261847.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.1376		492	500	-1.7	20.0
PCB-1221 Peak 2	Lin1		0.0898		492	500	-1.6	20.0
PCB-1221 Peak 3	Lin1		0.3217		502	500	0.4	20.0
PCB-1254 Peak 1	Lin1		0.5718		487	500	-2.6	20.0
PCB-1254 Peak 2	Lin1		0.4439		482	500	-3.6	20.0
PCB-1254 Peak 3	Lin1		0.6042		481	500	-3.8	20.0
PCB-1254 Peak 4	Lin1		0.3617		486	500	-2.9	20.0
PCB-1254 Peak 5	Lin1		0.8886		491	500	-1.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-438794/47 Calibration Date: 11/27/2018 08:22

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11261847.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.22	2.97	3.47
PCB-1221 Peak 3	3.27	3.03	3.53
PCB-1254 Peak 1	5.53	5.28	5.78
PCB-1254 Peak 2	5.95	5.70	6.20
PCB-1254 Peak 3	6.40	6.15	6.65
PCB-1254 Peak 4	6.64	6.40	6.90
PCB-1254 Peak 5	7.11	6.87	7.37

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261847.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 08:22:12 ALS Bottle#: 47 Worklist Smp#: 47
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076546-047
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 18:12:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.965	0.002	36425447	1000.0	1000.0	
2	1.744	1.742	0.002	186006437	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.087	3.085	0.002	4088376	500.0	443.3	
1	3.230	3.232	-0.002	2291004	500.0	428.8	
1	3.270	3.269	0.001	10814584	500.0	469.9	
		Average of Peak Amounts =				447.3	
2	3.090	3.092	-0.002	12797167	500.0	491.7	
2	3.220	3.222	-0.002	8354006	500.0	492.2	
2	3.274	3.276	-0.002	29917639	500.0	502.0	
		Average of Peak Amounts =				495.3	
						RPD = 10.18	
9 PCB-1254							
1	5.184	5.182	0.002	12800314	500.0	453.7	
1	5.507	5.509	-0.002	19247937	500.0	468.8	
1	5.850	5.849	0.001	13865842	500.0	452.1	
1	6.620	6.622	-0.002	17172004	500.0	456.3	
1	6.994	6.995	-0.001	23365199	500.0	452.4	
		Average of Peak Amounts =				456.7	
2	5.527	5.529	-0.002	53183194	500.0	487.2	
2	5.947	5.952	-0.005	41285347	500.0	481.9	
2	6.400	6.402	-0.002	56187582	500.0	481.2	
2	6.644	6.649	-0.005	33638804	500.0	485.7	
2	7.114	7.119	-0.005	82642325	500.0	490.5	
		Average of Peak Amounts =				485.3	
						RPD = 6.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
S 8 Polychlorinated biphenyls, Total							
1						904.0	
2						980.6	
						RPD = 8.13	

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

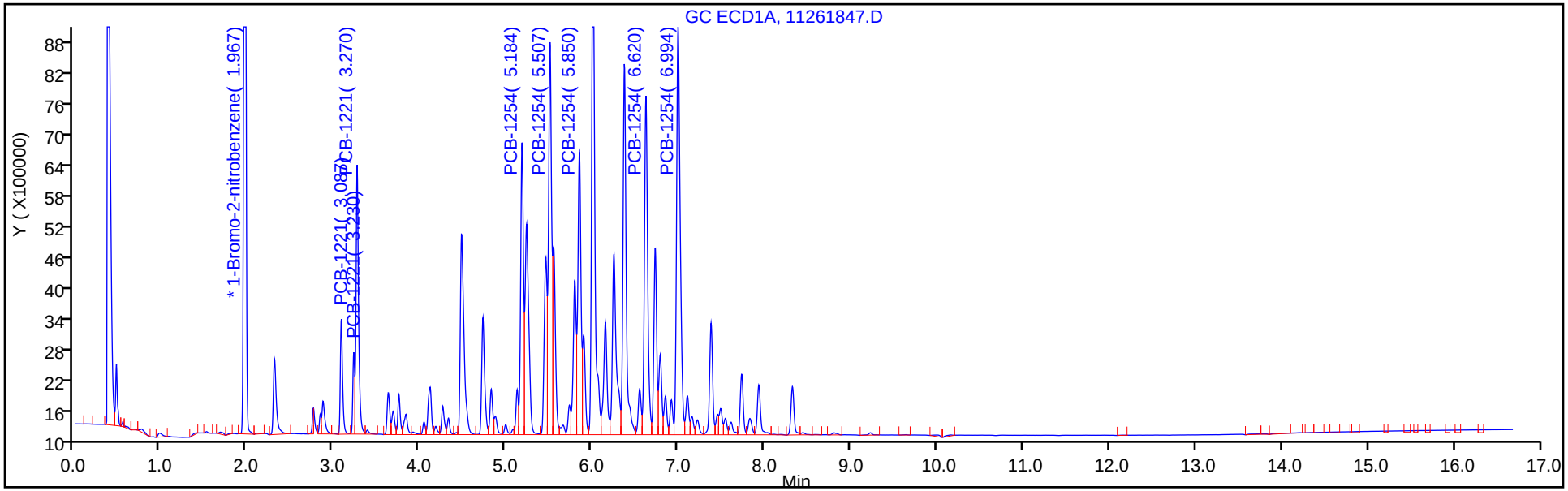
Report Date: 29-Nov-2018 18:12:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

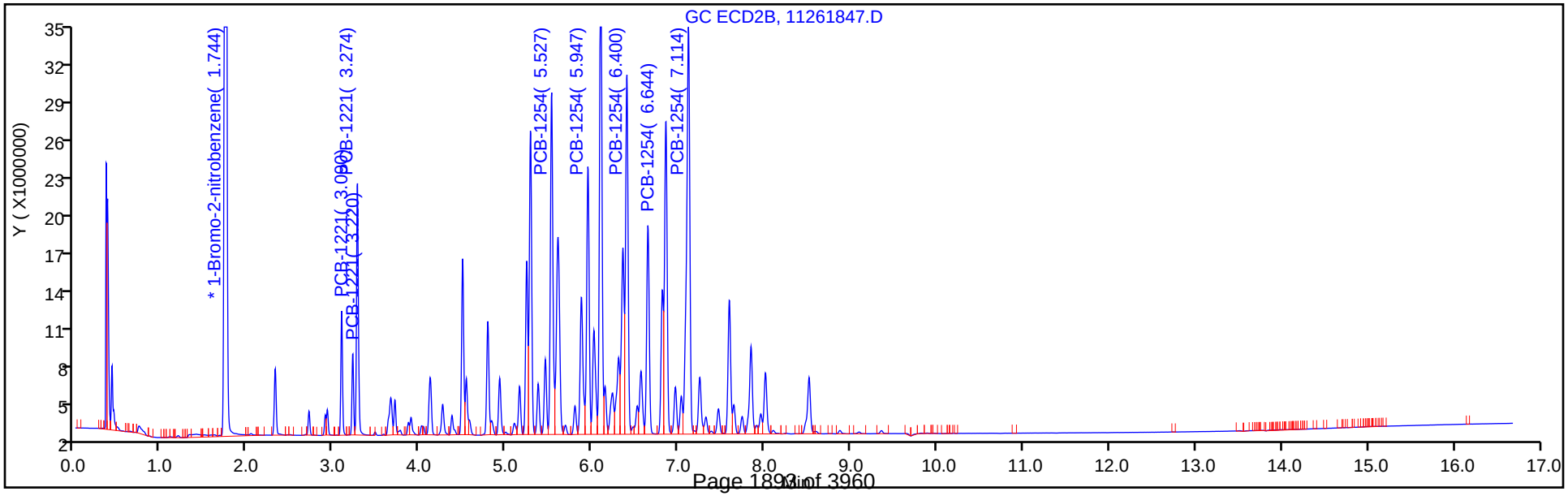
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261847.D

Injection Date:	27-Nov-2018 08:22:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	47
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	47
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436278/1-A

Matrix: Water | Lab File ID: 11261816.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/05/2018 09:12

Sample wt/vol: 1000(mL) | Date Analyzed: 11/26/2018 21:26

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438794 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	0.40	U M	1.0	0.40	0.12
11104-28-2	PCB-1221	0.25	U M	1.0	0.25	0.21
11141-16-5	PCB-1232	0.60	U M	1.0	0.60	0.17
53469-21-9	PCB-1242	0.30	U M	1.0	0.30	0.10
12672-29-6	PCB-1248	0.30	U M	1.0	0.30	0.092
11097-69-1	PCB-1254	0.25	U M	1.0	0.25	0.11
11096-82-5	PCB-1260	0.40	U M	1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	80		25-120
2051-24-3	DCB Decachlorobiphenyl	87		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261816.D
Lims ID: MB 280-436278/1-A
Client ID:
Sample Type: MB
Inject. Date: 26-Nov-2018 21:26:02 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-436278/1-
Misc. Info.: 280-0076546-016
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:16 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:32:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.965	0.001	37408029	1000.0	1000.0	
2	1.743	1.742	0.001	187489194	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.878	0.001	12765380	20.0	13.1	
2	2.776	2.775	0.001	39290583	20.0	16.1	
						RPD = 20.84	
3 PCB-1221							U
1		3.085				ND	
1		3.232					
1		3.269					
2		3.092					
2		3.222					
2		3.276					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
7	PCB-1232						U
1		3.088				ND	
1		3.271					
1		4.118					
1		4.264					
1		4.731					
2		3.275					
2		3.665					
2		4.121					
2		4.265					
2		4.928					
1	PCB-1016						U
1		3.268				ND	
1		3.631					
1		4.118					
1		4.265					
1		4.731					
2		3.272					
2		3.662					
2		4.118					
2		4.262					
2		4.495					
4	PCB-1248						U
1		3.629				ND	
1		4.115					
1		4.729					
1		5.505					
1		6.005					
2		4.119					
2		4.499					
2		4.789					
2		4.929					
2		6.102					
10	PCB-1242						U
1		3.631				ND	
1		4.117					
1		4.264					
1		5.237					
1		5.261					
2		3.664					
2		4.121					
2		4.264					
2		4.788					
2		4.928					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							U
1		5.182				ND	
1		5.509					
1		5.849					
1		6.622					
1		6.995					
2		5.529					
2		5.952					
2		6.402					
2		6.649					
2		7.119					
5 PCB-1262							U
1		6.248				ND	
1		7.154					
1		7.488					
1		7.931					
1		8.321					
2		6.648					
2		7.248					
2		7.645					
2		8.011					
2		8.515					
12 PCB-1260							U
1		6.248				ND	
1		6.995					
1		7.491					
1		7.931					
1		8.321					
2		6.645					
2		7.115					
2		7.642					
2		8.008					
2		8.515					
13 PCB-1268							U
1		8.381				ND	
1		8.434					
1		8.707					
1		9.224					
1		9.637					
2		8.511					
2		8.574					
2		8.928					
2		9.358					
2		9.821					
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.915	-0.002	12485051	20.0	16.3	
2	10.183	10.182	0.001	48459740	20.0	17.3	
						RPD = 6.08	
S 8 Polychlorinated biphenyls, Total							
1		0.000				ND	
2		0.000					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 PCB-5460							
1		0.000				ND	
1		12.739					
1		0.000					
1		13.802					
1		14.259					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
6 PCB-5432							
1		7.063				ND	
1		7.693					
1		8.203					
1		9.029					
1		9.459					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
11 PCB-5442							
1		9.459				ND	
1		9.923					
1		10.079					
1		10.289					
1		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

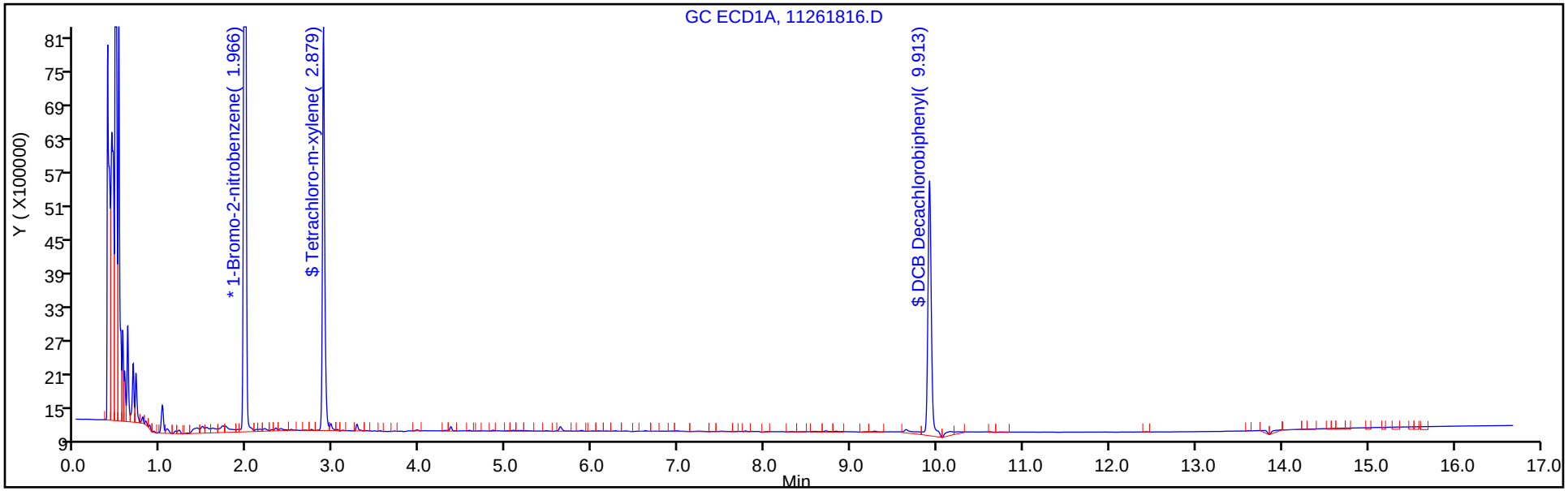
Report Date: 28-Nov-2018 13:12:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

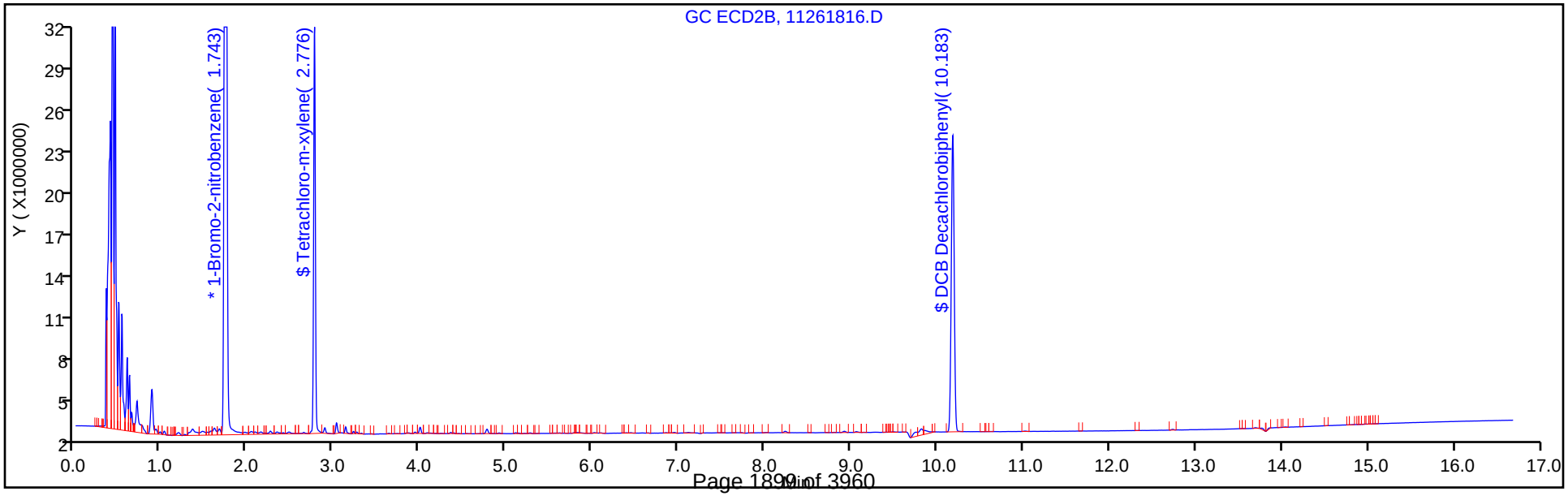
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261816.D

Injection Date:	26-Nov-2018 21:26:02	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	MB 280-436278/1-A			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261816.D				
Lims ID:	MB 280-436278/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	26-Nov-2018 21:26:02	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-436278/1-				
Misc. Info.:	280-0076546-016				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	28-Nov-2018 13:12:16	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: patadiab		Date:	28-Nov-2018 12:32:38		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	13.1	65.28
$ 15 DCB Decachlorobiphenyl	20.0	16.3	81.53

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	16.1	80.47
$ 15 DCB Decachlorobiphenyl	20.0	17.3	86.64

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436278/2-A

Matrix: Water | Lab File ID: 11261817.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/05/2018 09:12

Sample wt/vol: 1000(mL) | Date Analyzed: 11/26/2018 21:47

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438794 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	1.98		1.0	0.40	0.12
11096-82-5	PCB-1260	2.00		1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	85		25-120
2051-24-3	DCB Decachlorobiphenyl	85		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261817.D
Lims ID: LCS 280-436278/2-A
Client ID:
Sample Type: LCS
Inject. Date: 26-Nov-2018 21:47:12 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436278/2
Misc. Info.: 280-0076546-017
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 28-Nov-2018 13:12:16 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 28-Nov-2018 12:33:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.965	1.965	0.000	37943874	1000.0	1000.0	
2	1.742	1.742	0.000	190986736	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.878	2.878	0.000	13667174	20.0	13.8	
2	2.775	2.775	0.000	42219081	20.0	17.0	
						RPD = 21.01	
1 PCB-1016							
1	3.272	3.268	0.004	3112819	200.0	180.2	
1	3.632	3.631	0.001	6568826	200.0	162.2	
1	4.118	4.118	0.000	11440796	200.0	160.5	
1	4.265	4.265	0.000	5129248	200.0	167.4	
1	4.731	4.731	0.000	5592559	200.0	169.8	
		Average of Peak Amounts =				168.0	
2	3.272	3.272	0.000	9225398	200.0	211.1	
2	3.662	3.662	0.000	17679332	200.0	194.7	
2	4.118	4.118	0.000	38400364	200.0	192.1	
2	4.262	4.262	0.000	16845952	200.0	195.0	
2	4.495	4.495	0.000	9100804	200.0	194.8	
		Average of Peak Amounts =				197.6	
						RPD = 16.17	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.248	0.000	8605656	200.0	189.7	
1	6.995	6.995	0.000	14128448	200.0	205.6	
1	7.491	7.491	0.000	6468928	200.0	155.9	
1	7.931	7.931	0.000	14183674	200.0	153.3	
1	8.321	8.321	0.000	7297865	200.0	173.6	
		Average of Peak Amounts =				175.6	
2	6.645	6.645	0.000	32035213	200.0	218.7	
2	7.112	7.115	-0.003	51340868	200.0	238.0	
2	7.642	7.642	0.000	23612251	200.0	179.6	
2	8.008	8.008	0.000	53176107	200.0	181.1	
2	8.512	8.515	-0.003	41167661	200.0	183.1	
		Average of Peak Amounts =				200.1	
						RPD = 13.03	
$ 15 DCB Decachlorobiphenyl							
1	9.911	9.915	-0.004	11862070	20.0	15.2	
2	10.182	10.182	0.000	48633857	20.0	17.1	
						RPD = 11.30	

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

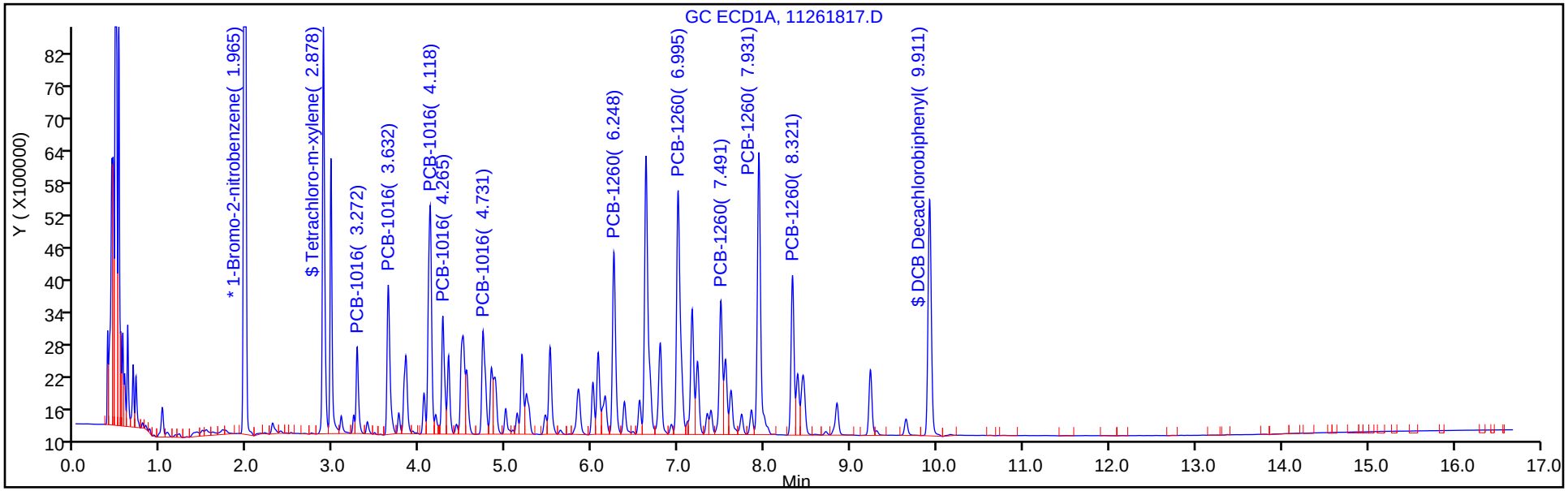
Report Date: 28-Nov-2018 13:12:33 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

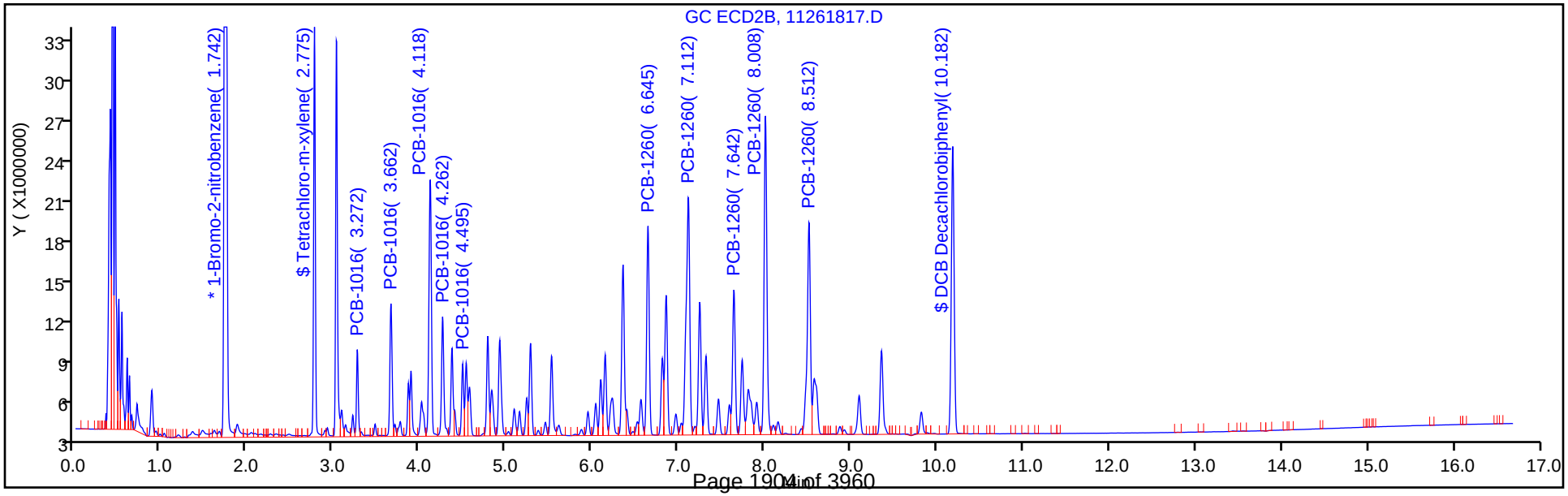
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261817.D

Injection Date:	26-Nov-2018 21:47:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	LCS 280-436278/2-A			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261817.D				
Lims ID:	LCS 280-436278/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	26-Nov-2018 21:47:12	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-436278/2				
Misc. Info.:	280-0076546-017				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	28-Nov-2018 13:12:16	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0304				
First Level Reviewer: patadiab		Date:	28-Nov-2018 12:33:02		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	13.8	68.87
$ 15 DCB Decachlorobiphenyl	20.0	15.2	76.18

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	17.0	85.04
$ 15 DCB Decachlorobiphenyl	20.0	17.1	85.31

Report Date: 28-Nov-2018 13:12:33 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261817.D

Injection Date: 26-Nov-2018 21:47:12 Instrument ID: SGC_J

Lims ID: LCS 280-436278/2-A

Client ID:

Operator ID: ALS ALS Bottle#: 17 Worklist Smp#: 17

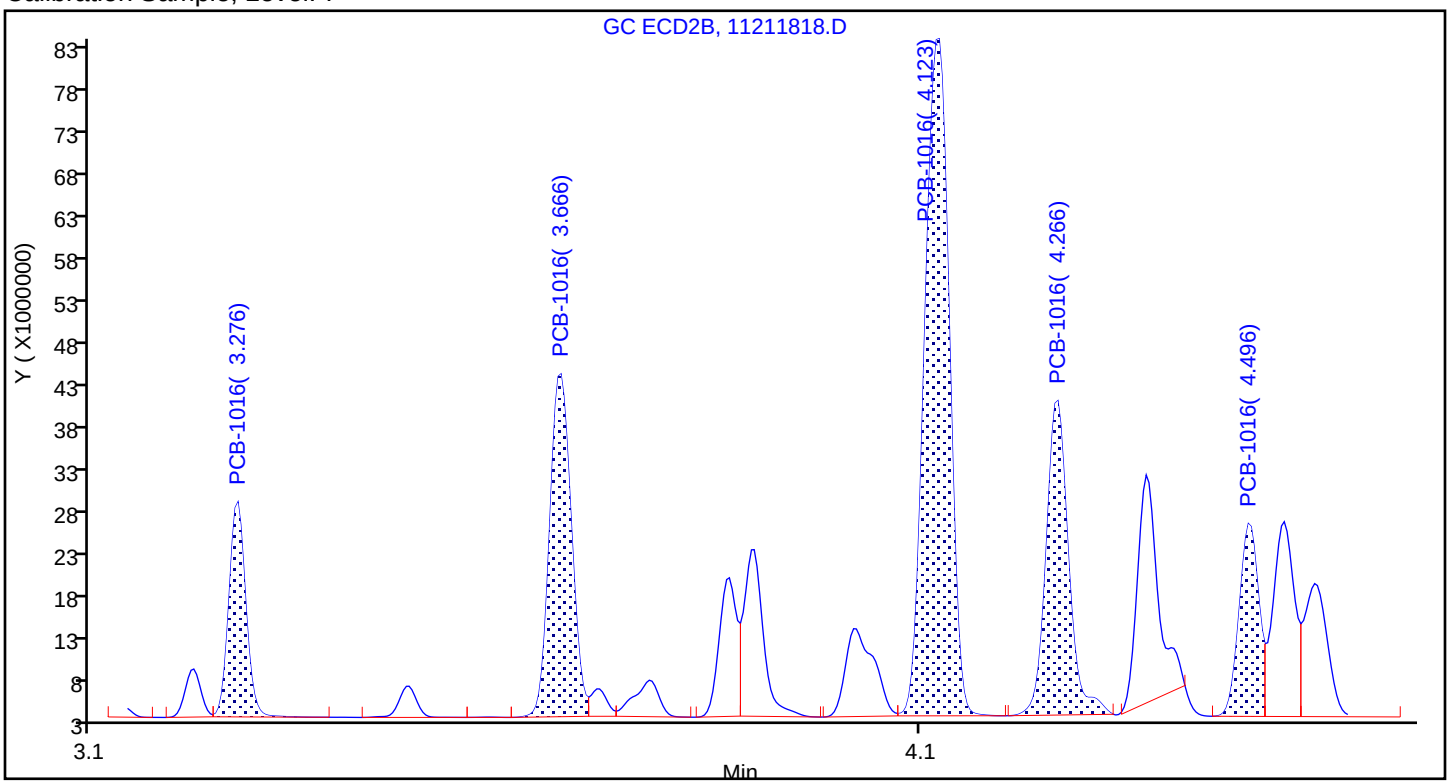
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

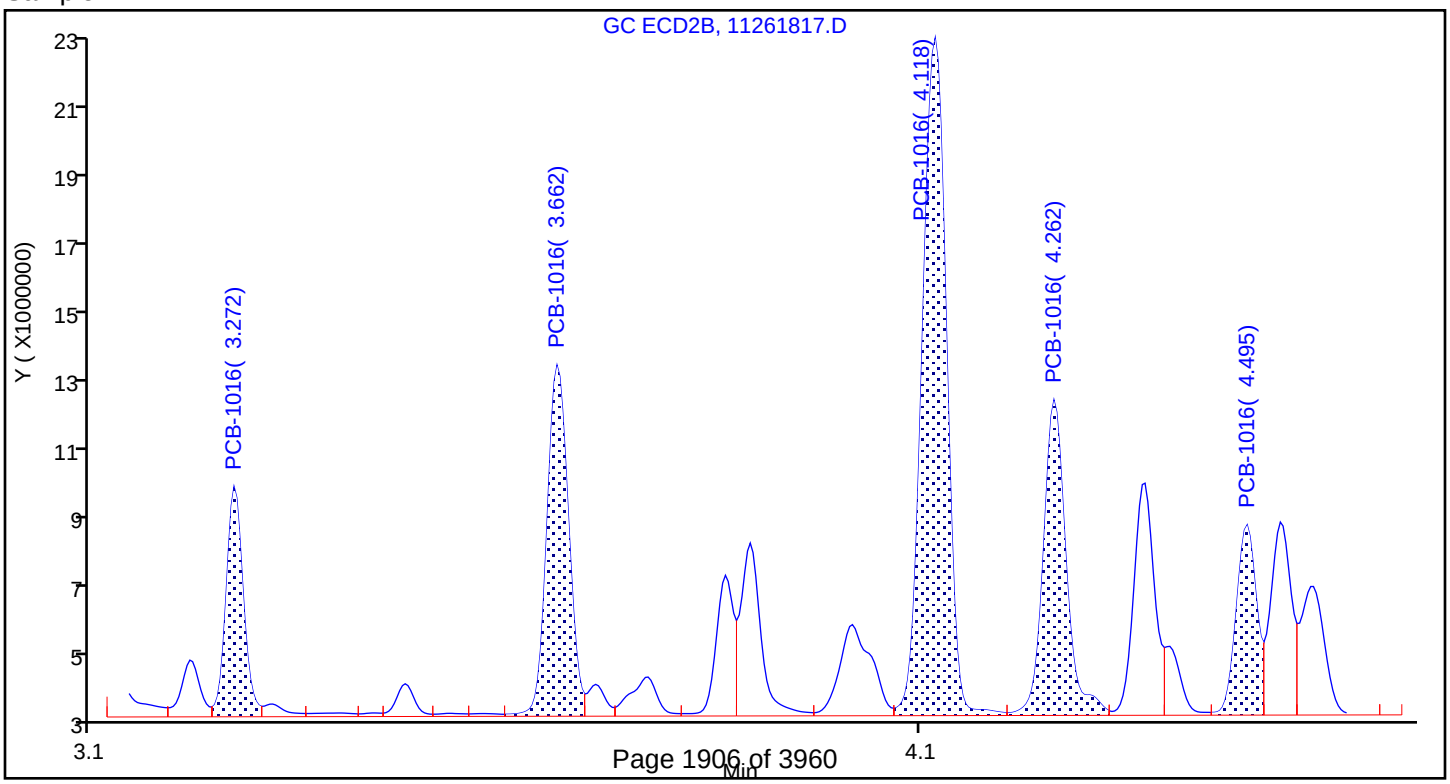
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



Sample



Report Date: 28-Nov-2018 13:12:33 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181126-76546.b\11261817.D

Injection Date: 26-Nov-2018 21:47:12 Instrument ID: SGC_J

Lims ID: LCS 280-436278/2-A

Client ID:

Operator ID: ALS ALS Bottle#: 17 Worklist Smp#: 17

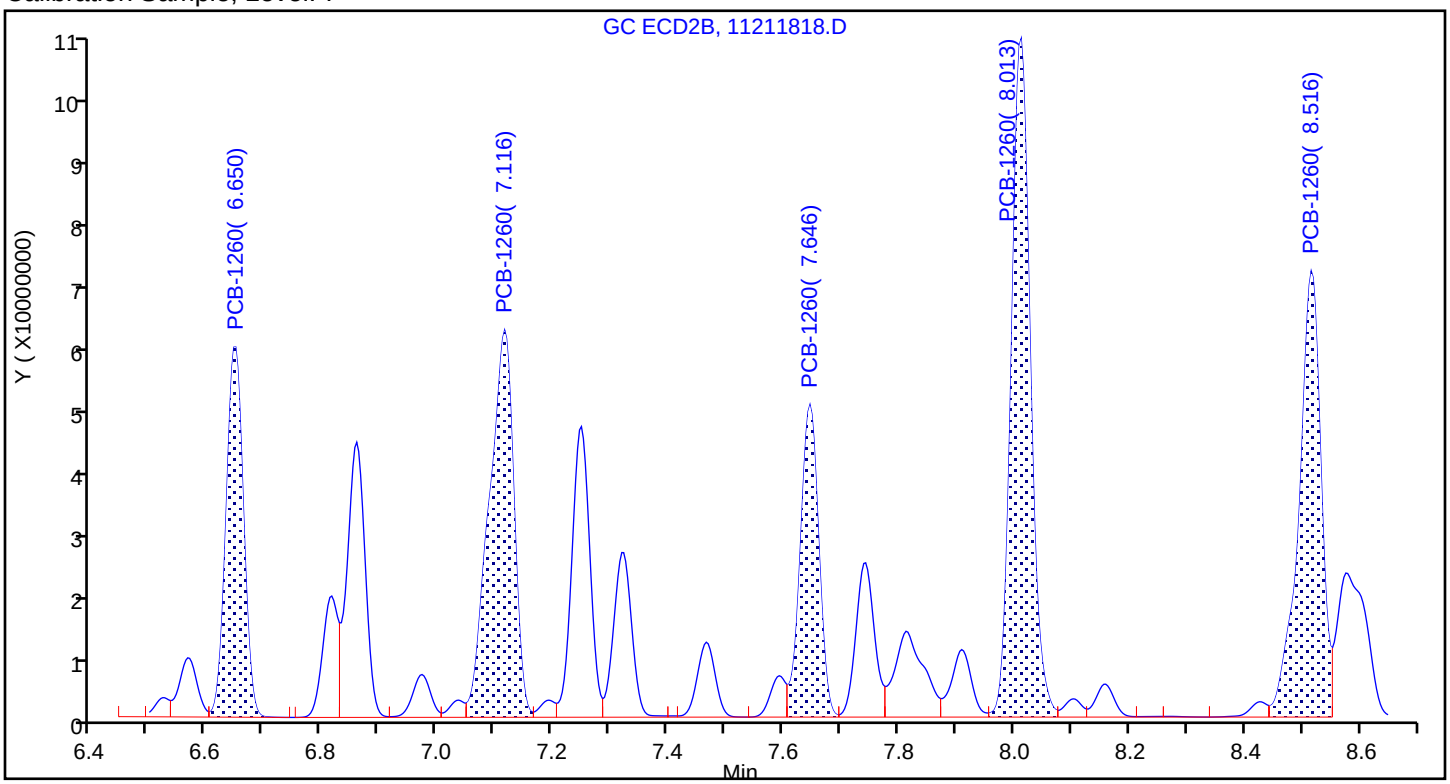
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

12 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



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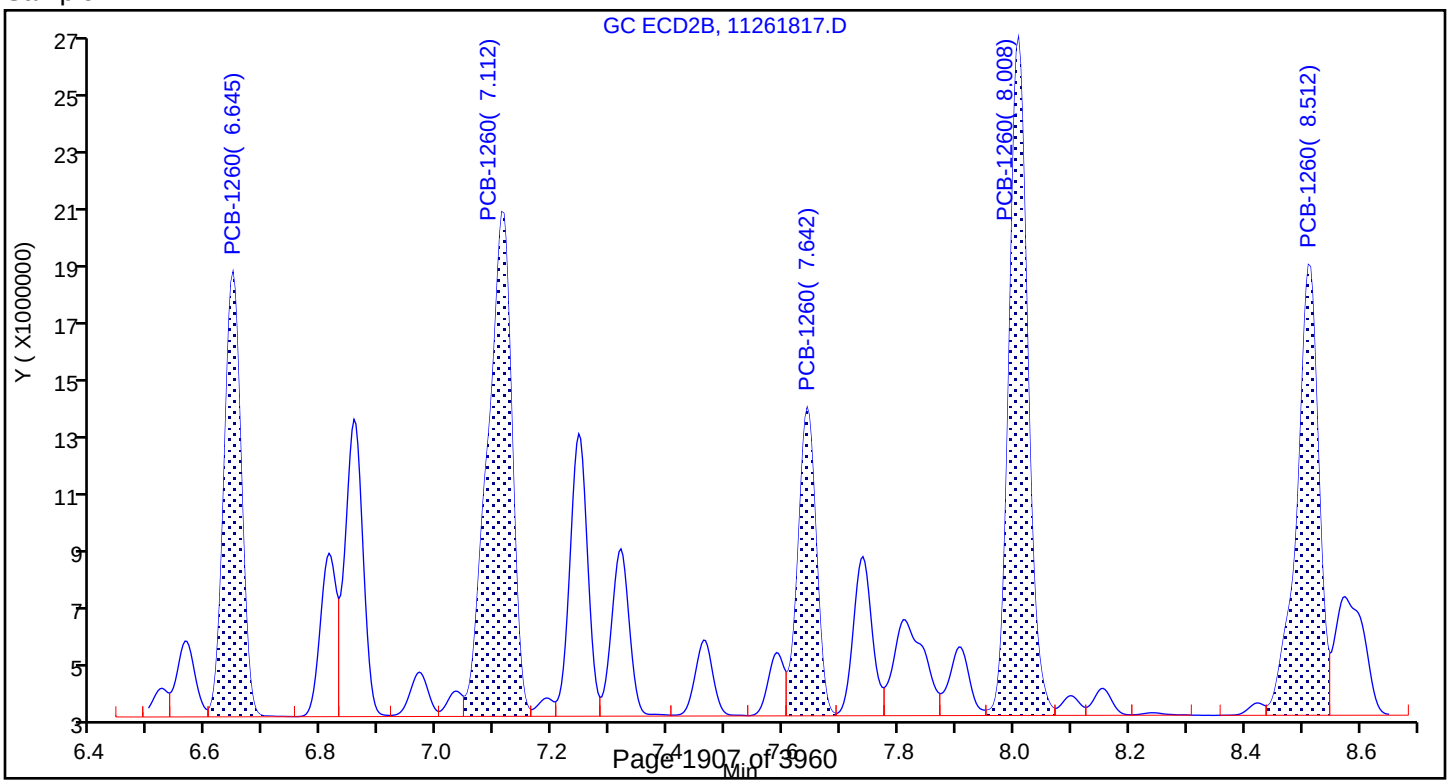


PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL71248 280-438388/4 IC		11/21/2018 09:48	1	11211804.D	CLP1 0.32(mm)
STDL71248 280-438388/4 IC		11/21/2018 09:48	1	11211804.D	CLP2 0.32(mm)
STDL61248 280-438388/5 IC		11/21/2018 10:09	1	11211805.D	CLP1 0.32(mm)
STDL61248 280-438388/5 IC		11/21/2018 10:09	1	11211805.D	CLP2 0.32(mm)
STDL51248 280-438388/6 IC		11/21/2018 10:30	1	11211806.D	CLP1 0.32(mm)
STDL51248 280-438388/6 IC		11/21/2018 10:30	1	11211806.D	CLP2 0.32(mm)
STDL41248 280-438388/7 IC		11/21/2018 10:51	1	11211807.D	CLP1 0.32(mm)
STDL41248 280-438388/7 IC		11/21/2018 10:51	1	11211807.D	CLP2 0.32(mm)
STDL31248 280-438388/8 IC		11/21/2018 11:12	1	11211808.D	CLP1 0.32(mm)
STDL31248 280-438388/8 IC		11/21/2018 11:12	1	11211808.D	CLP2 0.32(mm)
STDL21248 280-438388/9 IC		11/21/2018 11:33	1	11211809.D	CLP1 0.32(mm)
STDL21248 280-438388/9 IC		11/21/2018 11:33	1	11211809.D	CLP2 0.32(mm)
STDL11248 280-438388/10 IC		11/21/2018 11:55	1	11211810.D	CLP1 0.32(mm)
STDL11248 280-438388/10 IC		11/21/2018 11:55	1	11211810.D	CLP2 0.32(mm)
STDL72154 280-438388/11 IC		11/21/2018 12:16	1	11211811.D	CLP1 0.32(mm)
STDL72154 280-438388/11 IC		11/21/2018 12:16	1	11211811.D	CLP2 0.32(mm)
STDL62154 280-438388/12 IC		11/21/2018 12:37	1	11211812.D	CLP1 0.32(mm)
STDL62154 280-438388/12 IC		11/21/2018 12:37	1	11211812.D	CLP2 0.32(mm)
STDL52154 280-438388/13 IC		11/21/2018 12:58	1	11211813.D	CLP1 0.32(mm)
STDL52154 280-438388/13 IC		11/21/2018 12:58	1	11211813.D	CLP2 0.32(mm)
STDL42154 280-438388/14 IC		11/21/2018 13:19	1	11211814.D	CLP1 0.32(mm)
STDL42154 280-438388/14 IC		11/21/2018 13:19	1	11211814.D	CLP2 0.32(mm)
STDL32154 280-438388/15 IC		11/21/2018 13:41	1	11211815.D	CLP1 0.32(mm)
STDL32154 280-438388/15 IC		11/21/2018 13:41	1	11211815.D	CLP2 0.32(mm)
STDL22154 280-438388/16 IC		11/21/2018 14:02	1	11211816.D	CLP1 0.32(mm)
STDL22154 280-438388/16 IC		11/21/2018 14:02	1	11211816.D	CLP2 0.32(mm)
STDL12154 280-438388/17 IC		11/21/2018 14:23	1	11211817.D	CLP1 0.32(mm)
STDL12154 280-438388/17 IC		11/21/2018 14:23	1	11211817.D	CLP2 0.32(mm)
STDL71660 280-438388/18 IC		11/21/2018 14:44	1	11211818.D	CLP1 0.32(mm)
STDL71660 280-438388/18 IC		11/21/2018 14:44	1	11211818.D	CLP2 0.32(mm)
STDL61660 280-438388/19 IC		11/21/2018 15:05	1	11211819.D	CLP1 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL61660 280-438388/19 IC		11/21/2018 15:05	1	11211819.D	CLP2 0.32(mm)
STDL51660 280-438388/20 ICIS		11/21/2018 15:27	1	11211820.D	CLP1 0.32(mm)
STDL51660 280-438388/20 ICIS		11/21/2018 15:27	1	11211820.D	CLP2 0.32(mm)
STDL41660 280-438388/21 IC		11/21/2018 15:48	1	11211821.D	CLP1 0.32(mm)
STDL41660 280-438388/21 IC		11/21/2018 15:48	1	11211821.D	CLP2 0.32(mm)
STDL31660 280-438388/22 IC		11/21/2018 16:09	1	11211822.D	CLP1 0.32(mm)
STDL31660 280-438388/22 IC		11/21/2018 16:09	1	11211822.D	CLP2 0.32(mm)
STDL21660 280-438388/23 IC		11/21/2018 16:30	1	11211823.D	CLP1 0.32(mm)
STDL21660 280-438388/23 IC		11/21/2018 16:30	1	11211823.D	CLP2 0.32(mm)
STDL11660 280-438388/24 IC		11/21/2018 16:51	1	11211824.D	CLP1 0.32(mm)
STDL11660 280-438388/24 IC		11/21/2018 16:51	1	11211824.D	CLP2 0.32(mm)
STDL73262 280-438388/25 IC		11/21/2018 17:13	1	11211825.D	CLP1 0.32(mm)
STDL73262 280-438388/25 IC		11/21/2018 17:13	1	11211825.D	CLP2 0.32(mm)
STDL63262 280-438388/26 IC		11/21/2018 17:34	1	11211826.D	CLP1 0.32(mm)
STDL63262 280-438388/26 IC		11/21/2018 17:34	1	11211826.D	CLP2 0.32(mm)
STDL53262 280-438388/27 IC		11/21/2018 17:55	1	11211827.D	CLP1 0.32(mm)
STDL53262 280-438388/27 IC		11/21/2018 17:55	1	11211827.D	CLP2 0.32(mm)
STDL43262 280-438388/28 IC		11/21/2018 18:16	1	11211828.D	CLP1 0.32(mm)
STDL43262 280-438388/28 IC		11/21/2018 18:16	1	11211828.D	CLP2 0.32(mm)
STDL33262 280-438388/29 IC		11/21/2018 18:37	1	11211829.D	CLP1 0.32(mm)
STDL33262 280-438388/29 IC		11/21/2018 18:37	1	11211829.D	CLP2 0.32(mm)
STDL23262 280-438388/30 IC		11/21/2018 18:59	1	11211830.D	CLP1 0.32(mm)
STDL23262 280-438388/30 IC		11/21/2018 18:59	1	11211830.D	CLP2 0.32(mm)
STDL13262 280-438388/31 IC		11/21/2018 19:20	1	11211831.D	CLP1 0.32(mm)
STDL13262 280-438388/31 IC		11/21/2018 19:20	1	11211831.D	CLP2 0.32(mm)
STDL74268 280-438388/32 IC		11/21/2018 19:41	1	11211832.D	CLP1 0.32(mm)
STDL74268 280-438388/32 IC		11/21/2018 19:41	1	11211832.D	CLP2 0.32(mm)
STDL64268 280-438388/33 IC		11/21/2018 20:02	1	11211833.D	CLP1 0.32(mm)
STDL64268 280-438388/33 IC		11/21/2018 20:02	1	11211833.D	CLP2 0.32(mm)
STDL54268 280-438388/34 IC		11/21/2018 20:23	1	11211834.D	CLP1 0.32(mm)
STDL54268 280-438388/34 IC		11/21/2018 20:23	1	11211834.D	CLP2 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL44268 280-438388/35 IC		11/21/2018 20:44	1	11211835.D	CLP1 0.32(mm)
STDL44268 280-438388/35 IC		11/21/2018 20:44	1	11211835.D	CLP2 0.32(mm)
STDL34268 280-438388/36 IC		11/21/2018 21:06	1	11211836.D	CLP1 0.32(mm)
STDL34268 280-438388/36 IC		11/21/2018 21:06	1	11211836.D	CLP2 0.32(mm)
STDL24268 280-438388/37 IC		11/21/2018 21:27	1	11211837.D	CLP1 0.32(mm)
STDL24268 280-438388/37 IC		11/21/2018 21:27	1	11211837.D	CLP2 0.32(mm)
STDL14268 280-438388/38 IC		11/21/2018 21:48	1	11211838.D	CLP1 0.32(mm)
STDL14268 280-438388/38 IC		11/21/2018 21:48	1	11211838.D	CLP2 0.32(mm)
ICV 280-438388/39		11/21/2018 22:09	1	11211839.D	CLP1 0.32(mm)
ICV 280-438388/39		11/21/2018 22:09	1	11211839.D	CLP2 0.32(mm)
ICV 280-438388/40		11/21/2018 22:30	1	11211840.D	CLP1 0.32(mm)
ICV 280-438388/40		11/21/2018 22:30	1	11211840.D	CLP2 0.32(mm)
ICV 280-438388/41		11/21/2018 22:51	1	11211841.D	CLP1 0.32(mm)
ICV 280-438388/41		11/21/2018 22:51	1	11211841.D	CLP2 0.32(mm)
ICV 280-438388/42		11/21/2018 23:13	1	11211842.D	CLP1 0.32(mm)
ICV 280-438388/42		11/21/2018 23:13	1	11211842.D	CLP2 0.32(mm)
ICV 280-438388/43		11/21/2018 23:34	1	11211843.D	CLP1 0.32(mm)
ICV 280-438388/43		11/21/2018 23:34	1	11211843.D	CLP2 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/26/2018 17:11

Analysis Batch Number: 438794 End Date: 11/27/2018 08:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 280-438794/4		11/26/2018 17:11	1	11261804.D	CLP1 0.32(mm)
CCVIS 280-438794/4		11/26/2018 17:11	1	11261804.D	CLP2 0.32(mm)
ZZZZZ		11/26/2018 17:32	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 17:32	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 17:54	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 17:54	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 18:15	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 18:15	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 18:36	10		CLP1 0.32(mm)
ZZZZZ		11/26/2018 18:36	10		CLP2 0.32(mm)
ZZZZZ		11/26/2018 18:57	20		CLP1 0.32(mm)
ZZZZZ		11/26/2018 18:57	20		CLP2 0.32(mm)
ZZZZZ		11/26/2018 19:18	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 19:18	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 19:39	20		CLP1 0.32(mm)
ZZZZZ		11/26/2018 19:39	20		CLP2 0.32(mm)
ZZZZZ		11/26/2018 20:01	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 20:01	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 20:22	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 20:22	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 20:43	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 20:43	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 21:04	10		CLP1 0.32(mm)
ZZZZZ		11/26/2018 21:04	10		CLP2 0.32(mm)
MB 280-436278/1-A		11/26/2018 21:26	1	11261816.D	CLP1 0.32(mm)
MB 280-436278/1-A		11/26/2018 21:26	1	11261816.D	CLP2 0.32(mm)
LCS 280-436278/2-A		11/26/2018 21:47	1	11261817.D	CLP1 0.32(mm)
LCS 280-436278/2-A		11/26/2018 21:47	1	11261817.D	CLP2 0.32(mm)
CCV 280-438794/18		11/26/2018 22:08	1	11261818.D	CLP1 0.32(mm)
CCV 280-438794/18		11/26/2018 22:08	1	11261818.D	CLP2 0.32(mm)
ZZZZZ		11/26/2018 22:29	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 22:29	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 22:50	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 22:50	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 23:11	5		CLP1 0.32(mm)
ZZZZZ		11/26/2018 23:11	5		CLP2 0.32(mm)
ZZZZZ		11/26/2018 23:33	1		CLP1 0.32(mm)
ZZZZZ		11/26/2018 23:33	1		CLP2 0.32(mm)
ZZZZZ		11/26/2018 23:54	40		CLP1 0.32(mm)
ZZZZZ		11/26/2018 23:54	40		CLP2 0.32(mm)
ZZZZZ		11/27/2018 00:15	40		CLP1 0.32(mm)
ZZZZZ		11/27/2018 00:15	40		CLP2 0.32(mm)
ZZZZZ		11/27/2018 00:36	40		CLP1 0.32(mm)
ZZZZZ		11/27/2018 00:36	40		CLP2 0.32(mm)
ZZZZZ		11/27/2018 00:57	40		CLP1 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/26/2018 17:11

Analysis Batch Number: 438794 End Date: 11/27/2018 08:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		11/27/2018 00:57	40		CLP2 0.32(mm)
ZZZZZ		11/27/2018 01:18	100		CLP1 0.32(mm)
ZZZZZ		11/27/2018 01:18	100		CLP2 0.32(mm)
CCV 280-438794/28		11/27/2018 01:40	1	11261828.D	CLP1 0.32(mm)
CCV 280-438794/28		11/27/2018 01:40	1	11261828.D	CLP2 0.32(mm)
ZZZZZ		11/27/2018 02:01	100		CLP1 0.32(mm)
ZZZZZ		11/27/2018 02:01	100		CLP2 0.32(mm)
ZZZZZ		11/27/2018 02:22	100		CLP1 0.32(mm)
ZZZZZ		11/27/2018 02:22	100		CLP2 0.32(mm)
ZZZZZ		11/27/2018 02:43	100		CLP1 0.32(mm)
ZZZZZ		11/27/2018 02:43	100		CLP2 0.32(mm)
280-116270-1		11/27/2018 03:04	1	11261832.D	CLP1 0.32(mm)
280-116270-1		11/27/2018 03:04	1	11261832.D	CLP2 0.32(mm)
ZZZZZ		11/27/2018 03:25	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 03:25	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 03:47	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 03:47	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 04:08	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 04:08	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 04:29	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 04:29	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 04:50	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 04:50	1		CLP2 0.32(mm)
CCV 280-438794/38		11/27/2018 05:11	1	11261838.D	CLP1 0.32(mm)
CCV 280-438794/38		11/27/2018 05:11	1	11261838.D	CLP2 0.32(mm)
ZZZZZ		11/27/2018 05:32	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 05:32	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 05:54	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 05:54	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 06:15	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 06:15	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 06:36	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 06:36	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 06:57	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 06:57	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 07:18	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 07:18	1		CLP2 0.32(mm)
280-116270-9		11/27/2018 07:39	1	11261845.D	CLP1 0.32(mm)
280-116270-9		11/27/2018 07:39	1	11261845.D	CLP2 0.32(mm)
CCV 280-438794/46		11/27/2018 08:01	1	11261846.D	CLP1 0.32(mm)
CCV 280-438794/46		11/27/2018 08:01	1	11261846.D	CLP2 0.32(mm)
CCV 280-438794/47		11/27/2018 08:22	1	11261847.D	CLP1 0.32(mm)
CCV 280-438794/47		11/27/2018 08:22	1	11261847.D	CLP2 0.32(mm)

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436278 Batch Start Date: 11/05/18 09:12 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/06/18 12:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 280-436278/1		3510C, 8082A				1000 mL	10 mL	7 SU	
LCS 280-436278/2		3510C, 8082A				1000 mL	10 mL	7 SU	
280-116270-A-1	FWGmw-018-181001-GW	3510C, 8082A	T	1457.5 g	500.8 g	956.7 mL	10 mL	12 SU	7 SU
280-116270-A-9	FWGmw-020-181001-GW	3510C, 8082A	T	1459.5 g	501.8 g	957.7 mL	10 mL	7 SU	

Lab Sample ID	Client Sample ID	Method Chain	Basis	8081/82 Surr 00105	8082 LCS 00049				
MB 280-436278/1		3510C, 8082A		1 mL					
LCS 280-436278/2		3510C, 8082A		1 mL	1 mL				
280-116270-A-1	FWGmw-018-181001-GW	3510C, 8082A	T	1 mL					
280-116270-A-9	FWGmw-020-181001-GW	3510C, 8082A	T	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436278 Batch Start Date: 11/05/18 09:12 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/06/18 12:20

Batch Notes	
Acid Used for pH Adjustment ID	1:1 H2SO4_00075
Balance ID	24750399
Batch Comment	DV-OP-0006/0007/BB8@10.00mL
Analyst ID - Concentration	MF/AAG
Concentration 1 Corrected Temperature	88/88 Degrees C
Equipment ID - Concentration 1	A/B
Exchange Solvent ID	Hexane_Cycl_00053
Analyst ID - Extraction	AAG (trainer)/KS (trainee)
Method/Fraction	3510C/8082_PCB
Na2SO4 ID	0000205461_00009
NaCl ID	173831
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00411
Prep Solvent Volume Used	180 mL
Analyst ID - Spike Analyst	AAG
Analyst ID - Spike Witness Analyst	Reviewer:JM
Sufficient Volume for Batch QC	yes
Concentration 1 Uncorrected Temperature	89/87 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8330B_DOD5

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): UltraCarb5u ID: 4.6 (mm) GC Column (2): Luna-phenyl 4.6 (mm)

Client Sample ID	Lab Sample ID	12DNB1 #	12DNB2 #
FWGmw-018-181001-GW	280-116270-1		82 Q
FWGmw-018-181001-GW	280-116270-1	95	
FWGmw-016-181001-GW	280-116270-8	102	
FWGmw-020-181001-GW	280-116270-9	97	
LL3mw-237-181001-GW	280-116270-11		85
LL3mw-237-181001-GW	280-116270-11	96	
LL3mw-244-181001-GW	280-116270-12		84
LL3mw-244-181001-GW	280-116270-12	101	
SCFmw-004-181001-GW	280-116270-13	102	
LL1mw-087-181001-GW	280-116270-14	101	
	MB 280-435507/1-A	101	
	MB 280-435841/1-A	109	
	LCS 280-435507/2-A	102	
	LCS 280-435841/2-A	100	

	QC LIMITS
12DNB = 1,2-Dinitrobenzene	83-119

Column to be used to flag recovery values

FORM II 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11010042.D

Lab ID: LCS 280-435507/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.14	107	73-125	
1,3-Dinitrobenzene	2.00	2.04	102	78-120	
2,4,6-Trinitrotoluene	2.00	1.96	98	71-123	
2,4-Dinitrotoluene	2.00	1.90	95	78-120	
2,6-Dinitrotoluene	2.00	1.94	97	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.88	94	79-120	
2-Nitrotoluene	2.00	1.54	77	70-127	
3-Nitrotoluene	2.00	1.43	71	73-125	Q
4-Amino-2,6-dinitrotoluene	2.00	1.72	86	76-125	
4-Nitrotoluene	2.00	1.72	86	71-127	
HMX	2.00	1.97	99	65-135	
Nitrobenzene	2.00	1.78	89	65-134	
Nitroglycerin	20.0	20.6	103	74-127	
PETN	20.0	19.9	99	73-127	
RDX	2.00	2.05	102	68-130	
Tetryl	2.00	2.16	108	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11060014.D

Lab ID: LCS 280-435841/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.12	106	73-125	
1,3-Dinitrobenzene	2.00	2.04	102	78-120	
2,4,6-Trinitrotoluene	2.00	1.97	99	71-123	
2,4-Dinitrotoluene	2.00	1.96	98	78-120	
2,6-Dinitrotoluene	2.00	1.93	97	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.93	97	79-120	
2-Nitrotoluene	2.00	1.95	97	70-127	
3-Nitrotoluene	2.00	1.69	85	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.77	88	76-125	
4-Nitrotoluene	2.00	2.22	111	71-127	
HMX	2.00	2.02	101	65-135	
Nitrobenzene	2.00	1.84	92	65-134	
Nitroglycerin	20.0	20.3	102	74-127	
PETN	20.0	19.6	98	73-127	
RDX	2.00	2.04	102	68-130	
Tetryl	2.00	2.15	107	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: MB 280-435507/1-A

Matrix: Water Date Extracted: 10/30/2018 13:27

Lab File ID:(1) 11010041.D Lab File ID:(2)

Date Analyzed:(1) 11/02/2018 04:41 Date Analyzed:(2)

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2) CHHPLC_G2_LUNA

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) Luna-phenylh ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-435507/2-A	11/02/2018 05:04	
FWGmw-016-181001-GW	280-116270-8	11/02/2018 05:27	
LL3mw-237-181001-GW	280-116270-11	11/02/2018 05:50	11/03/2018 08:19
LL3mw-244-181001-GW	280-116270-12	11/02/2018 06:13	11/03/2018 08:54
SCFmw-004-181001-GW	280-116270-13	11/02/2018 06:36	
LL1mw-087-181001-GW	280-116270-14	11/02/2018 06:59	

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: MB 280-435841/1-A

Matrix: Water Date Extracted: 11/01/2018 12:42

Lab File ID:(1) 11060013.D Lab File ID:(2)

Date Analyzed:(1) 11/06/2018 16:36 Date Analyzed:(2)

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2) CHHPLC_G2_LUNA

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) Luna-phenylh ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-435841/2-A	11/06/2018 16:59	
FWGmw-018-181001-GW	280-116270-1	11/06/2018 17:22	11/07/2018 19:28
FWGmw-020-181001-GW	280-116270-9	11/06/2018 17:45	

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-237-181001-GW Lab Sample ID: 280-116270-11

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 11/02/2018 05:50 Date Analyzed (2): 11/03/2018 08:19

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
4-Amino-2,6-dinitrotoluene	1		11.47	11.36	11.56	0.37		21.1
	2		17.18	17.13	17.43	0.46		
2-Amino-4,6-dinitrotoluene	1		11.76	11.65	11.85	0.26		16.8
	2		18.21	18.17	18.47	0.22		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-244-181001-GW Lab Sample ID: 280-116270-12

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 11/02/2018 06:13 Date Analyzed (2): 11/03/2018 08:54

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
RDX	1		7.77	7.63	7.93	0.084		46.9
	2		9.21	9.11	9.41	0.14		
4-Amino-2,6-dinitrotoluene	1		11.46	11.36	11.56	0.33		3.0
	2		17.21	17.13	17.43	0.34		
2-Amino-4,6-dinitrotoluene	1		11.74	11.65	11.85	0.38		19.5
	2		18.23	18.17	18.47	0.46		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: 11060015.D

Analysis Method: 8330B | Date Collected: 10/26/2018 09:30

Extraction Method: 3535 | Date Extracted: 11/01/2018 12:42

Sample wt/vol: 478.3(mL) | Date Analyzed: 11/06/2018 17:22

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436503 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.42	U	1.0	0.42	0.21
99-65-0	1,3-Dinitrobenzene	0.21	U	0.42	0.21	0.093
118-96-7	2,4,6-Trinitrotoluene	0.21	U	0.42	0.21	0.076
121-14-2	2,4-Dinitrotoluene	0.21	U	0.42	0.21	0.088
606-20-2	2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.067
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.053
99-08-1	3-Nitrotoluene	0.21	U	0.42	0.21	0.087
19406-51-0	4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.13	0.060
99-99-0	4-Nitrotoluene	0.42	U	1.0	0.42	0.21
2691-41-0	HMX	0.21	U M	0.42	0.21	0.092
98-95-3	Nitrobenzene	0.21	U	0.42	0.21	0.095
55-63-0	Nitroglycerin	2.1	U	3.1	2.1	0.96
78-11-5	PETN	1.3	U	2.1	1.3	0.43
121-82-4	RDX	0.13	U	0.21	0.13	0.055
479-45-8	Tetryl	0.21	U	0.25	0.21	0.083

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	95		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060015.D
Lims ID: 280-116270-G-1-A
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 06-Nov-2018 17:22:08 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-G-1-A
Misc. Info.: 280-0075889-015
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Nov-2018 09:06:42 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: fiedlerh Date: 07-Nov-2018 08:29:49

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.656			ND	U
	5 RDX	1		7.769			ND	
$	7 1,2-Dinitrobenzene	1	8.759	8.756	0.003	24343	0.1891	
	8 1,3,5-Trinitrobenzene	1		8.916			ND	
	9 1,3-Dinitrobenzene	1		9.576			ND	
	11 Nitrobenzene	1		9.969			ND	
	12 Tetryl	1		10.296			ND	
	13 Nitroglycerin	2		10.796			ND	
	14 2,4,6-Trinitrotoluene	1		11.256			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.442			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.729			ND	
	17 2,6-Dinitrotoluene	1		11.869			ND	
	18 2,4-Dinitrotoluene	1		12.069			ND	
	19 o-Nitrotoluene	1	12.953	12.916	0.037	2915	0.0220	
	20 p-Nitrotoluene	1		13.356			ND	
	21 m-Nitrotoluene	1		13.956			ND	
	22 PETN	2		15.062			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

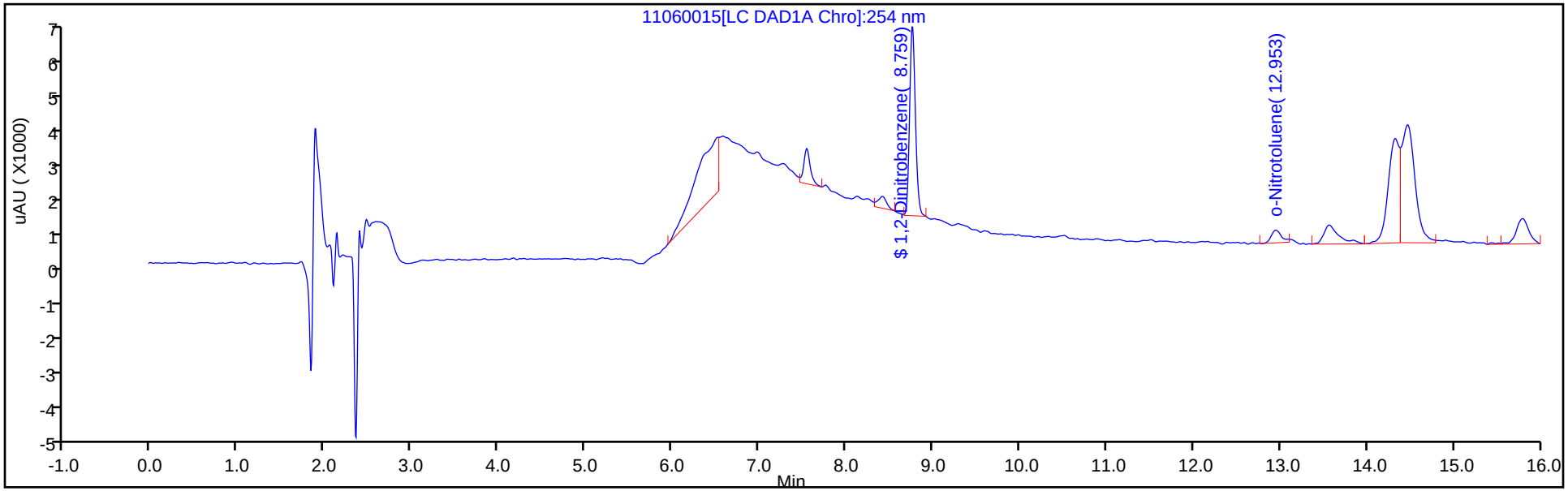
Report Date: 07-Nov-2018 09:06:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

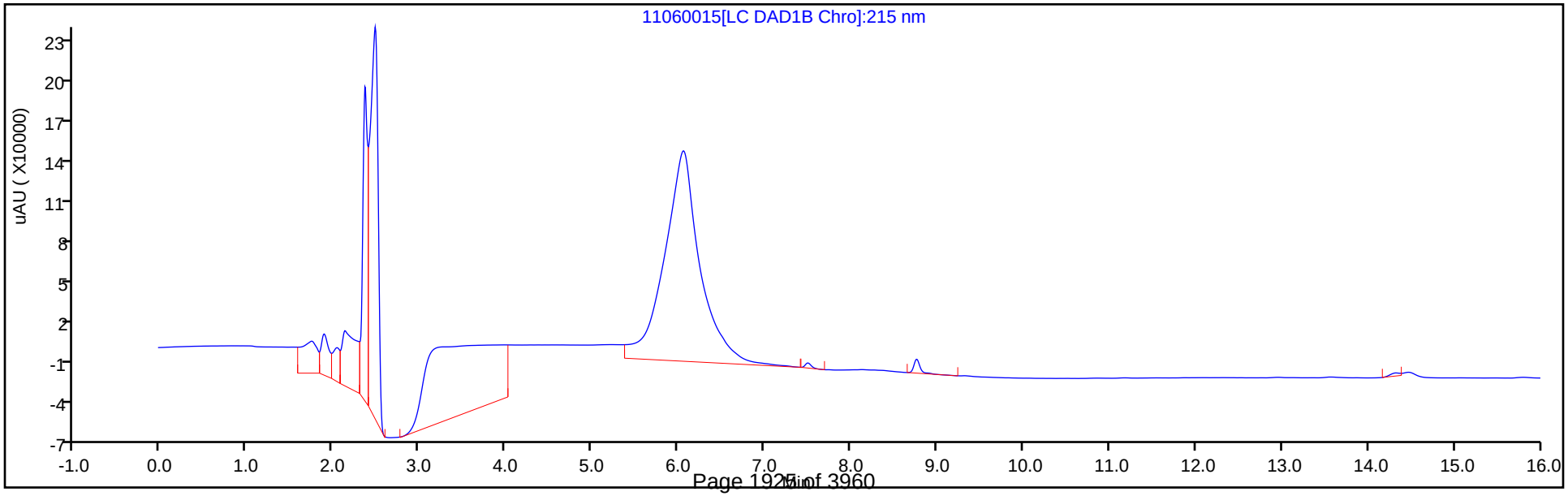
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060015.D

Injection Date:	06-Nov-2018 17:22:08	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116270-G-1-A	Lab Sample ID:	280-116270-1	Worklist Smp#:	15
Client ID:	FWGmw-018-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060015.D				
Lims ID:	280-116270-G-1-A				
Client ID:	FWGmw-018-181001-GW				
Sample Type:	Client				
Inject. Date:	06-Nov-2018 17:22:08	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-G-1-A				
Misc. Info.:	280-0075889-015				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	07-Nov-2018 09:06:42	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: fiedlerh		Date:	07-Nov-2018 08:29:49		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1891	94.55

User Disabled Compound Report

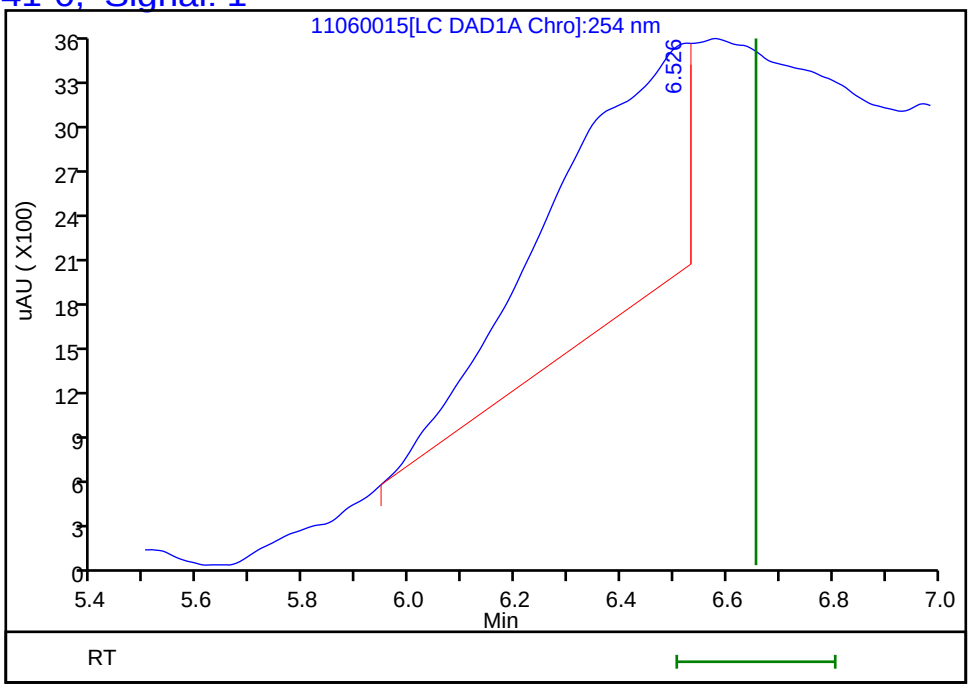
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060015.D

Injection Date:	06-Nov-2018 17:22:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-G-1-A	Lab Sample ID:	280-116270-1		
Client ID:	FWGmw-018-181001-GW				
Operator ID:	hkf	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.53
Response: 29639
Amount: 0.348918



Reviewer: fiedlerh, 07-Nov-2018 08:29:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-018-181001-GW | Lab Sample ID: 280-116270-1

Matrix: Water | Lab File ID: 11070010.D

Analysis Method: 8330B | Date Collected: 10/26/2018 09:30

Extraction Method: 3535 | Date Extracted: 11/01/2018 12:42

Sample wt/vol: 478.3(mL) | Date Analyzed: 11/07/2018 19:28

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436697 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
88-72-2	2-Nitrotoluene	0.21	U Q	0.42	0.21	0.089

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	82	Q	83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070010.D
Lims ID: 280-116270-G-1-A
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 07-Nov-2018 19:28:49 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-G-1-A
Misc. Info.: 280-0075940-010
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 08-Nov-2018 09:58:41 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0306

First Level Reviewer: fiedlerh Date: 08-Nov-2018 09:55:32

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
5 HMX	1		7.172			ND	
7 RDX	1	9.243	9.238	0.005	1806	0.007507	
8 Nitrobenzene	1		12.185			ND	
$ 9 1,2-Dinitrobenzene	1	13.183	13.205	-0.022	50732	0.1642	
12 Nitroglycerin	2		15.685			ND	
11 1,3-Dinitrobenzene	1		15.752			ND	
13 o-Nitrotoluene	1		16.505			ND	
14 p-Nitrotoluene	1		16.838			ND	U
15 4-Amino-2,6-dinitrotoluene	1		17.272			ND	
16 m-Nitrotoluene	1	17.756	17.752	0.004	9271	0.0296	
17 2-Amino-4,6-dinitrotoluene	1		18.312			ND	
18 1,3,5-Trinitrobenzene	1		19.058			ND	U
19 2,6-Dinitrotoluene	1		19.872			ND	
20 2,4-Dinitrotoluene	1		20.438			ND	
21 Tetryl	1		23.779			ND	
22 2,4,6-Trinitrotoluene	1		24.779			ND	
23 PETN	2		25.159			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

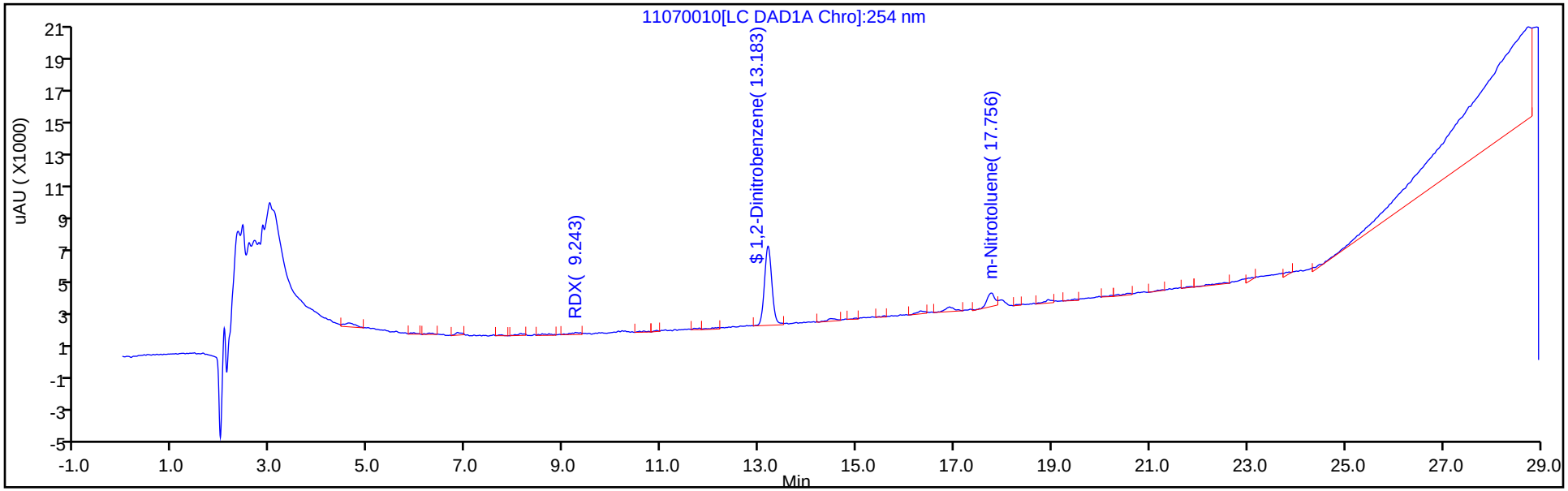
Report Date: 08-Nov-2018 09:58:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

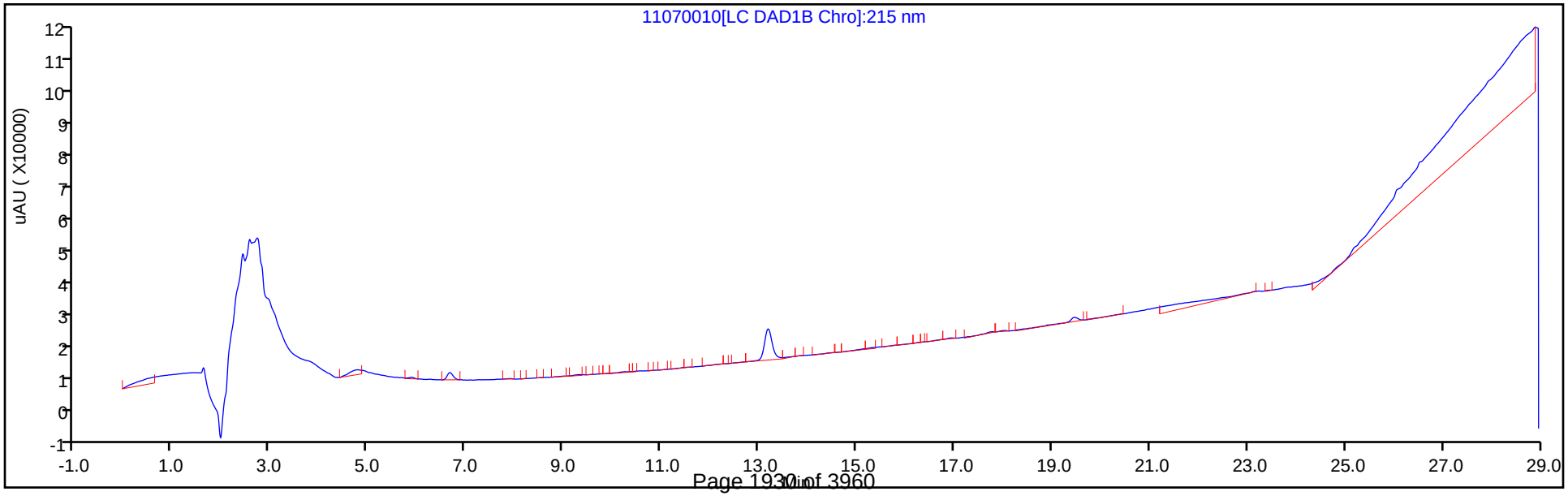
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070010.D

Injection Date:	07-Nov-2018 19:28:49	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	280-116270-G-1-A	Lab Sample ID:	280-116270-1	Worklist Smp#:	10
Client ID:	FWGmw-018-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070010.D
Lims ID: 280-116270-G-1-A
Client ID: FWGmw-018-181001-GW
Sample Type: Client
Inject. Date: 07-Nov-2018 19:28:49 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-G-1-A
Misc. Info.: 280-0075940-010
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 08-Nov-2018 09:58:41 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0306

First Level Reviewer: fiedlerh Date: 08-Nov-2018 09:55:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1642	82.12

User Disabled Compound Report

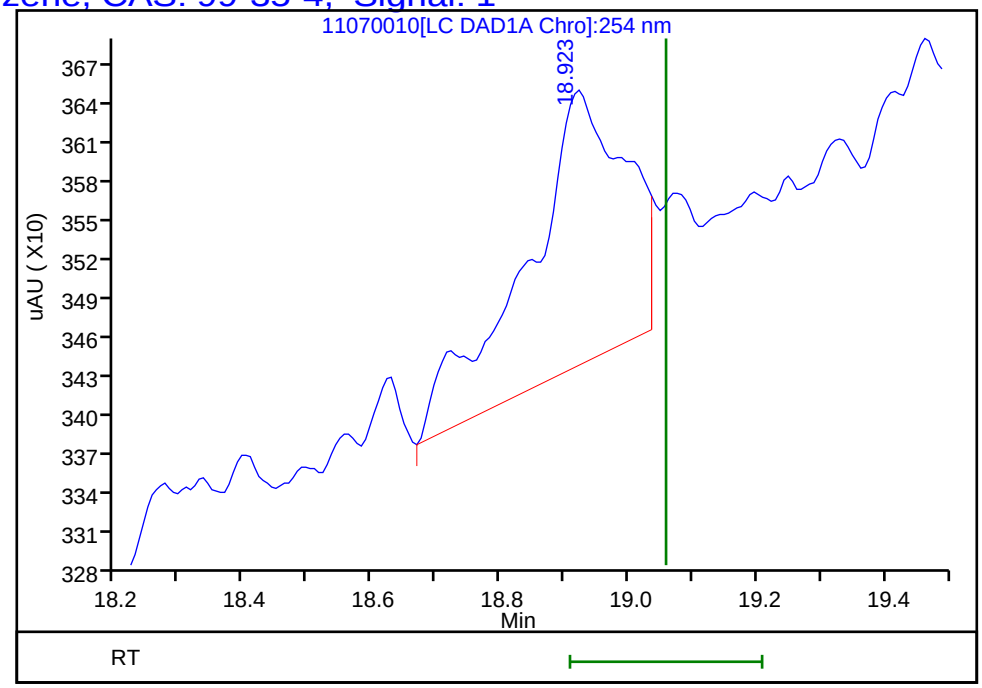
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070010.D

Injection Date:	07-Nov-2018 19:28:49	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-116270-G-1-A	Lab Sample ID:	280-116270-1		
Client ID:	FWGmw-018-181001-GW				
Operator ID:	HKF	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 18.92
Response: 2248
Amount: 0.004419



Reviewer: fiedlerh, 08-Nov-2018 09:55:32
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

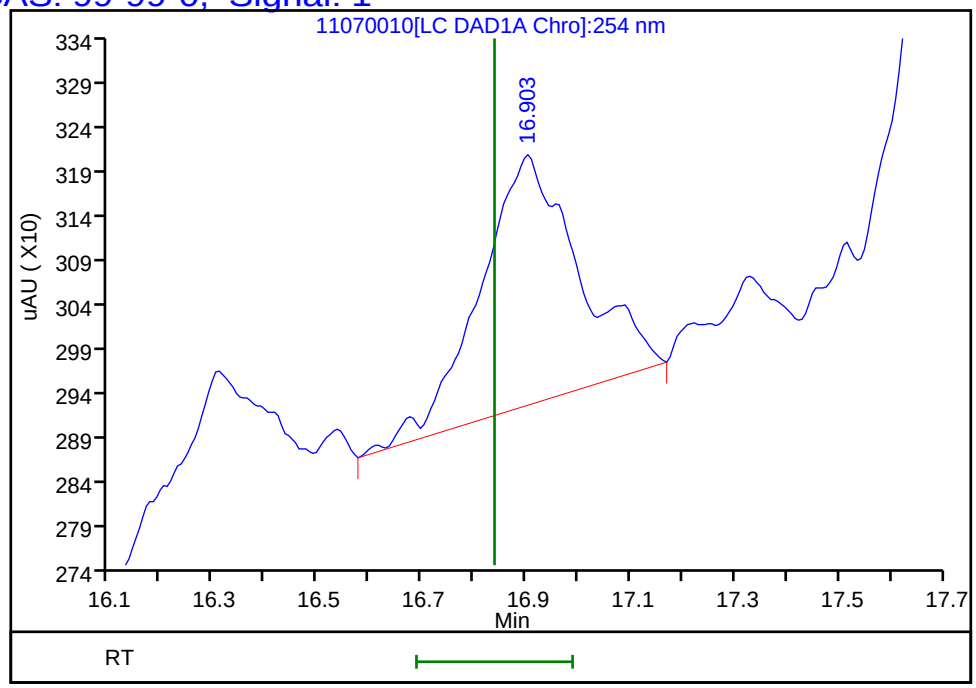
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070010.D

Injection Date:	07-Nov-2018 19:28:49	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-116270-G-1-A	Lab Sample ID:	280-116270-1		
Client ID:	FWGmw-018-181001-GW				
Operator ID:	HKF	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 16.90
Response: 3650
Amount: 0.015478



Reviewer: fiedlerh, 08-Nov-2018 09:55:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-016-181001-GW | Lab Sample ID: 280-116270-8

Matrix: Water | Lab File ID: 11010043.D

Analysis Method: 8330B | Date Collected: 10/25/2018 15:40

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 450.7(mL) | Date Analyzed: 11/02/2018 05:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.44	U	1.1	0.44	0.22
99-65-0	1,3-Dinitrobenzene	0.22	U	0.44	0.22	0.098
118-96-7	2,4,6-Trinitrotoluene	0.22	U	0.44	0.22	0.080
121-14-2	2,4-Dinitrotoluene	0.22	U	0.44	0.22	0.093
606-20-2	2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.072
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.22	0.13	0.056
88-72-2	2-Nitrotoluene	0.22	U	0.44	0.22	0.095
99-08-1	3-Nitrotoluene	0.22	U Q	0.44	0.22	0.093
19406-51-0	4-Amino-2,6-dinitrotoluene	0.13	U	0.22	0.13	0.064
99-99-0	4-Nitrotoluene	0.44	U	1.1	0.44	0.22
2691-41-0	HMX	0.22	U M	0.44	0.22	0.097
98-95-3	Nitrobenzene	0.22	U	0.44	0.22	0.10
55-63-0	Nitroglycerin	2.2	U	3.3	2.2	1.0
78-11-5	PETN	1.3	U	2.2	1.3	0.46
121-82-4	RDX	0.13	U	0.22	0.13	0.058
479-45-8	Tetryl	0.22	U M	0.27	0.22	0.088

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010043.D
Lims ID: 280-116270-D-8-A
Client ID: FWGmw-016-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 05:27:16 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-D-8-A
Misc. Info.: 280-0075718-043
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:44 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

First Level Reviewer: fiedlerh Date: 02-Nov-2018 16:09:47

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.669			ND	U
	5 RDX	1		7.782			ND	
$	7 1,2-Dinitrobenzene	1	8.764	8.769	-0.005	26301	0.2043	
	8 1,3,5-Trinitrobenzene	1		8.935			ND	
	9 1,3-Dinitrobenzene	1		9.595			ND	
	11 Nitrobenzene	1		9.982			ND	
	12 Tetryl	1		10.308			ND	U
	13 Nitroglycerin	2		10.815			ND	
	14 2,4,6-Trinitrotoluene	1		11.275			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.462			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.748			ND	
	17 2,6-Dinitrotoluene	1		11.888			ND	
	18 2,4-Dinitrotoluene	1		12.088			ND	
	19 o-Nitrotoluene	1		12.935			ND	
	20 p-Nitrotoluene	1		13.382			ND	
	21 m-Nitrotoluene	1		13.982			ND	
	22 PETN	2		15.102			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

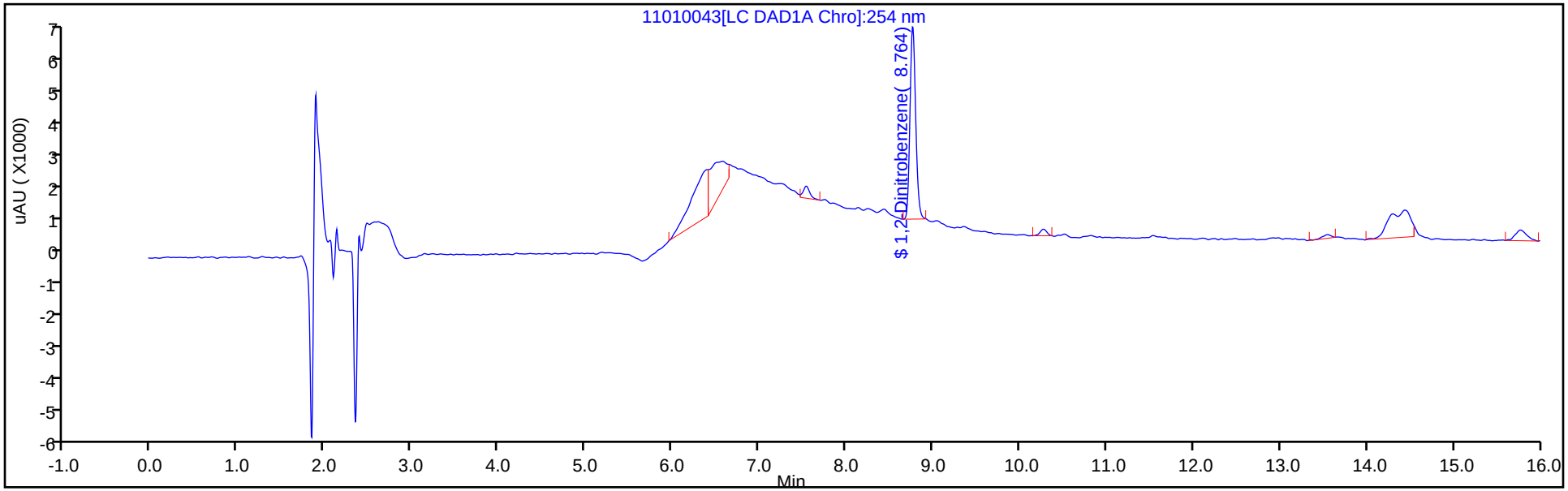
Report Date: 02-Nov-2018 16:14:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

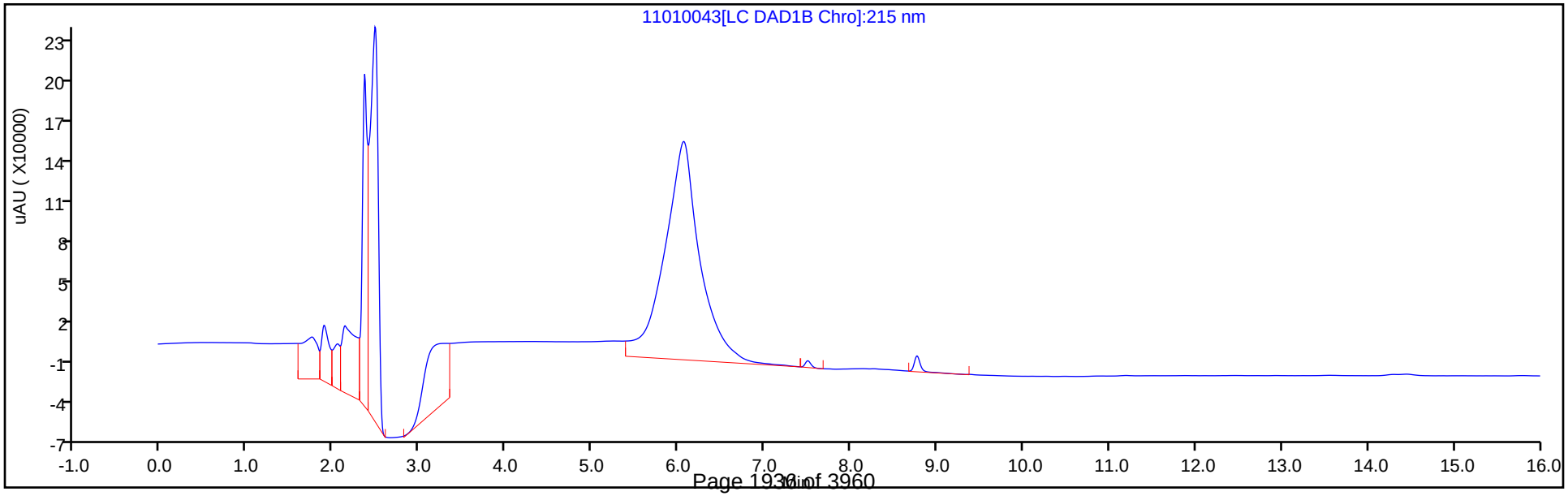
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010043.D

Injection Date:	02-Nov-2018 05:27:16	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116270-D-8-A	Lab Sample ID:	280-116270-8	Worklist Smp#:	43
Client ID:	FWGmw-016-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010043.D				
Lims ID:	280-116270-D-8-A				
Client ID:	FWGmw-016-181001-GW				
Sample Type:	Client				
Inject. Date:	02-Nov-2018 05:27:16	ALS Bottle#:	43	Worklist Smp#:	43
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-D-8-A				
Misc. Info.:	280-0075718-043				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Nov-2018 16:14:44	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0315				
First Level Reviewer: fiedlerh		Date:	02-Nov-2018 16:09:47		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2043	102.16

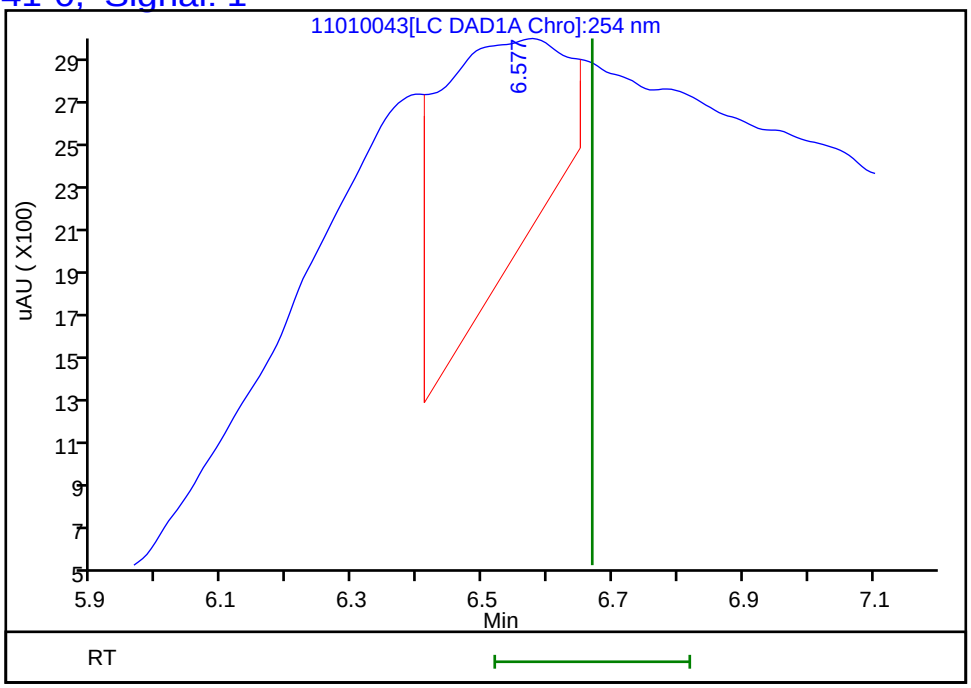
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010043.D				
Injection Date:	02-Nov-2018 05:27:16	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-D-8-A	Lab Sample ID:	280-116270-8		
Client ID:	FWGmw-016-181001-GW				
Operator ID:	hkf	ALS Bottle#:	43	Worklist Smp#:	43
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.58
Response: 13981
Amount: 0.164588



Reviewer: fiedlerh, 02-Nov-2018 16:09:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

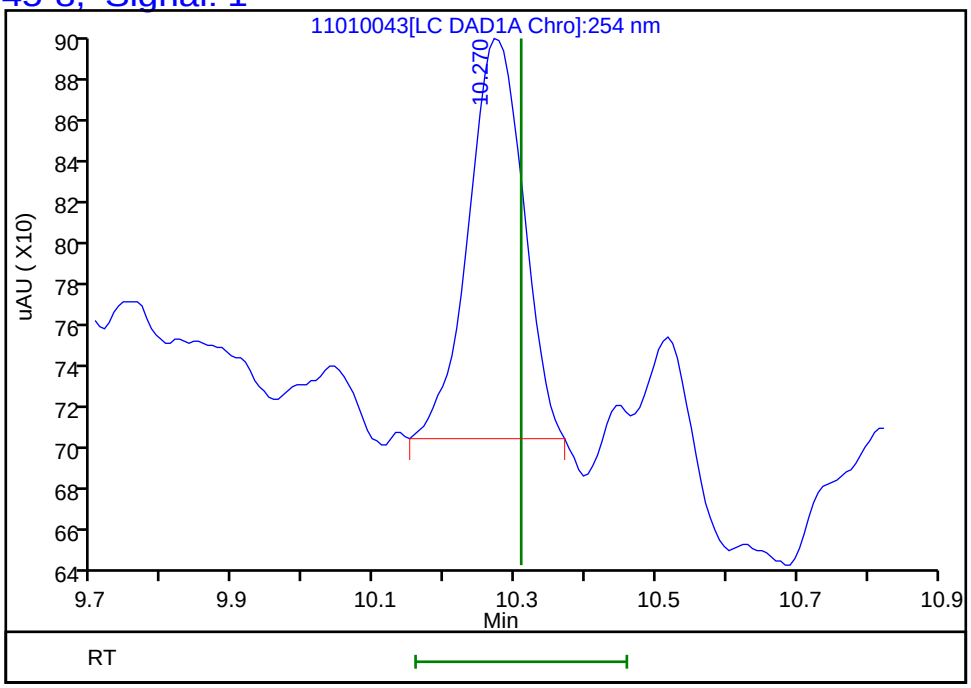
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010043.D

Injection Date:	02-Nov-2018 05:27:16	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-D-8-A	Lab Sample ID:	280-116270-8		
Client ID:	FWGmw-016-181001-GW				
Operator ID:	hkf	ALS Bottle#:	43	Worklist Smp#:	43
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

12 Tetryl, CAS: 479-45-8, Signal: 1

RT: 10.27
Response: 1050
Amount: 0.006424



Reviewer: fiedlerh, 02-Nov-2018 16:09:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: FWGmw-020-181001-GW | Lab Sample ID: 280-116270-9

Matrix: Water | Lab File ID: 11060016.D

Analysis Method: 8330B | Date Collected: 10/26/2018 10:00

Extraction Method: 3535 | Date Extracted: 11/01/2018 12:42

Sample wt/vol: 452.1(mL) | Date Analyzed: 11/06/2018 17:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436503 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.44	U	1.1	0.44	0.22
99-65-0	1,3-Dinitrobenzene	0.22	U	0.44	0.22	0.098
118-96-7	2,4,6-Trinitrotoluene	0.22	U	0.44	0.22	0.080
121-14-2	2,4-Dinitrotoluene	0.22	U	0.44	0.22	0.093
606-20-2	2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.071
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.22	0.13	0.056
88-72-2	2-Nitrotoluene	0.22	U M	0.44	0.22	0.095
99-08-1	3-Nitrotoluene	0.22	U	0.44	0.22	0.092
19406-51-0	4-Amino-2,6-dinitrotoluene	0.13	U	0.22	0.13	0.064
99-99-0	4-Nitrotoluene	0.44	U	1.1	0.44	0.22
2691-41-0	HMX	0.22	U M	0.44	0.22	0.097
98-95-3	Nitrobenzene	0.22	U	0.44	0.22	0.10
55-63-0	Nitroglycerin	2.2	U	3.3	2.2	1.0
78-11-5	PETN	1.3	U	2.2	1.3	0.46
121-82-4	RDX	0.13	U	0.22	0.13	0.058
479-45-8	Tetryl	0.22	U	0.27	0.22	0.088

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	97		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060016.D
Lims ID: 280-116270-G-9-A
Client ID: FWGmw-020-181001-GW
Sample Type: Client
Inject. Date: 06-Nov-2018 17:45:05 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-G-9-A
Misc. Info.: 280-0075889-016
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Nov-2018 09:06:42 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: fiedlerh Date: 07-Nov-2018 08:29:59

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.656			ND	U
	5 RDX	1		7.769			ND	
$	7 1,2-Dinitrobenzene	1	8.769	8.756	0.013	24958	0.1939	
	8 1,3,5-Trinitrobenzene	1		8.916			ND	
	9 1,3-Dinitrobenzene	1		9.576			ND	
	11 Nitrobenzene	1		9.969			ND	
	12 Tetryl	1		10.296			ND	
	13 Nitroglycerin	2		10.796			ND	
	14 2,4,6-Trinitrotoluene	1		11.256			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.442			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.729			ND	
	17 2,6-Dinitrotoluene	1		11.869			ND	
	18 2,4-Dinitrotoluene	1		12.069			ND	
	19 o-Nitrotoluene	1		12.916			ND	U
	20 p-Nitrotoluene	1		13.356			ND	
	21 m-Nitrotoluene	1		13.956			ND	
	22 PETN	2		15.062			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

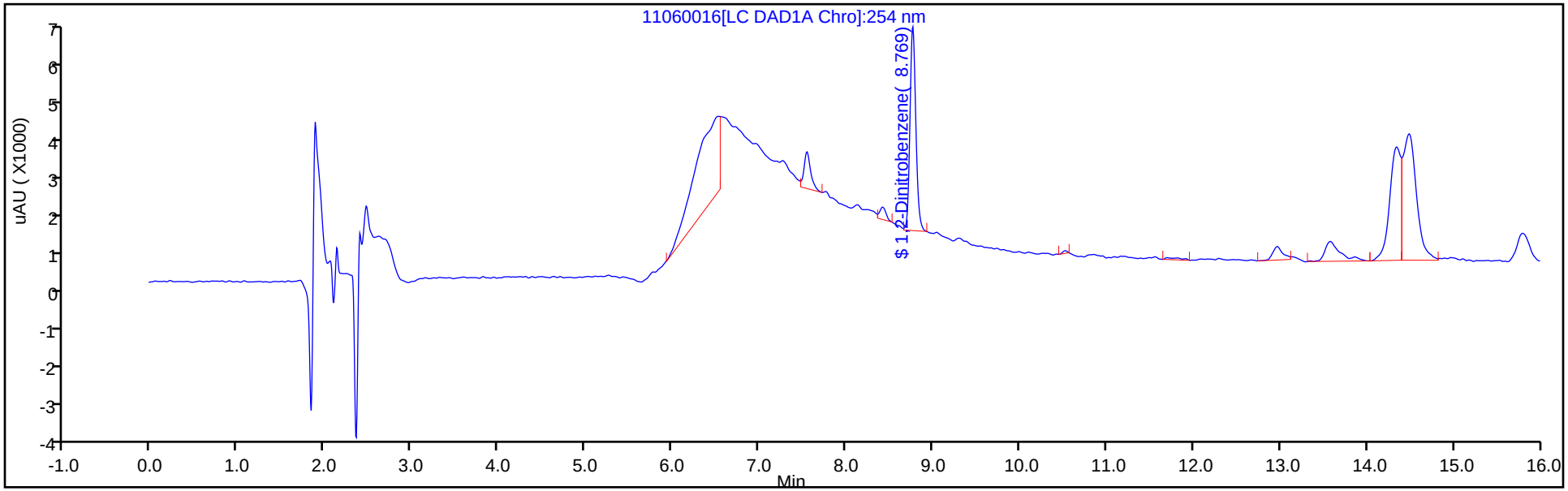
Report Date: 07-Nov-2018 09:06:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

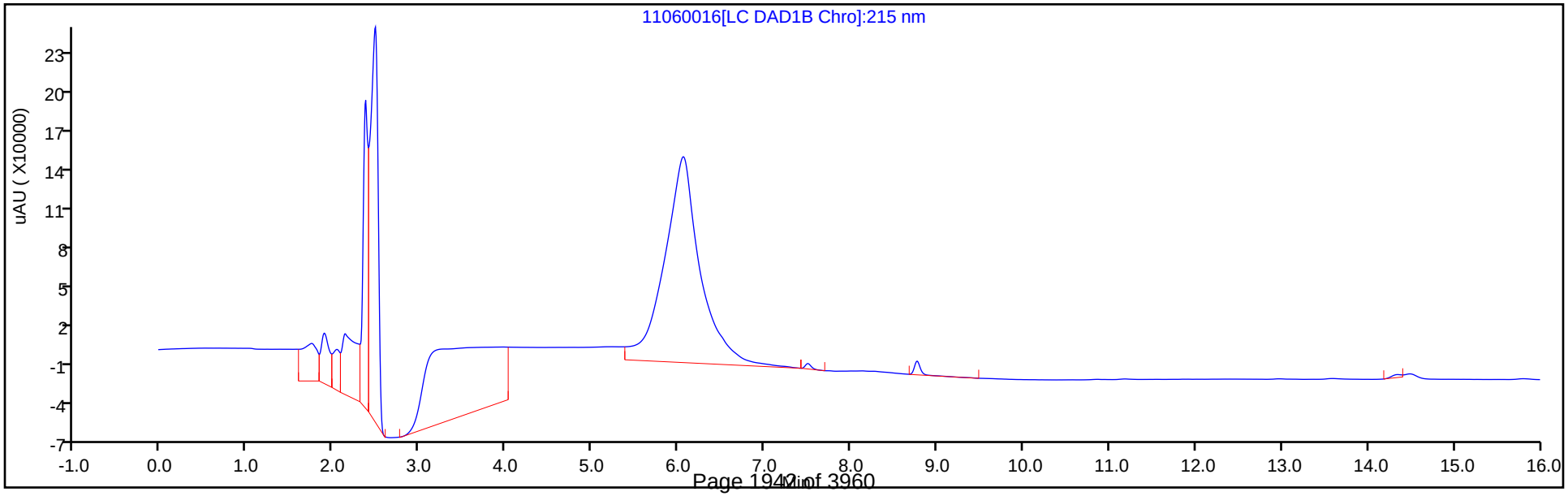
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060016.D

Injection Date:	06-Nov-2018 17:45:05	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116270-G-9-A	Lab Sample ID:	280-116270-9	Worklist Smp#:	16
Client ID:	FWGmw-020-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060016.D				
Lims ID:	280-116270-G-9-A				
Client ID:	FWGmw-020-181001-GW				
Sample Type:	Client				
Inject. Date:	06-Nov-2018 17:45:05	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-G-9-A				
Misc. Info.:	280-0075889-016				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	07-Nov-2018 09:06:42	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: fiedlerh		Date:	07-Nov-2018 08:29:59		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1939	96.94

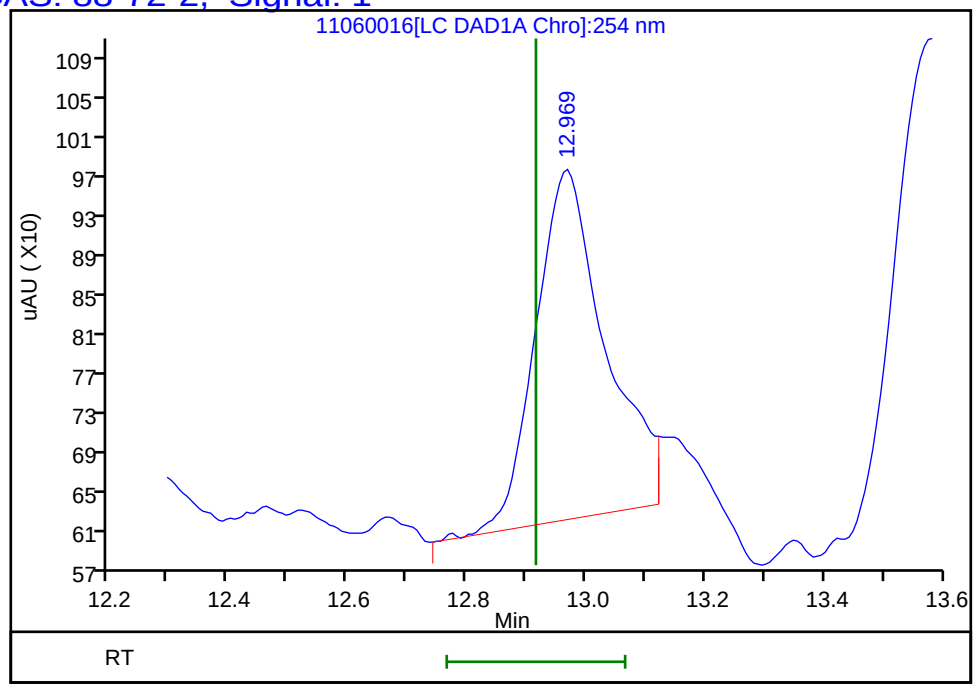
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060016.D				
Injection Date:	06-Nov-2018 17:45:05	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-G-9-A	Lab Sample ID:	280-116270-9		
Client ID:	FWGmw-020-181001-GW				
Operator ID:	hkf	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

19 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 12.97
Response: 2851
Amount: 0.021562



Reviewer: fiedlerh, 07-Nov-2018 08:29:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

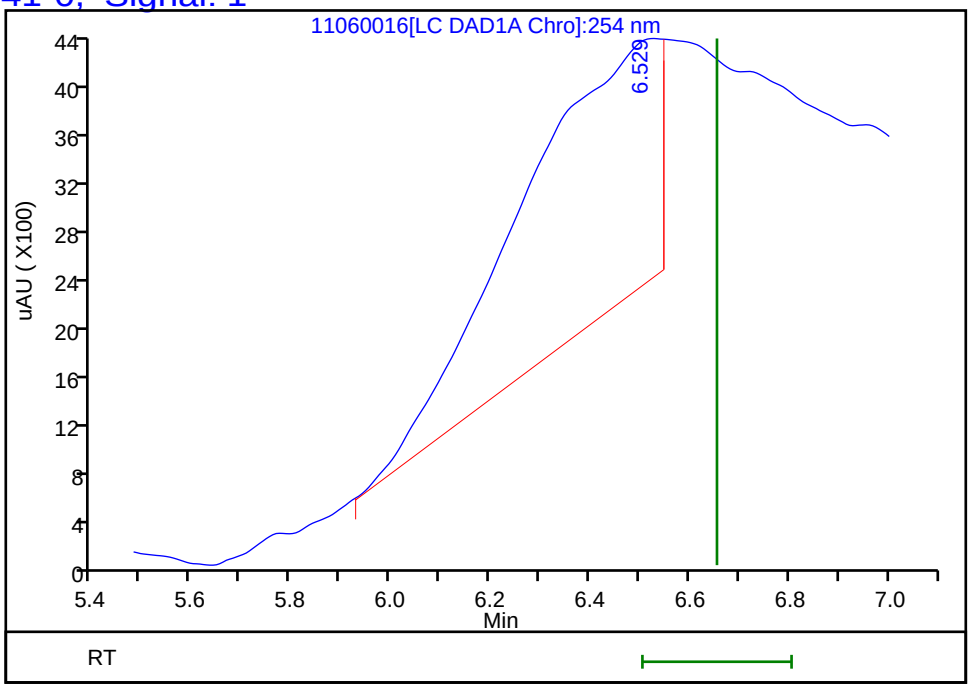
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060016.D

Injection Date:	06-Nov-2018 17:45:05	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-G-9-A	Lab Sample ID:	280-116270-9		
Client ID:	FWGmw-020-181001-GW				
Operator ID:	hkf	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.53
Response: 42386
Amount: 0.498978



Reviewer: fiedlerh, 07-Nov-2018 08:29:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-237-181001-GW | Lab Sample ID: 280-116270-11

Matrix: Water | Lab File ID: 11010044.D

Analysis Method: 8330B | Date Collected: 10/26/2018 13:10

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 463.5(mL) | Date Analyzed: 11/02/2018 05:50

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.43	U	1.1	0.43	0.22
99-65-0	1,3-Dinitrobenzene	0.22	U	0.43	0.22	0.096
118-96-7	2,4,6-Trinitrotoluene	0.22	U	0.43	0.22	0.078
121-14-2	2,4-Dinitrotoluene	0.22	U	0.43	0.22	0.090
606-20-2	2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.070
35572-78-2	2-Amino-4,6-dinitrotoluene	0.26		0.22	0.13	0.055
88-72-2	2-Nitrotoluene	0.22	U	0.43	0.22	0.092
99-08-1	3-Nitrotoluene	0.22	U Q	0.43	0.22	0.090
19406-51-0	4-Amino-2,6-dinitrotoluene	0.37		0.22	0.13	0.062
99-99-0	4-Nitrotoluene	0.43	U	1.1	0.43	0.22
2691-41-0	HMX	0.22	U M	0.43	0.22	0.094
55-63-0	Nitroglycerin	2.2	U	3.2	2.2	0.99
78-11-5	PETN	1.3	U	2.2	1.3	0.45
121-82-4	RDX	0.13	U	0.22	0.13	0.056
479-45-8	Tetryl	0.22	U M	0.26	0.22	0.086

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	96		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010044.D
Lims ID: 280-116270-B-11-A
Client ID: LL3mw-237-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 05:50:13 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-B-11-
Misc. Info.: 280-0075718-044
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:44 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

First Level Reviewer: fiedlerh Date: 02-Nov-2018 16:09:59

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.669			ND	U
	5 RDX	1		7.782			ND	
$	7 1,2-Dinitrobenzene	1	8.763	8.769	-0.006	24664	0.1916	
	8 1,3,5-Trinitrobenzene	1		8.935			ND	
	9 1,3-Dinitrobenzene	1		9.595			ND	
	11 Nitrobenzene	1	9.989	9.982	0.007	1813	0.009121	
	12 Tetryl	1		10.308			ND	U
	13 Nitroglycerin	2		10.815			ND	
	14 2,4,6-Trinitrotoluene	1		11.275			ND	
	15 4-Amino-2,6-dinitrotoluene	1	11.469	11.462	0.007	5709	0.0345	
	16 2-Amino-4,6-dinitrotoluene	1	11.756	11.748	0.008	4875	0.0244	
	17 2,6-Dinitrotoluene	1		11.888			ND	
	18 2,4-Dinitrotoluene	1		12.088			ND	
	19 o-Nitrotoluene	1		12.935			ND	
	20 p-Nitrotoluene	1		13.382			ND	
	21 m-Nitrotoluene	1		13.982			ND	
	22 PETN	2		15.102			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

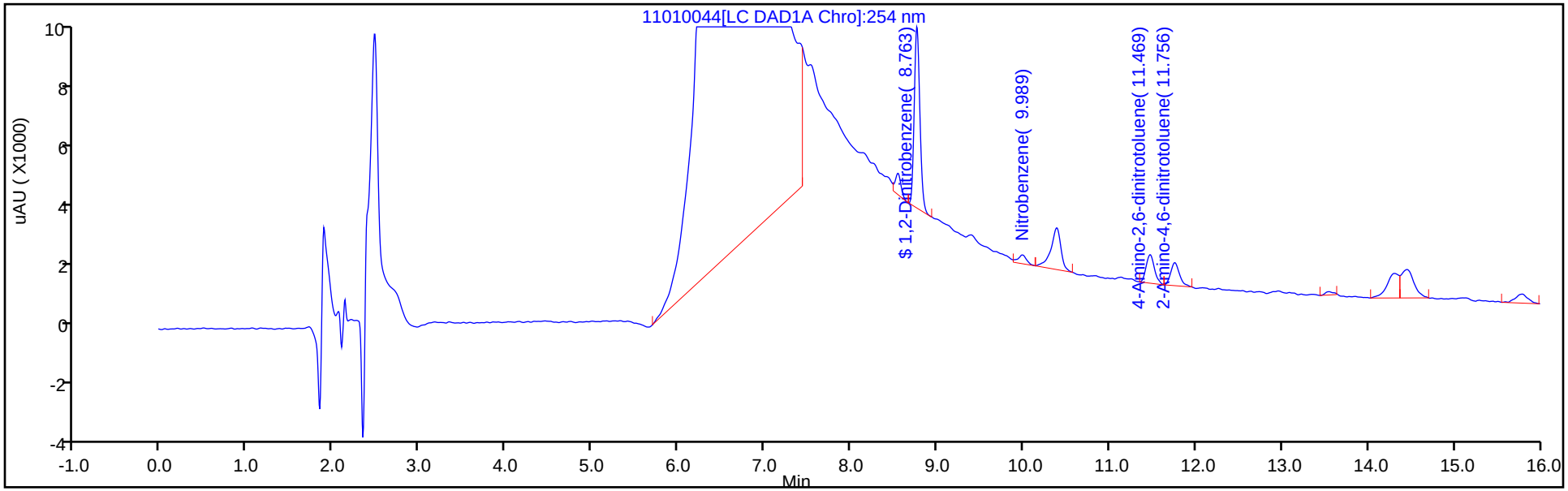
Report Date: 02-Nov-2018 16:14:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

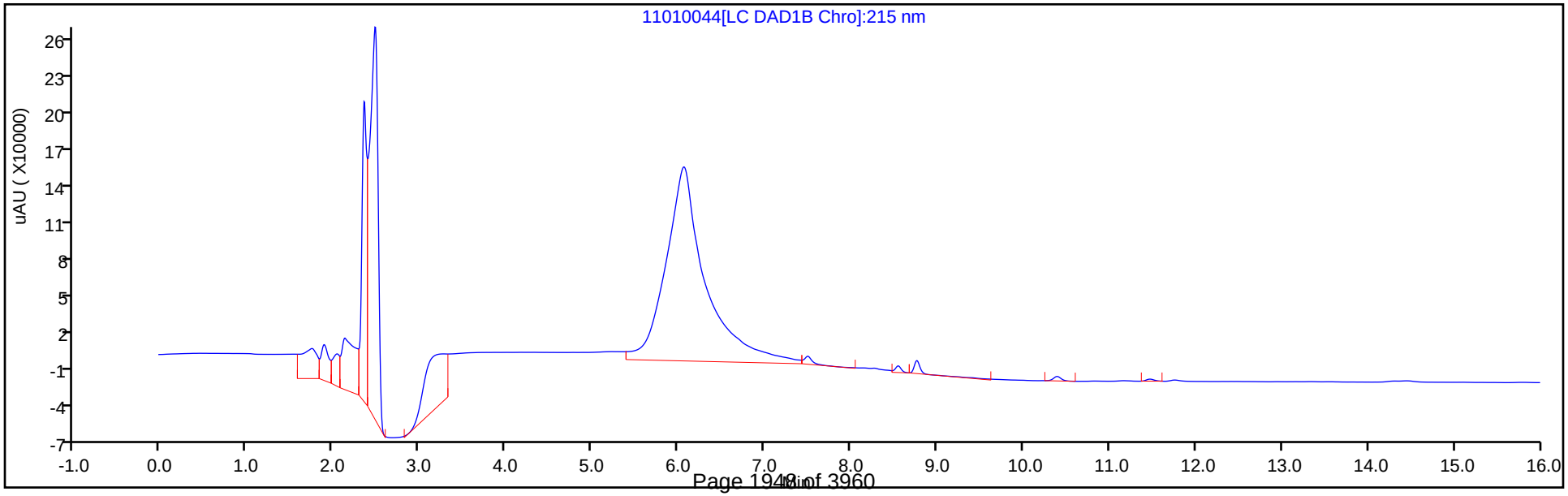
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010044.D

Injection Date:	02-Nov-2018 05:50:13	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116270-B-11-A	Lab Sample ID:	280-116270-11	Worklist Smp#:	44
Client ID:	LL3mw-237-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	44
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010044.D				
Lims ID:	280-116270-B-11-A				
Client ID:	LL3mw-237-181001-GW				
Sample Type:	Client				
Inject. Date:	02-Nov-2018 05:50:13	ALS Bottle#:	44	Worklist Smp#:	44
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-B-11-				
Misc. Info.:	280-0075718-044				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Nov-2018 16:14:44	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0315				
First Level Reviewer: fiedlerh		Date:	02-Nov-2018 16:09:59		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1916	95.80

User Disabled Compound Report

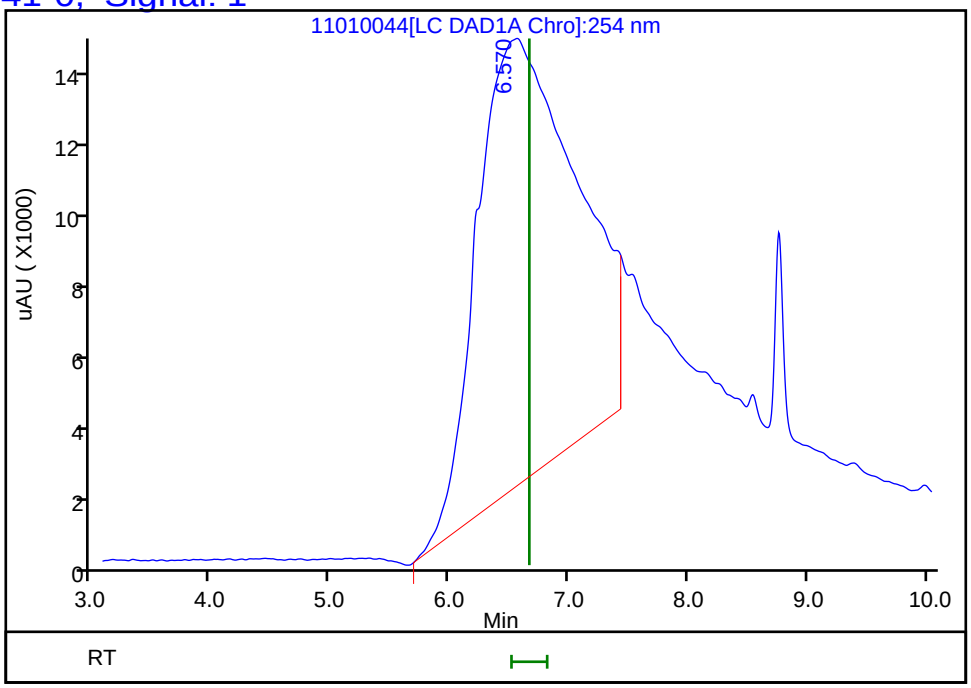
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010044.D

Injection Date:	02-Nov-2018 05:50:13	Instrument ID:	CHHPLC_X3
Lims ID:	280-116270-B-11-A	Lab Sample ID:	280-116270-11
Client ID:	LL3mw-237-181001-GW		
Operator ID:	hkf	ALS Bottle#:	44 Worklist Smp#: 44
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	8330_X3	Limit Group:	GCSV - 8330
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm

2 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.57
Response: 693011
Amount: 8.158295



Reviewer: fiedlerh, 02-Nov-2018 16:09:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

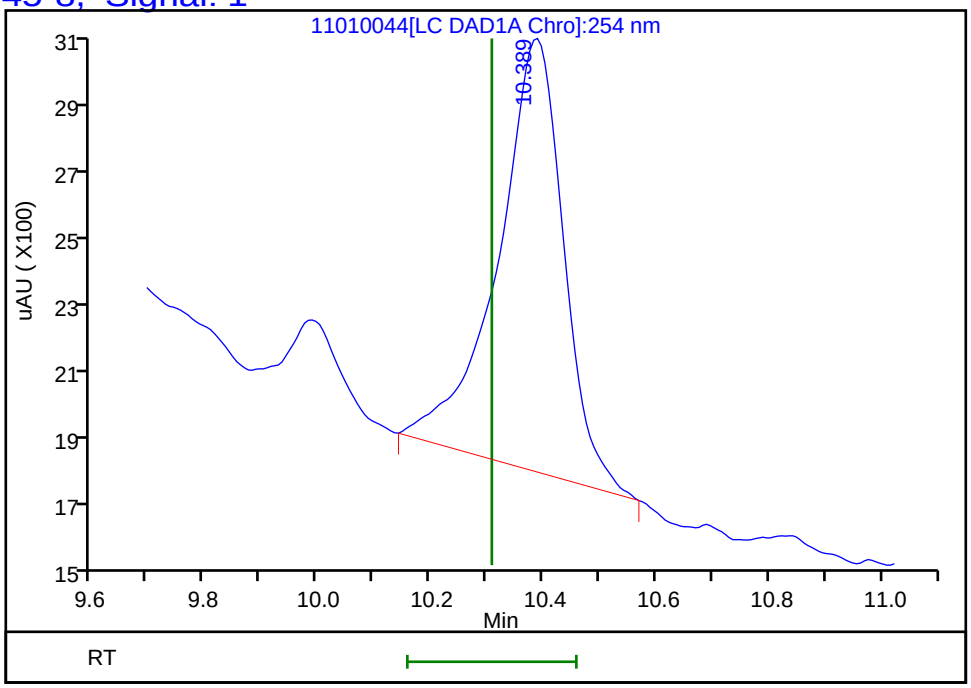
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010044.D				
Injection Date:	02-Nov-2018 05:50:13	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-B-11-A	Lab Sample ID:	280-116270-11		
Client ID:	LL3mw-237-181001-GW				
Operator ID:	hkf	ALS Bottle#:	44	Worklist Smp#:	44
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

12 Tetryl, CAS: 479-45-8, Signal: 1

RT: 10.39
Response: 10116
Amount: 0.061891



Reviewer: fiedlerh, 02-Nov-2018 16:09:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-237-181001-GW | Lab Sample ID: 280-116270-11

Matrix: Water | Lab File ID: 11020031.D

Analysis Method: 8330B | Date Collected: 10/26/2018 13:10

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 463.5(mL) | Date Analyzed: 11/03/2018 08:19

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
98-95-3	Nitrobenzene	0.22	U	0.43	0.22	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	85		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020031.D
Lims ID: 280-116270-B-11-A
Client ID: LL3mw-237-181001-GW
Sample Type: Client
Inject. Date: 03-Nov-2018 08:19:42 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-B-11-
Misc. Info.: 280-0075779-031
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-Nov-2018 11:35:08 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0304

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	5 HMX	1		7.171			ND	
	7 RDX	1	9.199	9.264	-0.065	2464	0.0102	
	8 Nitrobenzene	1		12.224			ND	
$	9 1,2-Dinitrobenzene	1	13.146	13.231	-0.085	52491	0.1699	
	12 Nitroglycerin	2		15.724			ND	
	11 1,3-Dinitrobenzene	1		15.771			ND	
	13 o-Nitrotoluene	1		16.544			ND	
	14 p-Nitrotoluene	1		16.878			ND	
	15 4-Amino-2,6-dinitrotoluene	1	17.179	17.284	-0.105	13933	0.0426	
	16 m-Nitrotoluene	1	17.726	17.784	-0.058	3936	0.0126	
	17 2-Amino-4,6-dinitrotoluene	1	18.206	18.324	-0.118	9963	0.0207	
	18 1,3,5-Trinitrobenzene	1		19.071			ND	
	19 2,6-Dinitrotoluene	1		19.891			ND	
	20 2,4-Dinitrotoluene	1		20.458			ND	
	21 Tetryl	1	23.713	23.758	-0.045	9474	0.0243	
	22 2,4,6-Trinitrotoluene	1		24.771			ND	
	23 PETN	2	25.126	25.178	-0.052	52275	0.3713	

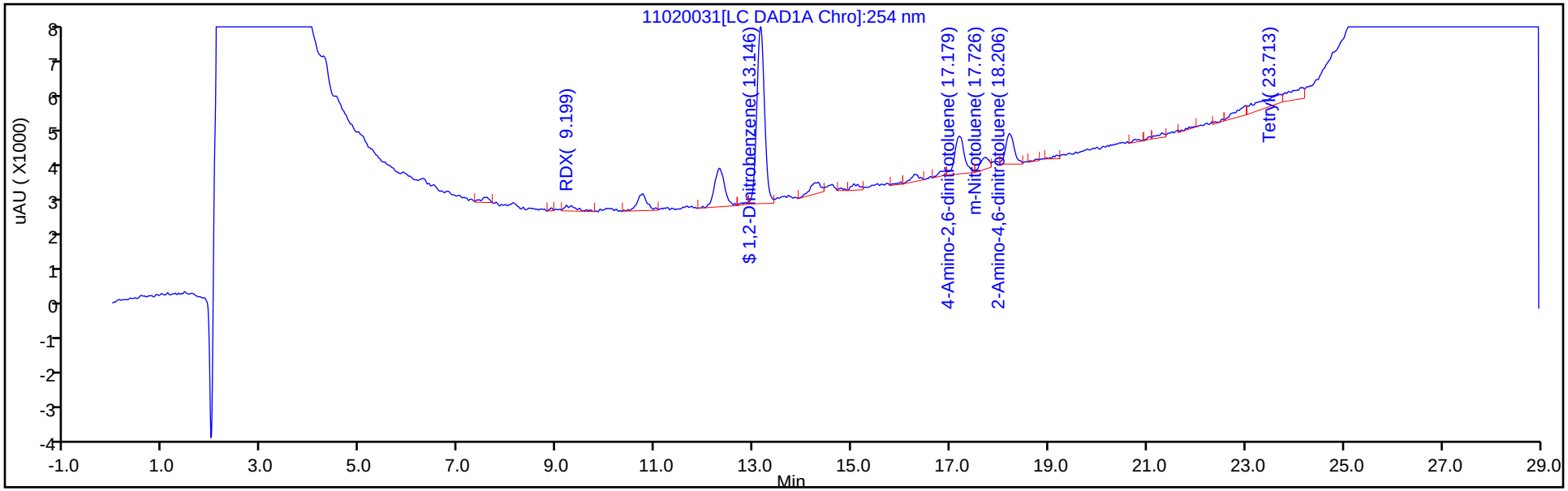
Report Date: 05-Nov-2018 11:35:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

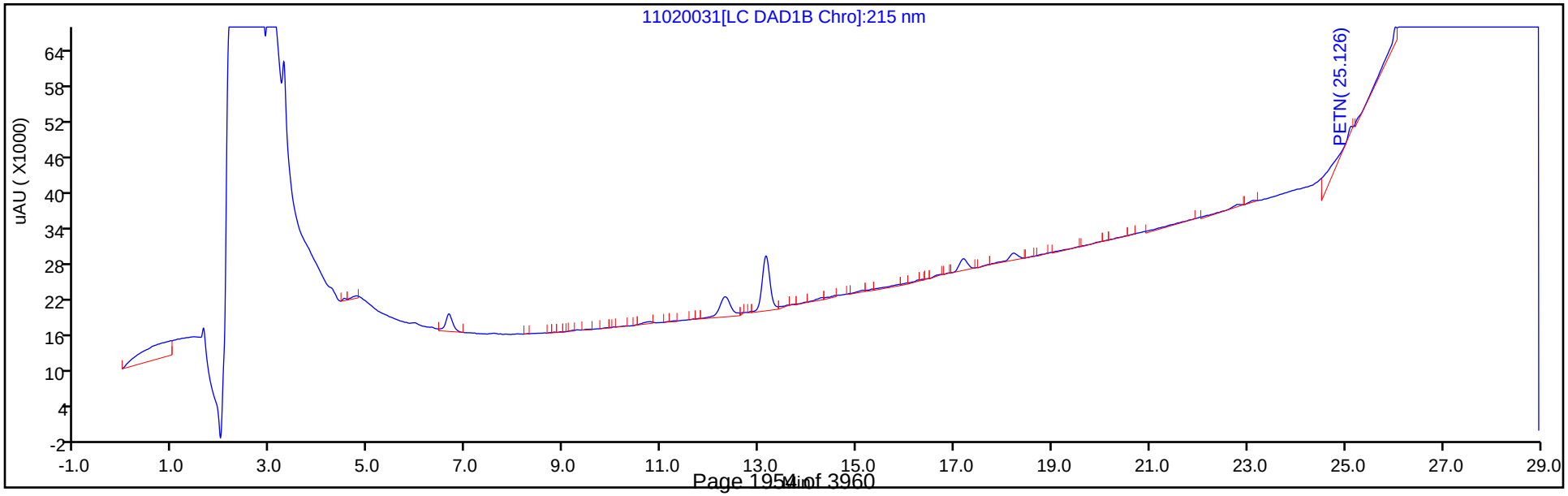
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020031.D

Injection Date:	03-Nov-2018 08:19:42	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	280-116270-B-11-A	Lab Sample ID:	280-116270-11	Worklist Smp#:	31
Client ID:	LL3mw-237-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020031.D				
Lims ID:	280-116270-B-11-A				
Client ID:	LL3mw-237-181001-GW				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 08:19:42	ALS Bottle#:	31	Worklist Smp#:	31
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-B-11-				
Misc. Info.:	280-0075779-031				
Operator ID:	HKF	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	05-Nov-2018 11:35:08	Calib Date:	14-Oct-2018 01:43:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX0304				

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1699	84.97

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-244-181001-GW | Lab Sample ID: 280-116270-12

Matrix: Water | Lab File ID: 11010045.D

Analysis Method: 8330B | Date Collected: 10/26/2018 08:50

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 480(mL) | Date Analyzed: 11/02/2018 06:13

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.42	U	1.0	0.42	0.21
99-65-0	1,3-Dinitrobenzene	0.21	U	0.42	0.21	0.092
118-96-7	2,4,6-Trinitrotoluene	0.21	U	0.42	0.21	0.075
121-14-2	2,4-Dinitrotoluene	0.21	U	0.42	0.21	0.087
606-20-2	2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.067
35572-78-2	2-Amino-4,6-dinitrotoluene	0.38		0.21	0.13	0.053
88-72-2	2-Nitrotoluene	0.21	U	0.42	0.21	0.089
99-08-1	3-Nitrotoluene	0.21	U Q	0.42	0.21	0.087
19406-51-0	4-Amino-2,6-dinitrotoluene	0.33		0.21	0.13	0.060
99-99-0	4-Nitrotoluene	0.42	U	1.0	0.42	0.21
2691-41-0	HMX	0.21	U	0.42	0.21	0.091
98-95-3	Nitrobenzene	0.21	U	0.42	0.21	0.095
55-63-0	Nitroglycerin	2.1	U	3.1	2.1	0.96
78-11-5	PETN	1.3	U	2.1	1.3	0.43
121-82-4	RDX	0.084	J M J1	0.21	0.13	0.054
479-45-8	Tetryl	0.21	U M	0.25	0.21	0.083

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	101		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010045.D
Lims ID: 280-116270-F-12-A
Client ID: LL3mw-244-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 06:13:11 ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-F-12-
Misc. Info.: 280-0075718-045
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:44 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

First Level Reviewer: fiedlerh Date: 02-Nov-2018 16:10:16

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.669			ND	
	5 RDX	1	7.769	7.782	-0.013	841	0.008042	M
$	7 1,2-Dinitrobenzene	1	8.763	8.769	-0.006	26028	0.2022	
	8 1,3,5-Trinitrobenzene	1		8.935			ND	
	9 1,3-Dinitrobenzene	1		9.595			ND	
	11 Nitrobenzene	1		9.982			ND	
	12 Tetryl	1		10.308			ND	U
	13 Nitroglycerin	2		10.815			ND	
	14 2,4,6-Trinitrotoluene	1		11.275			ND	
	15 4-Amino-2,6-dinitrotoluene	1	11.456	11.462	-0.006	5271	0.0318	
	16 2-Amino-4,6-dinitrotoluene	1	11.742	11.748	-0.006	7217	0.0362	
	17 2,6-Dinitrotoluene	1		11.888			ND	
	18 2,4-Dinitrotoluene	1		12.088			ND	
	19 o-Nitrotoluene	1		12.935			ND	
	20 p-Nitrotoluene	1		13.382			ND	
	21 m-Nitrotoluene	1		13.982			ND	
	22 PETN	2		15.102			ND	

QC Flag Legend

Review Flags
M - Manually Integrated
U - Marked Undetected

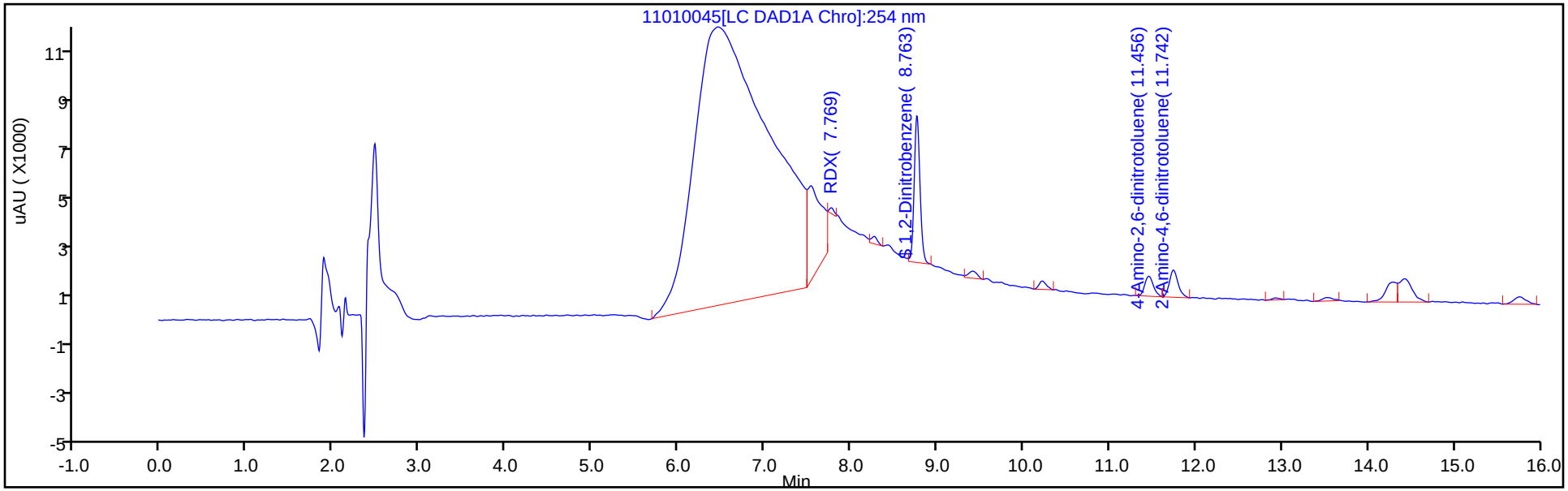
Report Date: 02-Nov-2018 16:14:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

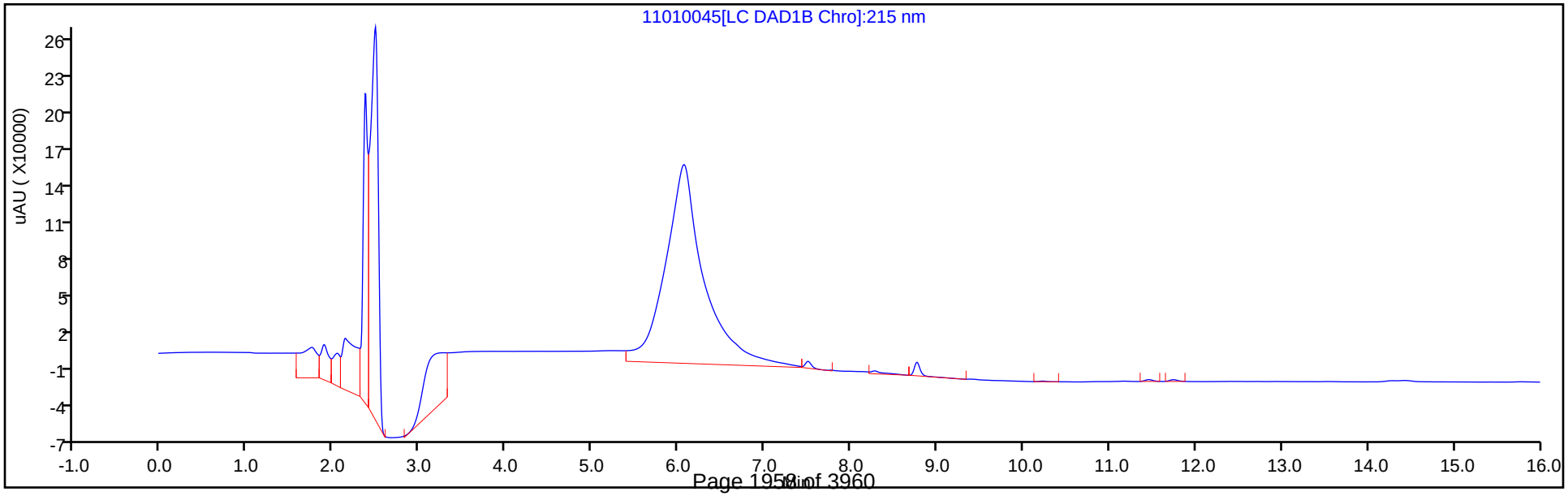
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010045.D

Injection Date:	02-Nov-2018 06:13:11	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116270-F-12-A	Lab Sample ID:	280-116270-12	Worklist Smp#:	45
Client ID:	LL3mw-244-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	45
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010045.D				
Lims ID:	280-116270-F-12-A				
Client ID:	LL3mw-244-181001-GW				
Sample Type:	Client				
Inject. Date:	02-Nov-2018 06:13:11	ALS Bottle#:	45	Worklist Smp#:	45
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-F-12-				
Misc. Info.:	280-0075718-045				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Nov-2018 16:14:44	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0315				
First Level Reviewer: fiedlerh		Date:	02-Nov-2018 16:10:16		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2022	101.10

Manual Integration/User Assign Peak Report

TestAmerica Denver

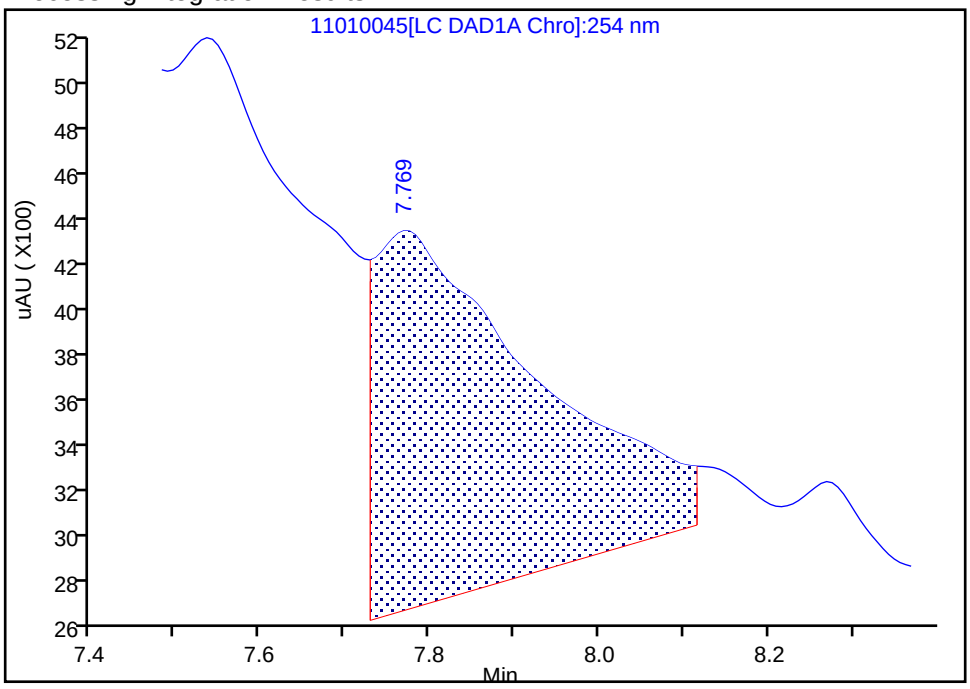
Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010045.D				
Injection Date:	02-Nov-2018 06:13:11	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-F-12-A	Lab Sample ID:	280-116270-12		
Client ID:	LL3mw-244-181001-GW				
Operator ID:	hkf	ALS Bottle#:	45	Worklist Smp#:	45
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 RDX, CAS: 121-82-4

Signal: 1

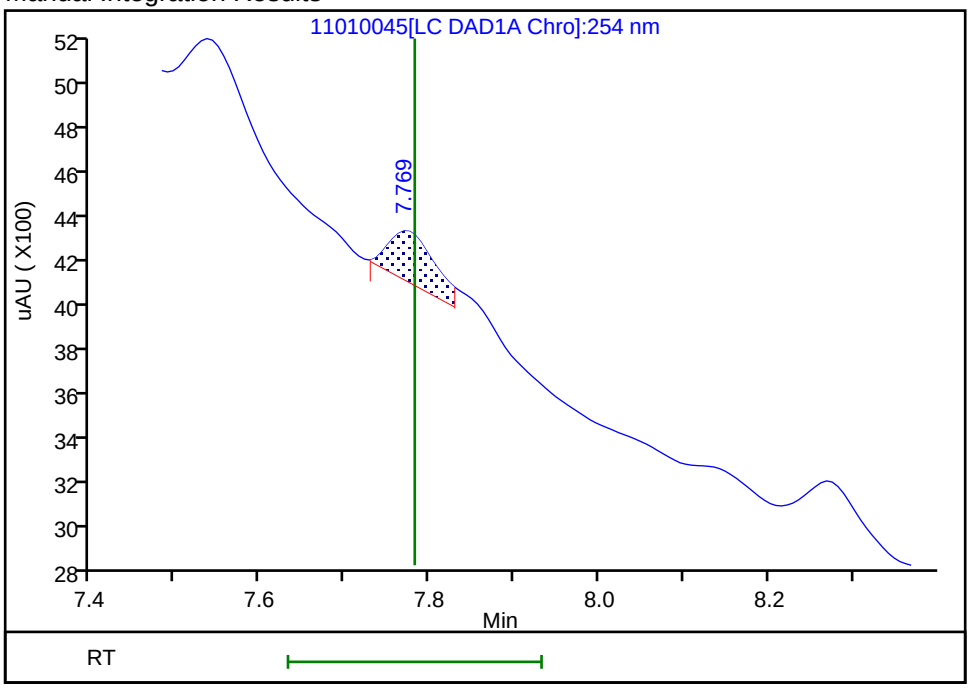
Processing Integration Results

RT: 7.77
Area: 21274
Amount: 0.203428
Amount Units: ug/mL



Manual Integration Results

RT: 7.77
Area: 841
Amount: 0.008042
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Nov-2018 16:10:10
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

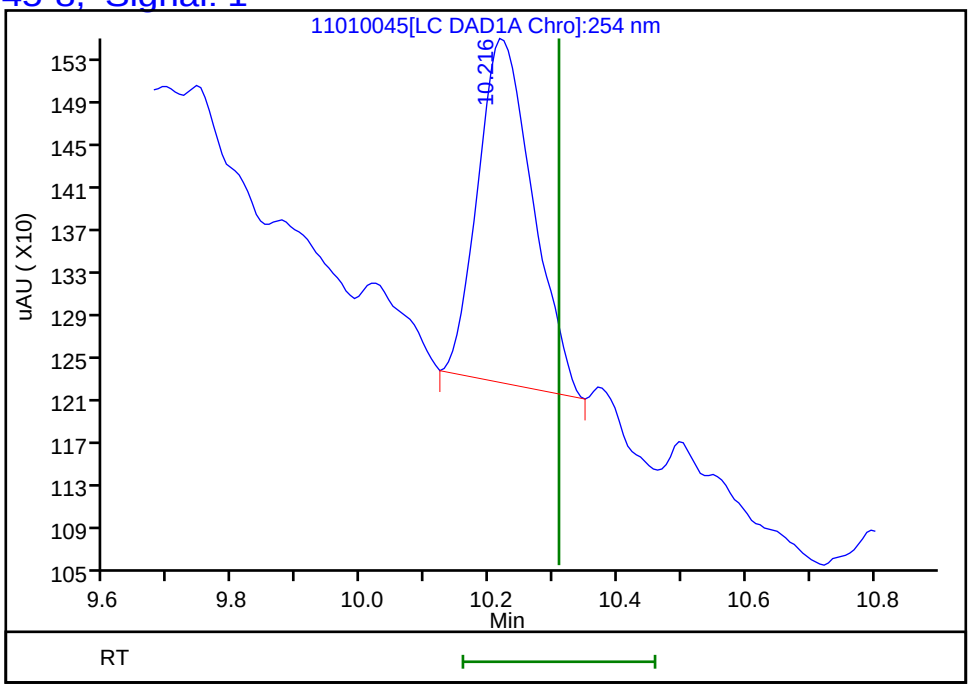
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010045.D				
Injection Date:	02-Nov-2018 06:13:11	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-F-12-A	Lab Sample ID:	280-116270-12		
Client ID:	LL3mw-244-181001-GW				
Operator ID:	hkf	ALS Bottle#:	45	Worklist Smp#:	45
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

12 Tetryl, CAS: 479-45-8, Signal: 1

RT: 10.22
Response: 1882
Amount: 0.011514



Reviewer: fiedlerh, 02-Nov-2018 16:10:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL3mw-244-181001-GW | Lab Sample ID: 280-116270-12

Matrix: Water | Lab File ID: 11020032.D

Analysis Method: 8330B | Date Collected: 10/26/2018 08:50

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 480(mL) | Date Analyzed: 11/03/2018 08:54

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436121 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-82-4	*RDX*	*0.14*	*J J1*	*0.21*	0.13	*0.054*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	84		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020032.D
Lims ID: 280-116270-F-12-A
Client ID: LL3mw-244-181001-GW
Sample Type: Client
Inject. Date: 03-Nov-2018 08:54:44 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-F-12-
Misc. Info.: 280-0075779-032
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-Nov-2018 11:35:08 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0304

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	5 HMX	1		7.171			ND	
	7 RDX	1	9.206	9.264	-0.058	3120	0.0130	
	8 Nitrobenzene	1		12.224			ND	
$	9 1,2-Dinitrobenzene	1	13.139	13.231	-0.092	52003	0.1684	
	12 Nitroglycerin	2		15.724			ND	
	11 1,3-Dinitrobenzene	1		15.771			ND	
	13 o-Nitrotoluene	1		16.544			ND	
	14 p-Nitrotoluene	1		16.878			ND	
	15 4-Amino-2,6-dinitrotoluene	1	17.206	17.284	-0.078	10726	0.0328	
	16 m-Nitrotoluene	1	17.746	17.784	-0.038	3908	0.0125	
	17 2-Amino-4,6-dinitrotoluene	1	18.233	18.324	-0.091	21211	0.0440	
	18 1,3,5-Trinitrobenzene	1		19.071			ND	
	19 2,6-Dinitrotoluene	1		19.891			ND	
	20 2,4-Dinitrotoluene	1		20.458			ND	
	21 Tetryl	1	23.779	23.758	0.021	5099	0.0131	
	22 2,4,6-Trinitrotoluene	1		24.771			ND	
	23 PETN	2		25.178			ND	

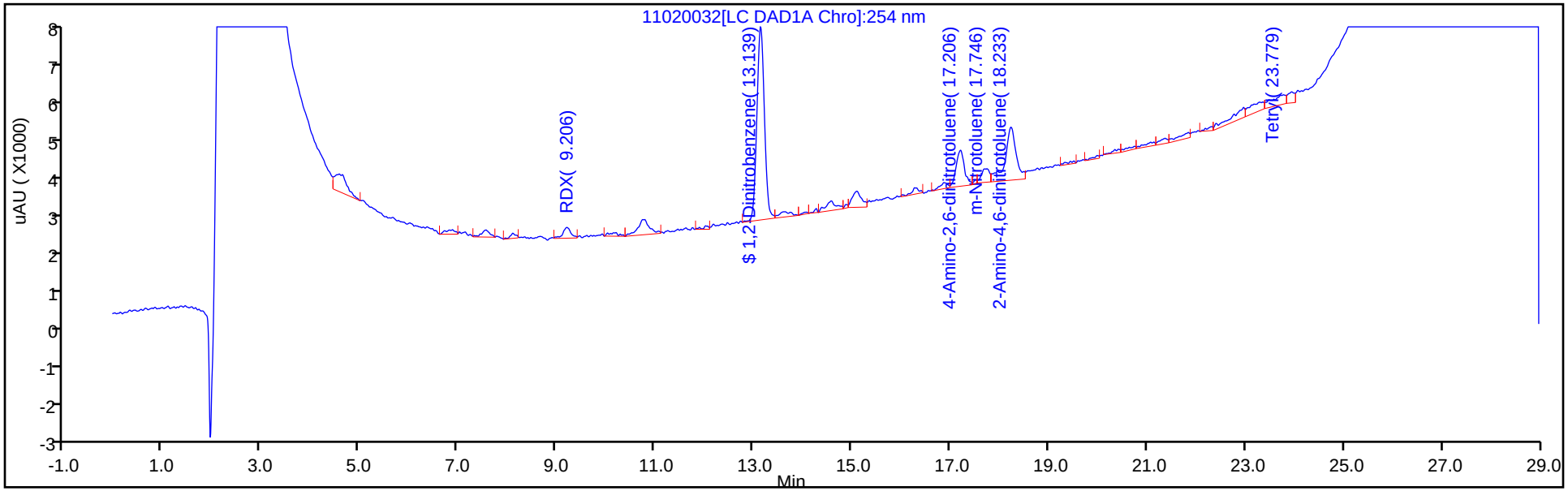
Report Date: 05-Nov-2018 11:35:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

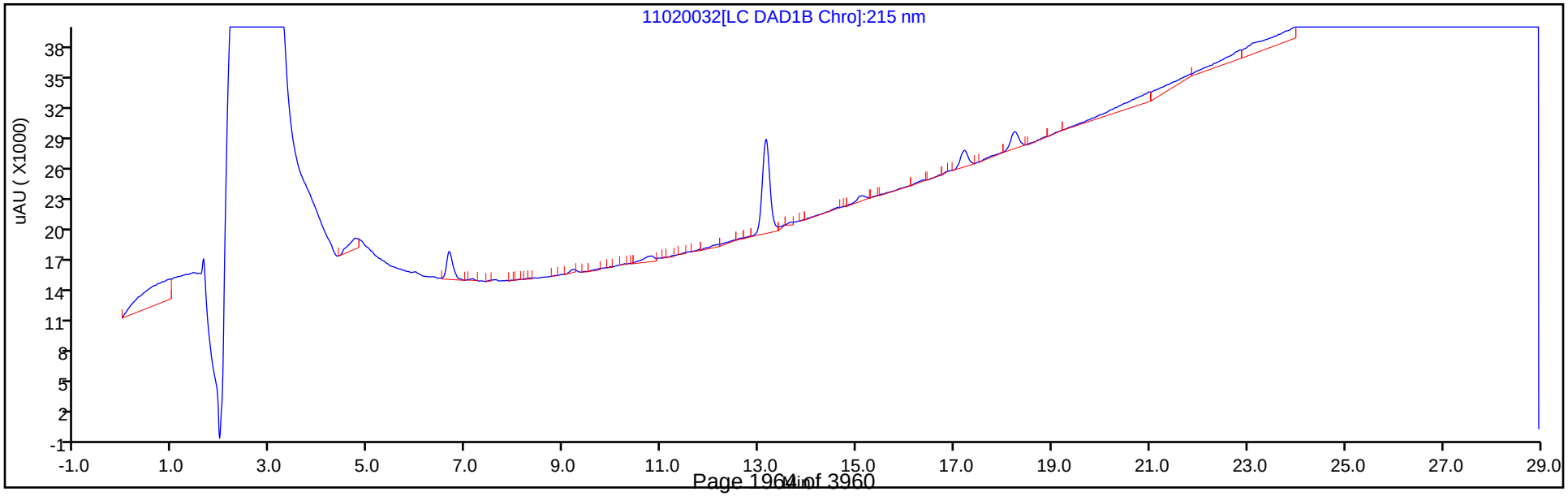
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020032.D

Injection Date:	03-Nov-2018 08:54:44	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	280-116270-F-12-A	Lab Sample ID:	280-116270-12	Worklist Smp#:	32
Client ID:	LL3mw-244-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020032.D				
Lims ID:	280-116270-F-12-A				
Client ID:	LL3mw-244-181001-GW				
Sample Type:	Client				
Inject. Date:	03-Nov-2018 08:54:44	ALS Bottle#:	32	Worklist Smp#:	32
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-F-12-				
Misc. Info.:	280-0075779-032				
Operator ID:	HKF	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	05-Nov-2018 11:35:08	Calib Date:	14-Oct-2018 01:43:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX0304				

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1684	84.18

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: SCFmw-004-181001-GW | Lab Sample ID: 280-116270-13

Matrix: Water | Lab File ID: 11010046.D

Analysis Method: 8330B | Date Collected: 10/26/2018 13:35

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 469.1(mL) | Date Analyzed: 11/02/2018 06:36

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.43	U	1.1	0.43	0.21
99-65-0	1,3-Dinitrobenzene	0.21	U	0.43	0.21	0.095
118-96-7	2,4,6-Trinitrotoluene	0.21	U	0.43	0.21	0.077
121-14-2	2,4-Dinitrotoluene	0.21	U	0.43	0.21	0.089
606-20-2	2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.069
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.054
88-72-2	2-Nitrotoluene	0.21	U	0.43	0.21	0.091
99-08-1	3-Nitrotoluene	0.21	U Q	0.43	0.21	0.089
19406-51-0	4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.13	0.062
99-99-0	4-Nitrotoluene	0.43	U	1.1	0.43	0.21
2691-41-0	HMX	0.21	U M	0.43	0.21	0.093
98-95-3	Nitrobenzene	0.21	U	0.43	0.21	0.097
55-63-0	Nitroglycerin	2.1	U	3.2	2.1	0.98
78-11-5	PETN	1.3	U	2.1	1.3	0.44
121-82-4	RDX	0.13	U	0.21	0.13	0.056
479-45-8	Tetryl	0.21	U	0.26	0.21	0.085

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010046.D
Lims ID: 280-116270-F-13-A
Client ID: SCFmw-004-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 06:36:09 ALS Bottle#: 46 Worklist Smp#: 46
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-F-13-
Misc. Info.: 280-0075718-046
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:44 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

First Level Reviewer: fiedlerh Date: 02-Nov-2018 16:10:20

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.669			ND	U
	5 RDX	1		7.782			ND	
$	7 1,2-Dinitrobenzene	1	8.765	8.769	-0.004	26249	0.2039	
	8 1,3,5-Trinitrobenzene	1		8.935			ND	
	9 1,3-Dinitrobenzene	1		9.595			ND	
	11 Nitrobenzene	1		9.982			ND	
	12 Tetryl	1		10.308			ND	
	13 Nitroglycerin	2		10.815			ND	
	14 2,4,6-Trinitrotoluene	1		11.275			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.462			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.748			ND	
	17 2,6-Dinitrotoluene	1		11.888			ND	
	18 2,4-Dinitrotoluene	1		12.088			ND	
	19 o-Nitrotoluene	1		12.935			ND	
	20 p-Nitrotoluene	1		13.382			ND	
	21 m-Nitrotoluene	1		13.982			ND	
	22 PETN	2		15.102			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

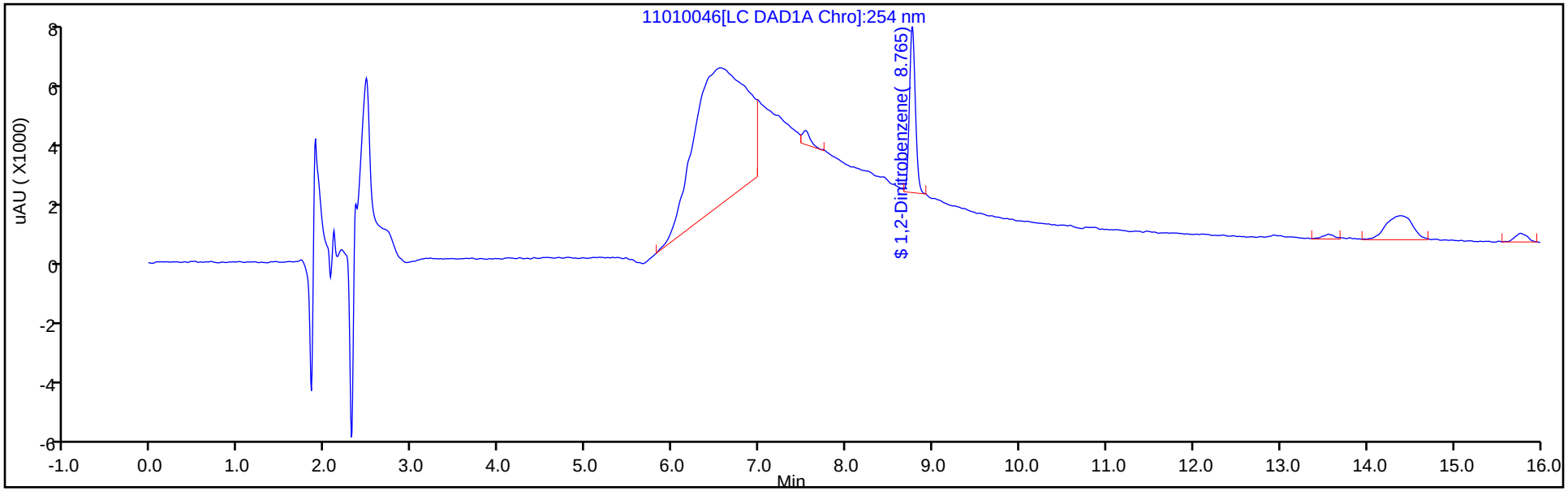
Report Date: 02-Nov-2018 16:14:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

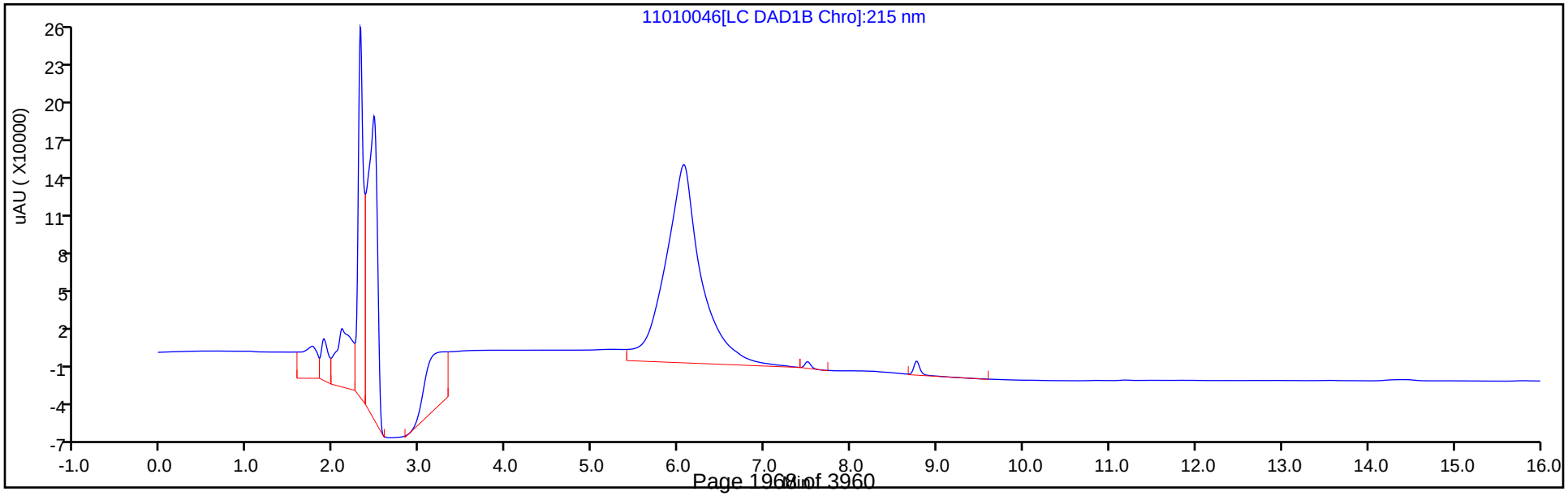
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010046.D

Injection Date:	02-Nov-2018 06:36:09	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116270-F-13-A	Lab Sample ID:	280-116270-13	Worklist Smp#:	46
Client ID:	SCFmw-004-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	46
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010046.D				
Lims ID:	280-116270-F-13-A				
Client ID:	SCFmw-004-181001-GW				
Sample Type:	Client				
Inject. Date:	02-Nov-2018 06:36:09	ALS Bottle#:	46	Worklist Smp#:	46
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-F-13-				
Misc. Info.:	280-0075718-046				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Nov-2018 16:14:44	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0315				
First Level Reviewer: fiedlerh		Date:	02-Nov-2018 16:10:20		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2039	101.96

User Disabled Compound Report

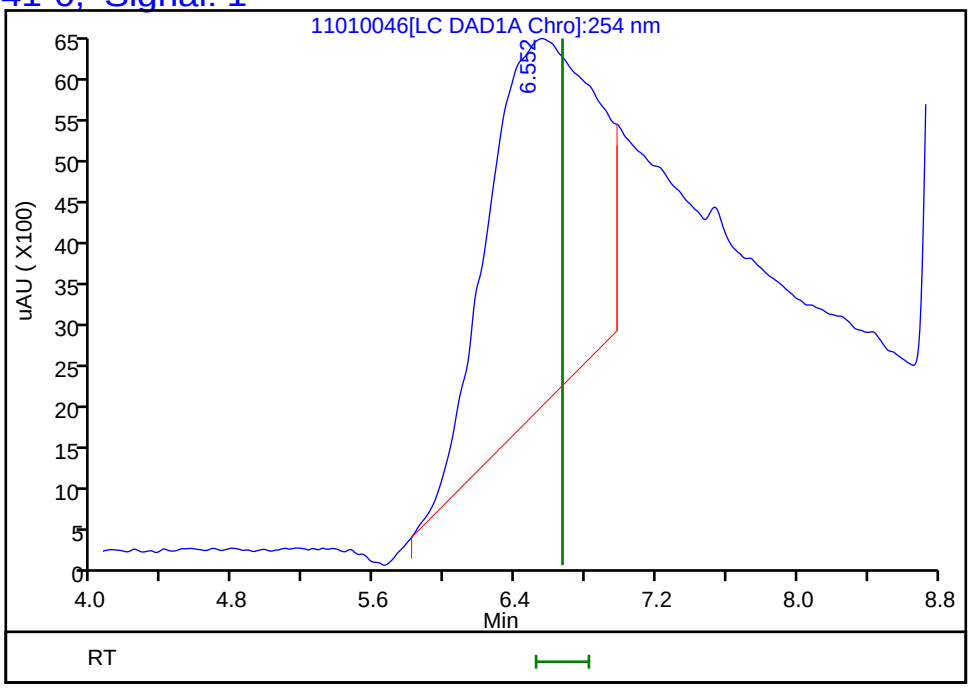
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010046.D

Injection Date:	02-Nov-2018 06:36:09	Instrument ID:	CHHPLC_X3
Lims ID:	280-116270-F-13-A	Lab Sample ID:	280-116270-13
Client ID:	SCFmw-004-181001-GW		
Operator ID:	hkf	ALS Bottle#:	46 Worklist Smp#: 46
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	8330_X3	Limit Group:	GCSV - 8330
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm

2 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.55
Response: 192068
Amount: 2.261071



Reviewer: fiedlerh, 02-Nov-2018 16:10:20
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: LL1mw-087-181001-GW | Lab Sample ID: 280-116270-14

Matrix: Water | Lab File ID: 11010047.D

Analysis Method: 8330B | Date Collected: 10/26/2018 13:30

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 428.5(mL) | Date Analyzed: 11/02/2018 06:59

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.47	U	1.2	0.47	0.23
99-65-0	1,3-Dinitrobenzene	0.23	U	0.47	0.23	0.10
118-96-7	2,4,6-Trinitrotoluene	0.23	U	0.47	0.23	0.084
121-14-2	2,4-Dinitrotoluene	0.23	U	0.47	0.23	0.098
606-20-2	2,6-Dinitrotoluene	0.23	U	0.23	0.23	0.075
35572-78-2	2-Amino-4,6-dinitrotoluene	0.14	U	0.23	0.14	0.059
88-72-2	2-Nitrotoluene	0.23	U	0.47	0.23	0.10
99-08-1	3-Nitrotoluene	0.23	U Q	0.47	0.23	0.097
19406-51-0	4-Amino-2,6-dinitrotoluene	0.14	U	0.23	0.14	0.067
99-99-0	4-Nitrotoluene	0.47	U	1.2	0.47	0.23
2691-41-0	HMX	0.23	U M	0.47	0.23	0.10
98-95-3	Nitrobenzene	0.23	U	0.47	0.23	0.11
55-63-0	Nitroglycerin	2.3	U	3.5	2.3	1.1
78-11-5	PETN	1.4	U	2.3	1.4	0.49
121-82-4	RDX	0.14	U	0.23	0.14	0.061
479-45-8	Tetryl	0.23	U	0.28	0.23	0.093

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	101		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010047.D
Lims ID: 280-116270-C-14-A
Client ID: LL1mw-087-181001-GW
Sample Type: Client
Inject. Date: 02-Nov-2018 06:59:06 ALS Bottle#: 47 Worklist Smp#: 47
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116270-C-14-
Misc. Info.: 280-0075718-047
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:44 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

First Level Reviewer: fiedlerh Date: 02-Nov-2018 16:10:23

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.669			ND	U
	5 RDX	1		7.782			ND	
$	7 1,2-Dinitrobenzene	1	8.760	8.769	-0.009	25990	0.2019	
	8 1,3,5-Trinitrobenzene	1		8.935			ND	
	9 1,3-Dinitrobenzene	1		9.595			ND	
	11 Nitrobenzene	1		9.982			ND	
	12 Tetryl	1		10.308			ND	
	13 Nitroglycerin	2		10.815			ND	
	14 2,4,6-Trinitrotoluene	1		11.275			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.462			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.748			ND	
	17 2,6-Dinitrotoluene	1		11.888			ND	
	18 2,4-Dinitrotoluene	1		12.088			ND	
	19 o-Nitrotoluene	1		12.935			ND	
	20 p-Nitrotoluene	1		13.382			ND	
	21 m-Nitrotoluene	1		13.982			ND	
	22 PETN	2		15.102			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

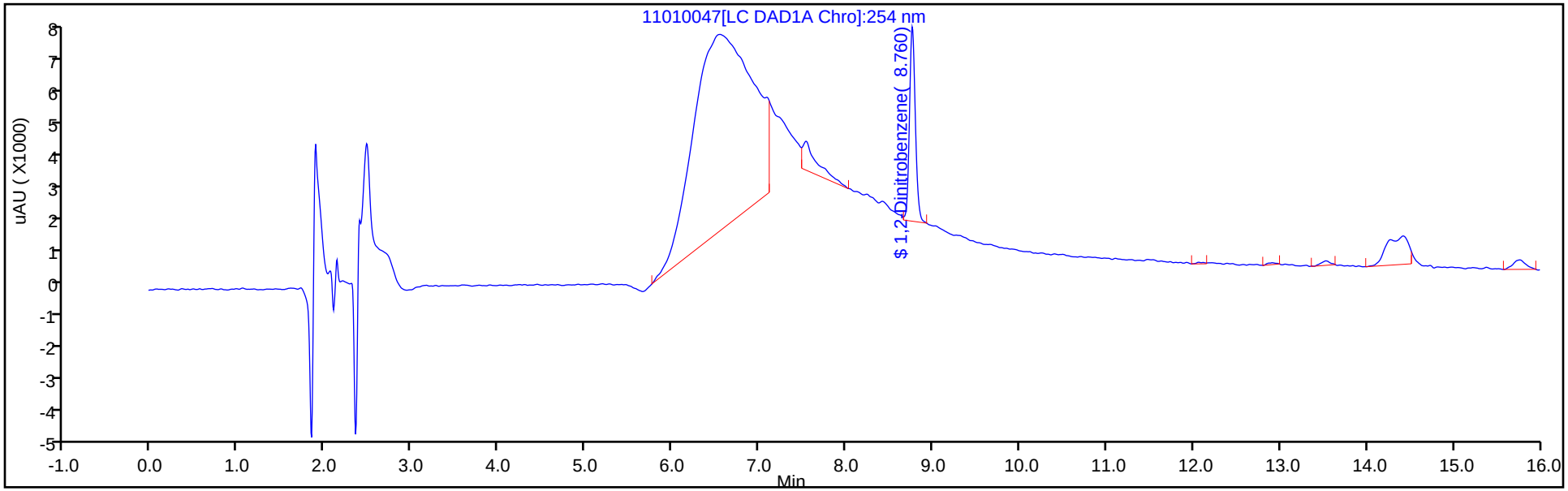
Report Date: 02-Nov-2018 16:14:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

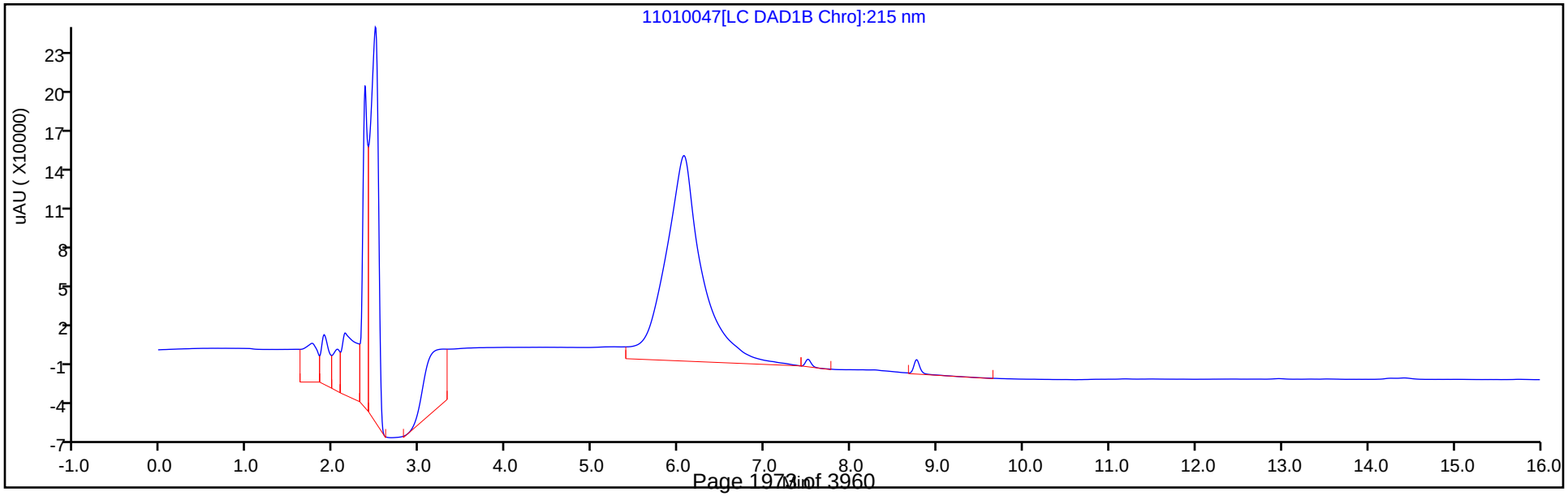
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010047.D

Injection Date:	02-Nov-2018 06:59:06	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116270-C-14-A	Lab Sample ID:	280-116270-14	Worklist Smp#:	47
Client ID:	LL1mw-087-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	47
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010047.D				
Lims ID:	280-116270-C-14-A				
Client ID:	LL1mw-087-181001-GW				
Sample Type:	Client				
Inject. Date:	02-Nov-2018 06:59:06	ALS Bottle#:	47	Worklist Smp#:	47
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116270-C-14-				
Misc. Info.:	280-0075718-047				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Nov-2018 16:14:44	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0315				
First Level Reviewer: fiedlerh		Date:	02-Nov-2018 16:10:23		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2019	100.95

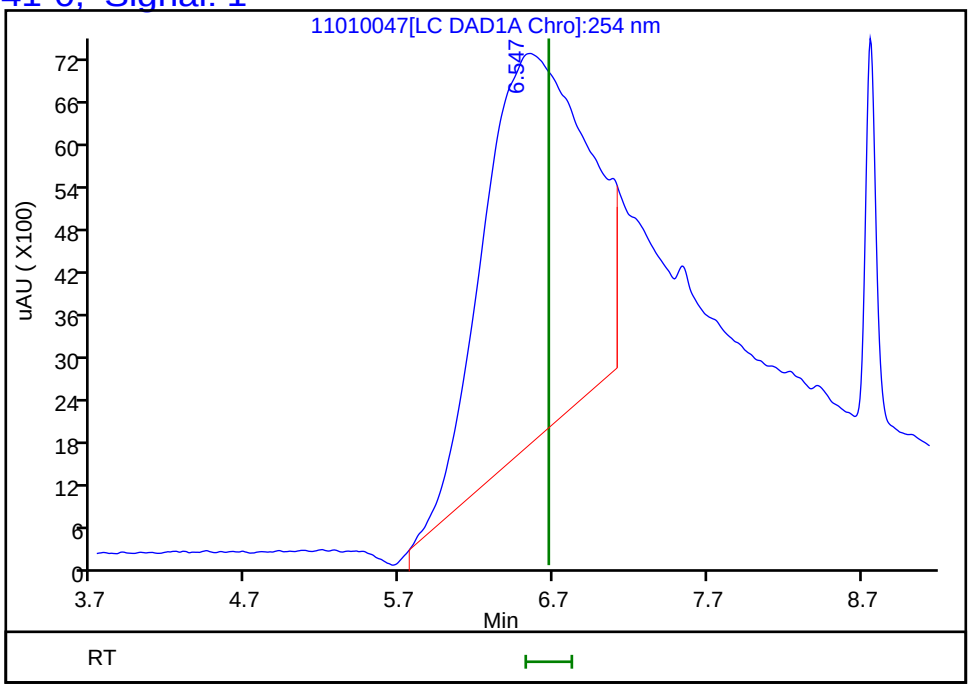
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010047.D				
Injection Date:	02-Nov-2018 06:59:06	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116270-C-14-A	Lab Sample ID:	280-116270-14		
Client ID:	LL1mw-087-181001-GW				
Operator ID:	hkf	ALS Bottle#:	47	Worklist Smp#:	47
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.55
Response: 261355
Amount: 3.076735



Reviewer: fiedlerh, 02-Nov-2018 16:10:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-433312/14	10130014.D
Level 2	IC 280-433312/13	10130013.D
Level 3	IC 280-433312/12	10130012.D
Level 4	IC 280-433312/11	10130011.D
Level 5	IC 280-433312/10	10130010.D
Level 6	IC 280-433312/9	10130009.D
Level 7	IC 280-433312/8	10130008.D
Level 8	IC 280-433312/7	10130007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Picric acid	6.216	6.184	6.146	6.109	6.081	6.046	6.016	5.925			5.931 - 6.231	6.090
HMX	7.143	7.151	7.146	7.149	7.148	7.146	7.142	7.112			6.998 - 7.298	7.142
RDX	9.223	9.224	9.219	9.222	9.221	9.219	9.209	9.165			9.071 - 9.371	9.213
Nitrobenzene	12.156	12.164	12.152	12.155	12.161	12.159	12.156	12.105			12.011 - 12.311	12.151
3,5-Dinitroaniline	15.123	15.124	15.106	15.115	15.114	15.119	15.102	15.065			14.964 - 15.264	15.109
Nitroglycerin	15.676	15.671	15.652	15.662	15.667	15.672	15.662	15.639			15.517 - 15.817	15.663
1,3-Dinitrobenzene	15.723	15.717	15.699	15.708	15.707	15.712	15.702	15.672			15.557 - 15.857	15.705
2-Nitrotoluene	16.496	16.477	16.472	16.475	16.474	16.486	16.469	16.445			16.324 - 16.624	16.474
4-Nitrotoluene	16.816	16.817	16.799	16.808	16.814	16.819	16.802	16.779			16.664 - 16.964	16.807
4-Amino-2,6-dinitrotoluene	17.223	17.224	17.212	17.215	17.221	17.232	17.209	17.185			17.071 - 17.371	17.215
3-Nitrotoluene	17.736	17.717	17.712	17.715	17.721	17.732	17.709	17.692			17.571 - 17.871	17.717
2-Amino-4,6-dinitrotoluene	18.263	18.257	18.246	18.255	18.254	18.266	18.242	18.219			18.104 - 18.404	18.250
1,3,5-Trinitrobenzene	19.029	19.004	19.006	19.015	19.021	19.026	19.009	18.999			18.871 - 19.171	19.014
2,6-Dinitrotoluene	19.843	19.831	19.826	19.828	19.834	19.839	19.816	19.805			19.684 - 19.984	19.828
2,4-Dinitrotoluene	20.403	20.391	20.386	20.388	20.394	20.406	20.382	20.372			20.244 - 20.544	20.390
Tetryl	23.723	23.717	23.712	23.722	23.721	23.733	23.716	23.705			23.571 - 23.871	23.719
2,4,6-Trinitrotoluene	24.749	24.737	24.726	24.735	24.734	24.746	24.729	24.719			24.584 - 24.884	24.734
PETN	25.149	25.137	25.132	25.142	25.141	25.153	25.142	25.145			24.991 - 25.291	25.143
1,2-Dinitrobenzene	13.163	13.171	13.152	13.162	13.161	13.166	13.162	13.119			13.011 - 13.311	13.157

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-433312/14	10130014.D
Level 2	IC 280-433312/13	10130013.D
Level 3	IC 280-433312/12	10130012.D
Level 4	IC 280-433312/11	10130011.D
Level 5	IC 280-433312/10	10130010.D
Level 6	IC 280-433312/9	10130009.D
Level 7	IC 280-433312/8	10130008.D
Level 8	IC 280-433312/7	10130007.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Picric acid	171900 183938	166760 179361	172570 177638	172416 179654	Ave		175529.616				3.2		20.0			
HMX	199500 189950	198220 188601	192540 186821	182328 189027	Ave		190873.454				3.0		20.0			
RDX	251100 237575	260020 230794	253530 228937	229536 233050	Ave		240567.786				5.2		20.0			
Nitrobenzene	470010 422997	477285 422314	440908 419976	409361 429277	Ave		436516.002				5.6		20.0			
3,5-Dinitroaniline	477750 504128	602240 488930	510910 487326	497264 503471	Lin2	103.308102	507848.792							0.9920		0.9900
Nitroglycerin	200635 199362	190858 195888	192800 194216	189582 198979	Ave		195289.833				2.1		20.0			
1,3-Dinitrobenzene	704895 694755	785275 682920	685225 676187	665459 686642	Ave		697669.613				5.3		20.0			
2-Nitrotoluene	274526 272378	304786 269873	264068 267766	268439 275564	Ave		274674.932				4.6		20.0			
4-Nitrotoluene	251594 237627	241474 235252	221205 233701	227833 237861	Ave		235818.321				3.8		20.0			
4-Amino-2,6-dinitrotoluene	306331 332395	357707 326268	319641 322613	320431 329183	Ave		326821.167				4.5		20.0			
3-Nitrotoluene	340139 306315	347390 302886	304044 299820	296247 305753	Ave		312824.221				6.2		20.0			
2-Amino-4,6-dinitrotoluene	501645 481209	534158 470825	468325 464267	464726 473093	Ave		482280.863				5.0		20.0			
1,3,5-Trinitrobenzene	501150 508803	577980 497797	504350 487319	495332 496662	Ave		508674.030				5.6		20.0			
2,6-Dinitrotoluene	316152 323447	395135 317916	337358 309942	314357 317060	Ave		328920.875				8.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
2,4-Dinitrotoluene	639870 631008	681557 619394	624820 608339	610575 621414	Ave		629622.213				3.7		20.0			
Tetryl	410800 393685	375200 385803	396050 399636	373136 386502	Ave		390101.482				3.2		20.0			
2,4,6-Trinitrotoluene	412849 471564	418426 465556	437380 461238	446526 471262	Ave		448100.146				5.2		20.0			
PETN	126430 148941	134988 146351	138138 145351	140480 145491	Ave		140771.306				5.3		20.0			
1,2-Dinitrobenzene	324000 308248	313640 300927	311970 299781	306840 305599	Ave		308875.605				2.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-433312/14	10130014.D
Level 2	IC 280-433312/13	10130013.D
Level 3	IC 280-433312/12	10130012.D
Level 4	IC 280-433312/11	10130011.D
Level 5	IC 280-433312/10	10130010.D
Level 6	IC 280-433312/9	10130009.D
Level 7	IC 280-433312/8	10130008.D
Level 8	IC 280-433312/7	10130007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Picric acid	Ave	3438 125553	8338 177638	17257 449135	43104	73575	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
HMX	Ave	3990 132021	9911 186821	19254 472568	45582	75980	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	5022 161556	13001 228937	25353 582625	57384	95030	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Ave	9419 296211	23912 420816	44179 1075338	102545	169537	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
3,5-Dinitroaniline	Lin2	9555 342251	30112 487326	51091 1258678	124316	201651	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	40127 1371216	95429 1942160	192800 4974464	473954	797446	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,3-Dinitrobenzene	Ave	14112 478522	39303 676863	68591 1718321	166531	278180	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
2-Nitrotoluene	Ave	5507 189478	15285 268569	26486 690977	67311	109278	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	5052 165335	12122 234636	22209 597031	57186	95431	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	6145 229073	17939 323581	32060 825426	80348	133357	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
3-Nitrotoluene	Ave	6830 212868	17439 301019	30526 767440	74358	123016	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
2-Amino-4,6-dinitrotoluene	Ave	10063 330566	26788 465660	46973 1186280	116530	193061	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
1,3,5-Trinitrobenzene	Ave	10023 348458	28899 487319	50435 1241654	123833	203521	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,6-Dinitrotoluene	Ave	6342 223209	19816 310872	33837 795029	78825	129767	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	12823 434443	34146 609556	62607 1556642	152949	252908	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 433312

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:23 Calibration End Date: 10/13/2018 20:28 Calibration ID: 33987

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Tetryl	Ave	8216 270062	18760 399636	39605 966255	93284	157474	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,4,6-Trinitrotoluene	Ave	8290 327193	21005 463083	43913 1182867	112078	189380	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	25286 1024457	67494 1453506	138138 3637280	351201	595765	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Ave	6480 210649	15682 299781	31197 763998	76710	123299	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130007.D
Lims ID: IC FULL LV 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 13-Oct-2018 16:23:32 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 8
Misc. Info.: 280-0075057-007
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:54 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 13-Oct-2018 17:35:45

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.412	4.401	0.011	1237396	2.50	2.83	
3 2,4-diamino-6-nitrotoluene	1	4.992	4.954	0.038	537898	2.50	1.94	
4 2,4,6-Trinitrophenol	1	5.925	6.081	-0.156	449135	2.50	2.56	
5 HMX	1	7.112	7.148	-0.036	472568	2.50	2.48	
7 RDX	1	9.165	9.221	-0.056	582625	2.50	2.42	
8 Nitrobenzene	1	12.105	12.161	-0.056	1075338	2.51	2.46	
$ 9 1,2-Dinitrobenzene	1	13.119	13.161	-0.042	763998	2.50	2.47	
10 3,5-Dinitroaniline	1	15.065	15.114	-0.049	1258678	2.50	2.48	
12 Nitroglycerin	2	15.639	15.667	-0.028	4974464	25.0	25.5	
11 1,3-Dinitrobenzene	1	15.672	15.707	-0.035	1718321	2.50	2.46	
13 o-Nitrotoluene	1	16.445	16.474	-0.029	690977	2.51	2.52	
14 p-Nitrotoluene	1	16.779	16.814	-0.035	597031	2.51	2.53	
15 4-Amino-2,6-dinitrotoluene	1	17.185	17.221	-0.036	825426	2.51	2.53	
16 m-Nitrotoluene	1	17.692	17.721	-0.029	767440	2.51	2.45	
17 2-Amino-4,6-dinitrotoluene	1	18.219	18.254	-0.035	1186280	2.51	2.46	
18 1,3,5-Trinitrobenzene	1	18.999	19.021	-0.022	1241654	2.50	2.44	
19 2,6-Dinitrotoluene	1	19.805	19.834	-0.029	795029	2.51	2.42	
20 2,4-Dinitrotoluene	1	20.372	20.394	-0.022	1556642	2.51	2.47	
21 Tetryl	1	23.705	23.721	-0.016	966255	2.50	2.48	
22 2,4,6-Trinitrotoluene	1	24.719	24.734	-0.015	1182867	2.51	2.64	
23 PETN	2	25.145	25.141	0.004	3637280	25.0	25.8	

Reagents:

8330IntermStk_00056 Amount Added: 125.00 Units: uL
8330_ADDs_00017 Amount Added: 125.00 Units: uL

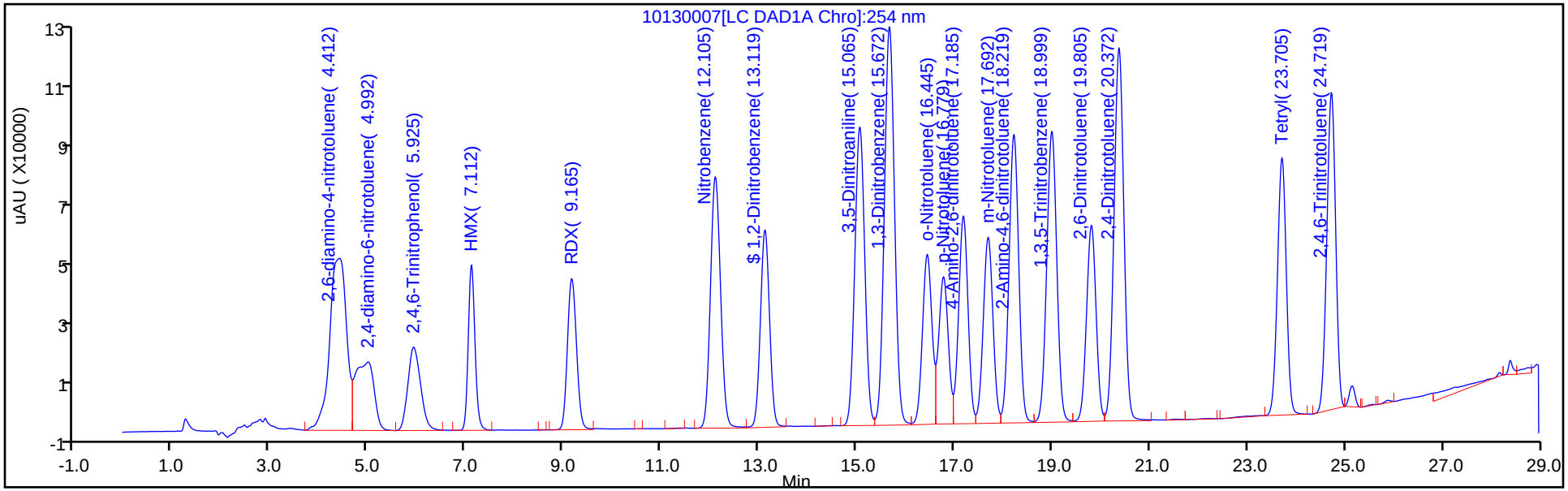
Report Date: 14-Oct-2018 14:02:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

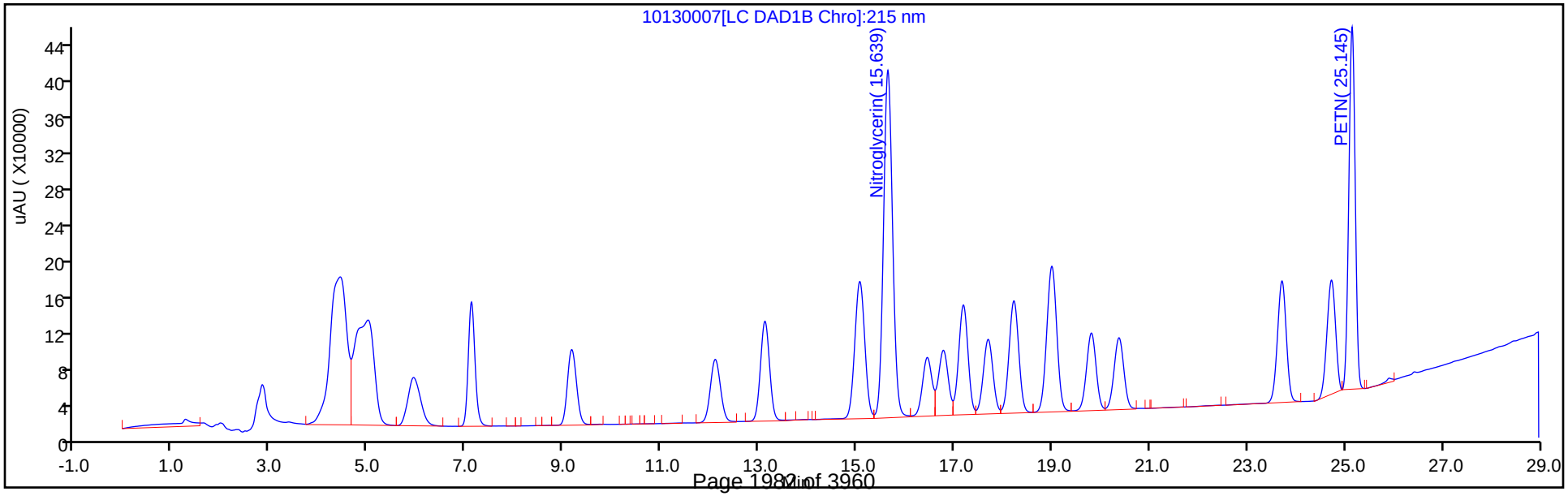
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130007.D

Injection Date:	13-Oct-2018 16:23:32	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130008.D
Lims ID: IC FULL LV 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 13-Oct-2018 16:58:36 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 7
Misc. Info.: 280-0075057-008
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:56 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 13-Oct-2018 17:35:58

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.382	4.401	-0.019	425871	1.00	0.9729	
3 2,4-diamino-6-nitrotoluene	1	4.989	4.954	0.035	257257	1.00	0.9265	M
4 2,4,6-Trinitrophenol	1	6.016	6.081	-0.065	177638	1.00	1.01	
5 HMX	1	7.142	7.148	-0.006	186821	1.00	0.9788	
7 RDX	1	9.209	9.221	-0.012	228937	1.00	0.9517	
8 Nitrobenzene	1	12.156	12.161	-0.005	420816	1.00	0.9640	
$ 9 1,2-Dinitrobenzene	1	13.162	13.161	0.001	299781	1.00	0.9706	
10 3,5-Dinitroaniline	1	15.102	15.114	-0.012	487326	1.00	0.9594	
12 Nitroglycerin	2	15.662	15.667	-0.005	1942160	10.0	9.95	
11 1,3-Dinitrobenzene	1	15.702	15.707	-0.005	676863	1.00	0.9702	
13 o-Nitrotoluene	1	16.469	16.474	-0.005	268569	1.00	0.9778	
14 p-Nitrotoluene	1	16.802	16.814	-0.012	234636	1.00	0.99	
15 4-Amino-2,6-dinitrotoluene	1	17.209	17.221	-0.012	323581	1.00	0.99	
16 m-Nitrotoluene	1	17.709	17.721	-0.012	301019	1.00	0.9623	
17 2-Amino-4,6-dinitrotoluene	1	18.242	18.254	-0.012	465660	1.00	0.9655	
18 1,3,5-Trinitrobenzene	1	19.009	19.021	-0.012	487319	1.00	0.9580	
19 2,6-Dinitrotoluene	1	19.816	19.834	-0.018	310872	1.00	0.9451	
20 2,4-Dinitrotoluene	1	20.382	20.394	-0.012	609556	1.00	0.9681	
21 Tetryl	1	23.716	23.721	-0.005	399636	1.00	1.02	
22 2,4,6-Trinitrotoluene	1	24.729	24.734	-0.005	463083	1.00	1.03	
23 PETN	2	25.142	25.141	0.001	1453506	10.0	10.3	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	50.00	Units: uL
8330_ADDs_00017	Amount Added:	50.00	Units: uL

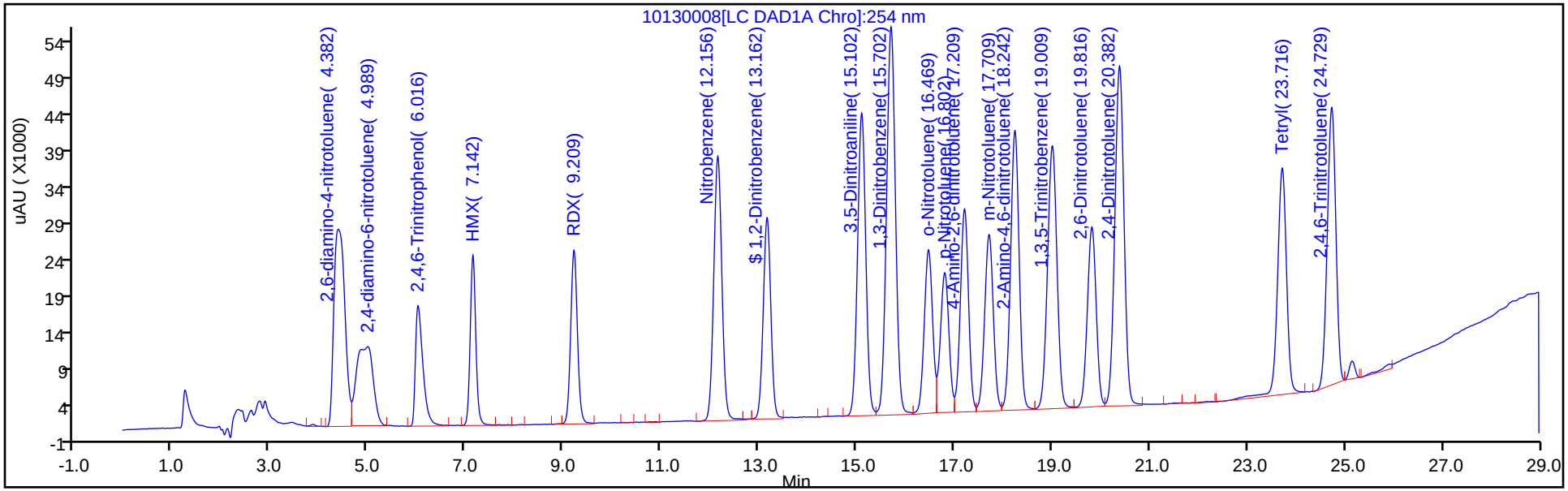
Report Date: 14-Oct-2018 14:02:56 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

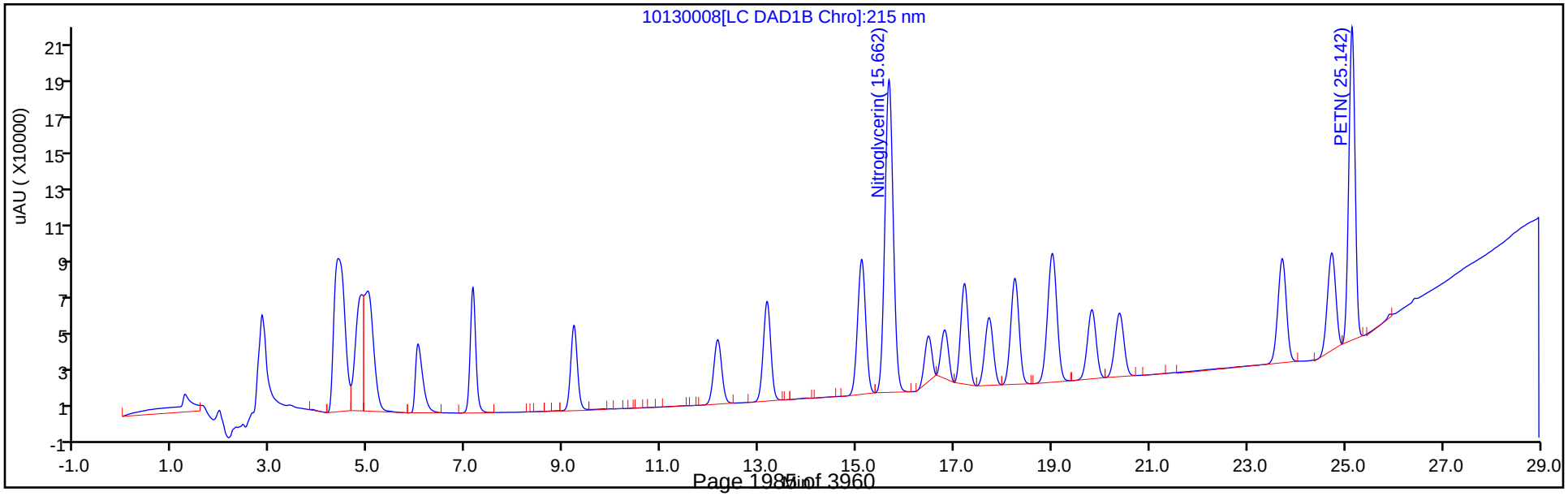
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130008.D

Injection Date:	13-Oct-2018 16:58:36	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130009.D
Lims ID: IC FULL LV 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 17:33:35 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 6
Misc. Info.: 280-0075057-009
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:58 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:54:06

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.393	4.401	-0.008	298705	0.7000	0.6824	
3 2,4-diamino-6-nitrotoluene	1	4.986	4.954	0.032	184732	0.7000	0.6653	M
4 2,4,6-Trinitrophenol	1	6.046	6.081	-0.035	125553	0.7000	0.7153	
5 HMX	1	7.146	7.148	-0.002	132021	0.7000	0.6917	
7 RDX	1	9.219	9.221	-0.002	161556	0.7000	0.6716	
8 Nitrobenzene	1	12.159	12.161	-0.002	296211	0.7014	0.6786	
$ 9 1,2-Dinitrobenzene	1	13.166	13.161	0.005	210649	0.7000	0.6820	
10 3,5-Dinitroaniline	1	15.119	15.114	0.005	342251	0.7000	0.6737	
12 Nitroglycerin	2	15.672	15.667	0.005	1371216	7.00	7.02	
11 1,3-Dinitrobenzene	1	15.712	15.707	0.005	478522	0.7007	0.6859	
13 o-Nitrotoluene	1	16.486	16.474	0.012	189478	0.7021	0.6898	
14 p-Nitrotoluene	1	16.819	16.814	0.005	165335	0.7028	0.7011	
15 4-Amino-2,6-dinitrotoluene	1	17.232	17.221	0.011	229073	0.7021	0.7009	
16 m-Nitrotoluene	1	17.732	17.721	0.011	212868	0.7028	0.6805	
17 2-Amino-4,6-dinitrotoluene	1	18.266	18.254	0.012	330566	0.7021	0.6854	
18 1,3,5-Trinitrobenzene	1	19.026	19.021	0.005	348458	0.7000	0.6850	
19 2,6-Dinitrotoluene	1	19.839	19.834	0.005	223209	0.7021	0.6786	
20 2,4-Dinitrotoluene	1	20.406	20.394	0.012	434443	0.7014	0.6900	
21 Tetryl	1	23.733	23.721	0.012	270062	0.7000	0.6923	
22 2,4,6-Trinitrotoluene	1	24.746	24.734	0.012	327193	0.7028	0.7302	
23 PETN	2	25.153	25.141	0.012	1024457	7.00	7.28	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	35.00	Units: uL
8330_ADDs_00017	Amount Added:	35.00	Units: uL

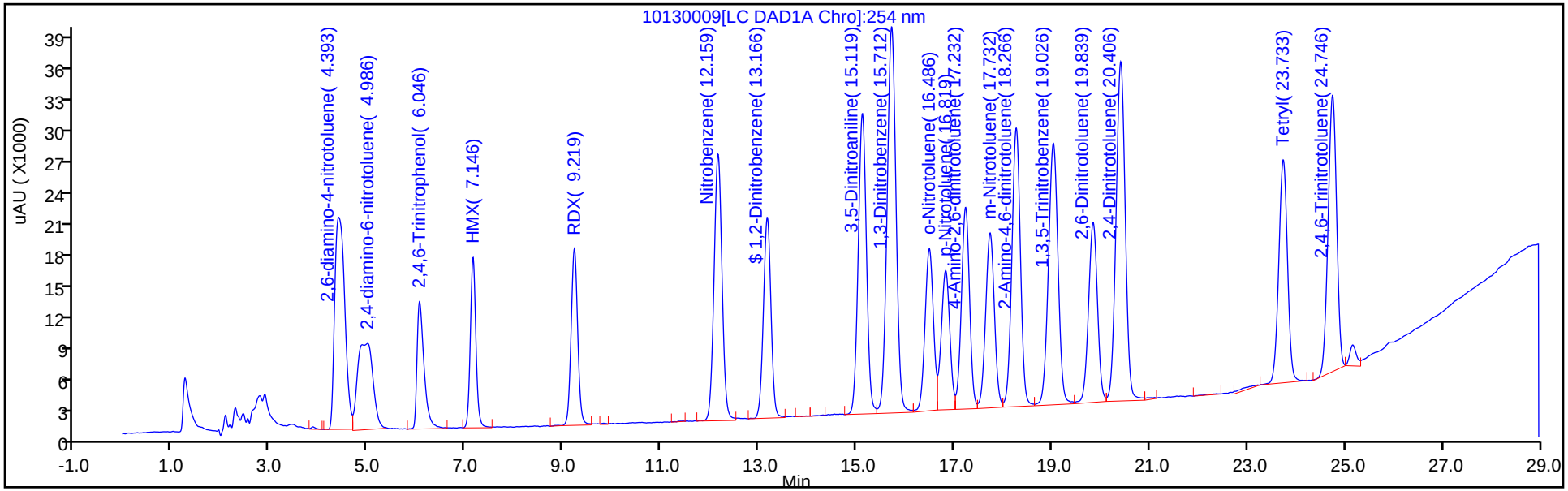
Report Date: 14-Oct-2018 14:02:58 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

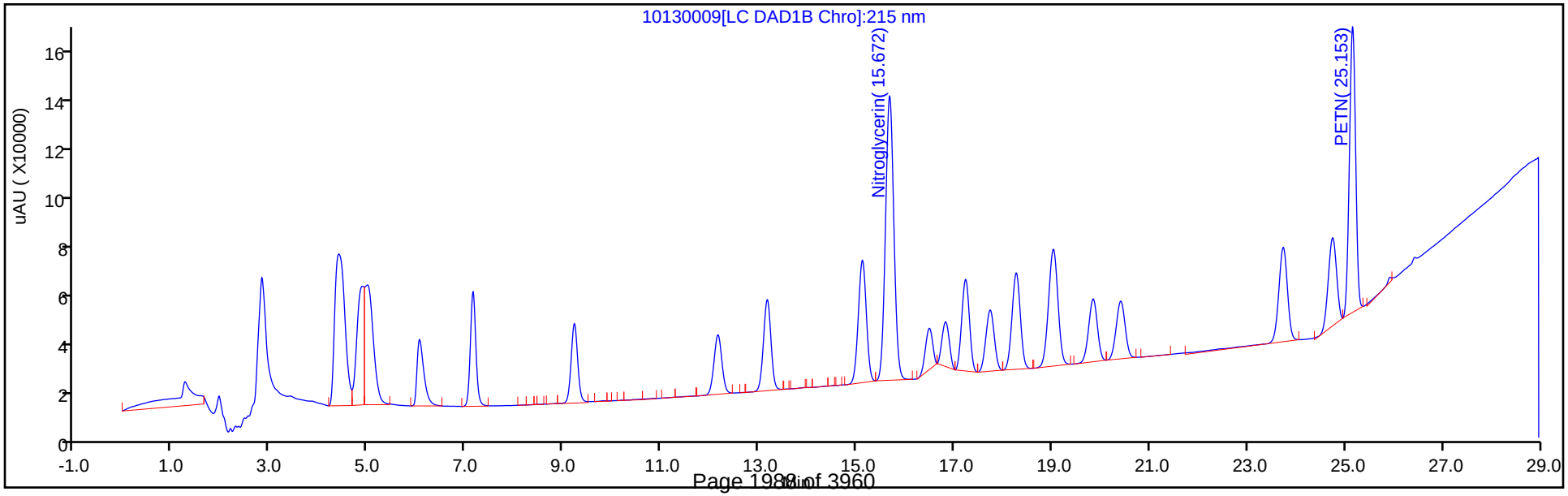
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130009.D

Injection Date:	13-Oct-2018 17:33:35	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130010.D
Lims ID: IC FULL LV 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 18:08:37 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 5
Misc. Info.: 280-0075057-010
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:02:59 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:52:11

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.401	4.401	0.000	175386	0.4000	0.4007	
3 2,4-diamino-6-nitrotoluene	1	4.954	4.954	0.000	108740	0.4000	0.3916	
4 2,4,6-Trinitrophenol	1	6.081	6.081	0.000	73575	0.4000	0.4192	
5 HMX	1	7.148	7.148	0.000	75980	0.4000	0.3981	
7 RDX	1	9.221	9.221	0.000	95030	0.4000	0.3950	
8 Nitrobenzene	1	12.161	12.161	0.000	169537	0.4008	0.3884	
$ 9 1,2-Dinitrobenzene	1	13.161	13.161	0.000	123299	0.4000	0.3992	
10 3,5-Dinitroaniline	1	15.114	15.114	0.000	201651	0.4000	0.3969	
12 Nitroglycerin	2	15.667	15.667	0.000	797446	4.00	4.08	
11 1,3-Dinitrobenzene	1	15.707	15.707	0.000	278180	0.4004	0.3987	
13 o-Nitrotoluene	1	16.474	16.474	0.000	109278	0.4012	0.3978	
14 p-Nitrotoluene	1	16.814	16.814	0.000	95431	0.4016	0.4047	
15 4-Amino-2,6-dinitrotoluene	1	17.221	17.221	0.000	133357	0.4012	0.4080	
16 m-Nitrotoluene	1	17.721	17.721	0.000	123016	0.4016	0.3932	
17 2-Amino-4,6-dinitrotoluene	1	18.254	18.254	0.000	193061	0.4012	0.4003	
18 1,3,5-Trinitrobenzene	1	19.021	19.021	0.000	203521	0.4000	0.4001	
19 2,6-Dinitrotoluene	1	19.834	19.834	0.000	129767	0.4012	0.3945	
20 2,4-Dinitrotoluene	1	20.394	20.394	0.000	252908	0.4008	0.4017	
21 Tetryl	1	23.721	23.721	0.000	157474	0.4000	0.4037	M
22 2,4,6-Trinitrotoluene	1	24.734	24.734	0.000	189380	0.4016	0.4226	
23 PETN	2	25.141	25.141	0.000	595765	4.00	4.23	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	20.00	Units: uL
8330_ADDs_00017	Amount Added:	20.00	Units: uL

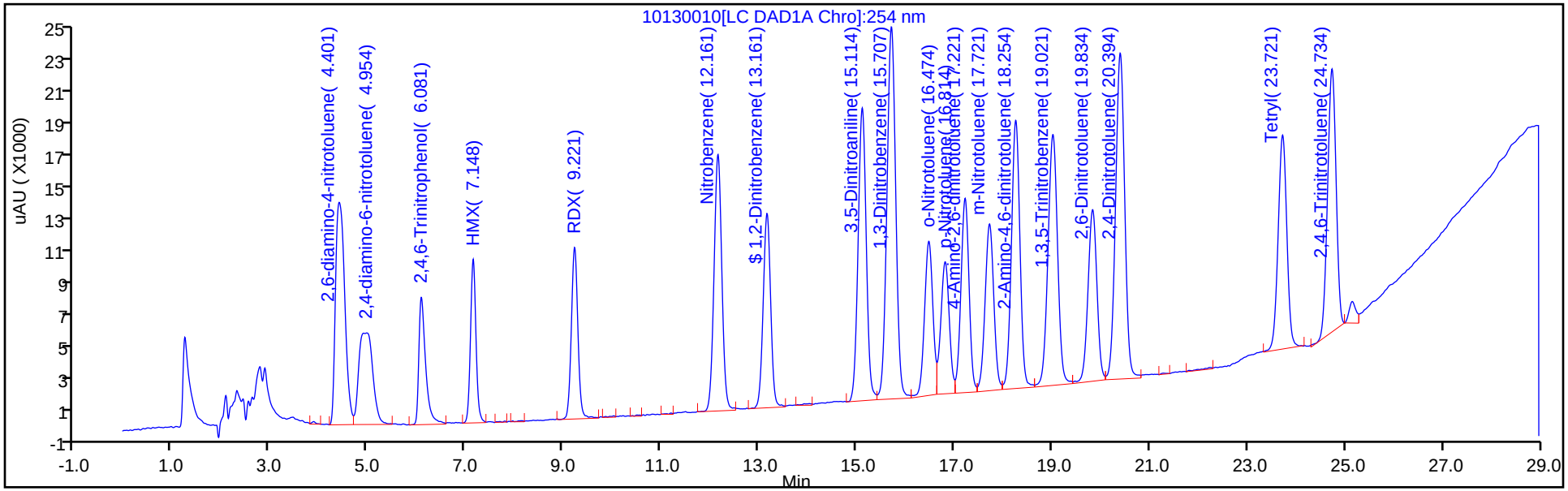
Report Date: 14-Oct-2018 14:02:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

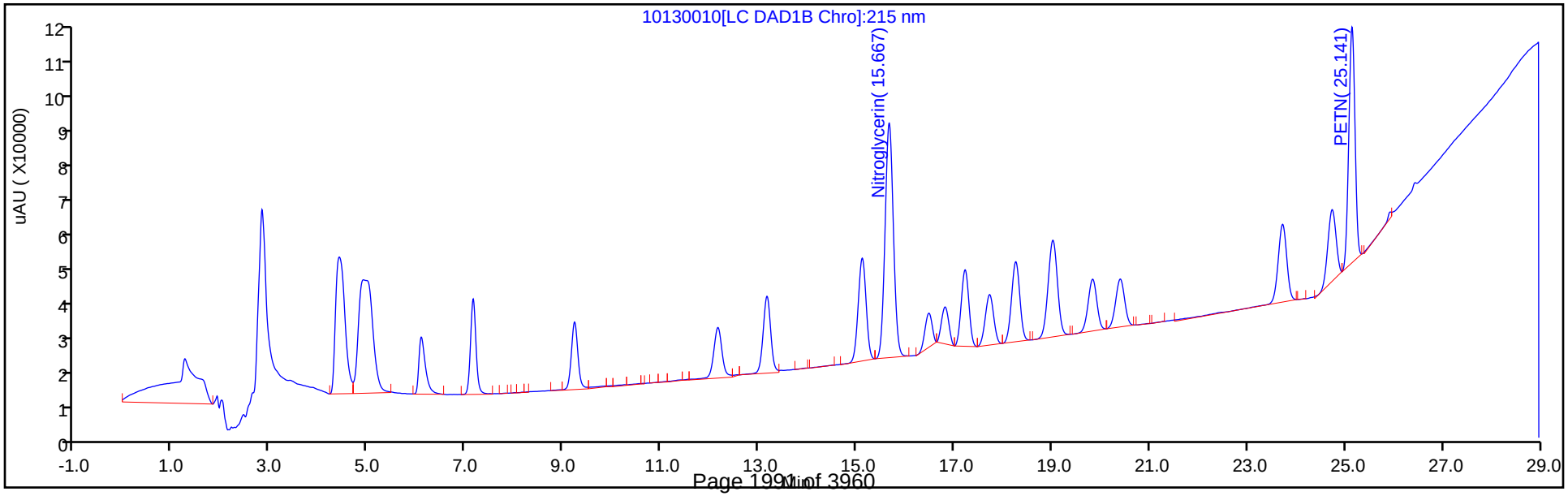
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130010.D

Injection Date:	13-Oct-2018 18:08:37	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

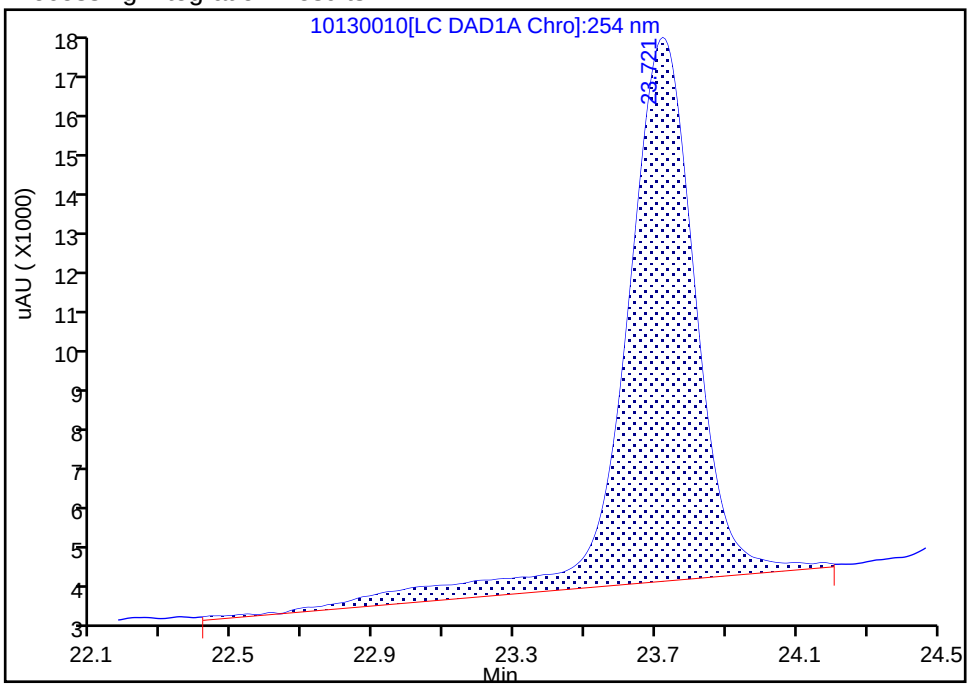
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130010.D
Injection Date: 13-Oct-2018 18:08:37 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 5
Client ID:
Operator ID: HKF ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 Tetryl, CAS: 479-45-8

Signal: 1

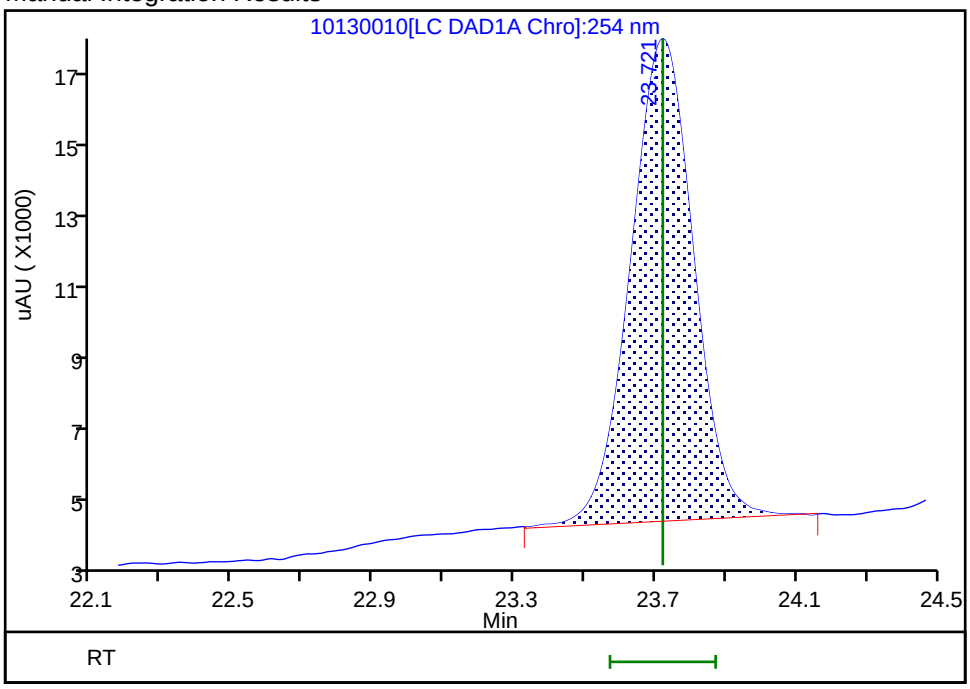
Processing Integration Results

RT: 23.72
Area: 180826
Amount: 0.437266
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 157474
Amount: 0.403674
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:52:09
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130011.D
Lims ID: IC FULL LV 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 18:43:36 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 4
Misc. Info.: 280-0075057-011
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:00 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:51:39

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.409	4.401	0.008	106496	0.2500	0.2433	
3 2,4-diamino-6-nitrotoluene	1	4.955	4.954	0.001	67339	0.2500	0.2425	
4 2,4,6-Trinitrophenol	1	6.109	6.081	0.028	43104	0.2500	0.2456	
5 HMX	1	7.149	7.148	0.001	45582	0.2500	0.2388	
7 RDX	1	9.222	9.221	0.001	57384	0.2500	0.2385	
8 Nitrobenzene	1	12.155	12.161	-0.006	102545	0.2505	0.2349	
$ 9 1,2-Dinitrobenzene	1	13.162	13.161	0.001	76710	0.2500	0.2484	
10 3,5-Dinitroaniline	1	15.115	15.114	0.001	124316	0.2500	0.2446	
12 Nitroglycerin	2	15.662	15.667	-0.005	473954	2.50	2.43	
11 1,3-Dinitrobenzene	1	15.708	15.707	0.001	166531	0.2503	0.2387	
13 o-Nitrotoluene	1	16.475	16.474	0.001	67311	0.2508	0.2451	
14 p-Nitrotoluene	1	16.808	16.814	-0.006	57186	0.2510	0.2425	
15 4-Amino-2,6-dinitrotoluene	1	17.215	17.221	-0.006	80348	0.2508	0.2458	
16 m-Nitrotoluene	1	17.715	17.721	-0.006	74358	0.2510	0.2377	
17 2-Amino-4,6-dinitrotoluene	1	18.255	18.254	0.001	116530	0.2508	0.2416	
18 1,3,5-Trinitrobenzene	1	19.015	19.021	-0.006	123833	0.2500	0.2434	
19 2,6-Dinitrotoluene	1	19.828	19.834	-0.006	78825	0.2508	0.2396	
20 2,4-Dinitrotoluene	1	20.388	20.394	-0.006	152949	0.2505	0.2429	
21 Tetryl	1	23.722	23.721	0.001	93284	0.2500	0.2391	M
22 2,4,6-Trinitrotoluene	1	24.735	24.734	0.001	112078	0.2510	0.2501	
23 PETN	2	25.142	25.141	0.001	351201	2.50	2.49	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	12.50	Units: uL
8330_ADDs_00017	Amount Added:	12.50	Units: uL

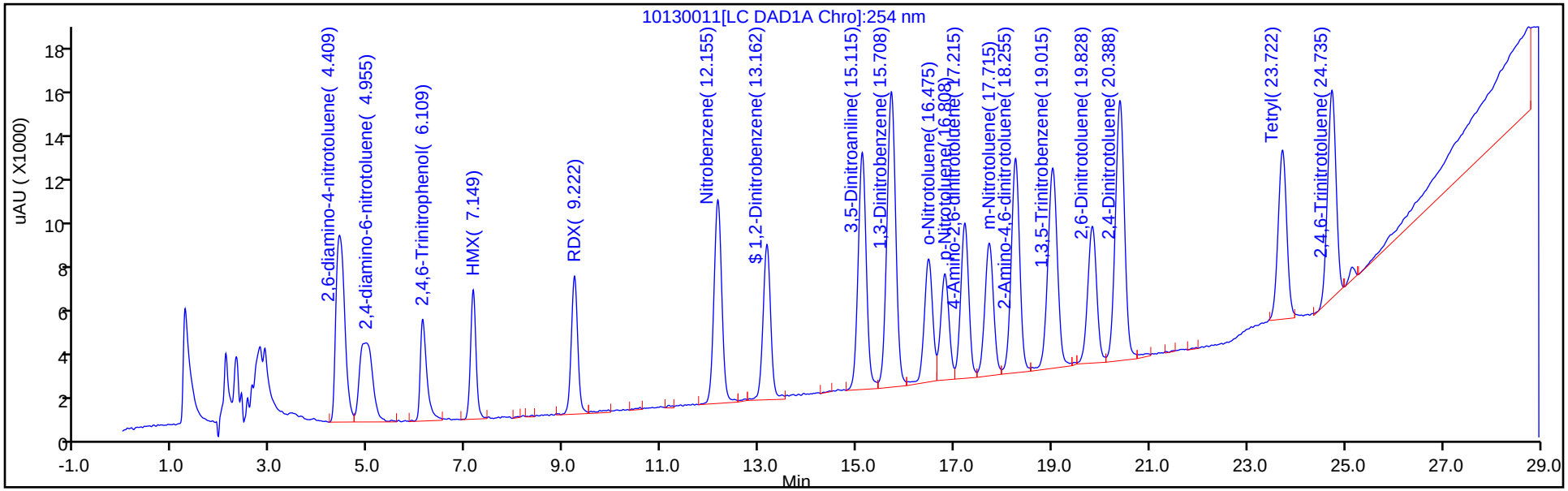
Report Date: 14-Oct-2018 14:03:01 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

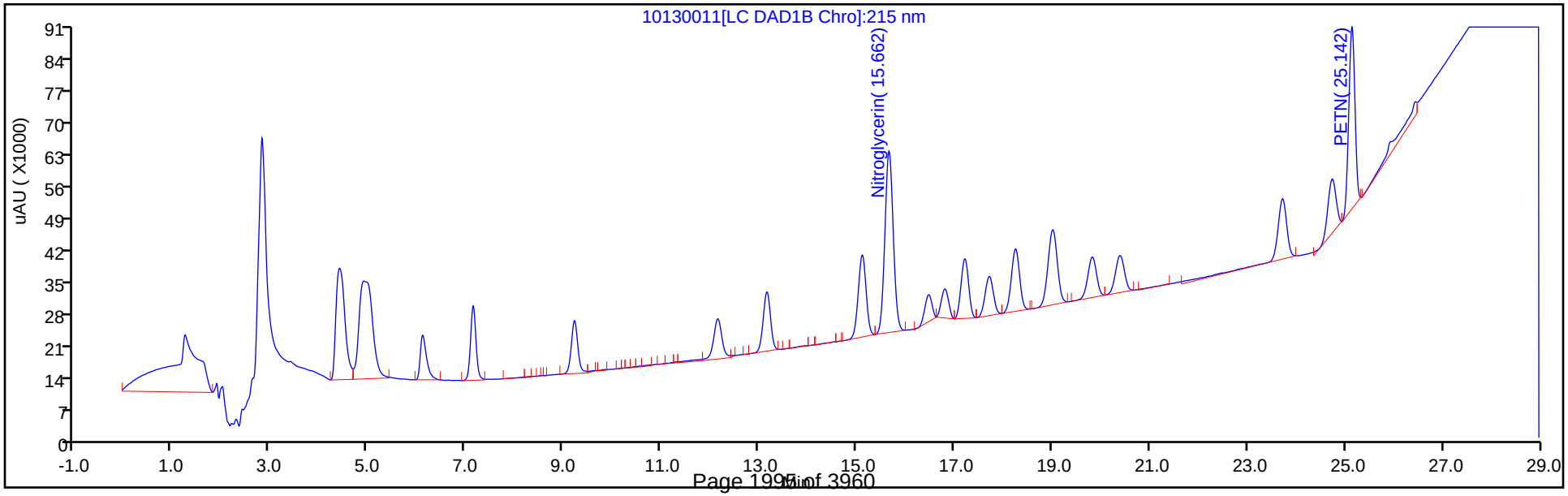
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130011.D

Injection Date:	13-Oct-2018 18:43:36	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

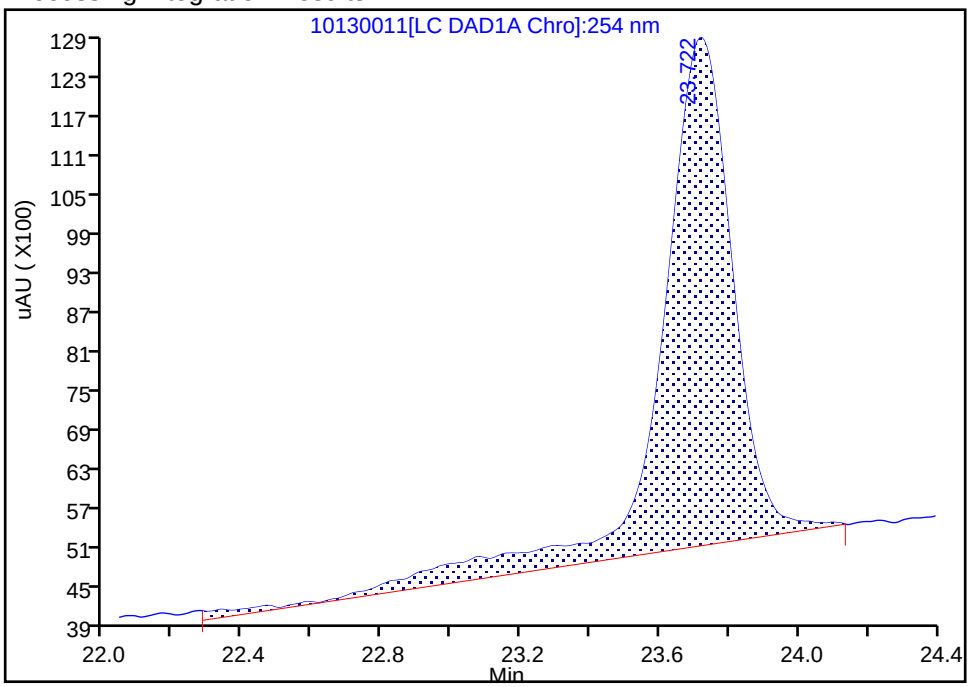
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130011.D
Injection Date: 13-Oct-2018 18:43:36 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 4
Client ID:
Operator ID: HKF ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 Tetryl, CAS: 479-45-8

Signal: 1

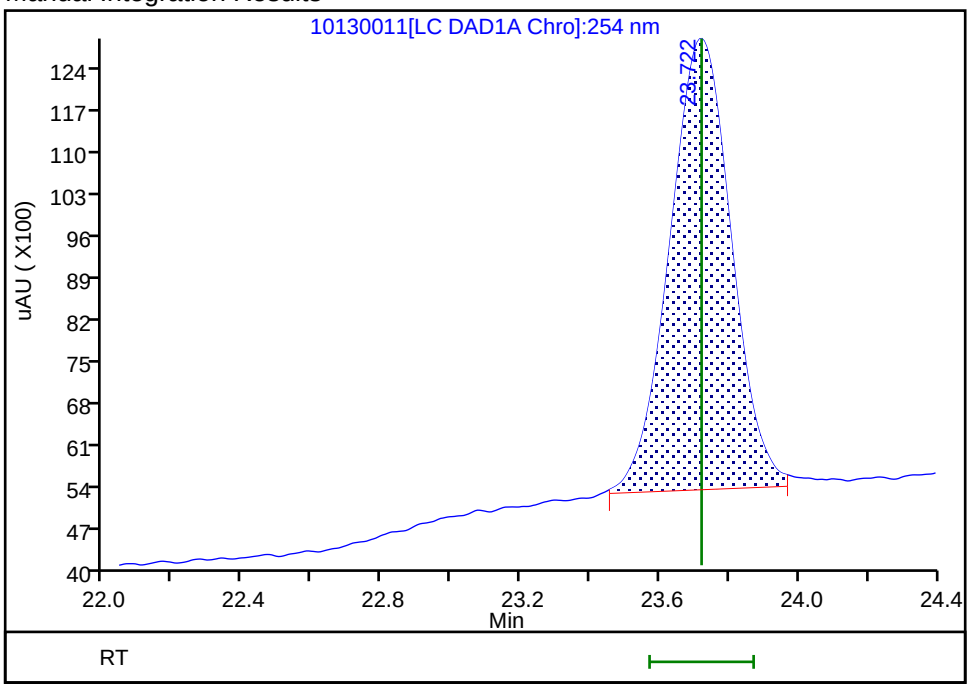
Processing Integration Results

RT: 23.72
Area: 112926
Amount: 0.252081
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 93284
Amount: 0.239128
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:51:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130012.D
Lims ID: IC FULL LV 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 19:18:34 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 3
Misc. Info.: 280-0075057-012
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:02 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:58:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.412	4.401	0.011	42512	0.1000	0.0971	
3 2,4-diamino-6-nitrotoluene	1	4.952	4.954	-0.002	27847	0.1000	0.1003	
4 2,4,6-Trinitrophenol	1	6.146	6.081	0.065	17257	0.1000	0.0983	
5 HMX	1	7.146	7.148	-0.002	19254	0.1000	0.1009	
7 RDX	1	9.219	9.221	-0.002	25353	0.1000	0.1054	
8 Nitrobenzene	1	12.152	12.161	-0.009	44179	0.1002	0.1012	
$ 9 1,2-Dinitrobenzene	1	13.152	13.161	-0.009	31197	0.1000	0.1010	
10 3,5-Dinitroaniline	1	15.106	15.114	-0.008	51091	0.1000	0.1004	
12 Nitroglycerin	2	15.652	15.667	-0.015	192800	1.00	0.9873	
11 1,3-Dinitrobenzene	1	15.699	15.707	-0.008	68591	0.1001	0.0983	
13 o-Nitrotoluene	1	16.472	16.474	-0.002	26486	0.1003	0.0964	
14 p-Nitrotoluene	1	16.799	16.814	-0.015	22209	0.1004	0.0942	
15 4-Amino-2,6-dinitrotoluene	1	17.212	17.221	-0.009	32060	0.1003	0.0981	
16 m-Nitrotoluene	1	17.712	17.721	-0.009	30526	0.1004	0.0976	
17 2-Amino-4,6-dinitrotoluene	1	18.246	18.254	-0.008	46973	0.1003	0.0974	
18 1,3,5-Trinitrobenzene	1	19.006	19.021	-0.015	50435	0.1000	0.0991	
19 2,6-Dinitrotoluene	1	19.826	19.834	-0.008	33837	0.1003	0.1029	
20 2,4-Dinitrotoluene	1	20.386	20.394	-0.008	62607	0.1002	0.0994	
21 Tetryl	1	23.712	23.721	-0.009	39605	0.1000	0.1015	
22 2,4,6-Trinitrotoluene	1	24.726	24.734	-0.008	43913	0.1004	0.0980	
23 PETN	2	25.132	25.141	-0.009	138138	1.00	0.9813	

Reagents:

8330IntermStk_00056 Amount Added: 5.00 Units: uL
8330_ADDs_00017 Amount Added: 5.00 Units: uL

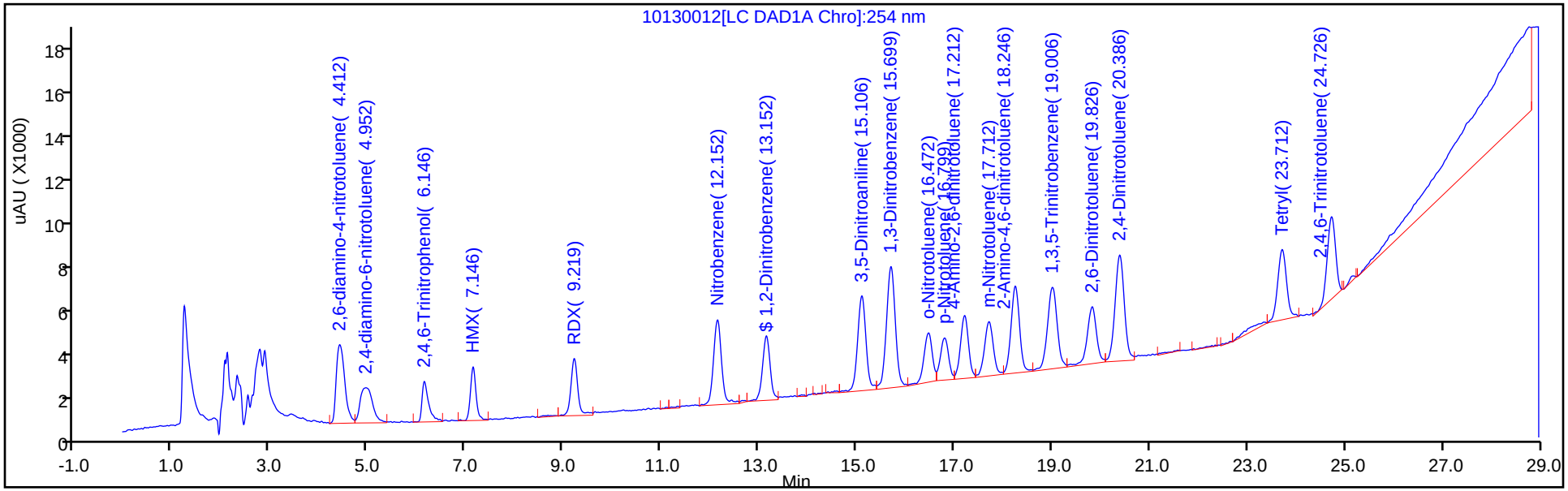
Report Date: 14-Oct-2018 14:03:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

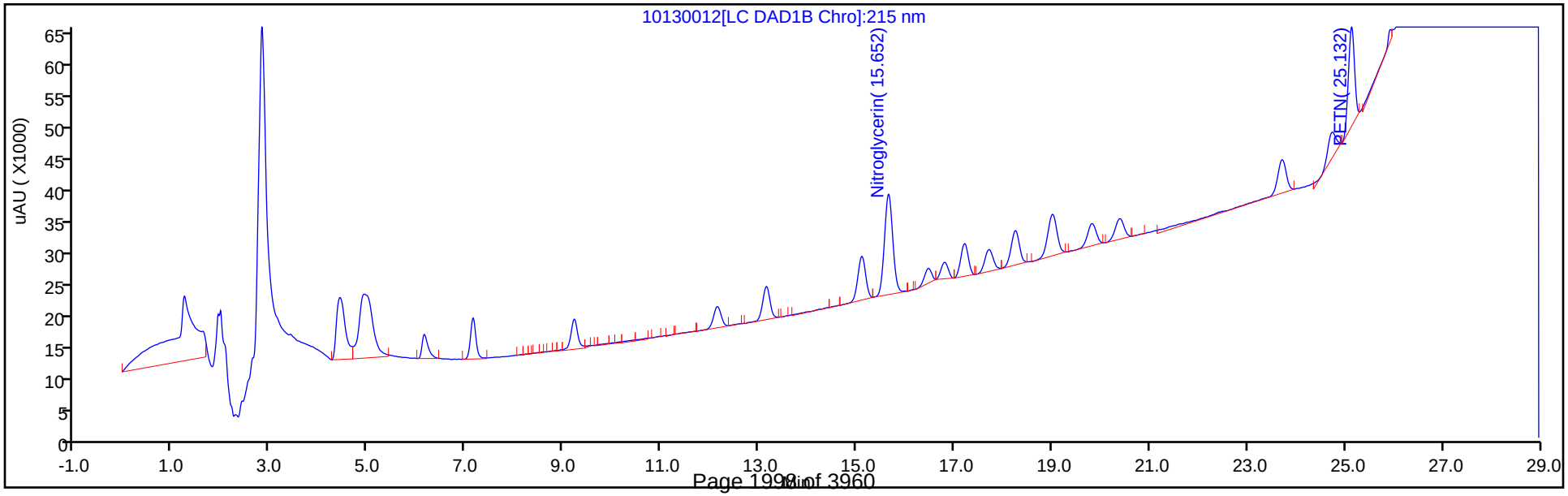
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130012.D

Injection Date:	13-Oct-2018 19:18:34	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D
Lims ID: IC FULL LV 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 19:53:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 2
Misc. Info.: 280-0075057-013
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:03 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:52:44

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.411	4.401	0.010	20884	0.0500	0.0477	
3 2,4-diamino-6-nitrotoluene	1	4.924	4.954	-0.030	15317	0.0500	0.0552	
4 2,4,6-Trinitrophenol	1	6.184	6.081	0.103	8338	0.0500	0.0475	
5 HMX	1	7.151	7.148	0.003	9911	0.0500	0.0519	
7 RDX	1	9.224	9.221	0.003	13001	0.0500	0.0540	
8 Nitrobenzene	1	12.164	12.161	0.003	23912	0.0501	0.0548	
$ 9 1,2-Dinitrobenzene	1	13.171	13.161	0.010	15682	0.0500	0.0508	
10 3,5-Dinitroaniline	1	15.124	15.114	0.010	30112	0.0500	0.0591	
12 Nitroglycerin	2	15.671	15.667	0.004	95429	0.5000	0.4887	
11 1,3-Dinitrobenzene	1	15.717	15.707	0.010	39303	0.0501	0.0563	
13 o-Nitrotoluene	1	16.477	16.474	0.003	15285	0.0502	0.0556	
14 p-Nitrotoluene	1	16.817	16.814	0.003	12122	0.0502	0.0514	
15 4-Amino-2,6-dinitrotoluene	1	17.224	17.221	0.003	17939	0.0502	0.0549	
16 m-Nitrotoluene	1	17.717	17.721	-0.004	17439	0.0502	0.0557	
17 2-Amino-4,6-dinitrotoluene	1	18.257	18.254	0.003	26788	0.0502	0.0555	
18 1,3,5-Trinitrobenzene	1	19.004	19.021	-0.017	28899	0.0500	0.0568	
19 2,6-Dinitrotoluene	1	19.831	19.834	-0.003	19816	0.0502	0.0602	
20 2,4-Dinitrotoluene	1	20.391	20.394	-0.003	34146	0.0501	0.0542	
21 Tetryl	1	23.717	23.721	-0.004	18760	0.0500	0.0481	M
22 2,4,6-Trinitrotoluene	1	24.737	24.734	0.003	21005	0.0502	0.0469	M
23 PETN	2	25.137	25.141	-0.004	67494	0.5000	0.4795	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	2.50	Units: uL
8330_ADDs_00017	Amount Added:	2.50	Units: uL

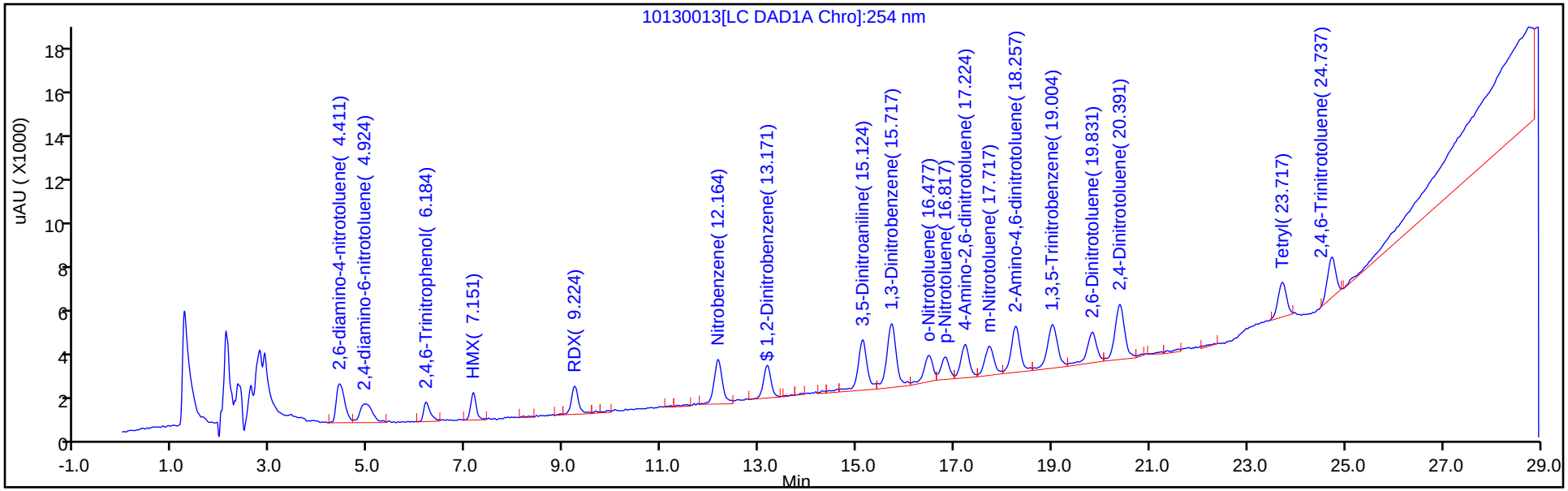
Report Date: 14-Oct-2018 14:03:04 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

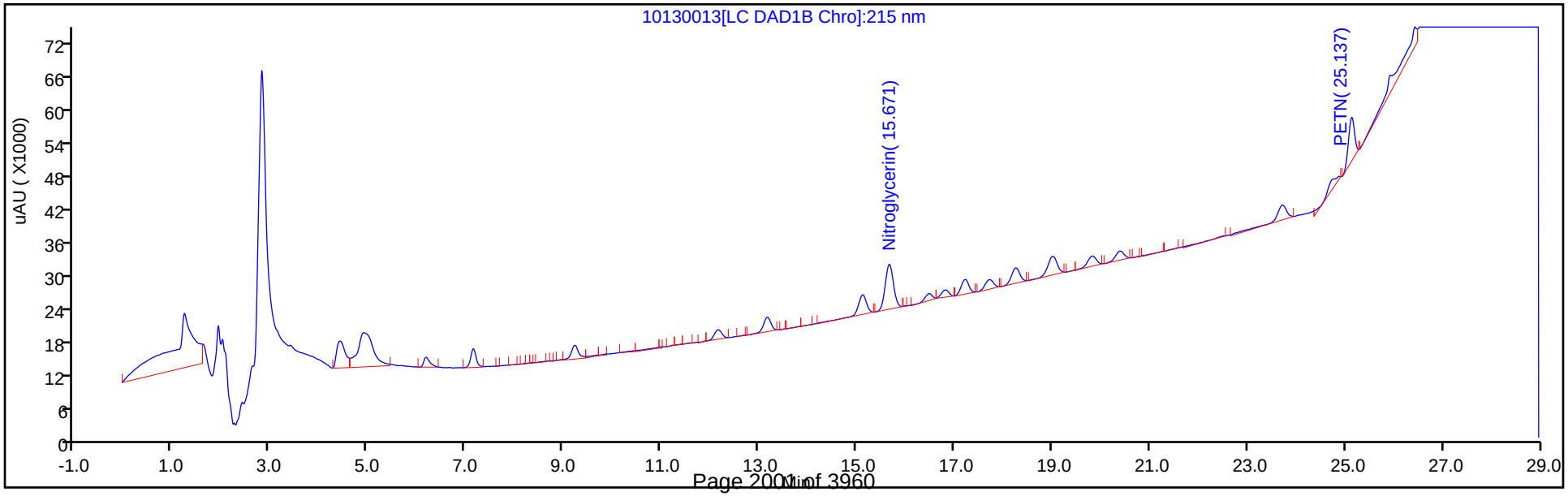
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D

Injection Date:	13-Oct-2018 19:53:30	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

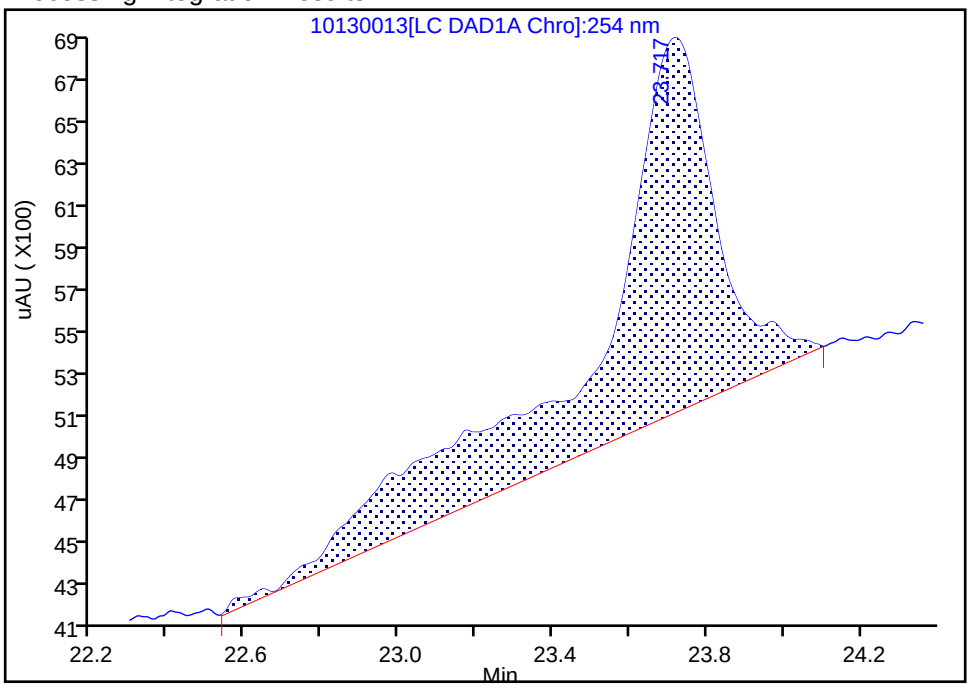
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D
Injection Date: 13-Oct-2018 19:53:30 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 2
Client ID:
Operator ID: HKF ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 Tetryl, CAS: 479-45-8

Signal: 1

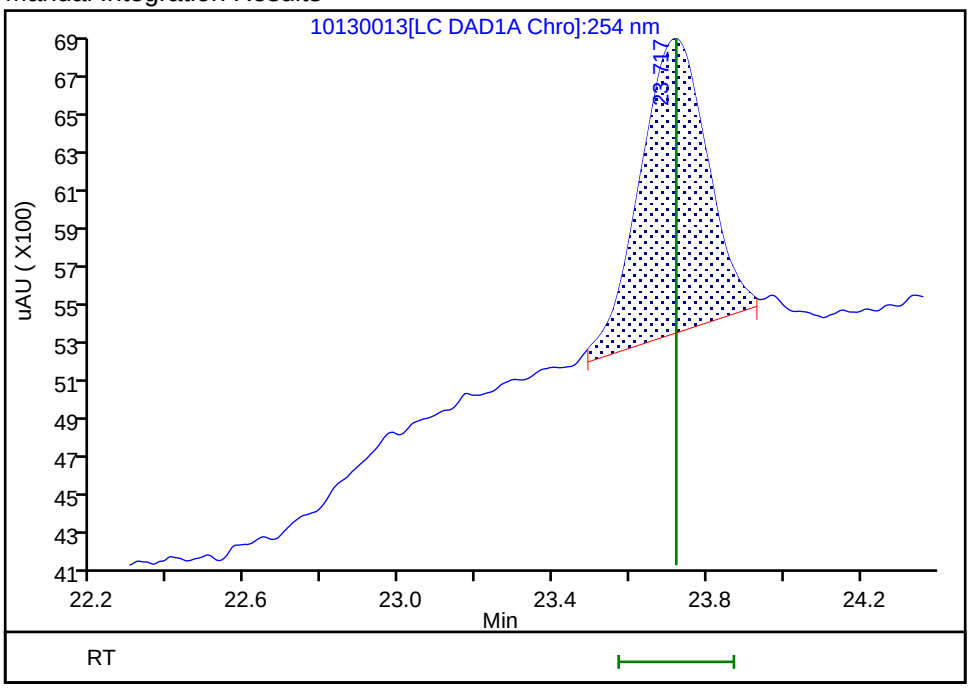
Processing Integration Results

RT: 23.72
Area: 38693
Amount: 0.058611
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 18760
Amount: 0.048090
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:58:23
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

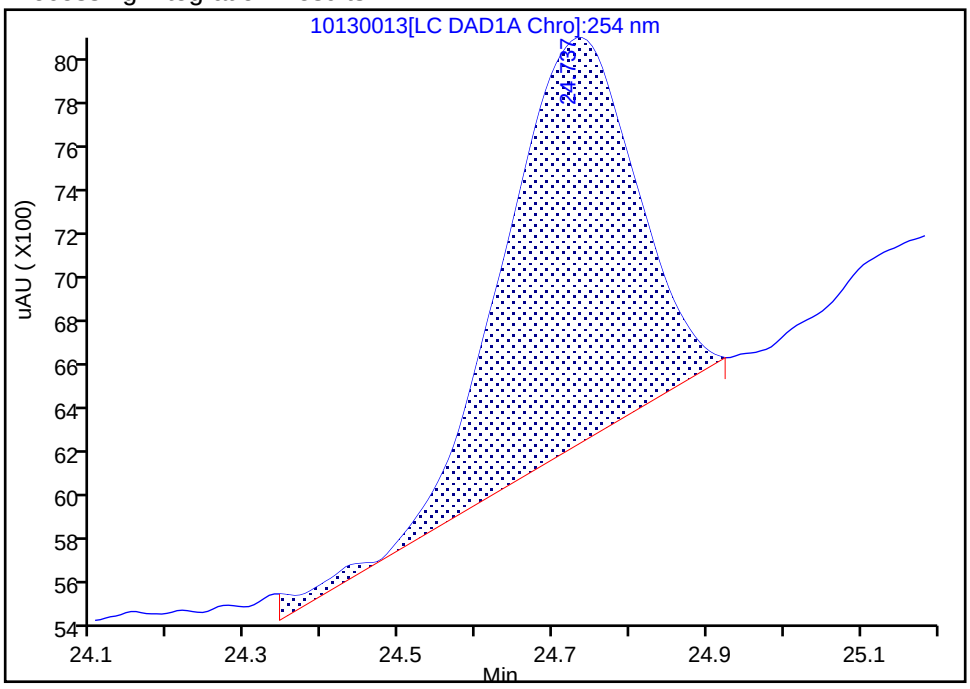
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130013.D				
Injection Date:	13-Oct-2018 19:53:30	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 2				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

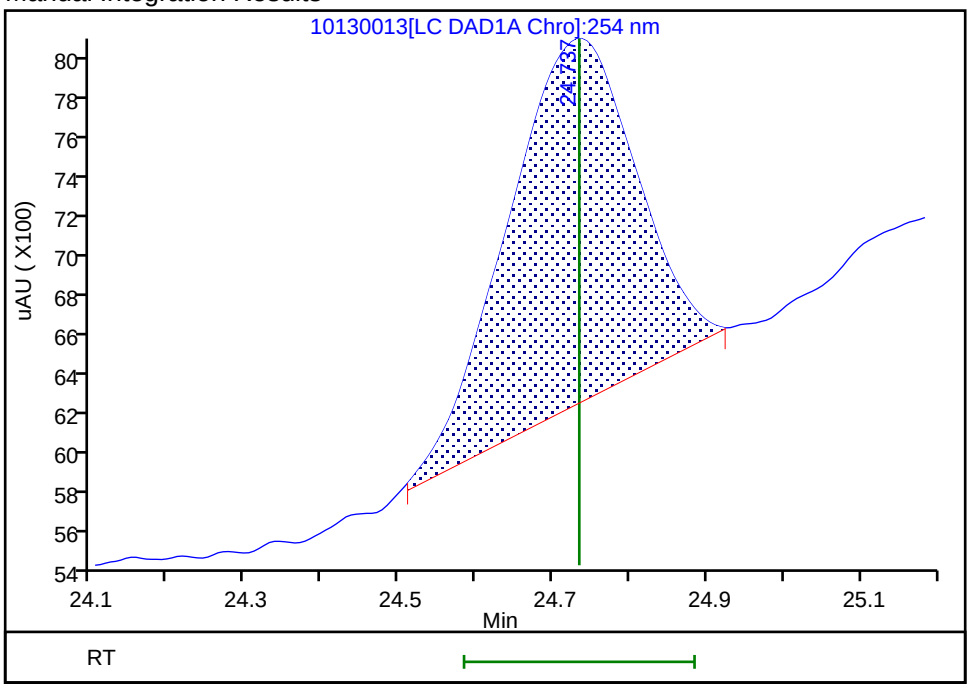
Processing Integration Results

RT: 24.74
Area: 21827
Amount: 0.048489
Amount Units: ug/ml



Manual Integration Results

RT: 24.74
Area: 21005
Amount: 0.046876
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:58:16

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Lims ID: IC FULL LV 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:28:27 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 1
Misc. Info.: 280-0075057-014
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:04 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:53:15

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.409	4.401	0.008	8941	0.0200	0.0204	
3 2,4-diamino-6-nitrotoluene	1	4.923	4.954	-0.031	7182	0.0200	0.0259	
4 2,4,6-Trinitrophenol	1	6.216	6.081	0.135	3438	0.0200	0.0196	
5 HMX	1	7.143	7.148	-0.005	3990	0.0200	0.0209	M
7 RDX	1	9.223	9.221	0.002	5022	0.0200	0.0209	M
8 Nitrobenzene	1	12.156	12.161	-0.005	9419	0.0200	0.0216	M
$ 9 1,2-Dinitrobenzene	1	13.163	13.161	0.002	6480	0.0200	0.0210	M
10 3,5-Dinitroaniline	1	15.123	15.114	0.009	9555	0.0200	0.0186	M
12 Nitroglycerin	2	15.676	15.667	0.009	40127	0.2000	0.2055	
11 1,3-Dinitrobenzene	1	15.723	15.707	0.016	14112	0.0200	0.0202	M
13 o-Nitrotoluene	1	16.496	16.474	0.022	5507	0.0201	0.0200	M
14 p-Nitrotoluene	1	16.816	16.814	0.002	5052	0.0201	0.0214	M
15 4-Amino-2,6-dinitrotoluene	1	17.223	17.221	0.002	6145	0.0201	0.0188	M
16 m-Nitrotoluene	1	17.736	17.721	0.015	6830	0.0201	0.0218	M
17 2-Amino-4,6-dinitrotoluene	1	18.263	18.254	0.009	10063	0.0201	0.0209	M
18 1,3,5-Trinitrobenzene	1	19.029	19.021	0.008	10023	0.0200	0.0197	
19 2,6-Dinitrotoluene	1	19.843	19.834	0.009	6342	0.0201	0.0193	M
20 2,4-Dinitrotoluene	1	20.403	20.394	0.009	12823	0.0200	0.0204	
21 Tetryl	1	23.723	23.721	0.002	8216	0.0200	0.0211	M
22 2,4,6-Trinitrotoluene	1	24.749	24.734	0.015	8290	0.0201	0.0185	M
23 PETN	2	25.149	25.141	0.008	25286	0.2000	0.1796	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056	Amount Added:	1.00	Units: uL
8330_ADDs_00017	Amount Added:	1.00	Units: uL

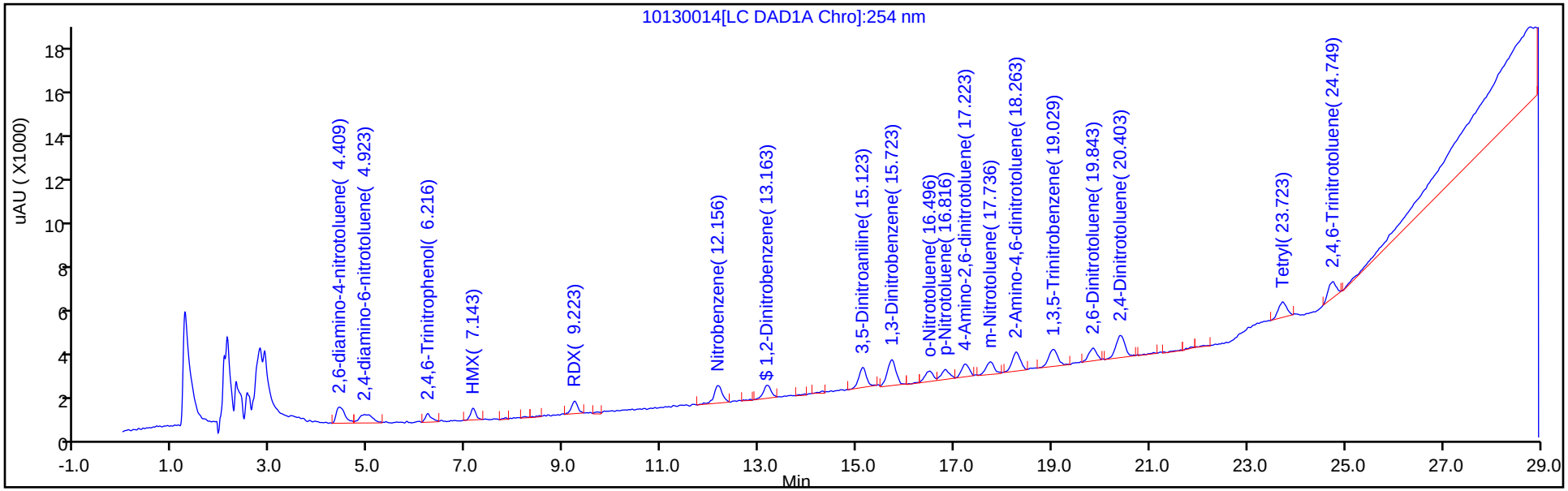
Report Date: 14-Oct-2018 14:03:05 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

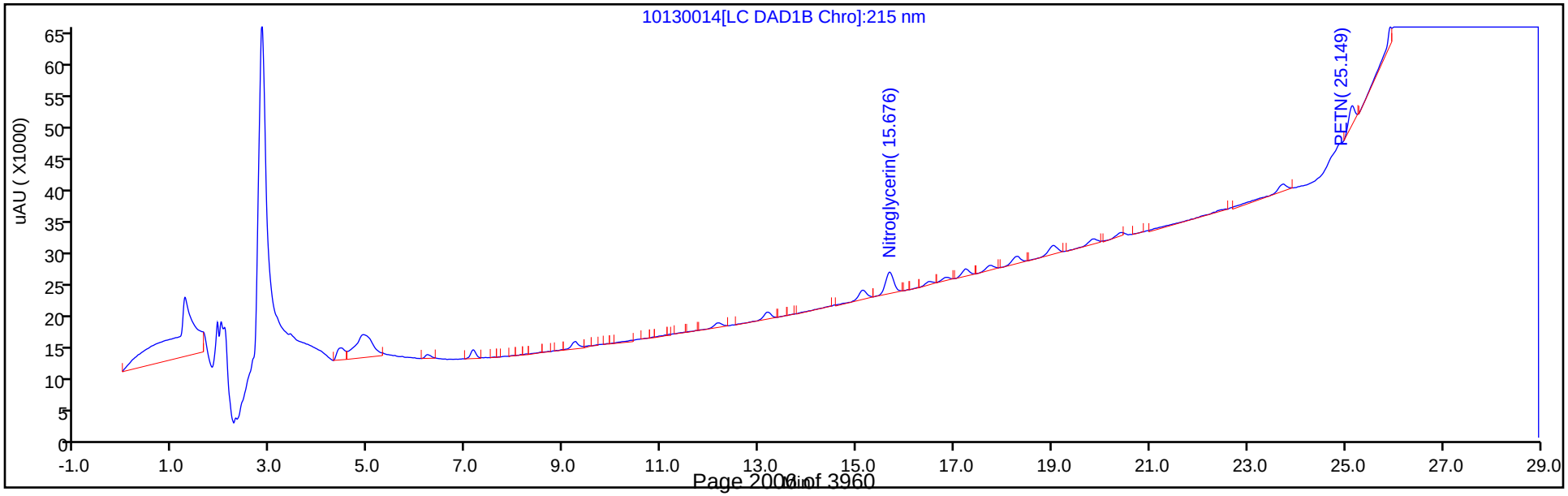
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D

Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	IC FULL LV 1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

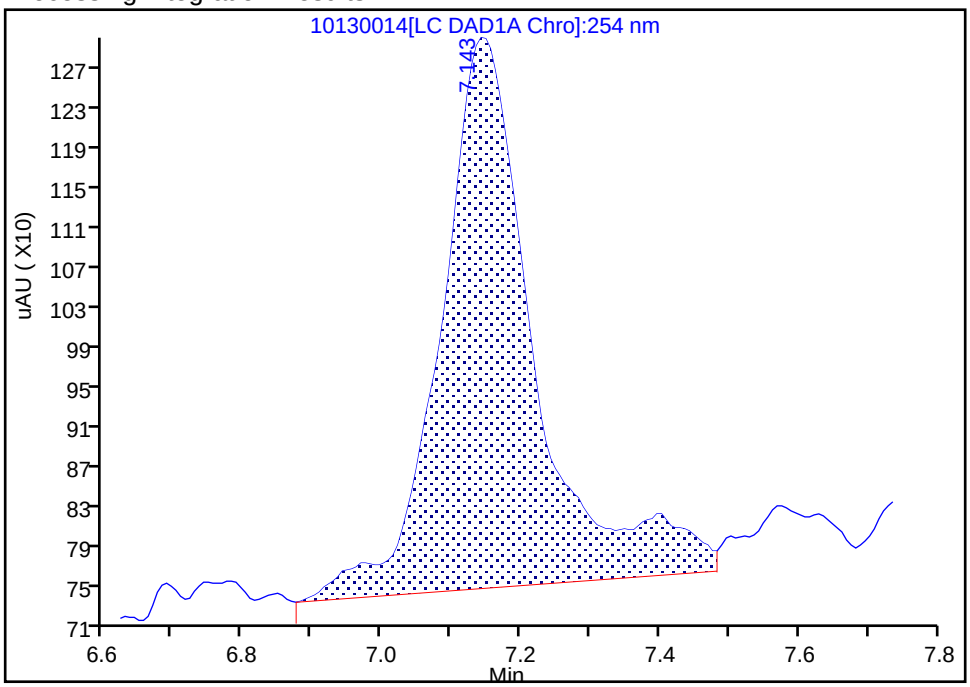
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

5 HMX, CAS: 2691-41-0

Signal: 1

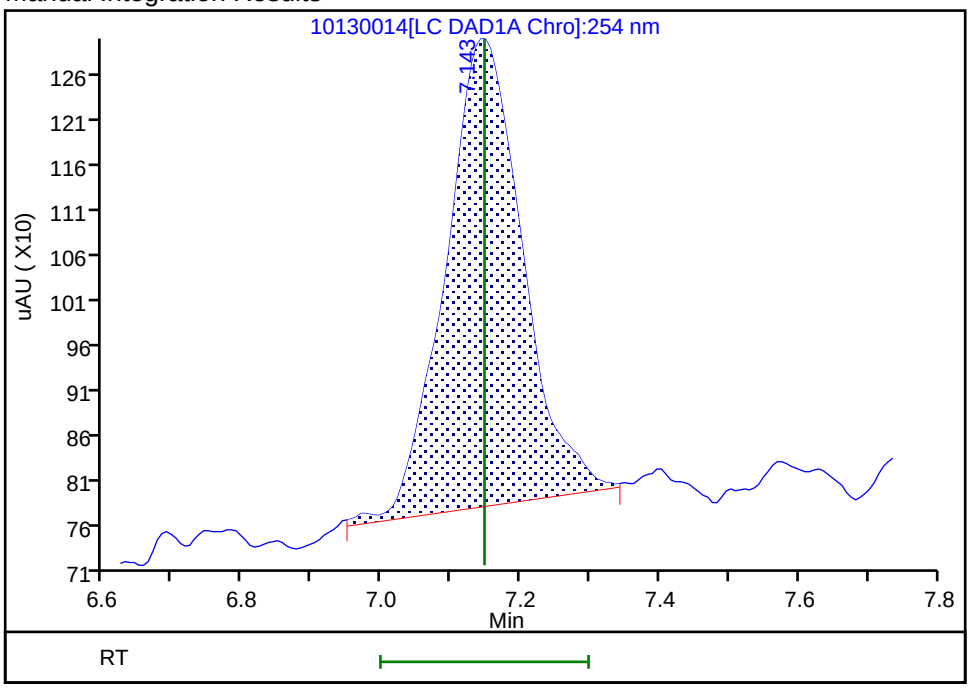
Processing Integration Results

RT: 7.14
Area: 5193
Amount: 0.026175
Amount Units: ug/ml



Manual Integration Results

RT: 7.14
Area: 3990
Amount: 0.020904
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:55:04
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

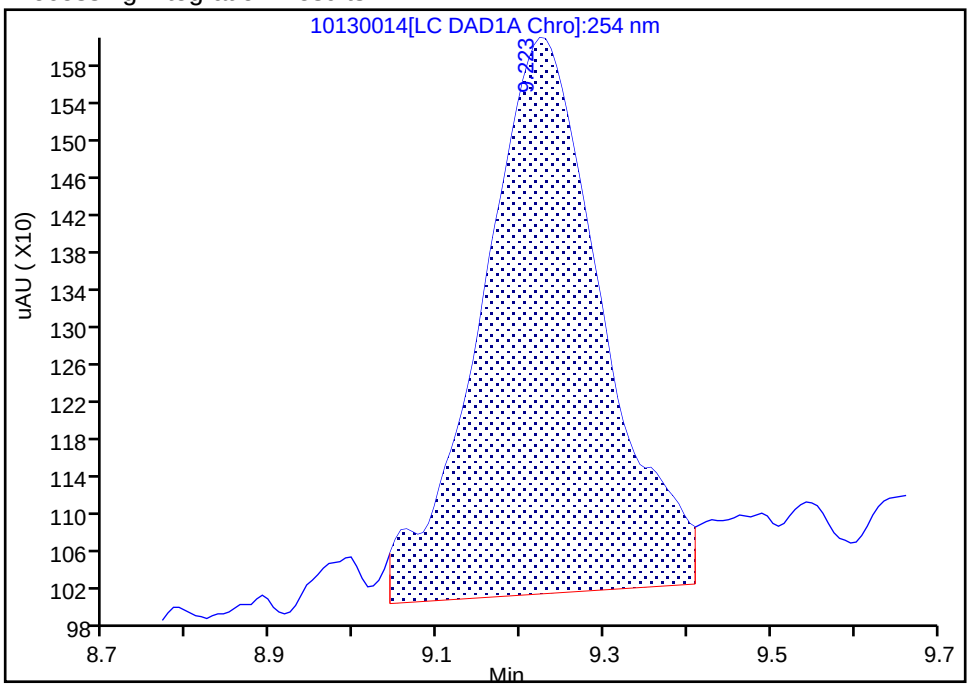
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

7 RDX, CAS: 121-82-4

Signal: 1

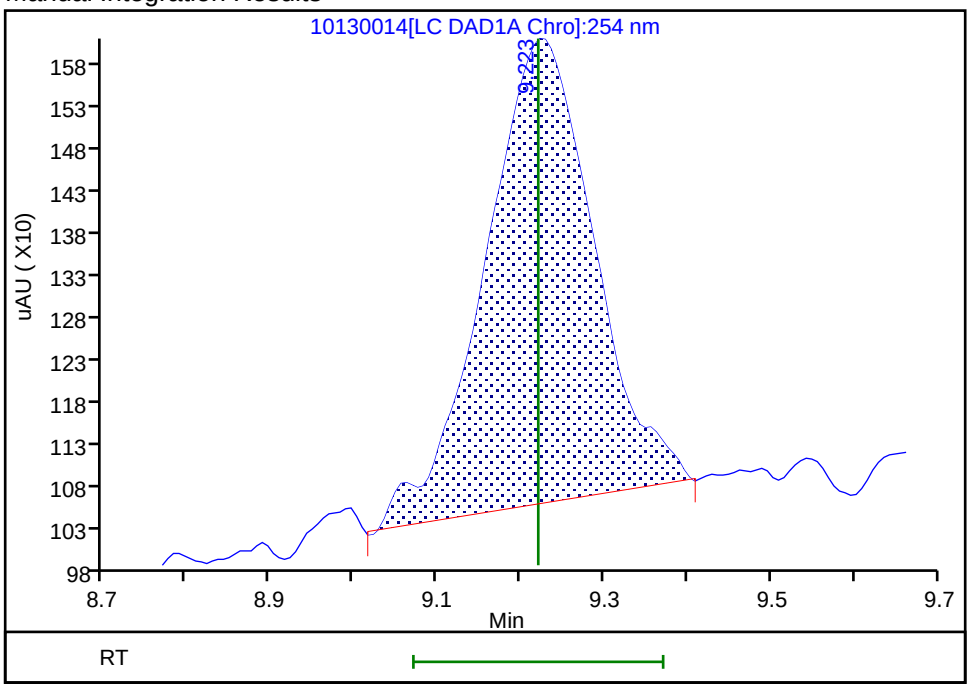
Processing Integration Results

RT: 9.22
Area: 6007
Amount: 0.024347
Amount Units: ug/ml



Manual Integration Results

RT: 9.22
Area: 5022
Amount: 0.020876
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:29
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

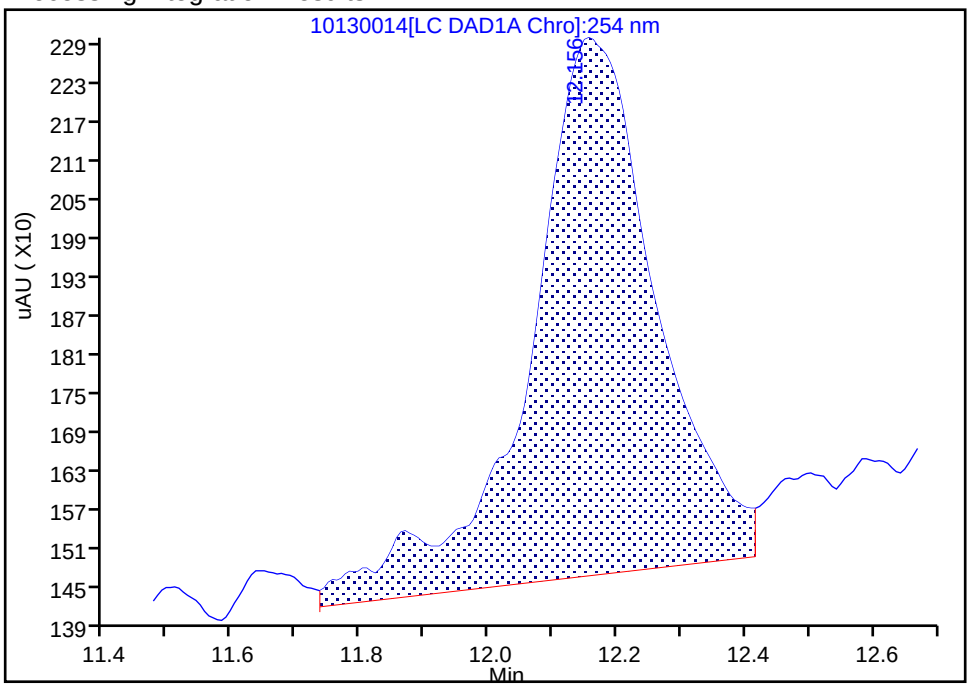
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

8 Nitrobenzene, CAS: 98-95-3

Signal: 1

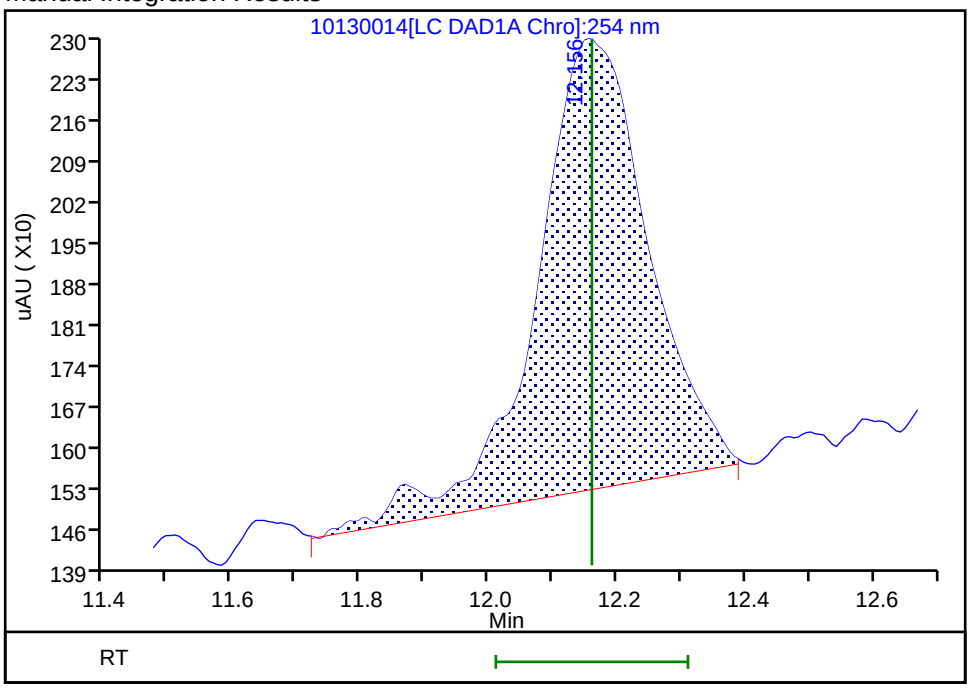
Processing Integration Results

RT: 12.16
Area: 11615
Amount: 0.025799
Amount Units: ug/ml



Manual Integration Results

RT: 12.16
Area: 9419
Amount: 0.021578
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:37
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

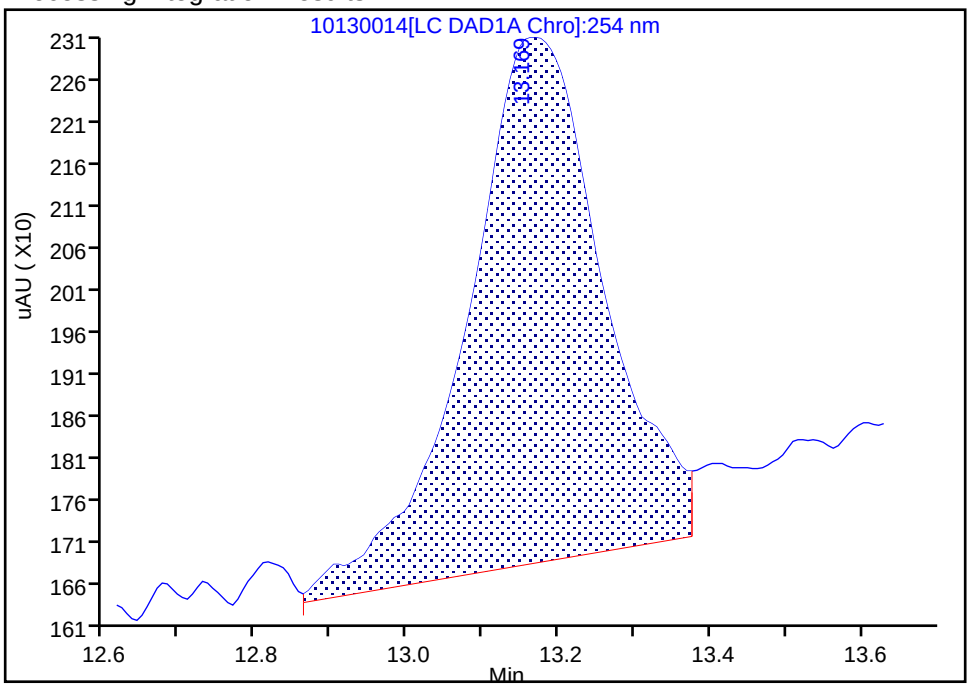
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

$ 9 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

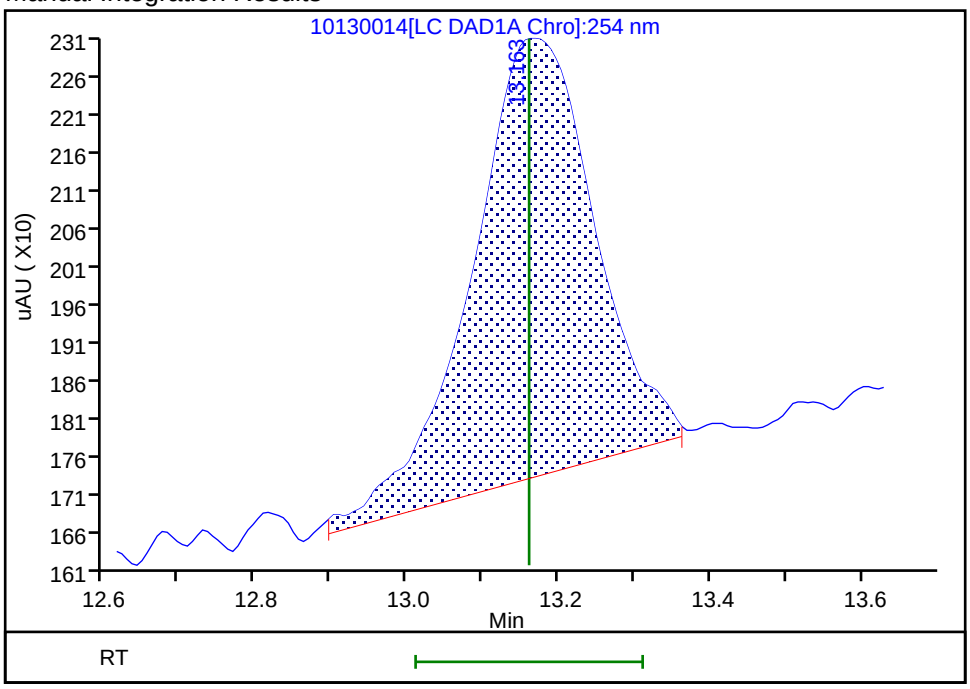
Processing Integration Results

RT: 13.17
Area: 7789
Amount: 0.024567
Amount Units: ug/ml



Manual Integration Results

RT: 13.16
Area: 6480
Amount: 0.020979
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:58:03
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

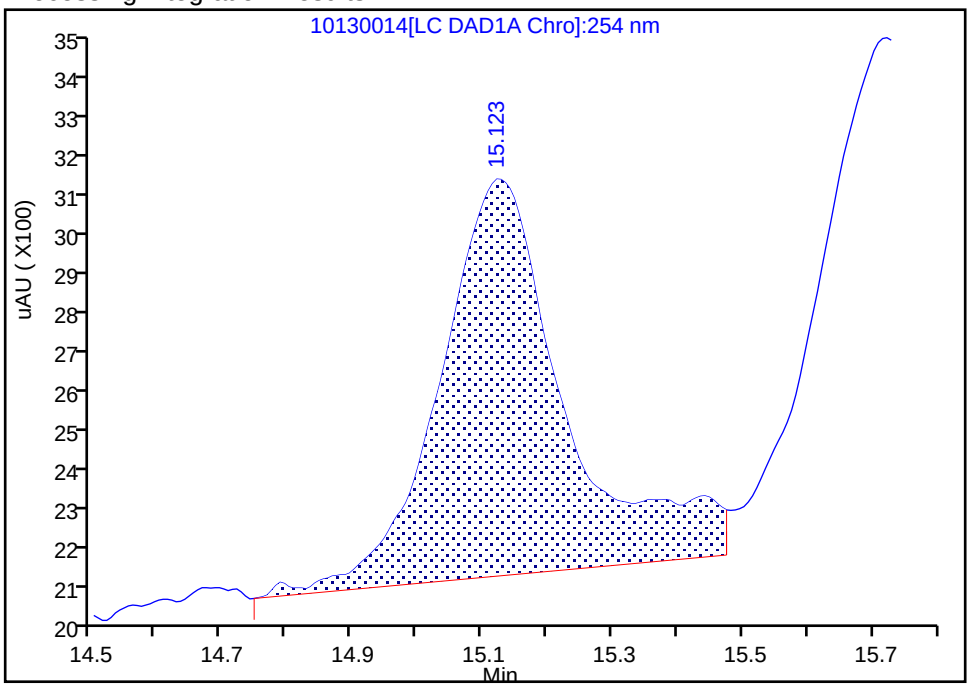
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

10 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

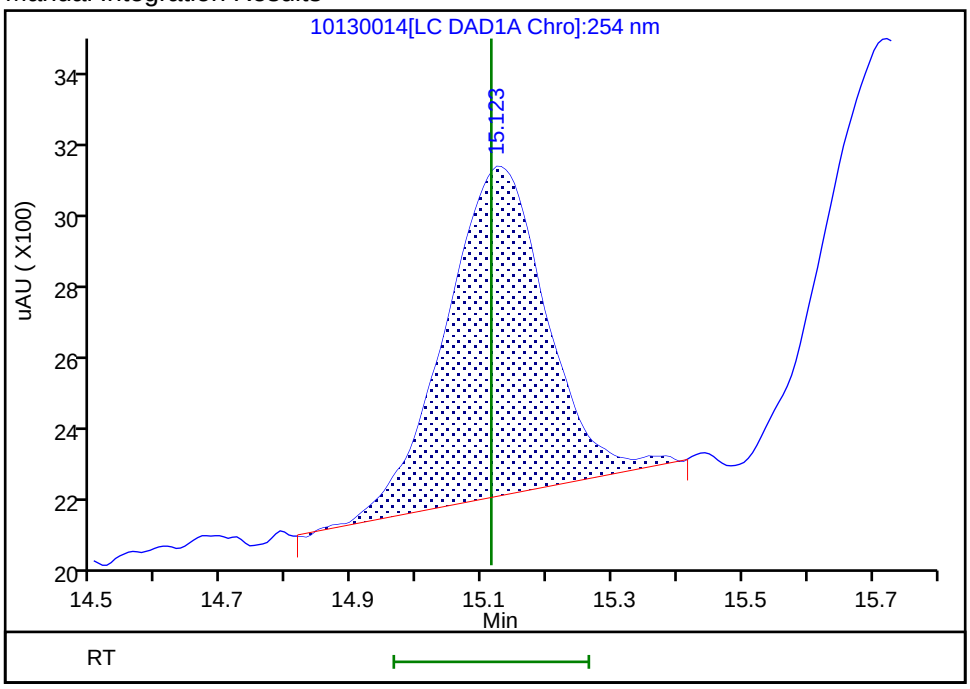
Processing Integration Results

RT: 15.12
Area: 12844
Amount: 0.019446
Amount Units: ug/ml



Manual Integration Results

RT: 15.12
Area: 9555
Amount: 0.018611
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:41
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

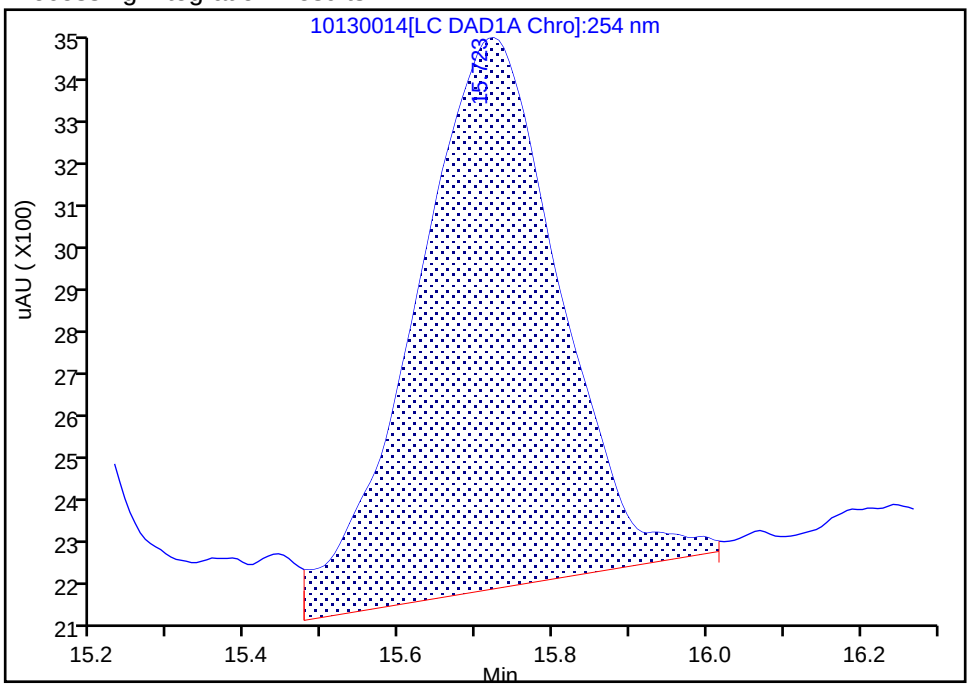
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

11 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

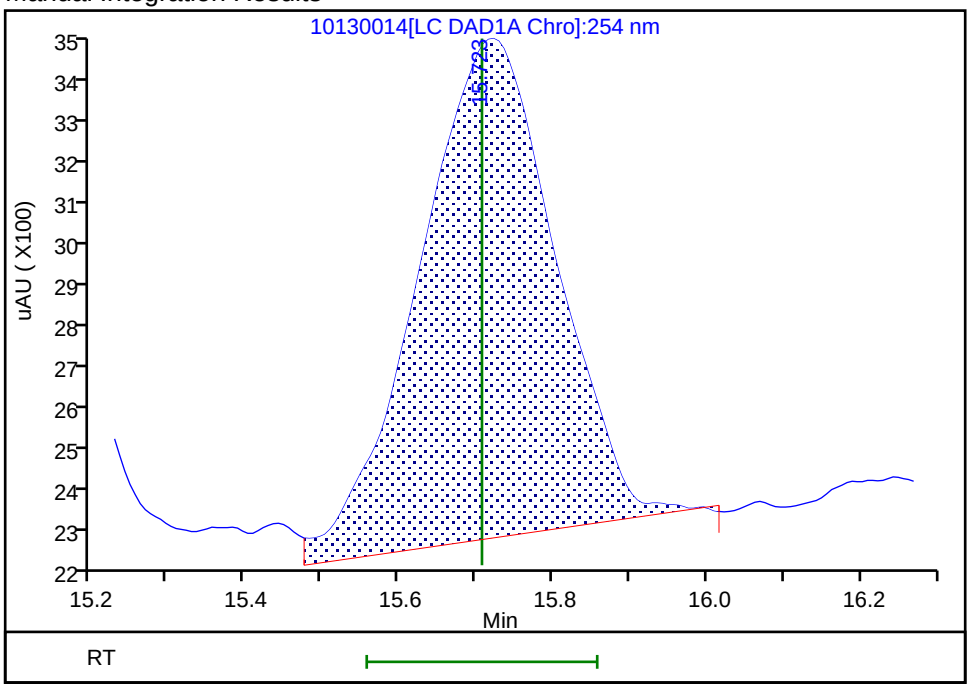
Processing Integration Results

RT: 15.72
Area: 15457
Amount: 0.021892
Amount Units: ug/ml



Manual Integration Results

RT: 15.72
Area: 14112
Amount: 0.020227
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:53:10
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

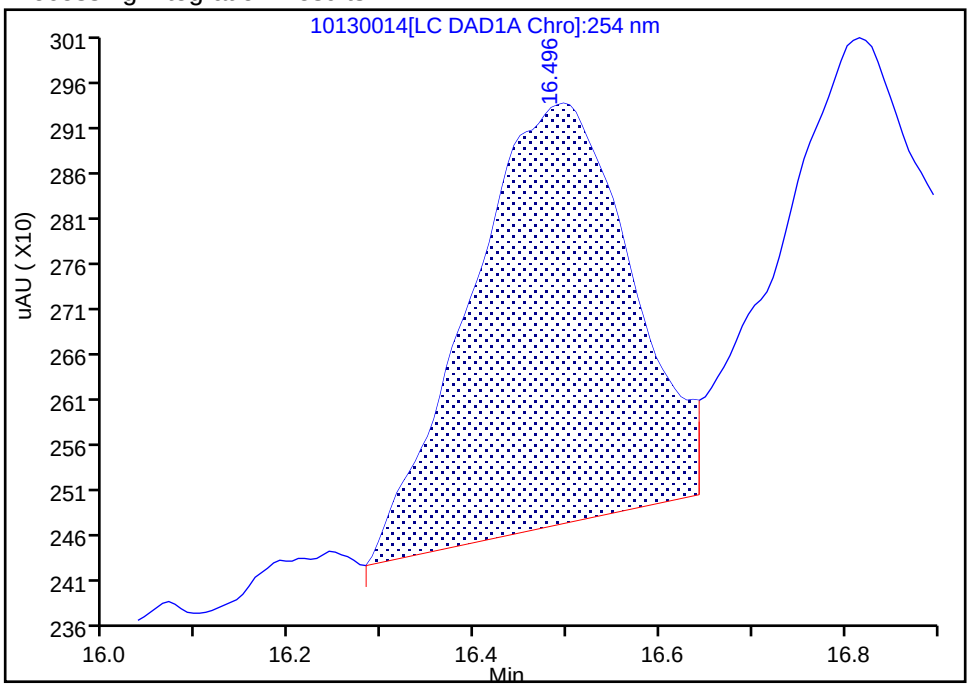
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

13 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

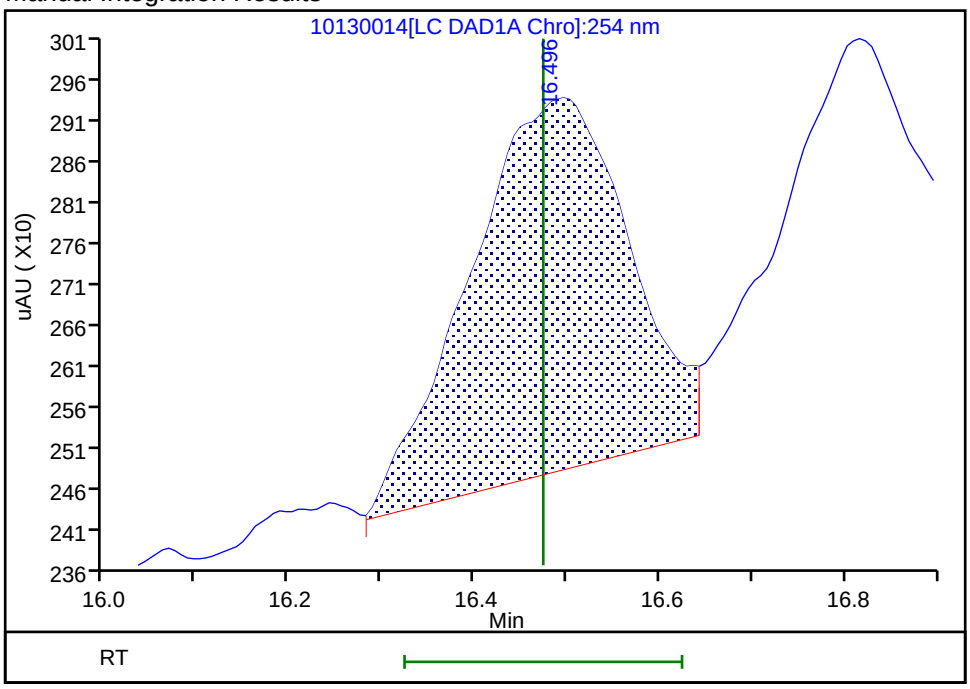
Processing Integration Results

RT: 16.50
Area: 5669
Amount: 0.020563
Amount Units: ug/ml



Manual Integration Results

RT: 16.50
Area: 5507
Amount: 0.020049
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

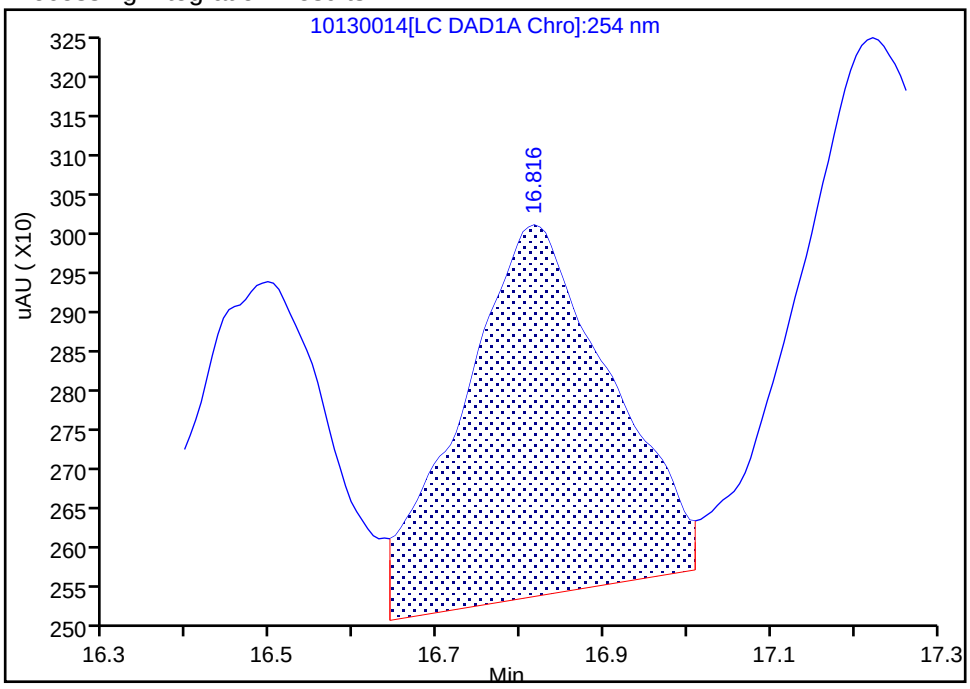
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

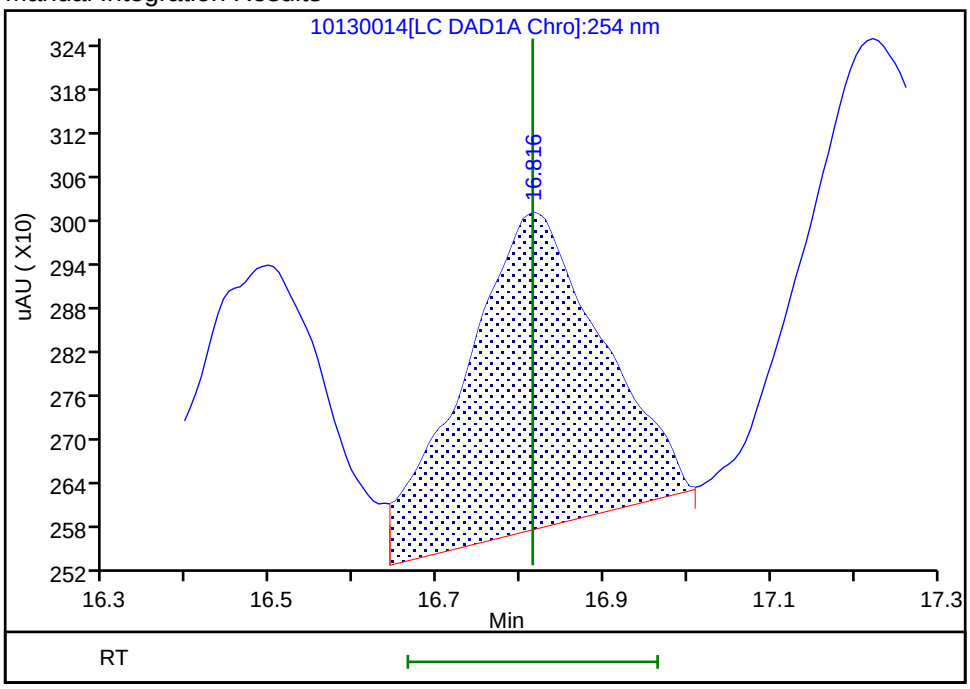
Processing Integration Results

RT: 16.82
Area: 5932
Amount: 0.024584
Amount Units: ug/ml



Manual Integration Results

RT: 16.82
Area: 5052
Amount: 0.021423
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

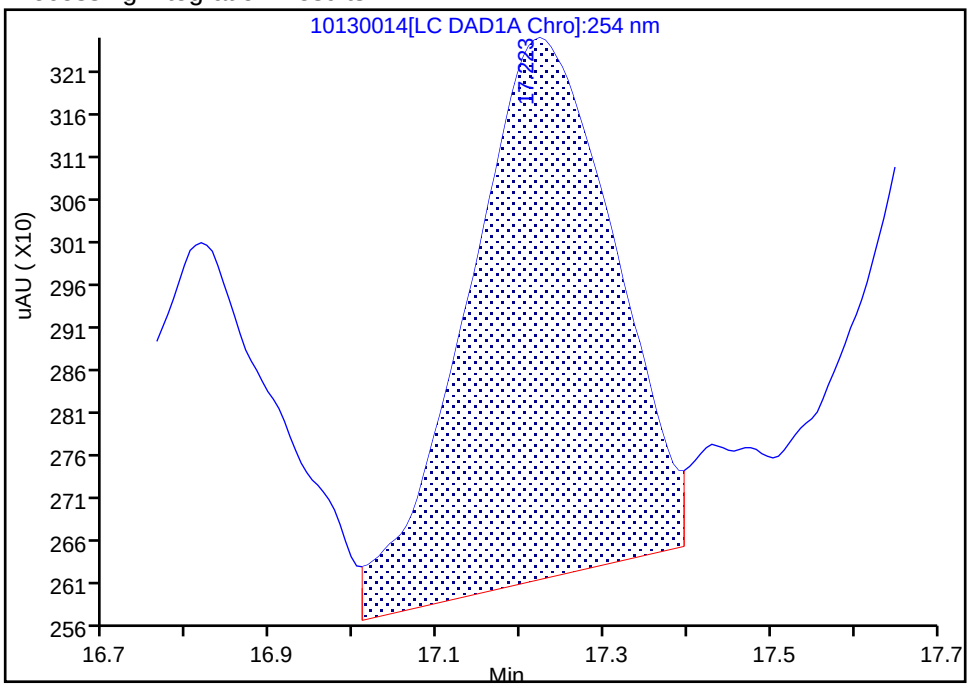
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

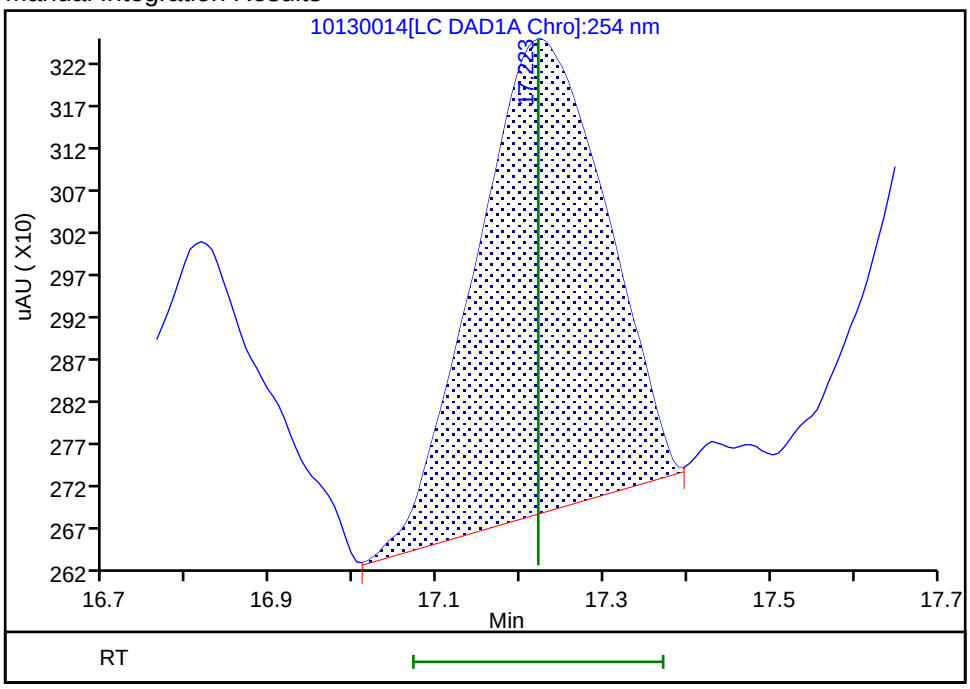
Processing Integration Results

RT: 17.22
Area: 7815
Amount: 0.023174
Amount Units: ug/ml



Manual Integration Results

RT: 17.22
Area: 6145
Amount: 0.018802
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

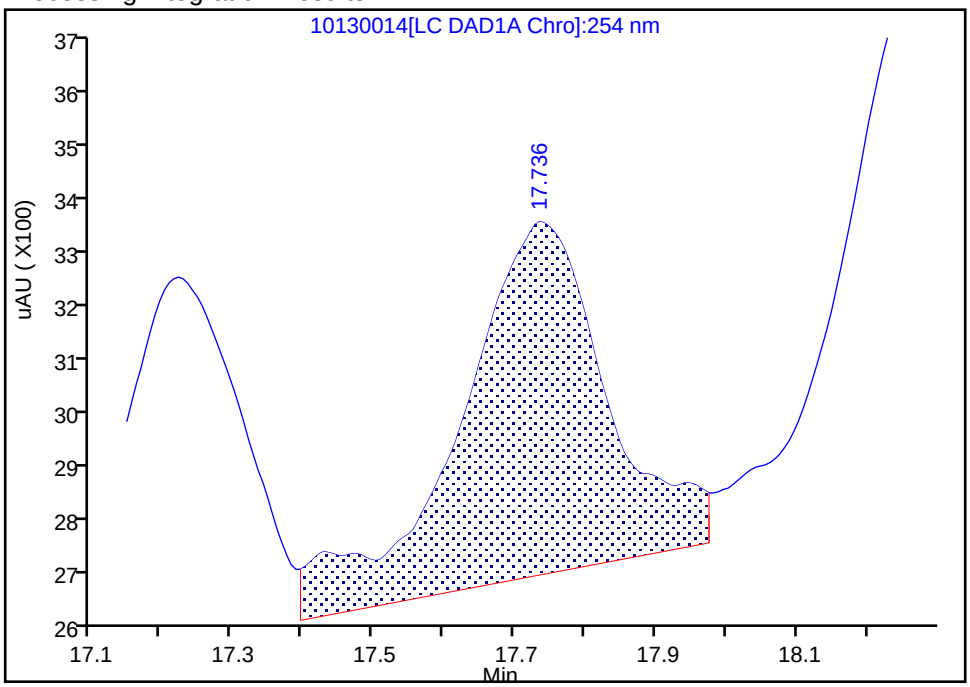
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

16 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

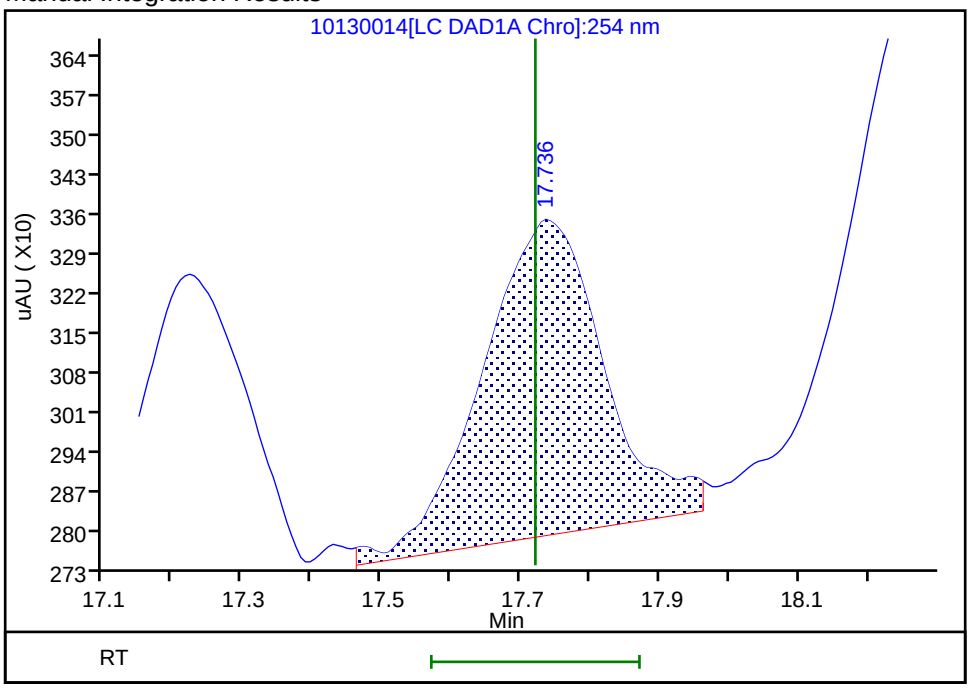
Processing Integration Results

RT: 17.74
Area: 9033
Amount: 0.027663
Amount Units: ug/ml



Manual Integration Results

RT: 17.74
Area: 6830
Amount: 0.021833
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:53
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

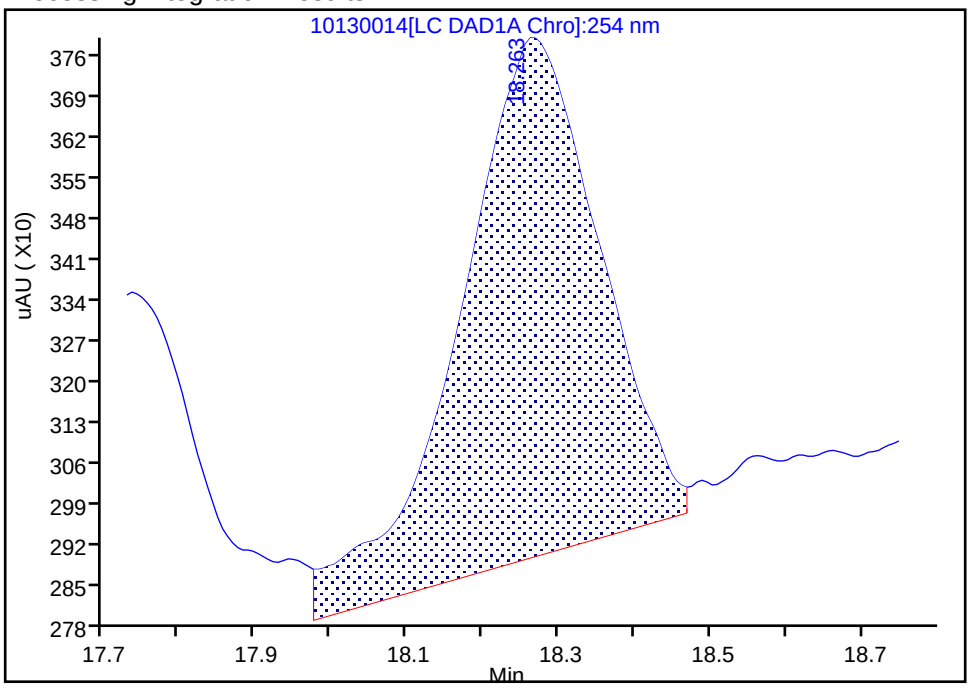
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

17 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

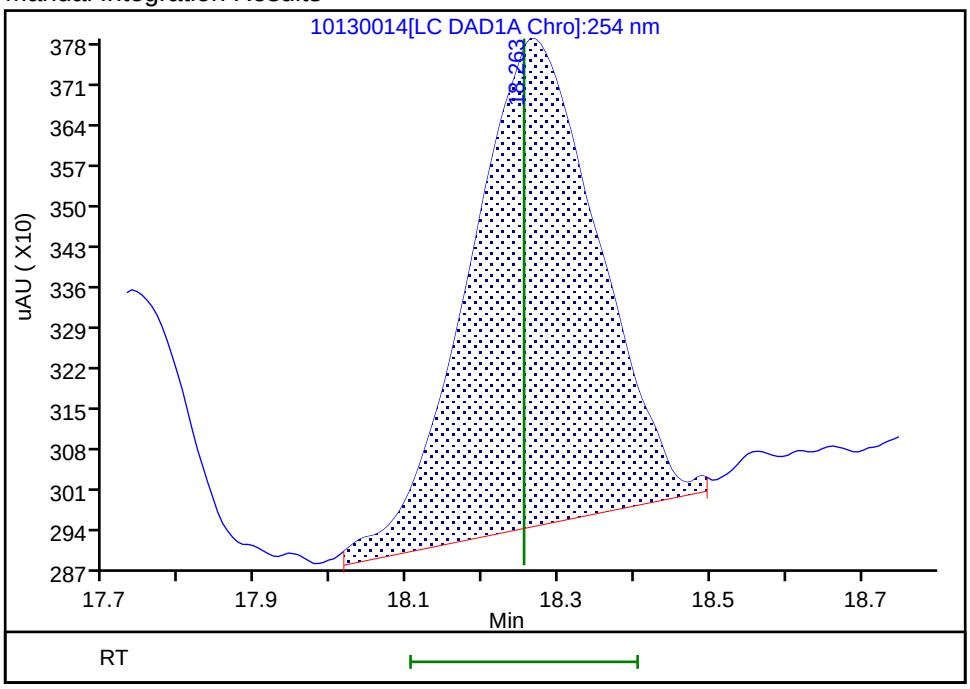
Processing Integration Results

RT: 18.26
Area: 11468
Amount: 0.023355
Amount Units: ug/ml



Manual Integration Results

RT: 18.26
Area: 10063
Amount: 0.020865
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:56:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

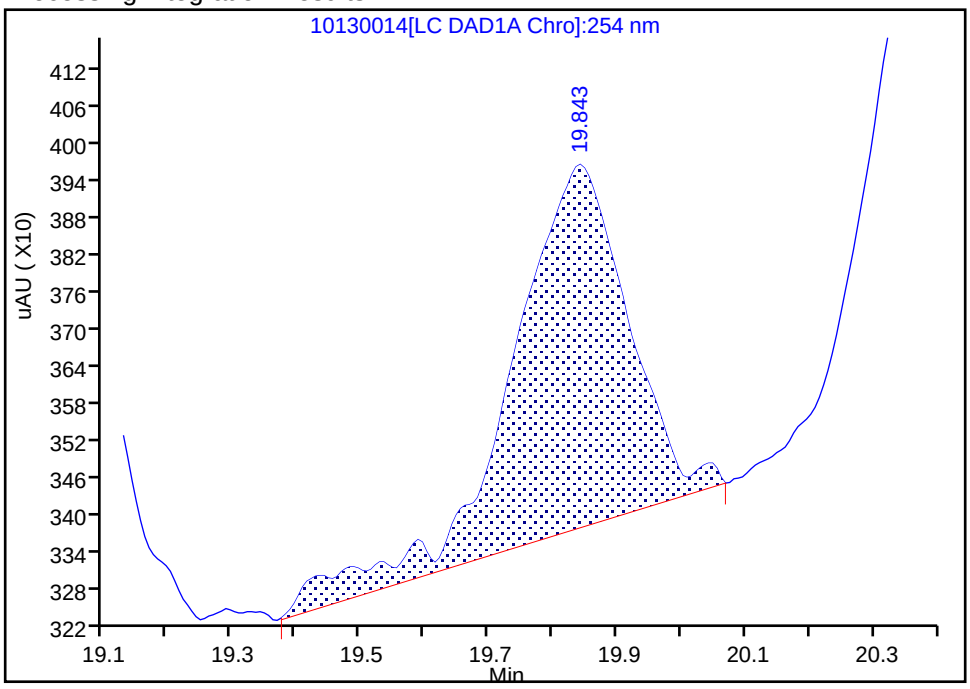
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

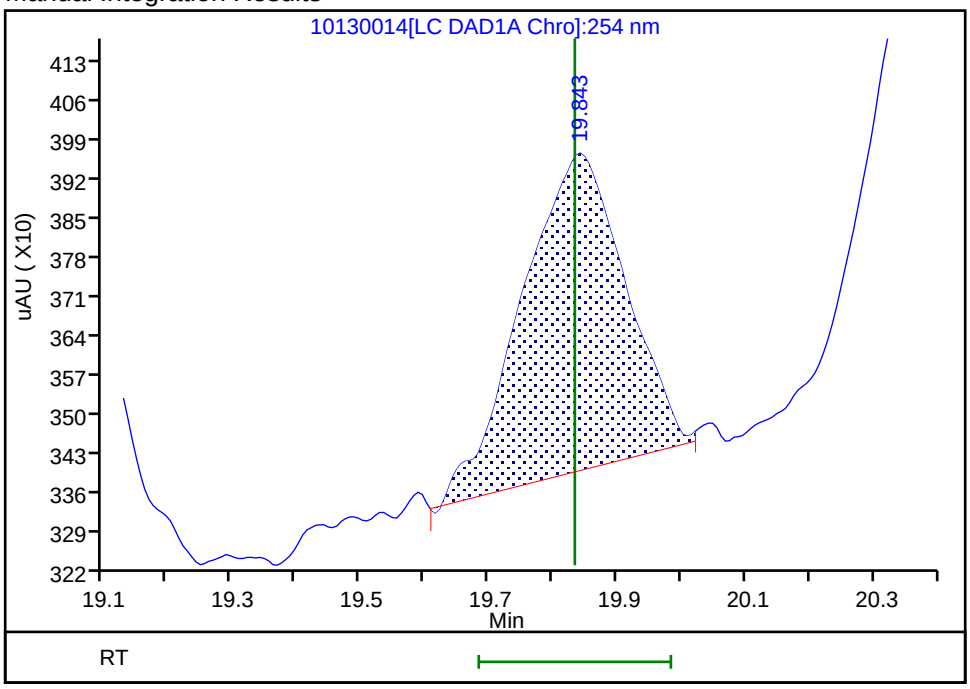
Processing Integration Results

RT: 19.84
Area: 7496
Amount: 0.022302
Amount Units: ug/ml



Manual Integration Results

RT: 19.84
Area: 6342
Amount: 0.019281
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:12
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

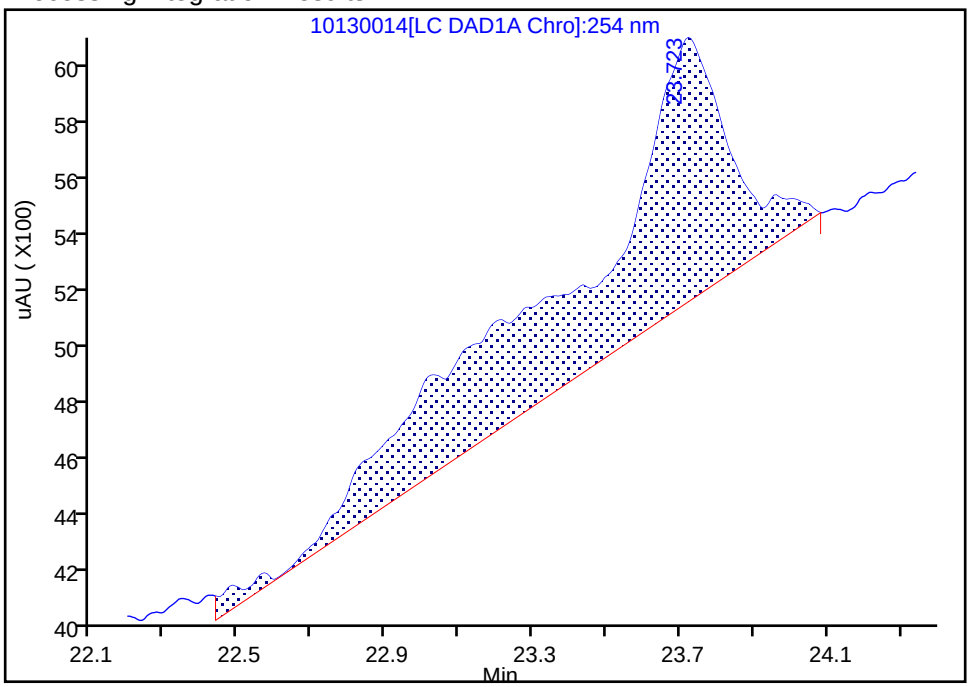
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 Tetryl, CAS: 479-45-8

Signal: 1

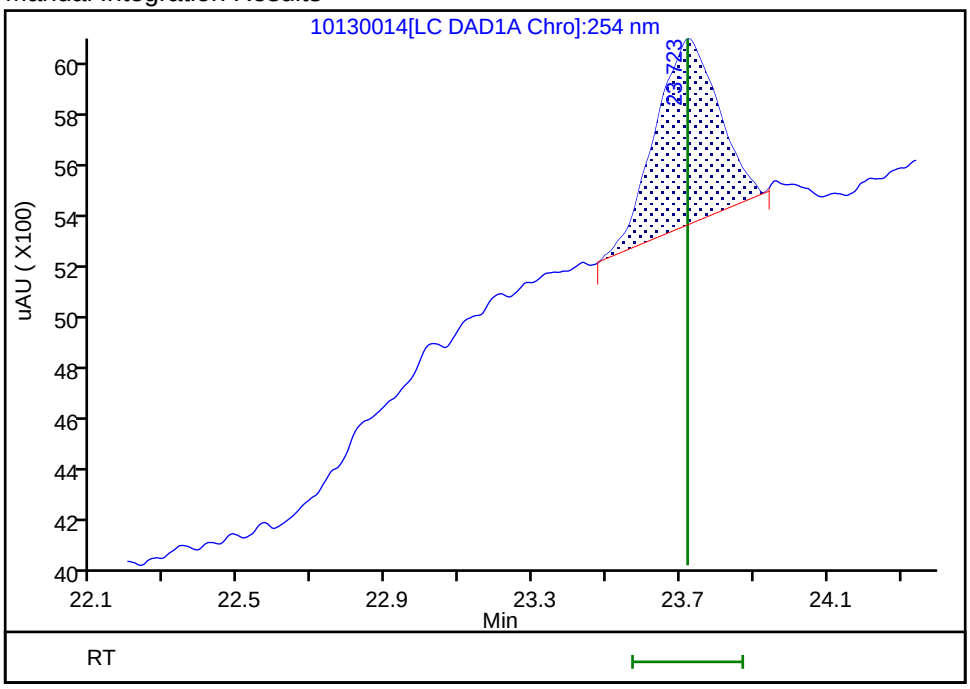
Processing Integration Results

RT: 23.72
Area: 27398
Amount: 0.052908
Amount Units: ug/ml



Manual Integration Results

RT: 23.72
Area: 8216
Amount: 0.021061
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:18
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

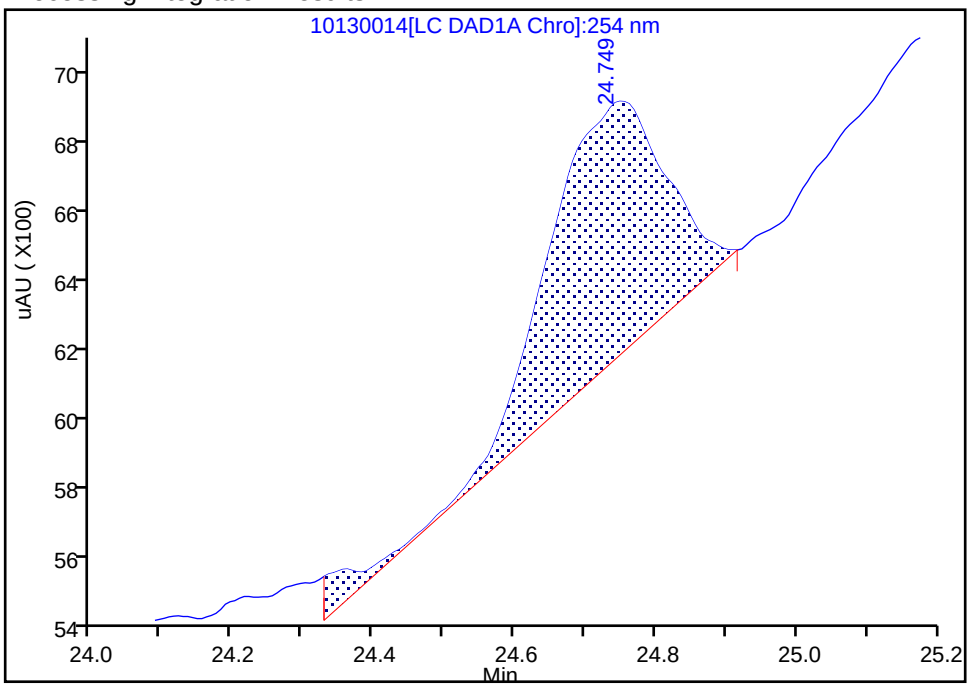
Data File:	\\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D				
Injection Date:	13-Oct-2018 20:28:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	HKF	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

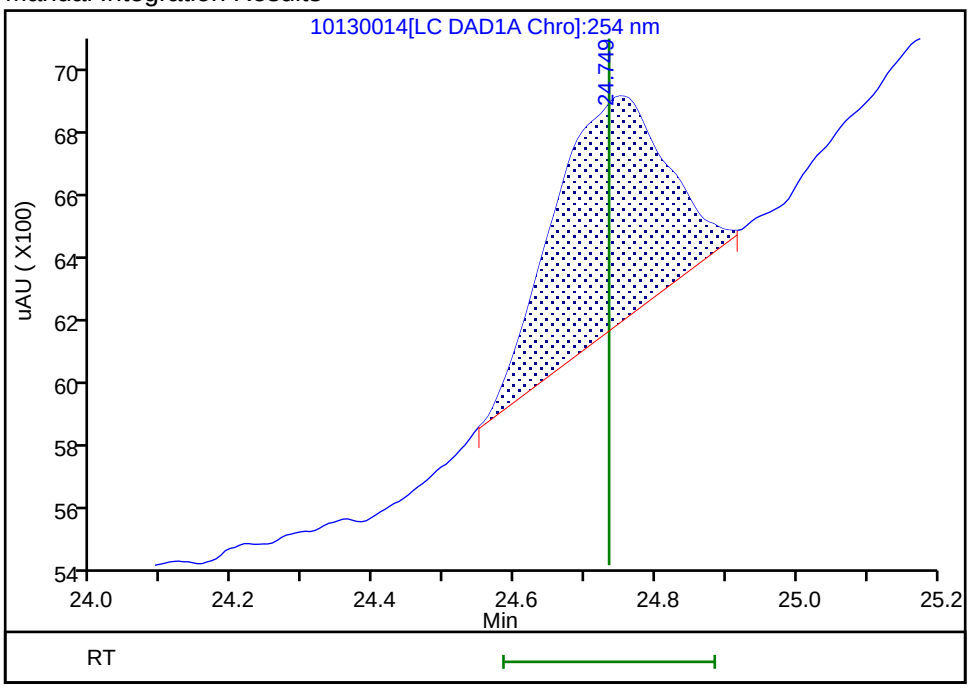
Processing Integration Results

RT: 24.75
Area: 8971
Amount: 0.019743
Amount Units: ug/ml



Manual Integration Results

RT: 24.75
Area: 8290
Amount: 0.018500
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:24

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

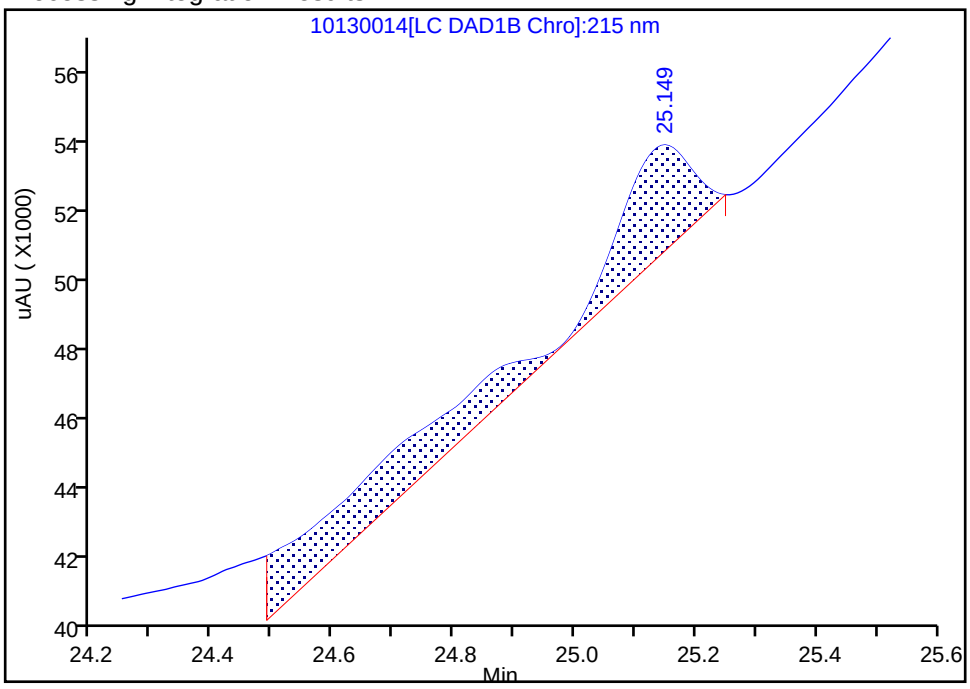
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D
Injection Date: 13-Oct-2018 20:28:27 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 1
Client ID:
Operator ID: HKF ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Detector LC DAD1B, 215 nm

23 PETN, CAS: 78-11-5

Signal: 1

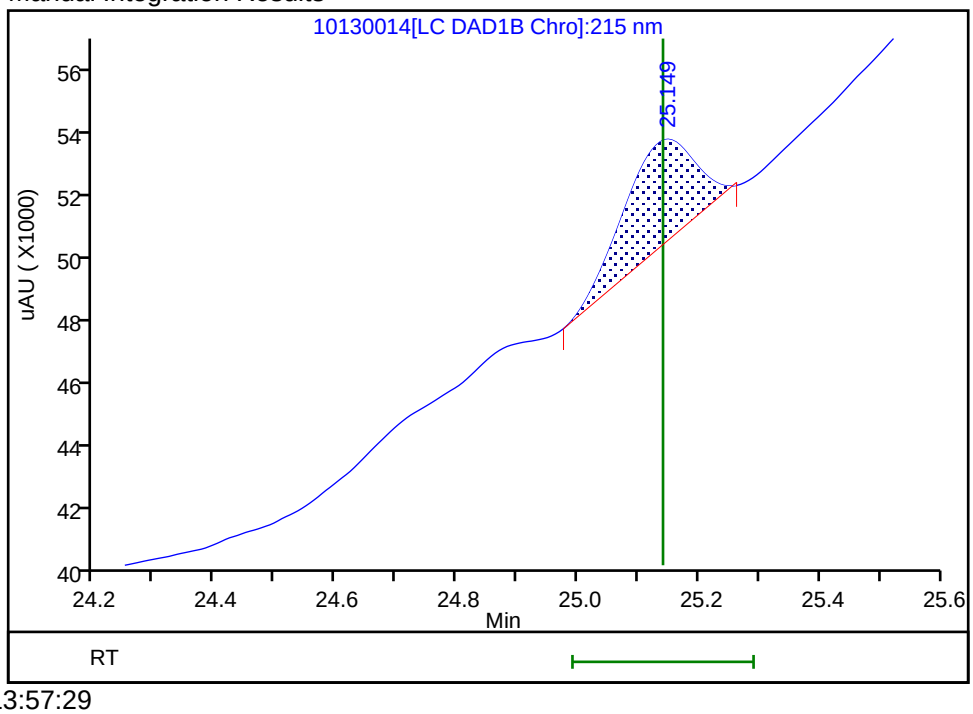
Processing Integration Results

RT: 25.15
Area: 58094
Amount: 0.293396
Amount Units: ug/ml



Manual Integration Results

RT: 25.15
Area: 25286
Amount: 0.179625
Amount Units: ug/ml



Reviewer: fiedlerh, 14-Oct-2018 13:57:29
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
HMX	6.625	6.622	6.623	6.622	6.624	6.625	6.624	6.622			6.472 - 6.772	6.623
RDX	7.718	7.722	7.723	7.722	7.717	7.719	7.724	7.715			7.572 - 7.872	7.720
Picric acid	8.065	8.062	8.056	8.049	8.037	8.025	8.018	7.968			7.899 - 8.199	8.035
1,3,5-Trinitrobenzene	8.865	8.869	8.869	8.862	8.857	8.859	8.864	8.855			8.712 - 9.012	8.863
1,3-Dinitrobenzene	9.512	9.516	9.516	9.509	9.503	9.512	9.511	9.502			9.359 - 9.659	9.510
Nitrobenzene	9.898	9.902	9.902	9.895	9.890	9.892	9.898	9.888			9.745 - 10.045	9.896
Tetryl	10.218	10.216	10.216	10.209	10.210	10.212	10.211	10.208			10.059 - 10.359	10.213
Nitroglycerin	10.725	10.722	10.722	10.715	10.710	10.712	10.711	10.708			10.565 - 10.865	10.716
2,4,6-Trinitrotoluene	11.165	11.162	11.162	11.155	11.157	11.159	11.158	11.155			11.055 - 11.255	11.159
4-Amino-2,6-dinitrotoluene	11.318	11.316	11.322	11.315	11.310	11.312	11.311	11.308			11.215 - 11.415	11.314
2-Amino-4,6-dinitrotoluene	11.598	11.596	11.602	11.595	11.590	11.592	11.591	11.588			11.495 - 11.695	11.594
2,6-Dinitrotoluene	11.765	11.756	11.762	11.755	11.750	11.752	11.751	11.748			11.655 - 11.855	11.755
2,4-Dinitrotoluene	11.952	11.949	11.956	11.942	11.943	11.945	11.944	11.942			11.842 - 12.042	11.947
2-Nitrotoluene	12.785	12.789	12.789	12.782	12.777	12.785	12.778	12.775			12.632 - 12.932	12.783
4-Nitrotoluene	13.218	13.216	13.216	13.209	13.210	13.212	13.211	13.208			13.059 - 13.359	13.213
3-Nitrotoluene	13.812	13.809	13.809	13.802	13.797	13.799	13.798	13.795			13.652 - 13.952	13.803
PETN		14.916	14.916	14.909	14.910	14.905	14.904	14.895			14.759 - 15.059	14.908
1,2-Dinitrobenzene	8.705	8.702	8.703	8.702	8.697	8.699	8.704	8.695			8.552 - 8.852	8.701

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
HMX	80950 85940	83640 87649	81370 87246	83844 88926	Ave		84945.5714				3.5		20.0			
RDX	102150 107003	101000 105186	105630 105400	103860 106390	Ave		104577.327				2.0		20.0			
Picric acid	93950 80905	89880 82509	80500 84211	76192 86576	Ave		84340.3214				6.7		20.0			
1,3,5-Trinitrobenzene	202100 234028	227660 235761	222530 236230	227420 241536	Ave		228408.166				5.4		20.0			
1,3-Dinitrobenzene	277572 307465	303437 304447	303027 304477	298725 309038	Ave		301023.443				3.3		20.0			
Nitrobenzene	191717 200245	201876 200781	198214 198631	193980 204804	Ave		198780.920				2.1		20.0			
Tetryl	139850 166665	164520 170279	162800 170312	160332 172830	Ave		163448.446				6.4		20.0			
Nitroglycerin	59530 70785	65386 70242	68459 70136	68518 70507	Ave		67945.3646				5.6		20.0			
2,4,6-Trinitrotoluene	206026 213254	224442 215804	210707 214814	209992 220784	Ave		214477.993				2.8		20.0			
4-Amino-2,6-dinitrotoluene	173779 167448	169831 161815	164606 161970	161779 162780	Ave		165500.847				2.7		20.0			
2-Amino-4,6-dinitrotoluene	191376 201012	204327 198084	197906 202480	197823 202720	Ave		199465.924				2.1		20.0			
2,6-Dinitrotoluene	155783 152159	159342 155008	150588 150226	148247 153167	Ave		153065.012				2.3		20.0			
2,4-Dinitrotoluene	286926 302290	305649 297850	299481 296720	293297 303937	Ave		298268.777				2.0		20.0			
2-Nitrotoluene	137637 130803	137886 130219	132742 128507	127864 132138	Ave		132224.576				2.9		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
4-Nitrotoluene	117281 112786	117211 112420	114412 111061	110291 113768	Ave		113653.797				2.3		20.0			
3-Nitrotoluene	161604 145301	155100 144859	146165 142855	142582 146418	Ave		148110.392				4.5		20.0			
PETN	 76935	68194 76788	73842 76779	74512 77633	Ave		74954.8292				4.4		20.0			
1,2-Dinitrobenzene	113900 131463	133300 131203	126380 133312	125372 134889	Ave		128727.320				5.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
HMX	Ave	1619 61354	4182 87246	8137 222315	20961	34376	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	2043 73630	5050 105400	10563 265976	25965	42801	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Picric acid	Ave	1879 57756	4494 84211	8050 216440	19048	32362	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3,5-Trinitrobenzene	Ave	4042 165033	11383 236230	22253 603841	56855	93611	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3-Dinitrobenzene	Ave	5557 213326	15187 304781	30333 773367	74756	123109	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Ave	3842 140828	10114 199028	19861 513035	48592	80258	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
Tetryl	Ave	2797 119195	8226 170312	16280 432075	40083	66666	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	11906 491693	32693 701363	68459 1762679	171294	283140	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2,4,6-Trinitrotoluene	Ave	4137 151667	11267 215673	21155 554169	52708	85643	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	3486 113610	8517 162456	16510 408172	40566	67180	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2-Amino-4,6-dinitrotoluene	Ave	3839 139075	10247 203087	19850 508320	49604	80646	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,6-Dinitrotoluene	Ave	3125 108831	7991 150677	15104 384067	37173	61046	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	5750 208912	15313 297313	30008 761362	73471	121158	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
2-Nitrotoluene	Ave	2761 91427	6915 128893	13314 331335	32062	52478	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	2355 79009	5884 111505	11487 285557	27683	45295	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116270-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3-Nitrotoluene	Ave	3245 101807	7786 143426	14675 367509	35788	58353	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	 537514	34097 767790	73842 1940836	186281	307741	 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Ave	2278 91842	6665 133312	12638 337223	31343	52585	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:
Ave = Average

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D
Lims ID: IC MAIN L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-May-2018 10:34:02 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L8
Misc. Info.: 280-0070054-007
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:16 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:54:21

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	222315	2.50	2.62	
5 RDX	1	7.715	7.722	-0.007	265976	2.50	2.54	
6 2,4,6-Trinitrophenol	1	7.968	8.049	-0.081	216440	2.50	2.57	
$ 7 1,2-Dinitrobenzene	1	8.695	8.702	-0.007	337223	2.50	2.62	
8 1,3,5-Trinitrobenzene	1	8.855	8.862	-0.007	603841	2.50	2.64	
9 1,3-Dinitrobenzene	1	9.502	9.509	-0.007	773367	2.50	2.57	
11 Nitrobenzene	1	9.888	9.895	-0.007	513035	2.51	2.58	
12 Tetryl	1	10.208	10.209	-0.001	432075	2.50	2.64	
13 Nitroglycerin	2	10.708	10.715	-0.007	1762679	25.0	25.9	
14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	554169	2.51	2.58	
15 4-Amino-2,6-dinitrotoluene	1	11.308	11.315	-0.007	408172	2.51	2.47	
16 2-Amino-4,6-dinitrotoluene	1	11.588	11.595	-0.007	508320	2.51	2.55	
17 2,6-Dinitrotoluene	1	11.748	11.755	-0.007	384067	2.51	2.51	
18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	761362	2.51	2.55	
19 o-Nitrotoluene	1	12.775	12.782	-0.007	331335	2.51	2.51	
20 p-Nitrotoluene	1	13.208	13.209	-0.001	285557	2.51	2.51	
21 m-Nitrotoluene	1	13.795	13.802	-0.007	367509	2.51	2.48	
22 PETN	2	14.895	14.909	-0.014	1940836	25.0	25.9	

Reagents:

8330IntermStk_00055 Amount Added: 250.00 Units: uL

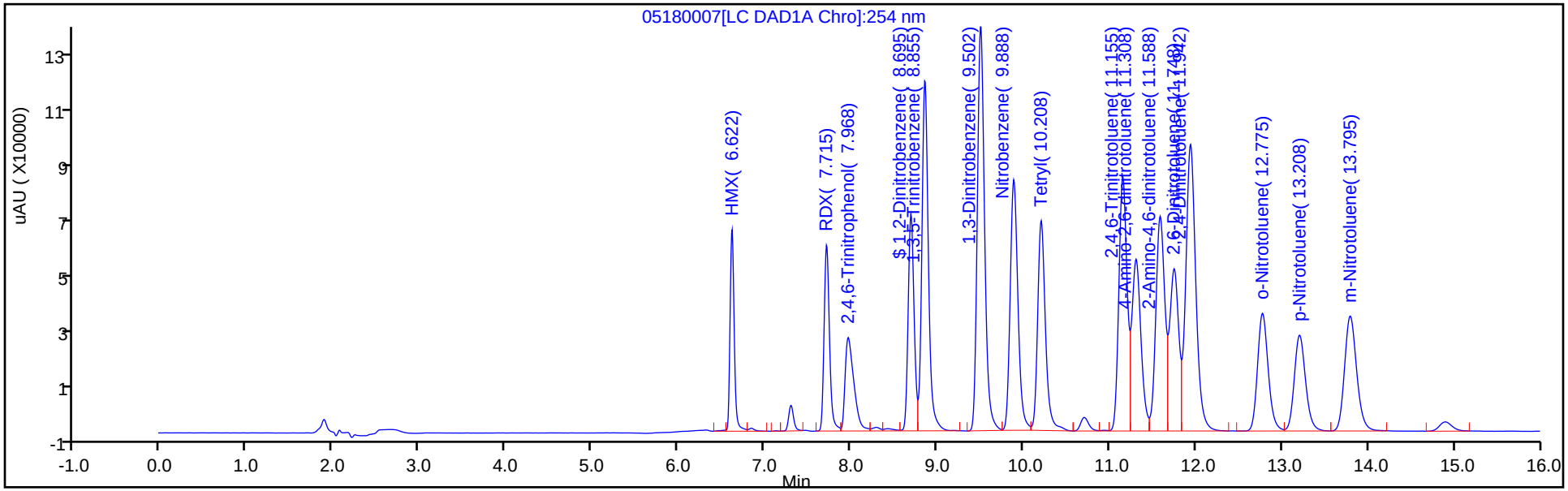
Report Date: 22-May-2018 12:01:17 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

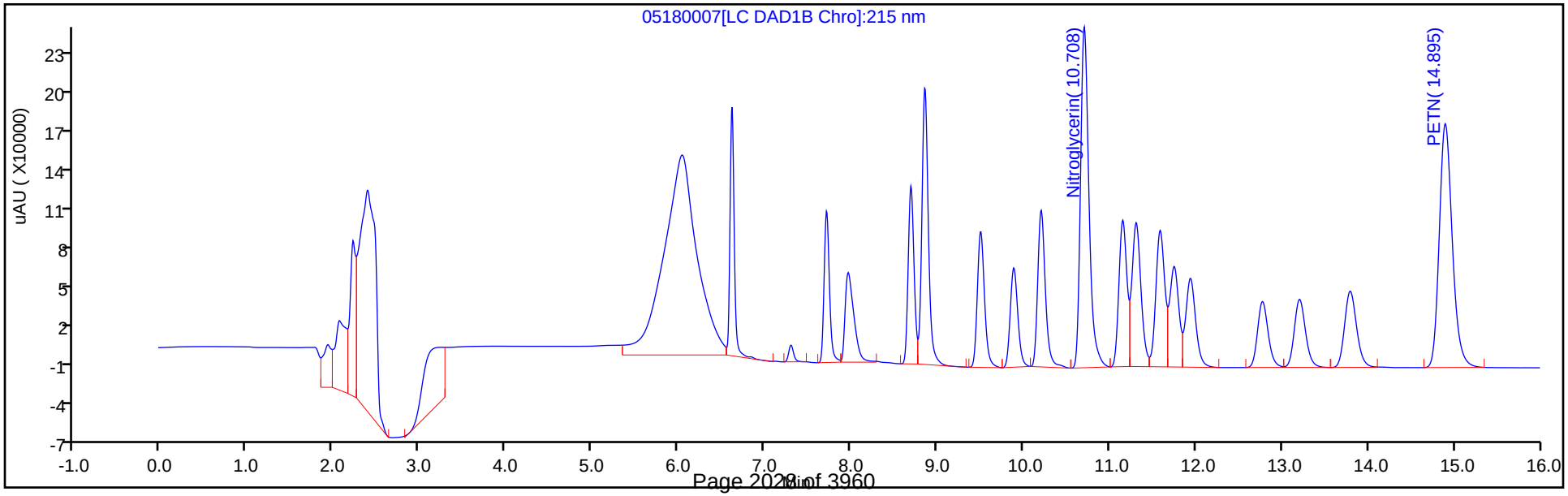
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D

Injection Date:	18-May-2018 10:34:02	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D
Lims ID: IC MAIN L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-May-2018 10:57:00 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L7
Misc. Info.: 280-0070054-008
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:17 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:06:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	87246	1.00	1.03	
5 RDX	1	7.724	7.722	0.002	105400	1.00	1.01	
6 2,4,6-Trinitrophenol	1	8.018	8.049	-0.031	84211	1.00	1.00	
$ 7 1,2-Dinitrobenzene	1	8.704	8.702	0.002	133312	1.00	1.04	
8 1,3,5-Trinitrobenzene	1	8.864	8.862	0.002	236230	1.00	1.03	
9 1,3-Dinitrobenzene	1	9.511	9.509	0.002	304781	1.00	1.01	
11 Nitrobenzene	1	9.898	9.895	0.003	199028	1.00	1.00	
12 Tetryl	1	10.211	10.209	0.002	170312	1.00	1.04	
13 Nitroglycerin	2	10.711	10.715	-0.004	701363	10.0	10.3	
14 2,4,6-Trinitrotoluene	1	11.158	11.155	0.003	215673	1.00	1.01	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.315	-0.004	162456	1.00	0.9816	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.595	-0.004	203087	1.00	1.02	
17 2,6-Dinitrotoluene	1	11.751	11.755	-0.004	150677	1.00	0.9844	
18 2,4-Dinitrotoluene	1	11.944	11.942	0.002	297313	1.00	1.00	
19 o-Nitrotoluene	1	12.778	12.782	-0.004	128893	1.00	0.9748	
20 p-Nitrotoluene	1	13.211	13.209	0.002	111505	1.00	0.9811	
21 m-Nitrotoluene	1	13.798	13.802	-0.004	143426	1.00	0.9684	
22 PETN	2	14.904	14.909	-0.005	767790	10.0	10.2	

Reagents:

8330IntermStk_00055 Amount Added: 100.00 Units: uL

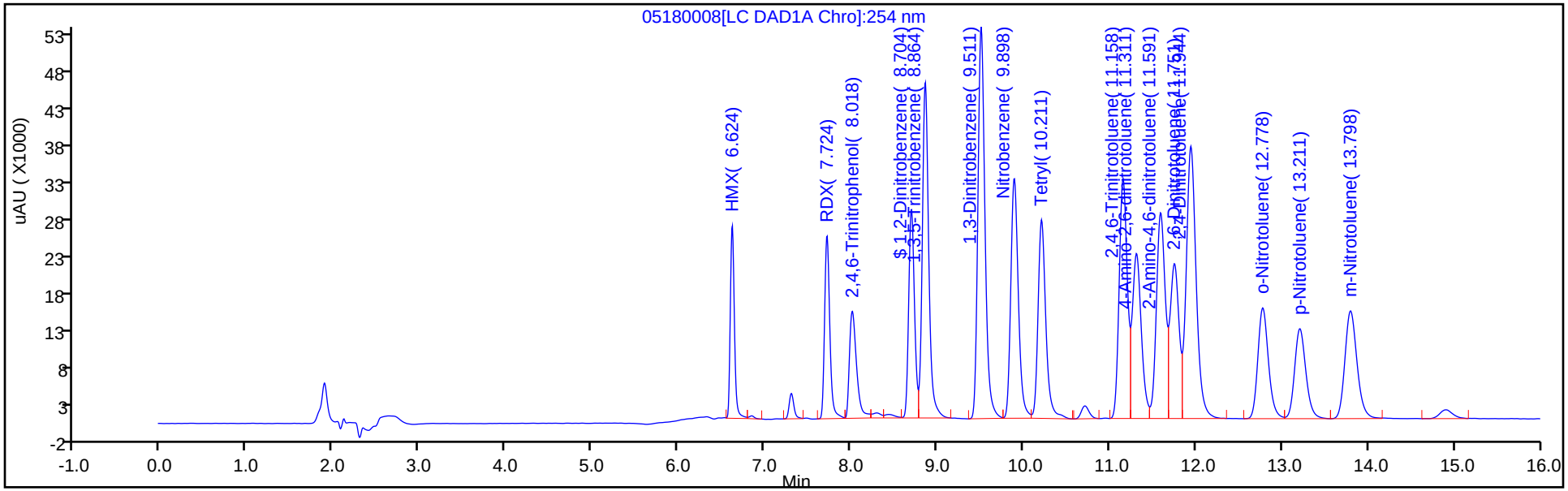
Report Date: 22-May-2018 12:01:18 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

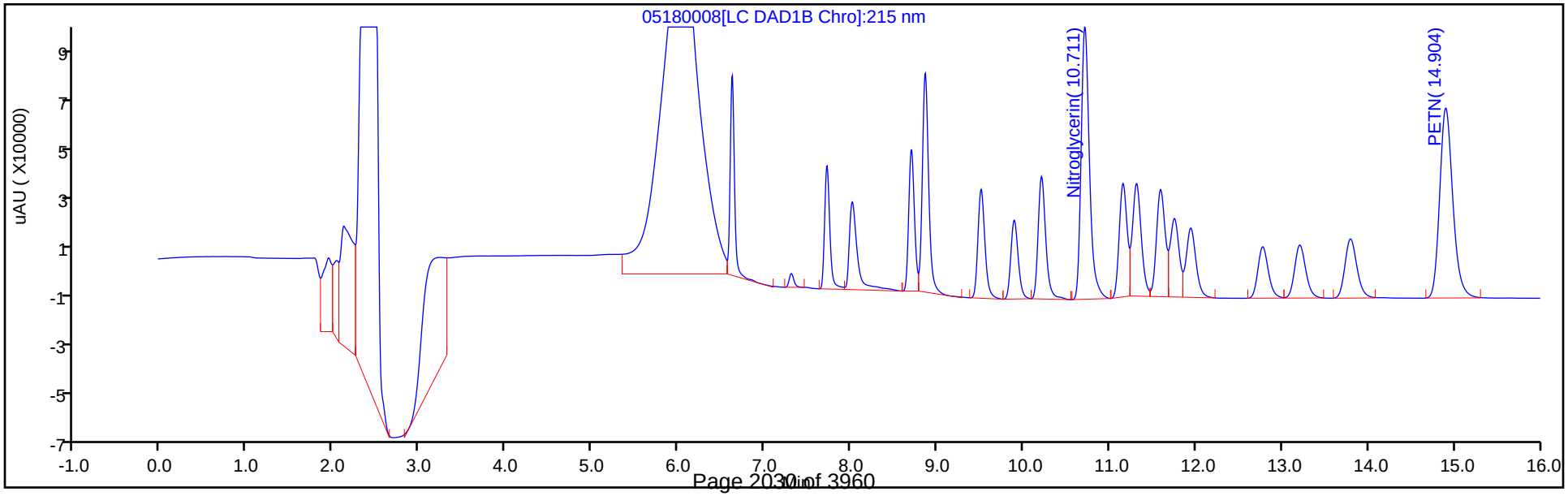
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D

Injection Date:	18-May-2018 10:57:00	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Report Date: 22-May-2018 12:01:20 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D
Lims ID: IC MAIN L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-May-2018 11:19:59 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L6
Misc. Info.: 280-0070054-009
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:19 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:09:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.625	6.622	0.003	61354	0.7000	0.7223	
5 RDX	1	7.719	7.722	-0.003	73630	0.7000	0.7041	
6 2,4,6-Trinitrophenol	1	8.025	8.049	-0.024	57756	0.7000	0.6848	
$ 7 1,2-Dinitrobenzene	1	8.699	8.702	-0.003	91842	0.7000	0.7135	
8 1,3,5-Trinitrobenzene	1	8.859	8.862	-0.003	165033	0.7000	0.7225	
9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	213326	0.7007	0.7087	
11 Nitrobenzene	1	9.892	9.895	-0.003	140828	0.7014	0.7085	
12 Tetryl	1	10.212	10.209	0.003	119195	0.7000	0.7293	
13 Nitroglycerin	2	10.712	10.715	-0.003	491693	7.00	7.24	
14 2,4,6-Trinitrotoluene	1	11.159	11.155	0.004	151667	0.7028	0.7071	
15 4-Amino-2,6-dinitrotoluene	1	11.312	11.315	-0.003	113610	0.7021	0.6865	
16 2-Amino-4,6-dinitrotoluene	1	11.592	11.595	-0.003	139075	0.7021	0.6972	
17 2,6-Dinitrotoluene	1	11.752	11.755	-0.003	108831	0.7021	0.7110	
18 2,4-Dinitrotoluene	1	11.945	11.942	0.003	208912	0.7014	0.7004	
19 o-Nitrotoluene	1	12.785	12.782	0.003	91427	0.7021	0.6915	
20 p-Nitrotoluene	1	13.212	13.209	0.003	79009	0.7028	0.6952	
21 m-Nitrotoluene	1	13.799	13.802	-0.003	101807	0.7028	0.6874	
22 PETN	2	14.905	14.909	-0.004	537514	7.00	7.17	

Reagents:

8330IntermStk_00055 Amount Added: 70.00 Units: uL

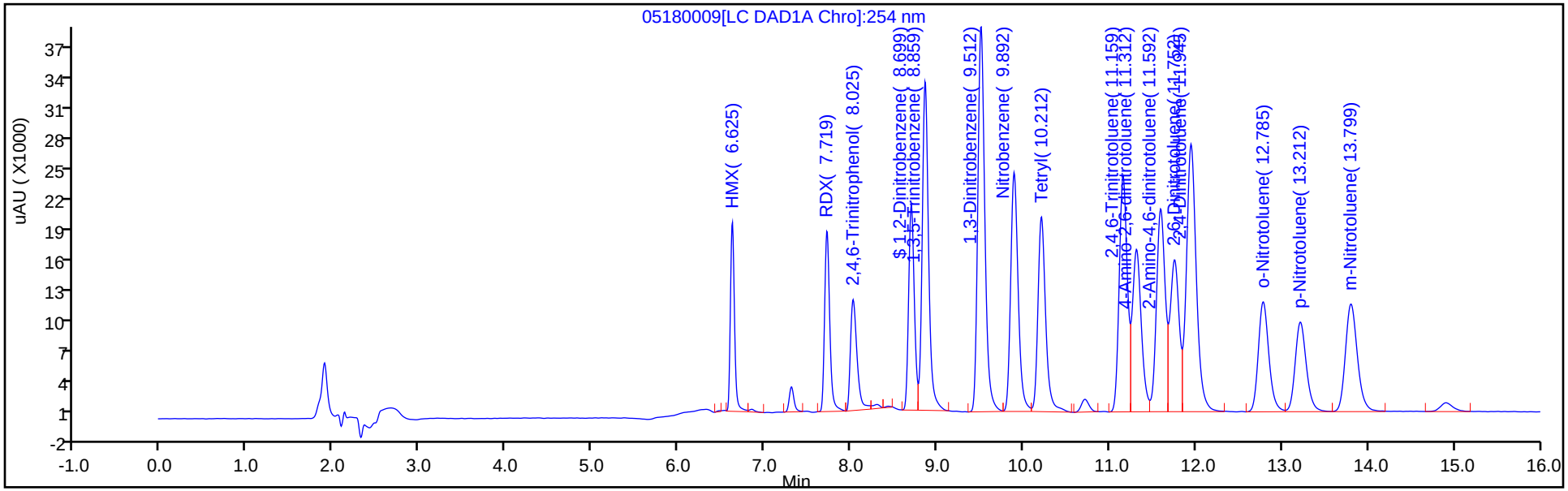
Report Date: 22-May-2018 12:01:20 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

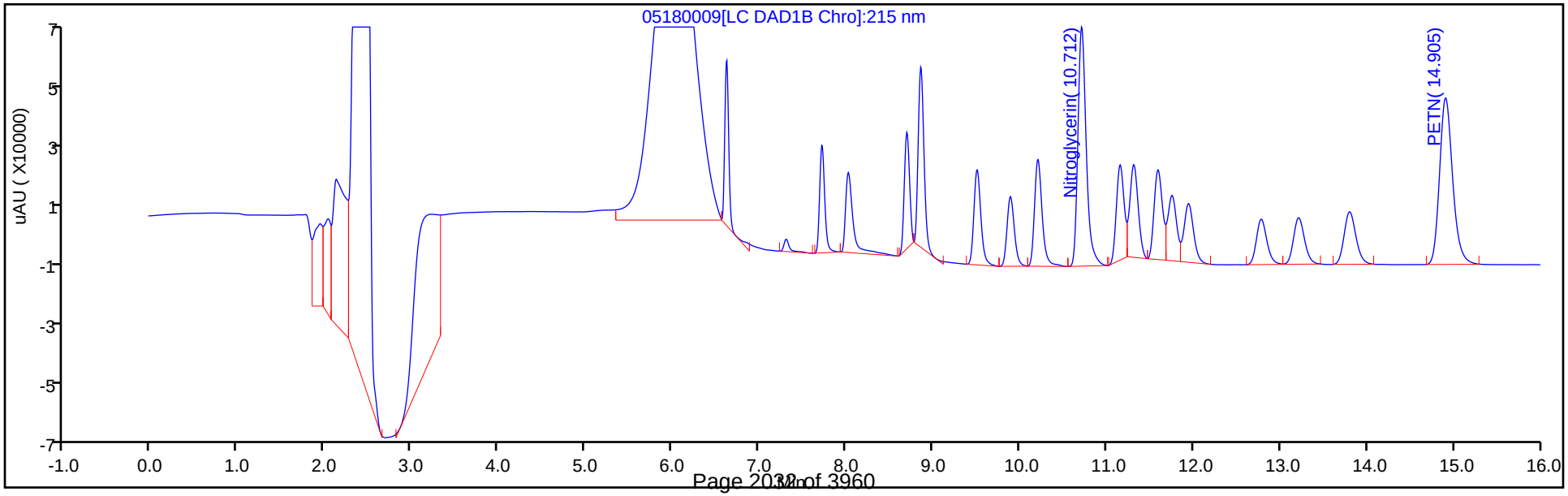
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D

Injection Date:	18-May-2018 11:19:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D
Lims ID: IC MAIN L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-May-2018 11:42:59 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L5
Misc. Info.: 280-0070054-010
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:21 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:13:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	34376	0.4000	0.4047	
5 RDX	1	7.717	7.722	-0.005	42801	0.4000	0.4093	
6 2,4,6-Trinitrophenol	1	8.037	8.049	-0.012	32362	0.4000	0.3837	
$ 7 1,2-Dinitrobenzene	1	8.697	8.702	-0.005	52585	0.4000	0.4085	
8 1,3,5-Trinitrobenzene	1	8.857	8.862	-0.005	93611	0.4000	0.4098	
9 1,3-Dinitrobenzene	1	9.503	9.509	-0.006	123109	0.4004	0.4090	
11 Nitrobenzene	1	9.890	9.895	-0.005	80258	0.4008	0.4038	
12 Tetryl	1	10.210	10.209	0.001	66666	0.4000	0.4079	
13 Nitroglycerin	2	10.710	10.715	-0.005	283140	4.00	4.17	
14 2,4,6-Trinitrotoluene	1	11.157	11.155	0.002	85643	0.4016	0.3993	
15 4-Amino-2,6-dinitrotoluene	1	11.310	11.315	-0.005	67180	0.4012	0.4059	
16 2-Amino-4,6-dinitrotoluene	1	11.590	11.595	-0.005	80646	0.4012	0.4043	
17 2,6-Dinitrotoluene	1	11.750	11.755	-0.005	61046	0.4012	0.3988	
18 2,4-Dinitrotoluene	1	11.943	11.942	0.001	121158	0.4008	0.4062	
19 o-Nitrotoluene	1	12.777	12.782	-0.005	52478	0.4012	0.3969	
20 p-Nitrotoluene	1	13.210	13.209	0.001	45295	0.4016	0.3985	
21 m-Nitrotoluene	1	13.797	13.802	-0.005	58353	0.4016	0.3940	
22 PETN	2	14.910	14.909	0.001	307741	4.00	4.11	

Reagents:

8330IntermStk_00055 Amount Added: 40.00 Units: uL

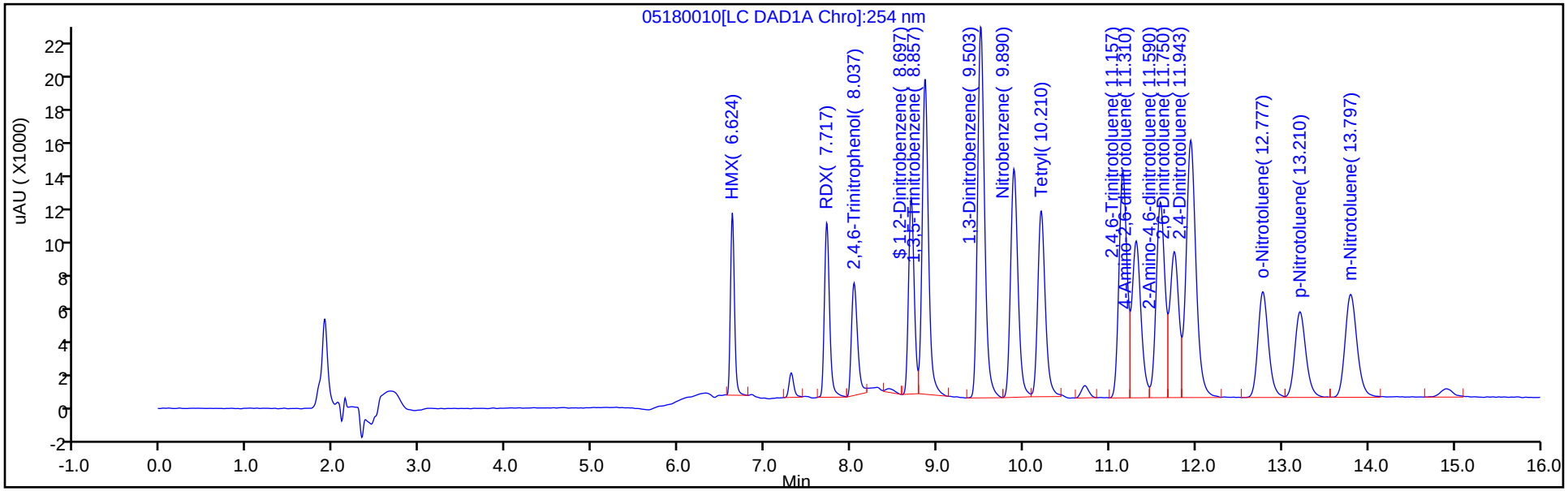
Report Date: 22-May-2018 12:01:22 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

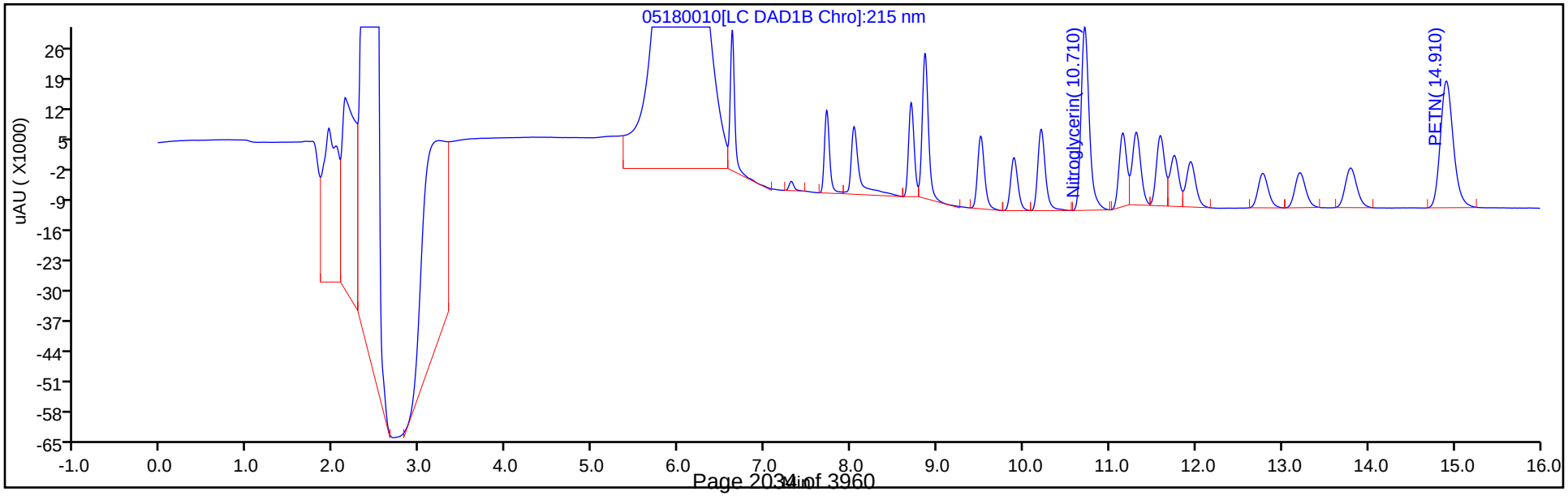
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D

Injection Date:	18-May-2018 11:42:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D
Lims ID: IC MAIN L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-May-2018 12:05:58 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L4
Misc. Info.: 280-0070054-011
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:23 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:16:46

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	20961	0.2500	0.2468	
5 RDX	1	7.722	7.722	0.000	25965	0.2500	0.2483	
6 2,4,6-Trinitrophenol	1	8.049	8.049	0.000	19048	0.2500	0.2258	
$ 7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	31343	0.2500	0.2435	
8 1,3,5-Trinitrobenzene	1	8.862	8.862	0.000	56855	0.2500	0.2489	
9 1,3-Dinitrobenzene	1	9.509	9.509	0.000	74756	0.2503	0.2483	
11 Nitrobenzene	1	9.895	9.895	0.000	48592	0.2505	0.2445	
12 Tetryl	1	10.209	10.209	0.000	40083	0.2500	0.2452	
13 Nitroglycerin	2	10.715	10.715	0.000	171294	2.50	2.52	
14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	52708	0.2510	0.2458	
15 4-Amino-2,6-dinitrotoluene	1	11.315	11.315	0.000	40566	0.2508	0.2451	
16 2-Amino-4,6-dinitrotoluene	1	11.595	11.595	0.000	49604	0.2508	0.2487	
17 2,6-Dinitrotoluene	1	11.755	11.755	0.000	37173	0.2508	0.2429	
18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	73471	0.2505	0.2463	
19 o-Nitrotoluene	1	12.782	12.782	0.000	32062	0.2508	0.2425	
20 p-Nitrotoluene	1	13.209	13.209	0.000	27683	0.2510	0.2436	
21 m-Nitrotoluene	1	13.802	13.802	0.000	35788	0.2510	0.2416	
22 PETN	2	14.909	14.909	0.000	186281	2.50	2.49	

Reagents:

8330IntermStk_00055 Amount Added: 25.00 Units: uL

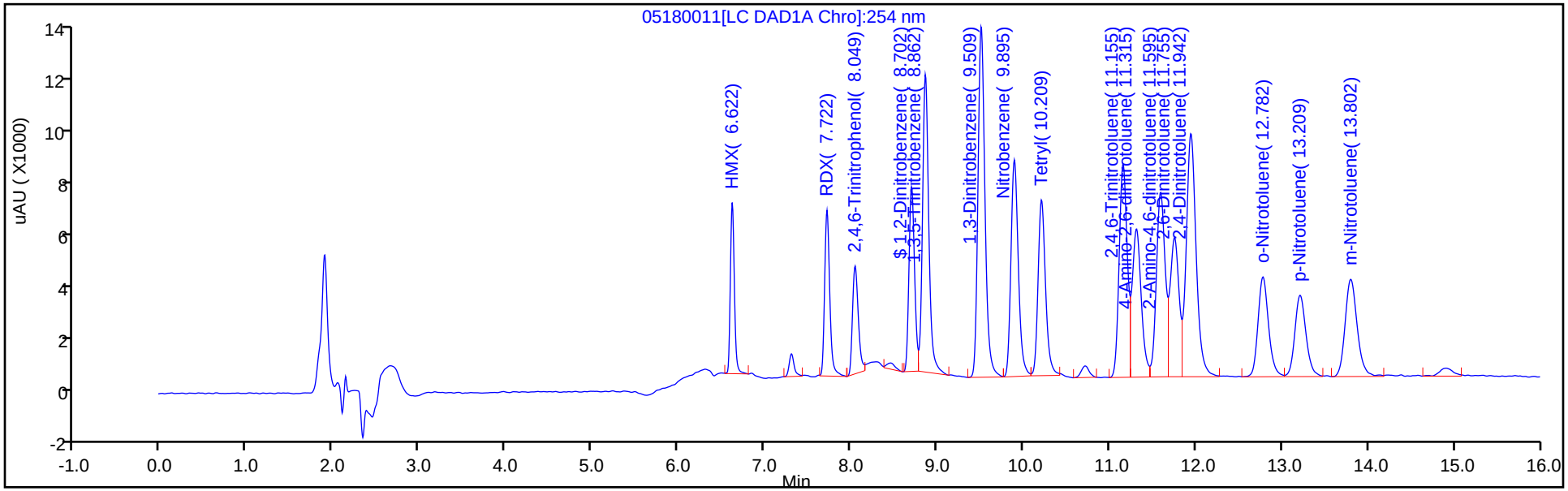
Report Date: 22-May-2018 12:01:24 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

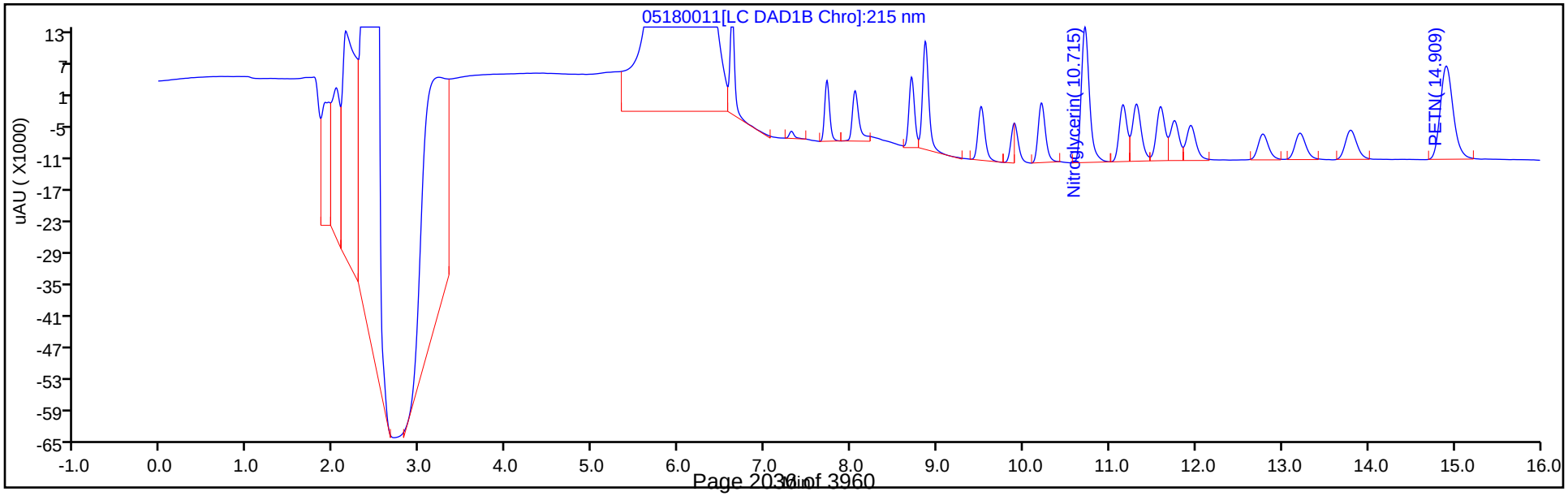
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D

Injection Date:	18-May-2018 12:05:58	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D
Lims ID: IC MAIN L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-May-2018 12:28:55 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L3
Misc. Info.: 280-0070054-012
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:24 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:17:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.623	6.622	0.001	8137	0.1000	0.0958	
5 RDX	1	7.723	7.722	0.001	10563	0.1000	0.1010	
6 2,4,6-Trinitrophenol	1	8.056	8.049	0.007	8050	0.1000	0.0954	
$ 7 1,2-Dinitrobenzene	1	8.703	8.702	0.001	12638	0.1000	0.0982	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	22253	0.1000	0.0974	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	30333	0.1001	0.1008	
11 Nitrobenzene	1	9.902	9.895	0.007	19861	0.1002	0.0999	
12 Tetryl	1	10.216	10.209	0.007	16280	0.1000	0.0996	
13 Nitroglycerin	2	10.722	10.715	0.007	68459	1.00	1.01	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	21155	0.1004	0.0986	
15 4-Amino-2,6-dinitrotoluene	1	11.322	11.315	0.007	16510	0.1003	0.0998	
16 2-Amino-4,6-dinitrotoluene	1	11.602	11.595	0.007	19850	0.1003	0.0995	
17 2,6-Dinitrotoluene	1	11.762	11.755	0.007	15104	0.1003	0.0987	
18 2,4-Dinitrotoluene	1	11.956	11.942	0.014	30008	0.1002	0.1006	
19 o-Nitrotoluene	1	12.789	12.782	0.007	13314	0.1003	0.1007	
20 p-Nitrotoluene	1	13.216	13.209	0.007	11487	0.1004	0.1011	
21 m-Nitrotoluene	1	13.809	13.802	0.007	14675	0.1004	0.0991	
22 PETN	2	14.916	14.909	0.007	73842	1.00	0.9852	

Reagents:

8330IntermStk_00055 Amount Added: 10.00 Units: uL

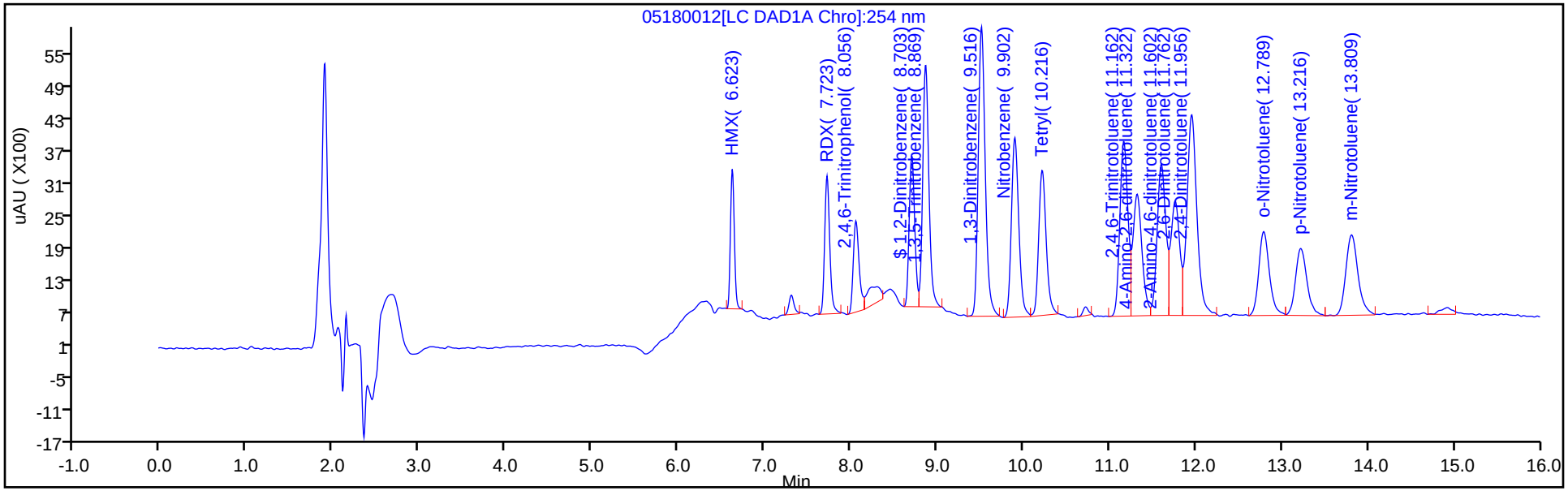
Report Date: 22-May-2018 12:01:25 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

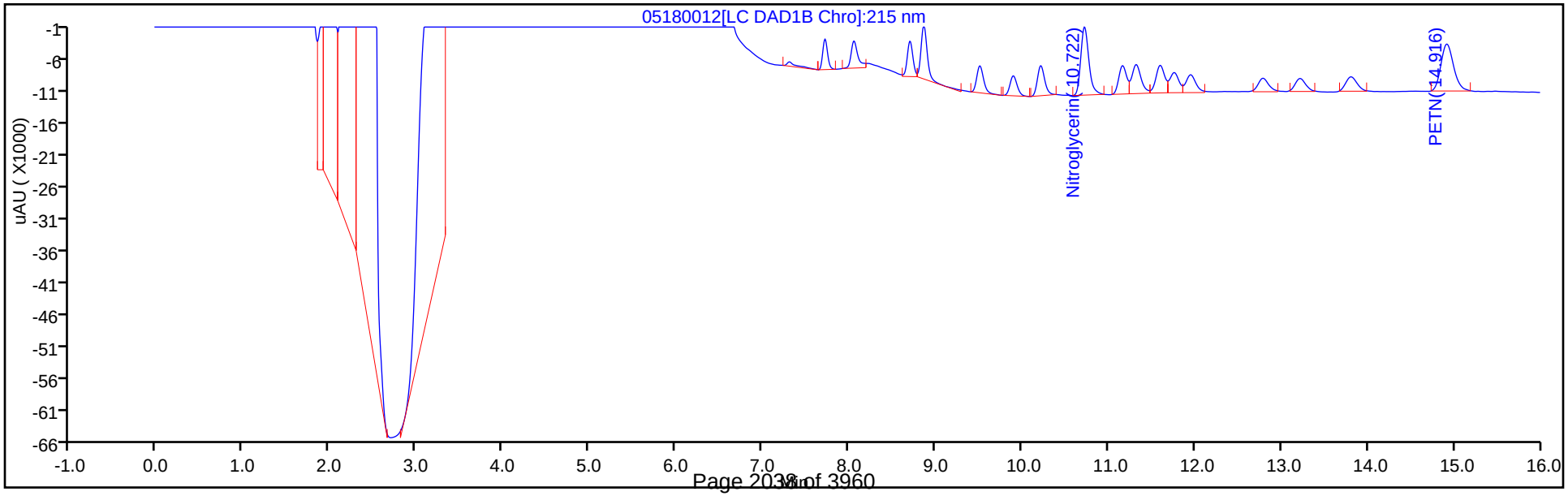
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D

Injection Date:	18-May-2018 12:28:55	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D
Lims ID: IC MAIN L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-May-2018 12:51:52 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L2
Misc. Info.: 280-0070054-013
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:26 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:08:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	4182	0.0500	0.0492	
5 RDX	1	7.722	7.722	0.000	5050	0.0500	0.0483	
6 2,4,6-Trinitrophenol	1	8.062	8.049	0.013	4494	0.0500	0.0533	
$ 7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	6665	0.0500	0.0518	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	11383	0.0500	0.0498	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	15187	0.0501	0.0505	
11 Nitrobenzene	1	9.902	9.895	0.007	10114	0.0501	0.0509	
12 Tetryl	1	10.216	10.209	0.007	8226	0.0500	0.0503	
13 Nitroglycerin	2	10.722	10.715	0.007	32693	0.5000	0.4812	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	11267	0.0502	0.0525	
15 4-Amino-2,6-dinitrotoluene	1	11.316	11.315	0.001	8517	0.0502	0.0515	
16 2-Amino-4,6-dinitrotoluene	1	11.596	11.595	0.001	10247	0.0502	0.0514	
17 2,6-Dinitrotoluene	1	11.756	11.755	0.001	7991	0.0502	0.0522	
18 2,4-Dinitrotoluene	1	11.949	11.942	0.007	15313	0.0501	0.0513	
19 o-Nitrotoluene	1	12.789	12.782	0.007	6915	0.0502	0.0523	
20 p-Nitrotoluene	1	13.216	13.209	0.007	5884	0.0502	0.0518	
21 m-Nitrotoluene	1	13.809	13.802	0.007	7786	0.0502	0.0526	
22 PETN	2	14.916	14.909	0.007	34097	0.5000	0.4549	

Reagents:

8330IntermStk_00055 Amount Added: 5.00 Units: uL

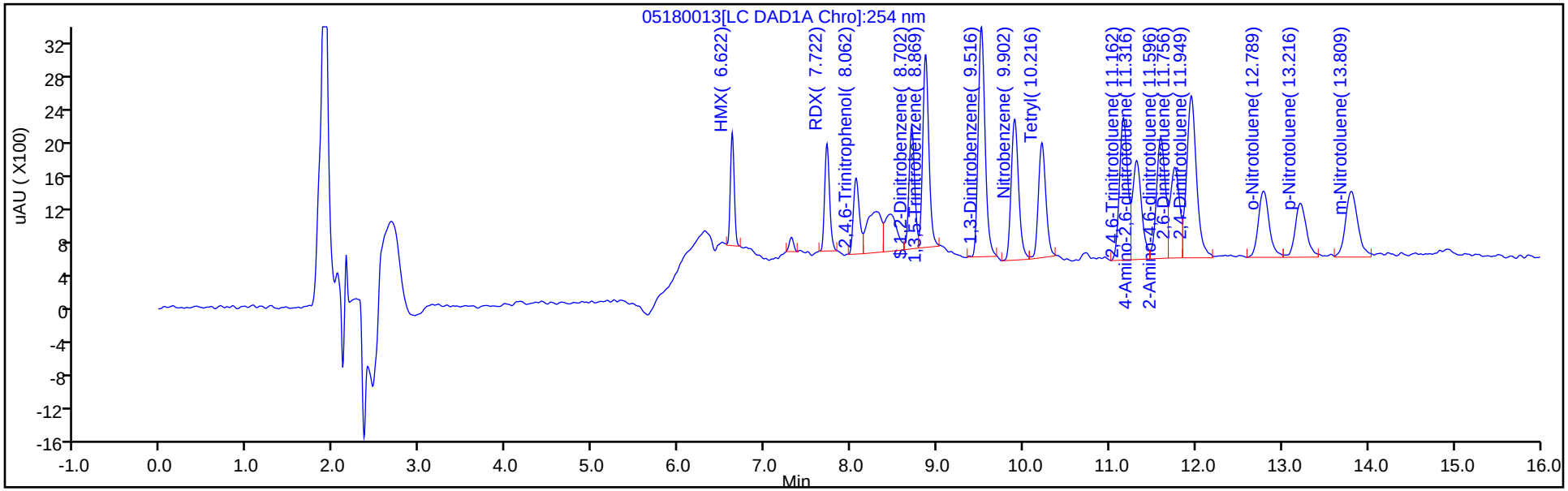
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

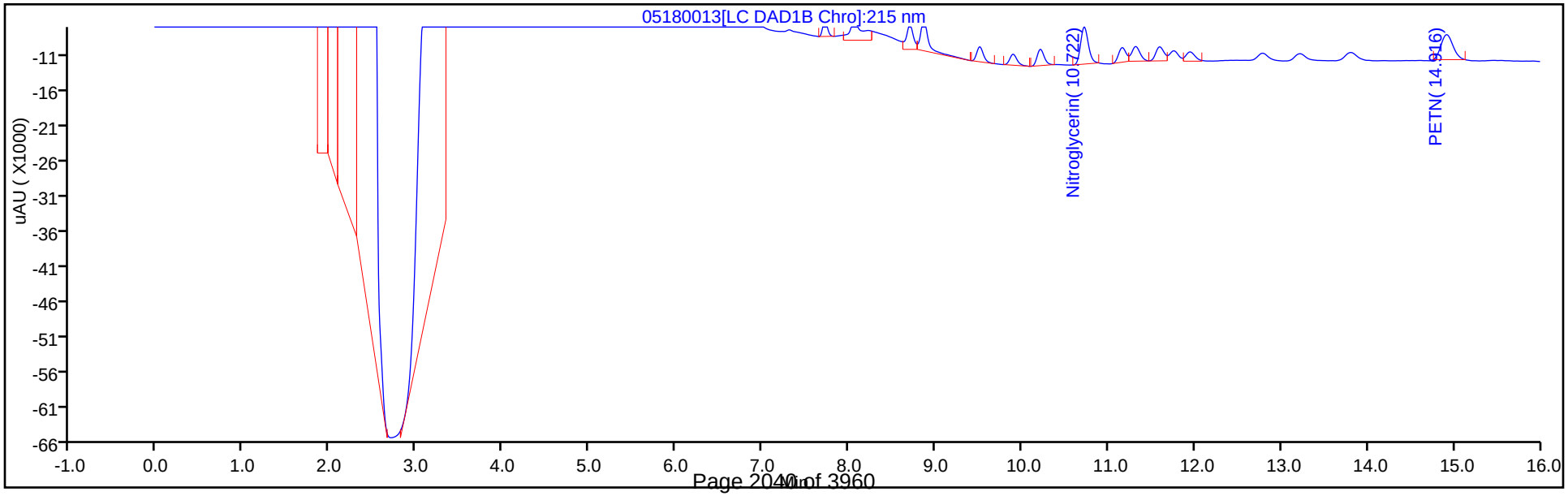
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D

Injection Date:	18-May-2018 12:51:52	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D
Lims ID: IC MAIN L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-May-2018 13:14:50 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L1
Misc. Info.: 280-0070054-014
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:27 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:19:59

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.625	6.622	0.003	1619	0.0200	0.0191	
5 RDX	1	7.718	7.722	-0.004	2043	0.0200	0.0195	
6 2,4,6-Trinitrophenol	1	8.065	8.049	0.016	1879	0.0200	0.0223	
$ 7 1,2-Dinitrobenzene	1	8.705	8.702	0.003	2278	0.0200	0.0177	
8 1,3,5-Trinitrobenzene	1	8.865	8.862	0.003	4042	0.0200	0.0177	
9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	5557	0.0200	0.0185	
11 Nitrobenzene	1	9.898	9.895	0.003	3842	0.0200	0.0193	
12 Tetryl	1	10.218	10.209	0.009	2797	0.0200	0.0171	
13 Nitroglycerin	2	10.725	10.715	0.010	11906	0.2000	0.1752	
14 2,4,6-Trinitrotoluene	1	11.165	11.155	0.010	4137	0.0201	0.0193	
15 4-Amino-2,6-dinitrotoluene	1	11.318	11.315	0.003	3486	0.0201	0.0211	
16 2-Amino-4,6-dinitrotoluene	1	11.598	11.595	0.003	3839	0.0201	0.0192	
17 2,6-Dinitrotoluene	1	11.765	11.755	0.010	3125	0.0201	0.0204	
18 2,4-Dinitrotoluene	1	11.952	11.942	0.010	5750	0.0200	0.0193	
19 o-Nitrotoluene	1	12.785	12.782	0.003	2761	0.0201	0.0209	
20 p-Nitrotoluene	1	13.218	13.209	0.009	2355	0.0201	0.0207	
21 m-Nitrotoluene	1	13.812	13.802	0.010	3245	0.0201	0.0219	
22 PETN	2		14.909			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

8330IntermStk_00055 Amount Added: 2.00 Units: uL

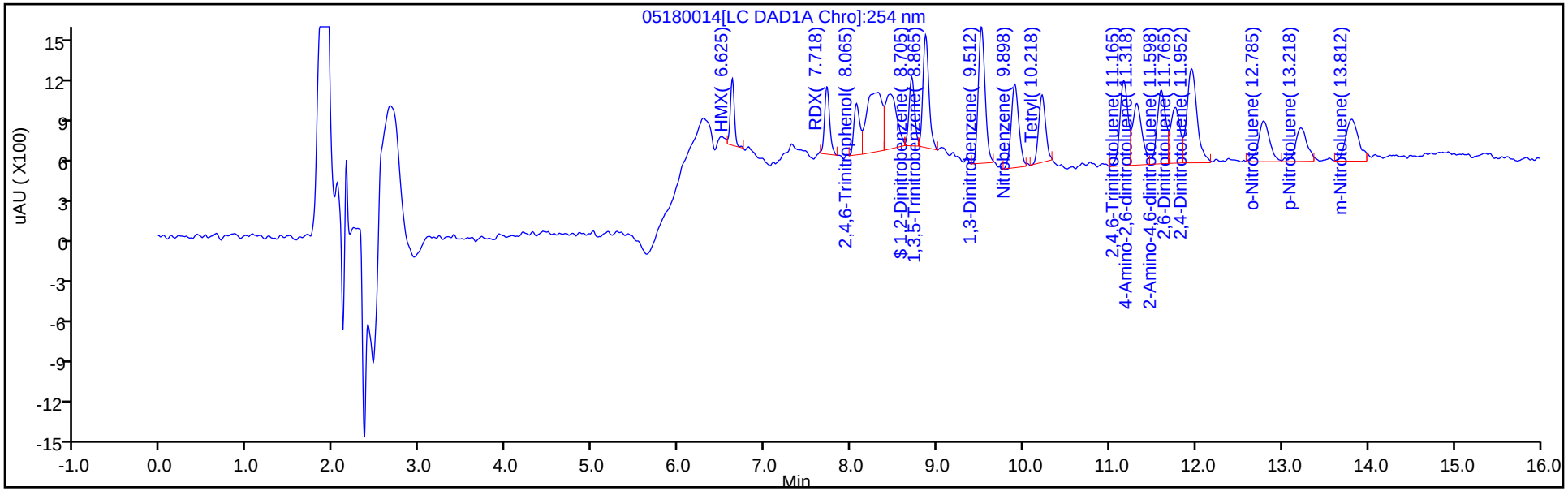
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

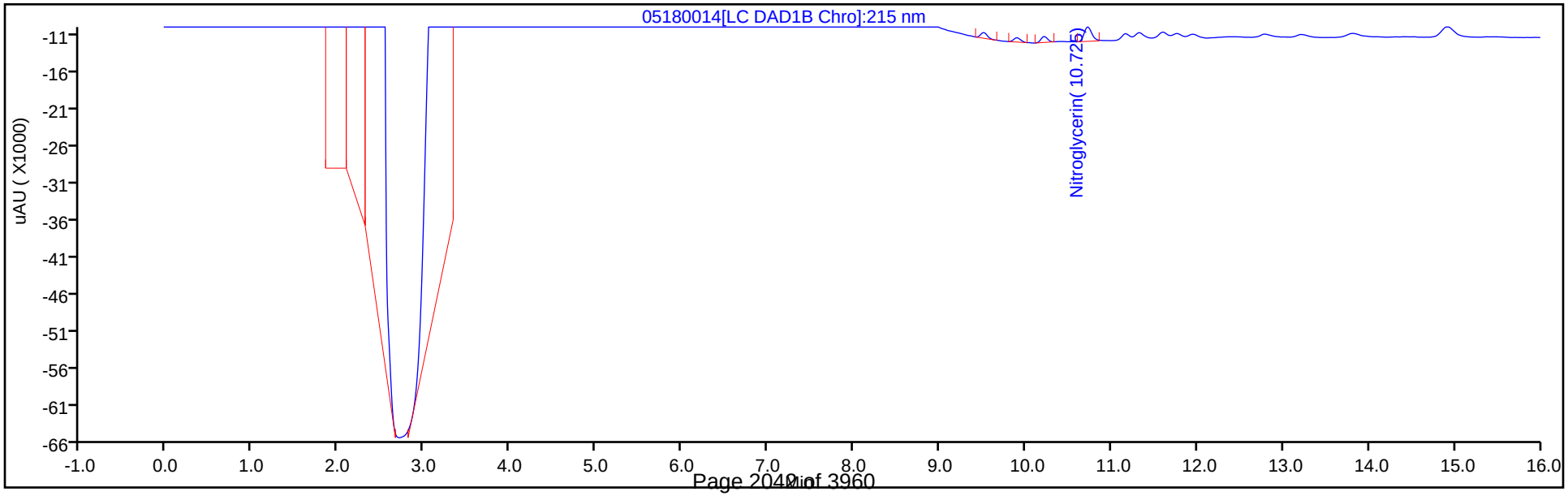
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Injection Date:	18-May-2018 13:14:50	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / HMX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

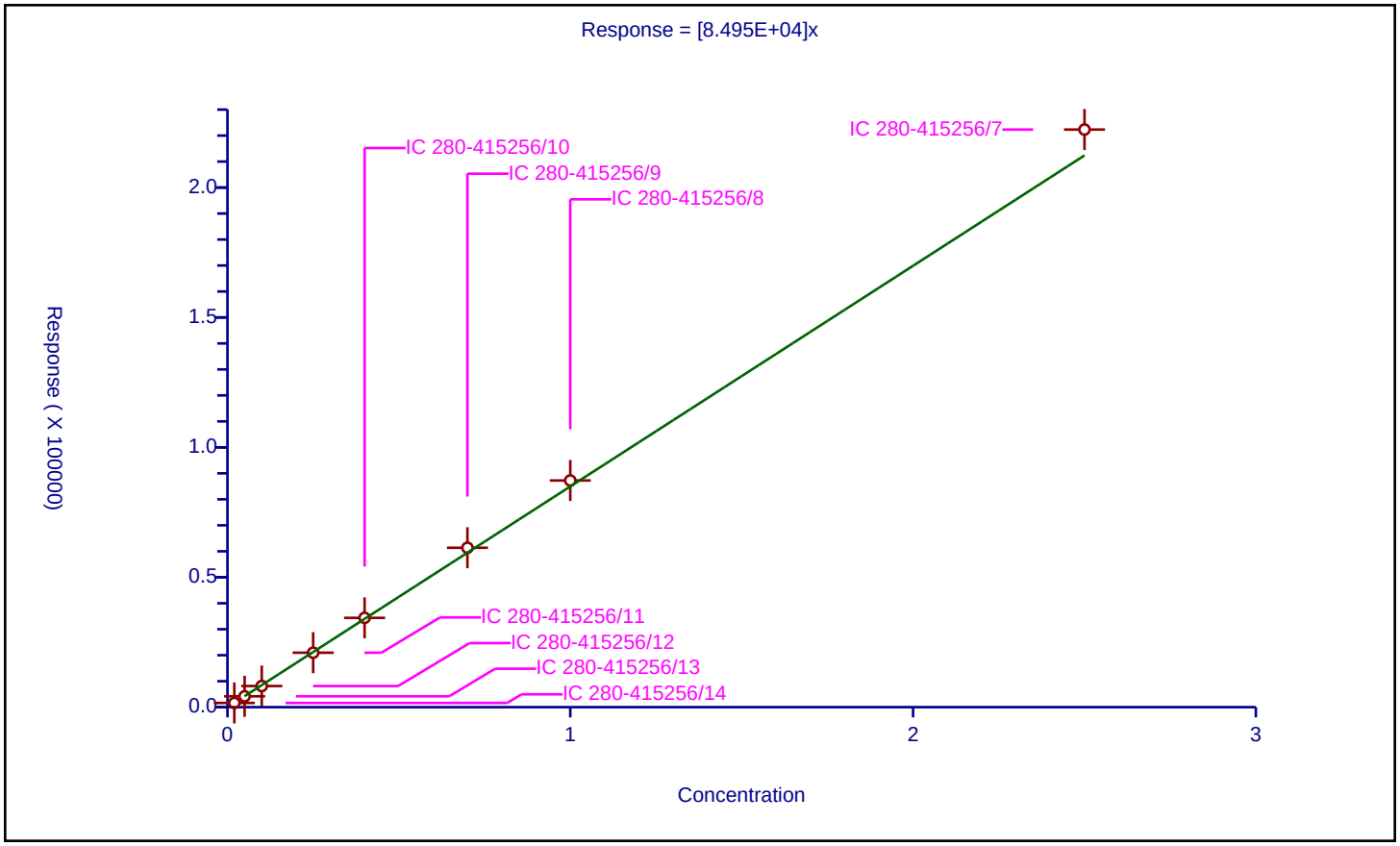
Curve Coefficients

Intercept:	0
Slope:	8.495E+04

Error Coefficients

Standard Error:	3930
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1619.0			80950.0	Y
2	IC 280-415256/13	0.05	4182.0			83640.0	Y
3	IC 280-415256/12	0.1	8137.0			81370.0	Y
4	IC 280-415256/11	0.25	20961.0			83844.0	Y
5	IC 280-415256/10	0.4	34376.0			85940.0	Y
6	IC 280-415256/9	0.7	61354.0			87648.571429	Y
7	IC 280-415256/8	1.0	87246.0			87246.0	Y
8	IC 280-415256/7	2.5	222315.0			88926.0	Y



Calibration / RDX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

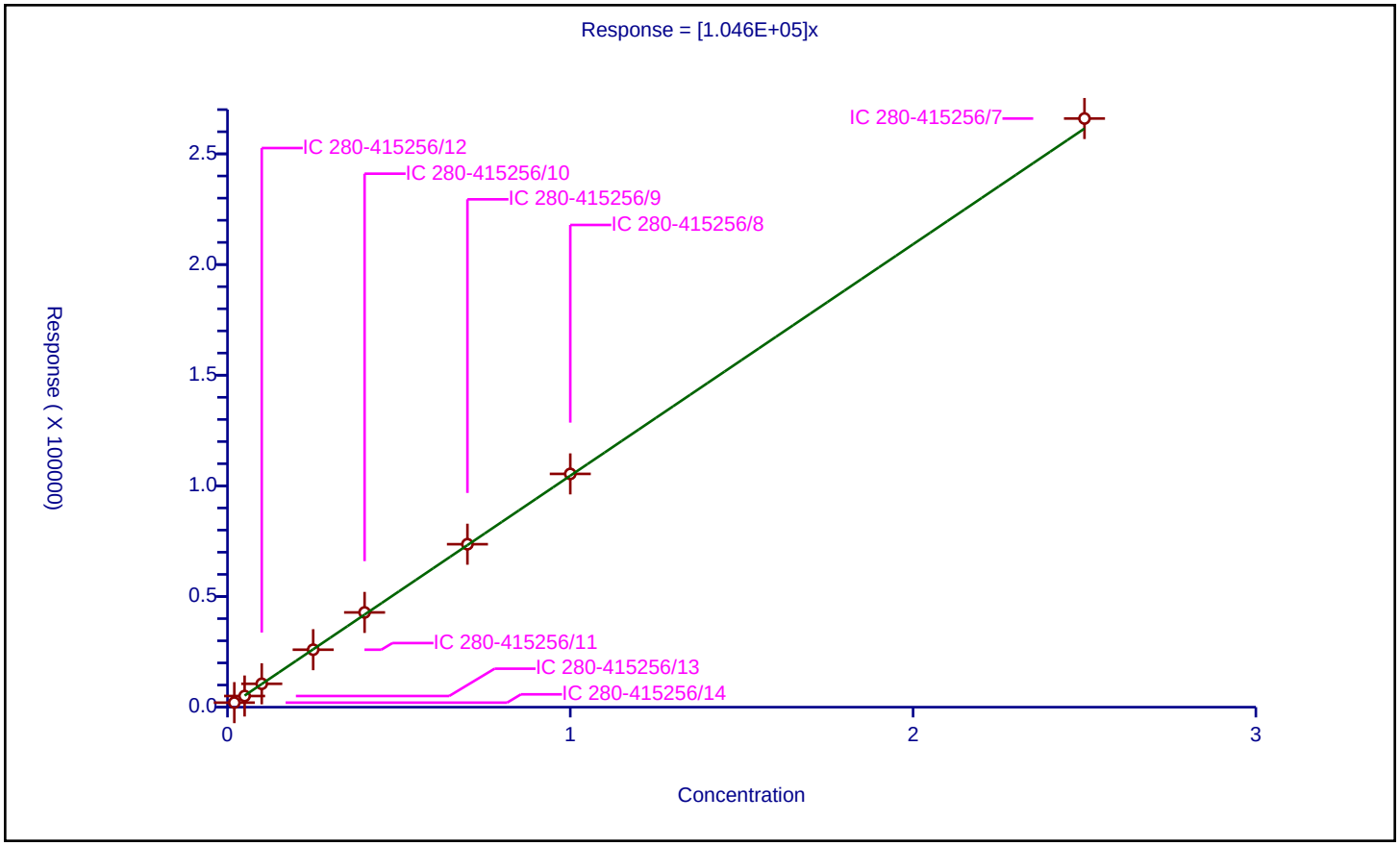
Curve Coefficients

Intercept:	0
Slope:	1.046E+05

Error Coefficients

Standard Error:	1790
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2043.0			102150.0	Y
2	IC 280-415256/13	0.05	5050.0			101000.0	Y
3	IC 280-415256/12	0.1	10563.0			105630.0	Y
4	IC 280-415256/11	0.25	25965.0			103860.0	Y
5	IC 280-415256/10	0.4	42801.0			107002.5	Y
6	IC 280-415256/9	0.7	73630.0			105185.714286	Y
7	IC 280-415256/8	1.0	105400.0			105400.0	Y
8	IC 280-415256/7	2.5	265976.0			106390.4	Y



Calibration / 2,4,6-Trinitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

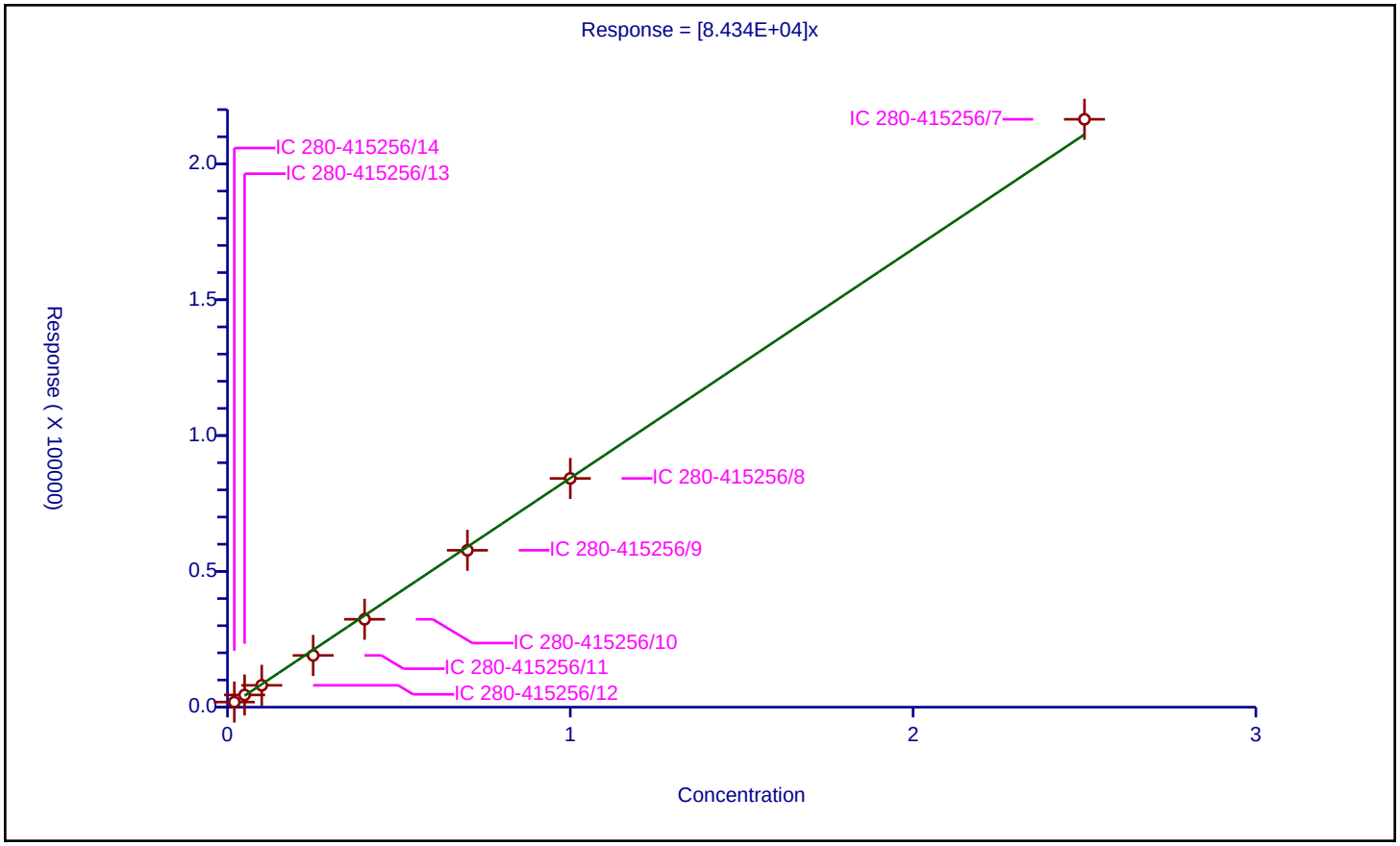
Curve Coefficients

Intercept:	0
Slope:	8.434E+04

Error Coefficients

Standard Error:	2370
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1879.0			93950.0	Y
2	IC 280-415256/13	0.05	4494.0			89880.0	Y
3	IC 280-415256/12	0.1	8050.0			80500.0	Y
4	IC 280-415256/11	0.25	19048.0			76192.0	Y
5	IC 280-415256/10	0.4	32362.0			80905.0	Y
6	IC 280-415256/9	0.7	57756.0			82508.571429	Y
7	IC 280-415256/8	1.0	84211.0			84211.0	Y
8	IC 280-415256/7	2.5	216440.0			86576.0	Y



Calibration / 1,2-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

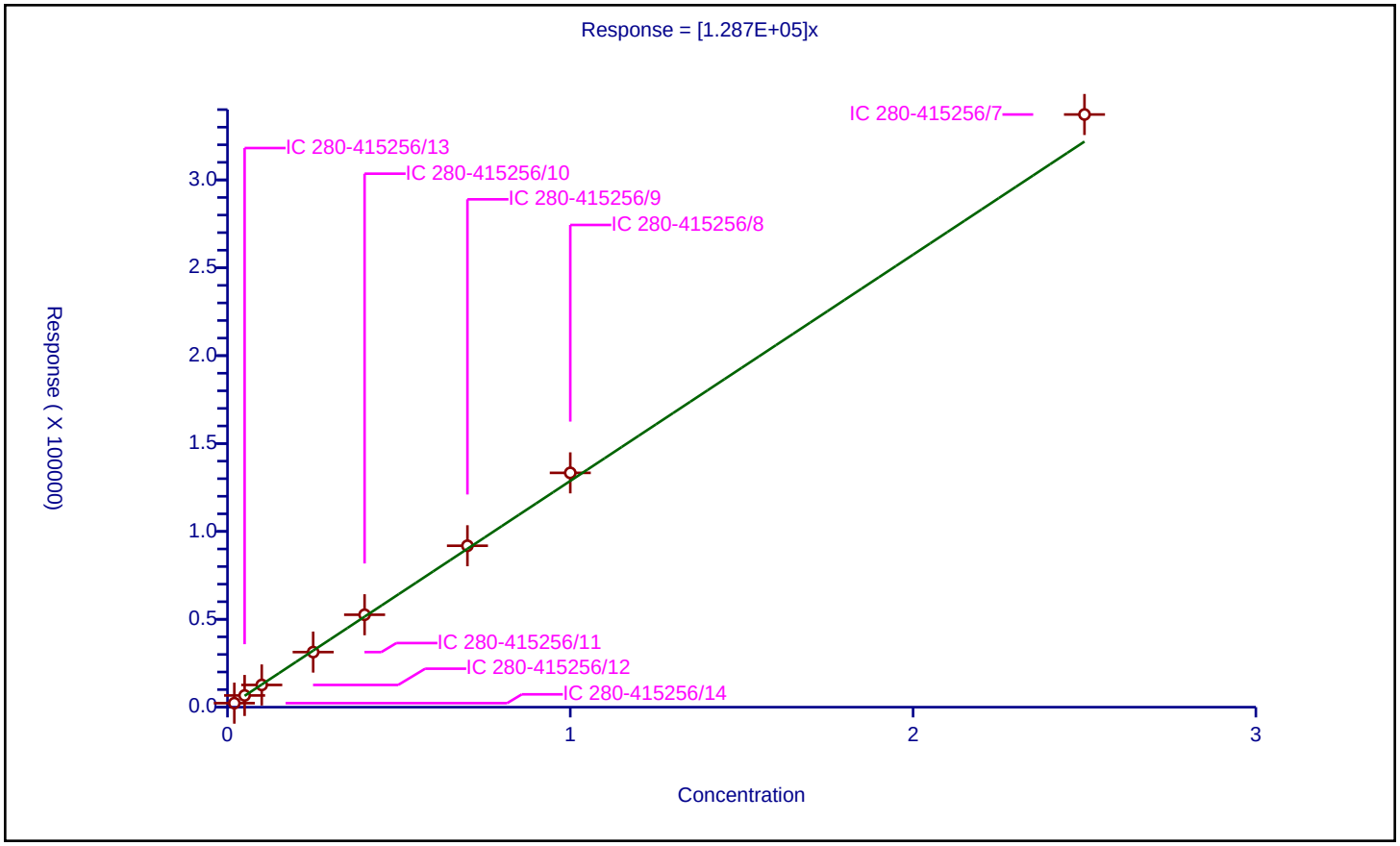
Curve Coefficients

Intercept:	0
Slope:	1.287E+05

Error Coefficients

Standard Error:	6130
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2278.0			113900.0	Y
2	IC 280-415256/13	0.05	6665.0			133300.0	Y
3	IC 280-415256/12	0.1	12638.0			126380.0	Y
4	IC 280-415256/11	0.25	31343.0			125372.0	Y
5	IC 280-415256/10	0.4	52585.0			131462.5	Y
6	IC 280-415256/9	0.7	91842.0			131202.857143	Y
7	IC 280-415256/8	1.0	133312.0			133312.0	Y
8	IC 280-415256/7	2.5	337223.0			134889.2	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

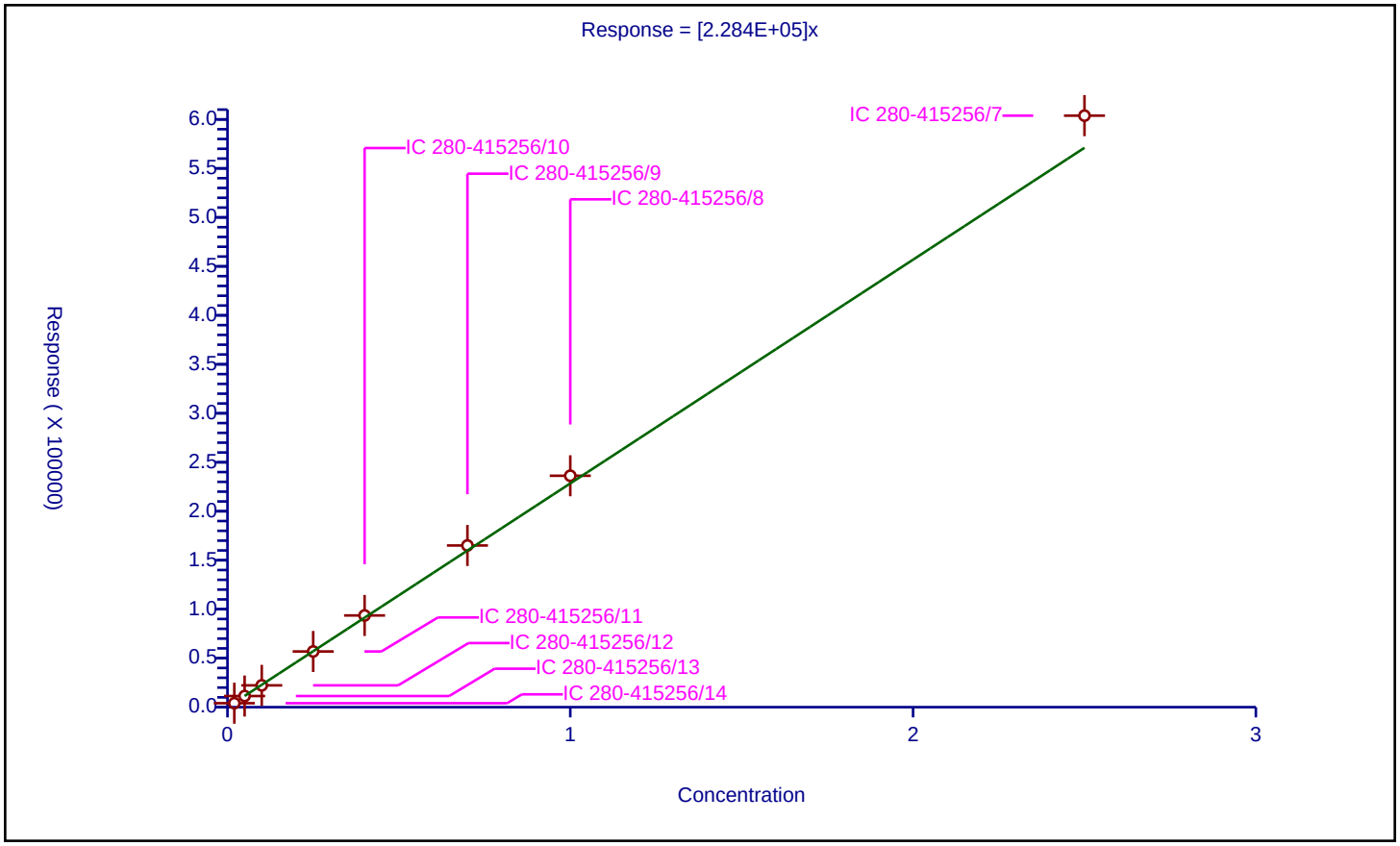
Curve Coefficients

Intercept:	0
Slope:	2.284E+05

Error Coefficients

Standard Error:	12900
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	4042.0			202100.0	Y
2	IC 280-415256/13	0.05	11383.0			227660.0	Y
3	IC 280-415256/12	0.1	22253.0			222530.0	Y
4	IC 280-415256/11	0.25	56855.0			227420.0	Y
5	IC 280-415256/10	0.4	93611.0			234027.5	Y
6	IC 280-415256/9	0.7	165033.0			235761.428571	Y
7	IC 280-415256/8	1.0	236230.0			236230.0	Y
8	IC 280-415256/7	2.5	603841.0			241536.4	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

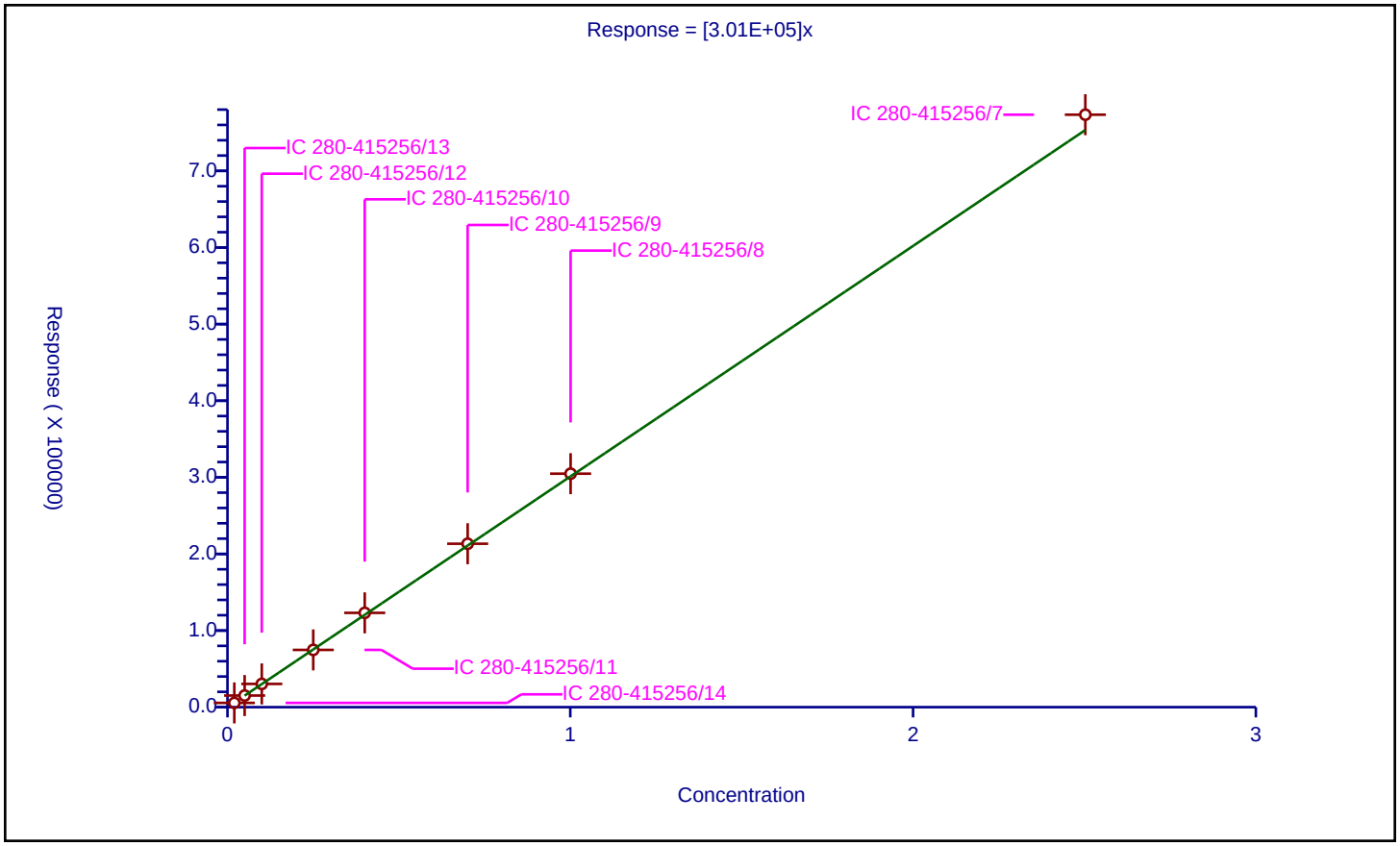
Curve Coefficients

Intercept:	0
Slope:	3.01E+05

Error Coefficients

Standard Error:	7810
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02002	5557.0			277572.427572	Y
2	IC 280-415256/13	0.05005	15187.0			303436.563437	Y
3	IC 280-415256/12	0.1001	30333.0			303026.973027	Y
4	IC 280-415256/11	0.25025	74756.0			298725.274725	Y
5	IC 280-415256/10	0.4004	123109.0			307465.034965	Y
6	IC 280-415256/9	0.7007	213326.0			304446.98159	Y
7	IC 280-415256/8	1.001	304781.0			304476.523477	Y
8	IC 280-415256/7	2.5025	773367.0			309037.762238	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

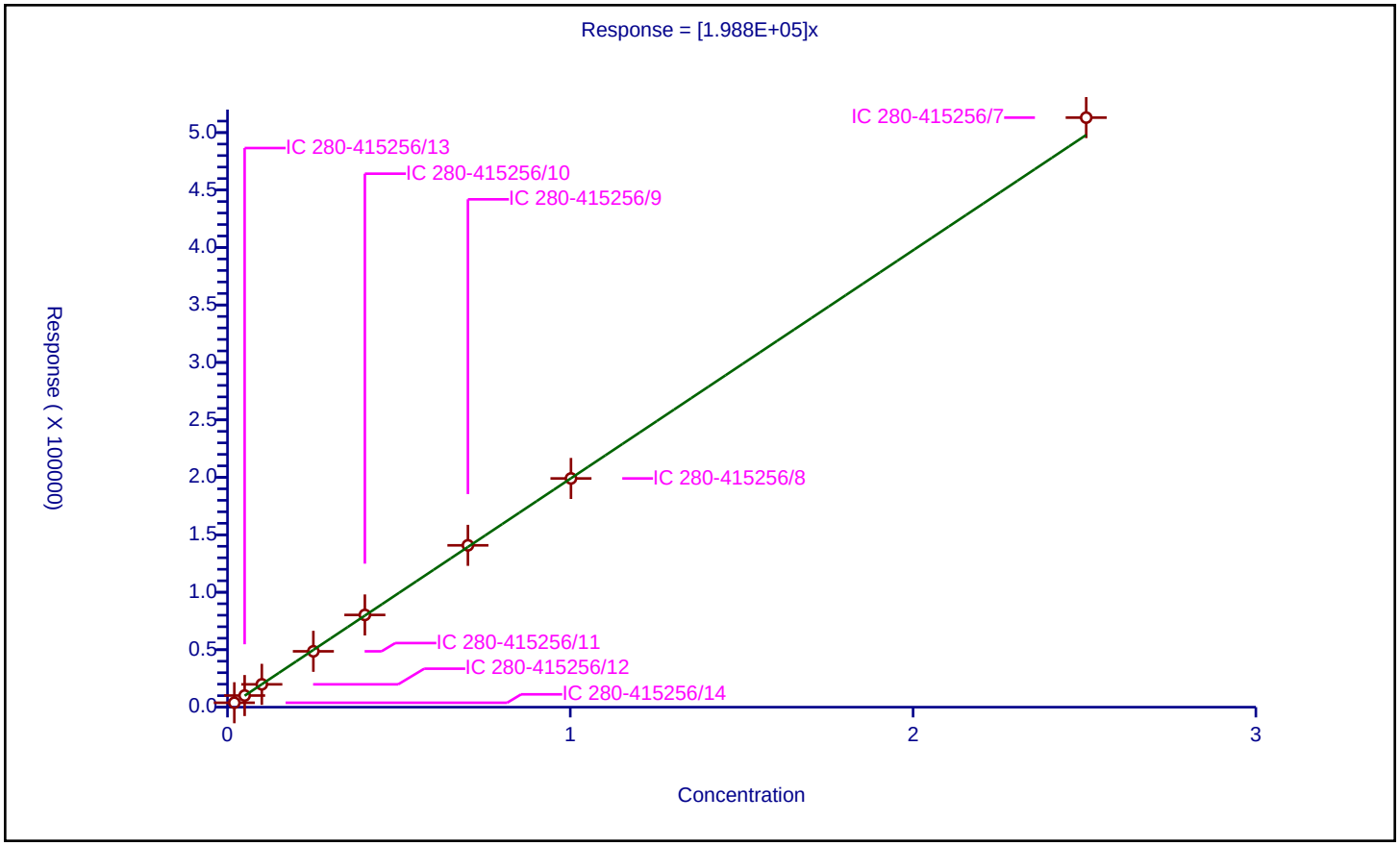
Curve Coefficients

Intercept:	0
Slope:	1.988E+05

Error Coefficients

Standard Error:	5750
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	3842.0			191716.566866	Y
2	IC 280-415256/13	0.0501	10114.0			201876.247505	Y
3	IC 280-415256/12	0.1002	19861.0			198213.572854	Y
4	IC 280-415256/11	0.2505	48592.0			193980.03992	Y
5	IC 280-415256/10	0.4008	80258.0			200244.510978	Y
6	IC 280-415256/9	0.7014	140828.0			200781.294554	Y
7	IC 280-415256/8	1.002	199028.0			198630.738523	Y
8	IC 280-415256/7	2.505	513035.0			204804.391218	Y



Calibration / Tetryl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

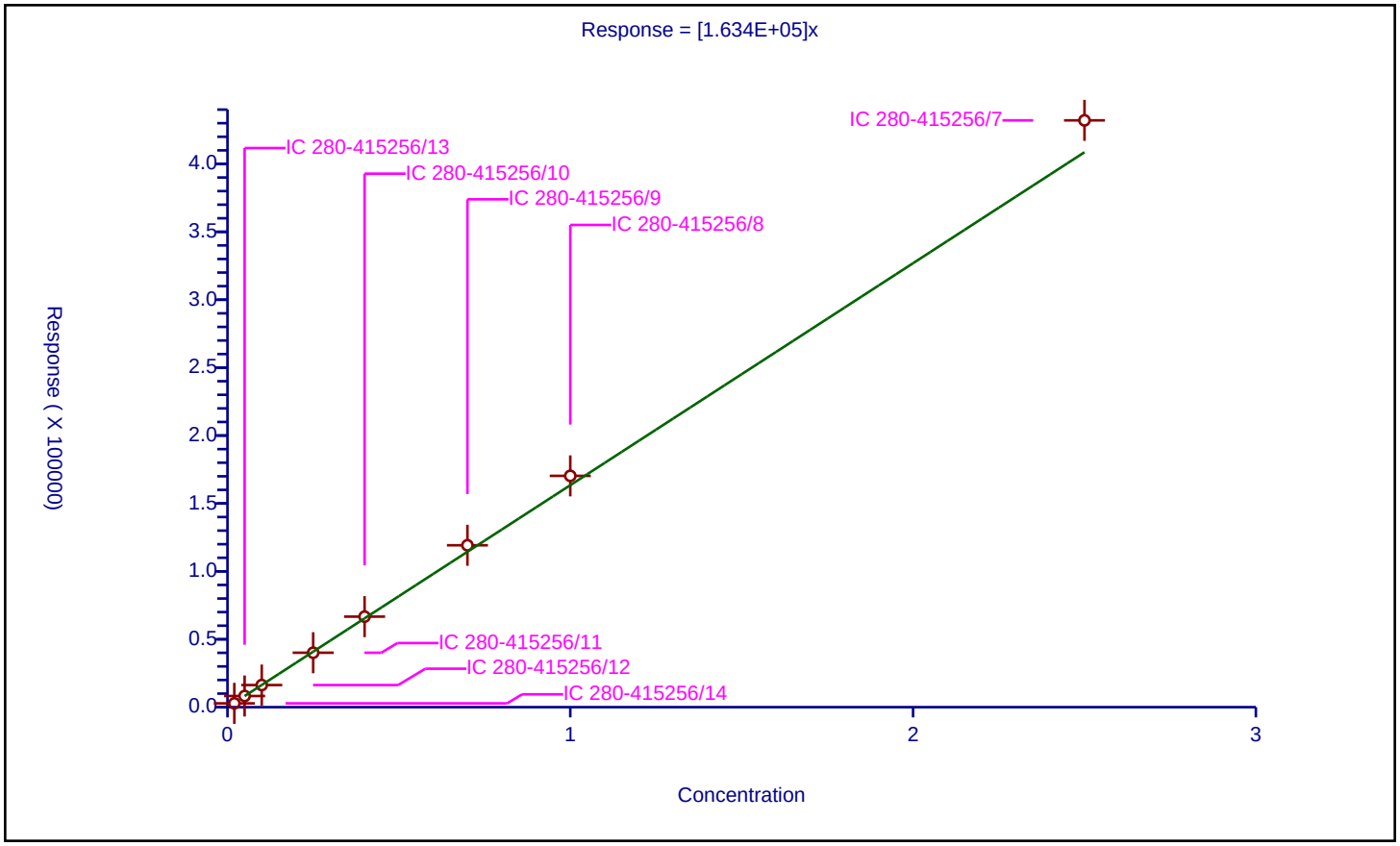
Curve Coefficients

Intercept:	0
Slope:	1.634E+05

Error Coefficients

Standard Error:	9430
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2797.0			139850.0	Y
2	IC 280-415256/13	0.05	8226.0			164520.0	Y
3	IC 280-415256/12	0.1	16280.0			162800.0	Y
4	IC 280-415256/11	0.25	40083.0			160332.0	Y
5	IC 280-415256/10	0.4	66666.0			166665.0	Y
6	IC 280-415256/9	0.7	119195.0			170278.571429	Y
7	IC 280-415256/8	1.0	170312.0			170312.0	Y
8	IC 280-415256/7	2.5	432075.0			172830.0	Y



Calibration / Nitroglycerin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

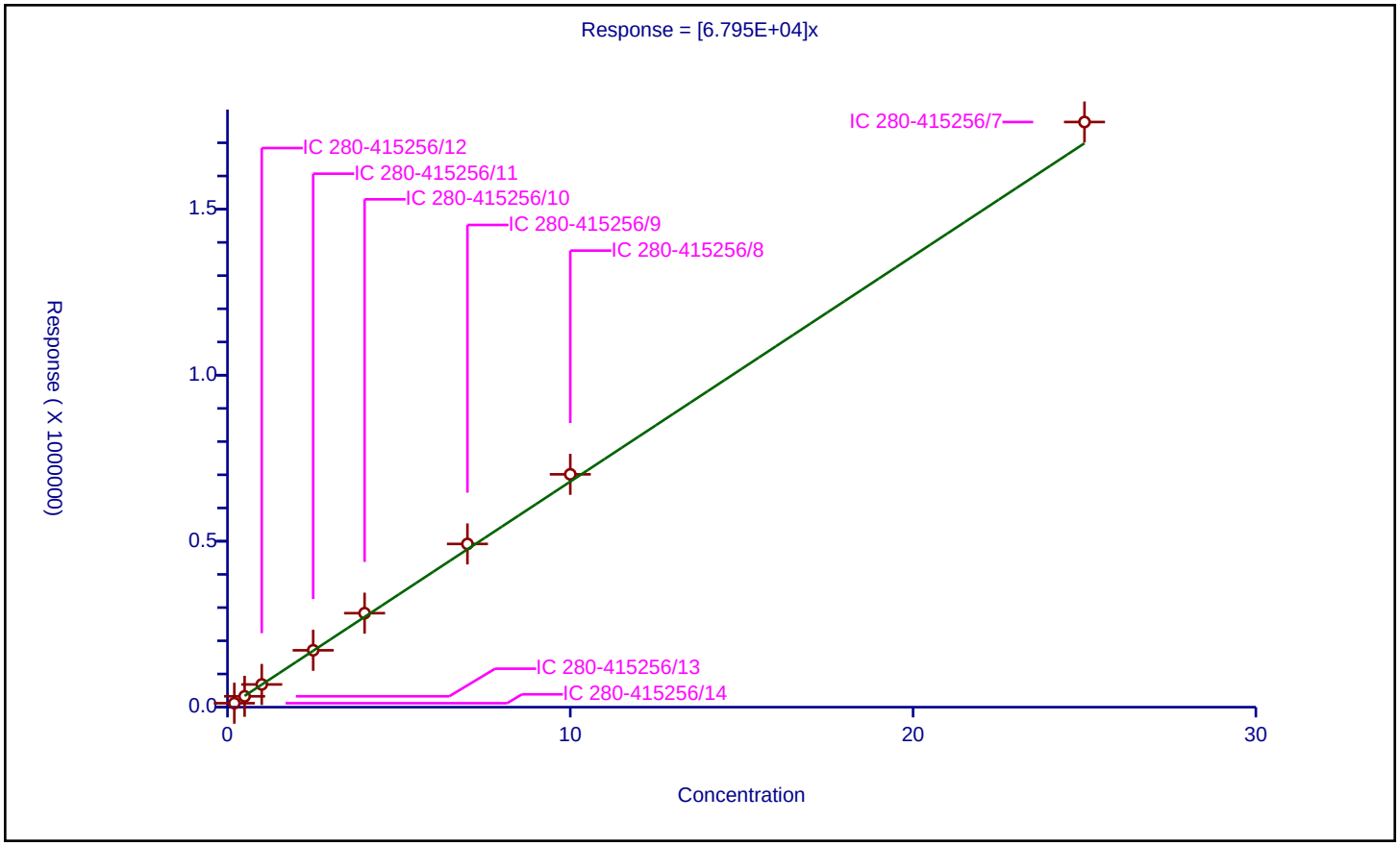
Curve Coefficients

Intercept:	0
Slope:	6.795E+04

Error Coefficients

Standard Error:	26700
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	11906.0			59530.0	Y
2	IC 280-415256/13	0.5	32693.0			65386.0	Y
3	IC 280-415256/12	1.0	68459.0			68459.0	Y
4	IC 280-415256/11	2.5	171294.0			68517.6	Y
5	IC 280-415256/10	4.0	283140.0			70785.0	Y
6	IC 280-415256/9	7.0	491693.0			70241.857143	Y
7	IC 280-415256/8	10.0	701363.0			70136.3	Y
8	IC 280-415256/7	25.0	1762679.0			70507.16	Y



Calibration / 2,4,6-Trinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

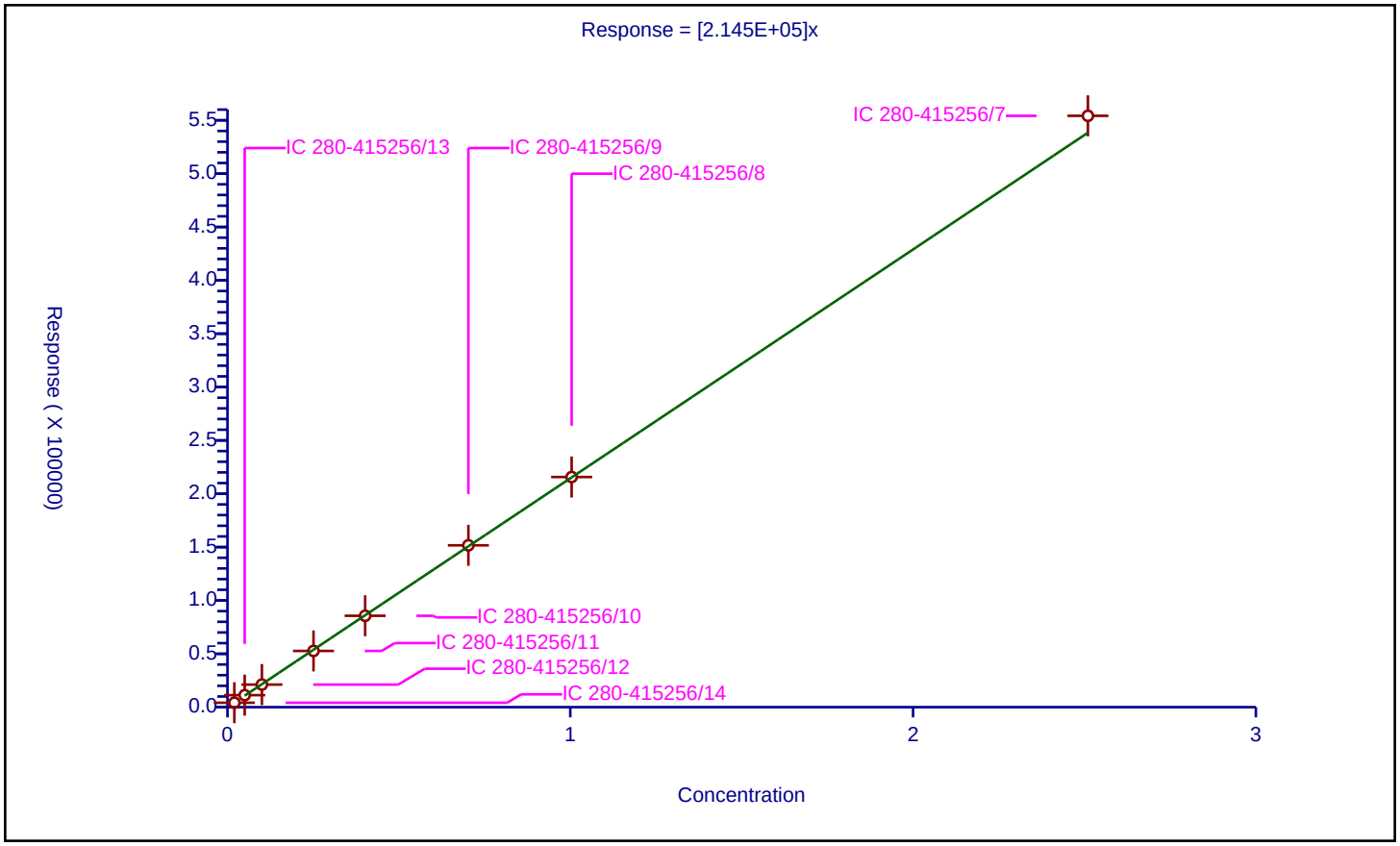
Curve Coefficients

Intercept:	0
Slope:	2.145E+05

Error Coefficients

Standard Error:	6020
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	4137.0			206025.896414	Y
2	IC 280-415256/13	0.0502	11267.0			224442.231076	Y
3	IC 280-415256/12	0.1004	21155.0			210707.171315	Y
4	IC 280-415256/11	0.251	52708.0			209992.031873	Y
5	IC 280-415256/10	0.4016	85643.0			213254.482072	Y
6	IC 280-415256/9	0.7028	151667.0			215803.927149	Y
7	IC 280-415256/8	1.004	215673.0			214813.74502	Y
8	IC 280-415256/7	2.51	554169.0			220784.462151	Y



Calibration / 4-Amino-2,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

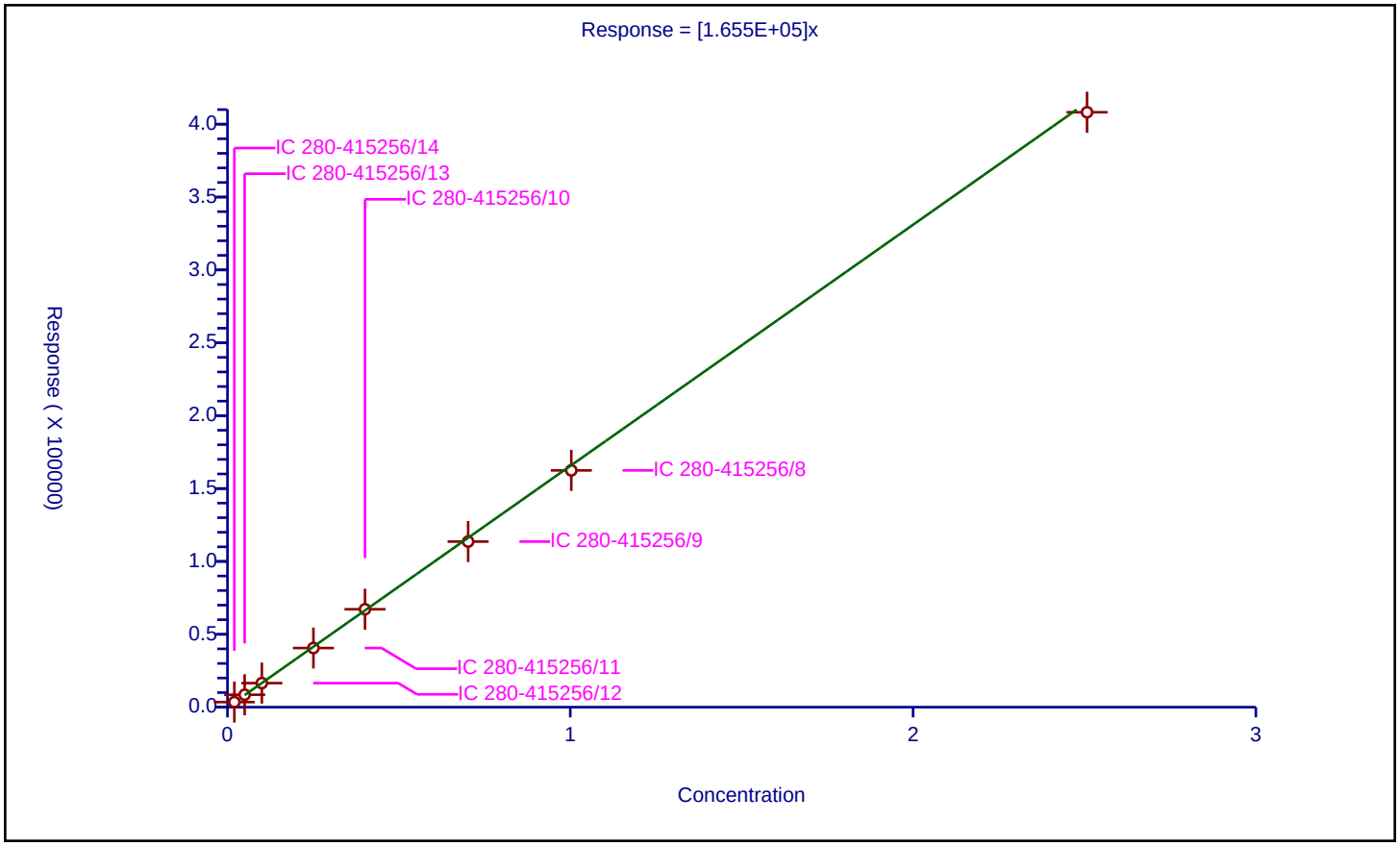
Curve Coefficients

Intercept:	0
Slope:	1.655E+05

Error Coefficients

Standard Error:	3100
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3486.0			173778.664008	Y
2	IC 280-415256/13	0.05015	8517.0			169830.508475	Y
3	IC 280-415256/12	0.1003	16510.0			164606.181456	Y
4	IC 280-415256/11	0.25075	40566.0			161778.664008	Y
5	IC 280-415256/10	0.4012	67180.0			167447.657029	Y
6	IC 280-415256/9	0.7021	113610.0			161814.556331	Y
7	IC 280-415256/8	1.003	162456.0			161970.089731	Y
8	IC 280-415256/7	2.5075	408172.0			162780.458624	Y



Calibration / 2-Amino-4,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

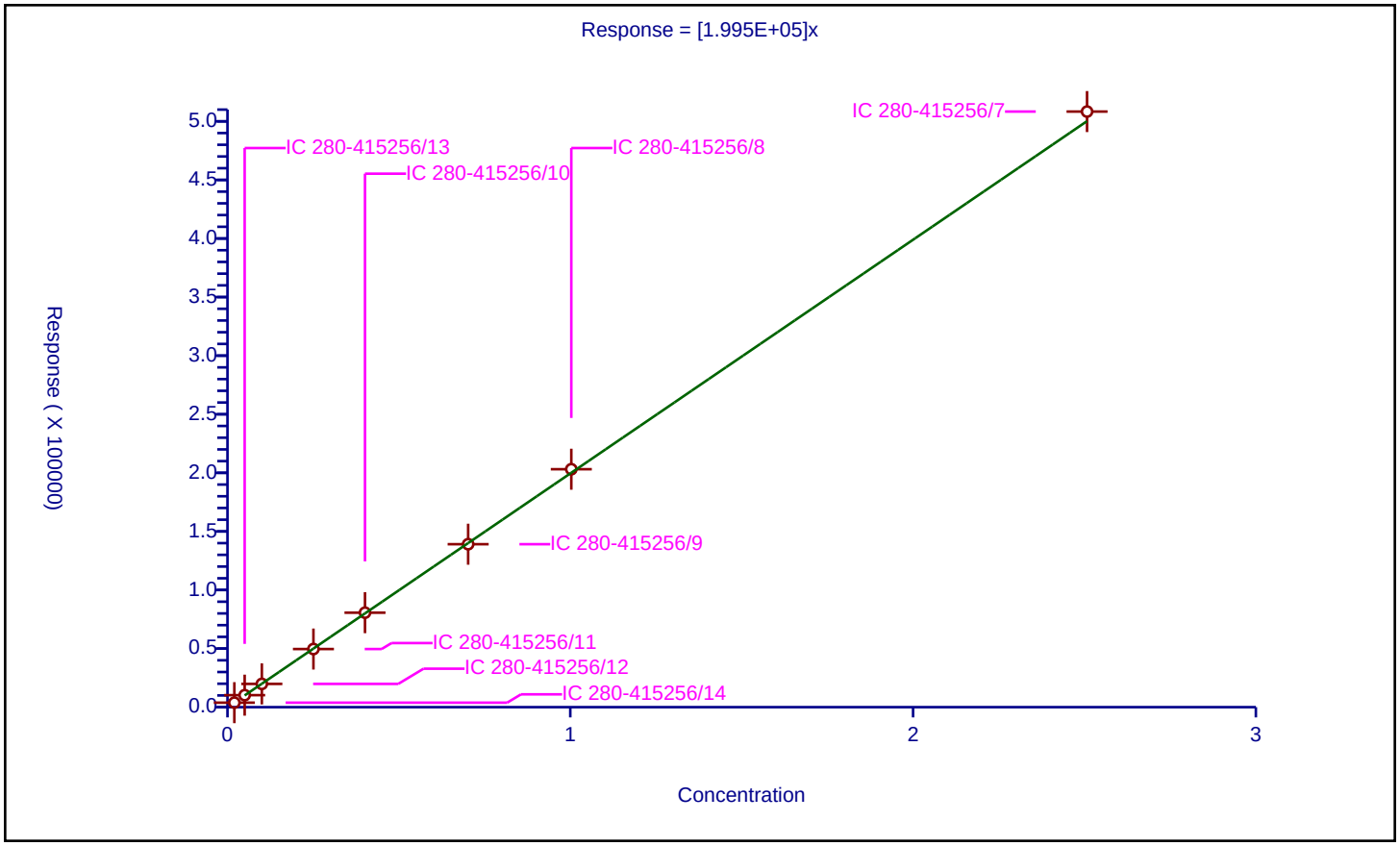
Curve Coefficients

Intercept:	0
Slope:	1.995E+05

Error Coefficients

Standard Error:	3320
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3839.0			191375.872383	Y
2	IC 280-415256/13	0.05015	10247.0			204327.018943	Y
3	IC 280-415256/12	0.1003	19850.0			197906.281157	Y
4	IC 280-415256/11	0.25075	49604.0			197822.532403	Y
5	IC 280-415256/10	0.4012	80646.0			201011.964108	Y
6	IC 280-415256/9	0.7021	139075.0			198084.318473	Y
7	IC 280-415256/8	1.003	203087.0			202479.561316	Y
8	IC 280-415256/7	2.5075	508320.0			202719.840479	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

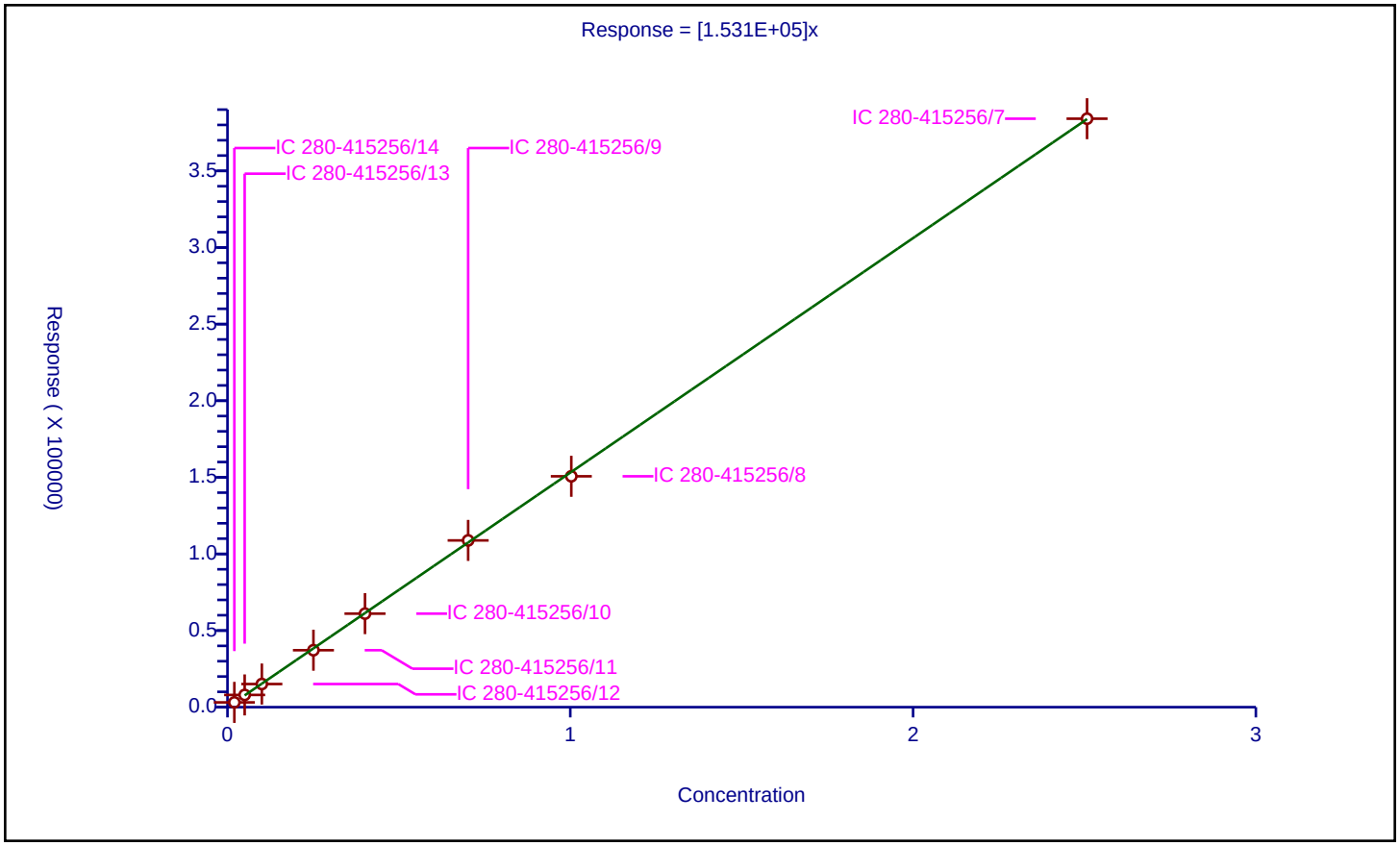
Curve Coefficients

Intercept:	0
Slope:	1.531E+05

Error Coefficients

Standard Error:	1300
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3125.0			155782.652044	Y
2	IC 280-415256/13	0.05015	7991.0			159341.974078	Y
3	IC 280-415256/12	0.1003	15104.0			150588.235294	Y
4	IC 280-415256/11	0.25075	37173.0			148247.258225	Y
5	IC 280-415256/10	0.4012	61046.0			152158.524427	Y
6	IC 280-415256/9	0.7021	108831.0			155007.833642	Y
7	IC 280-415256/8	1.003	150677.0			150226.321037	Y
8	IC 280-415256/7	2.5075	384067.0			153167.298106	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

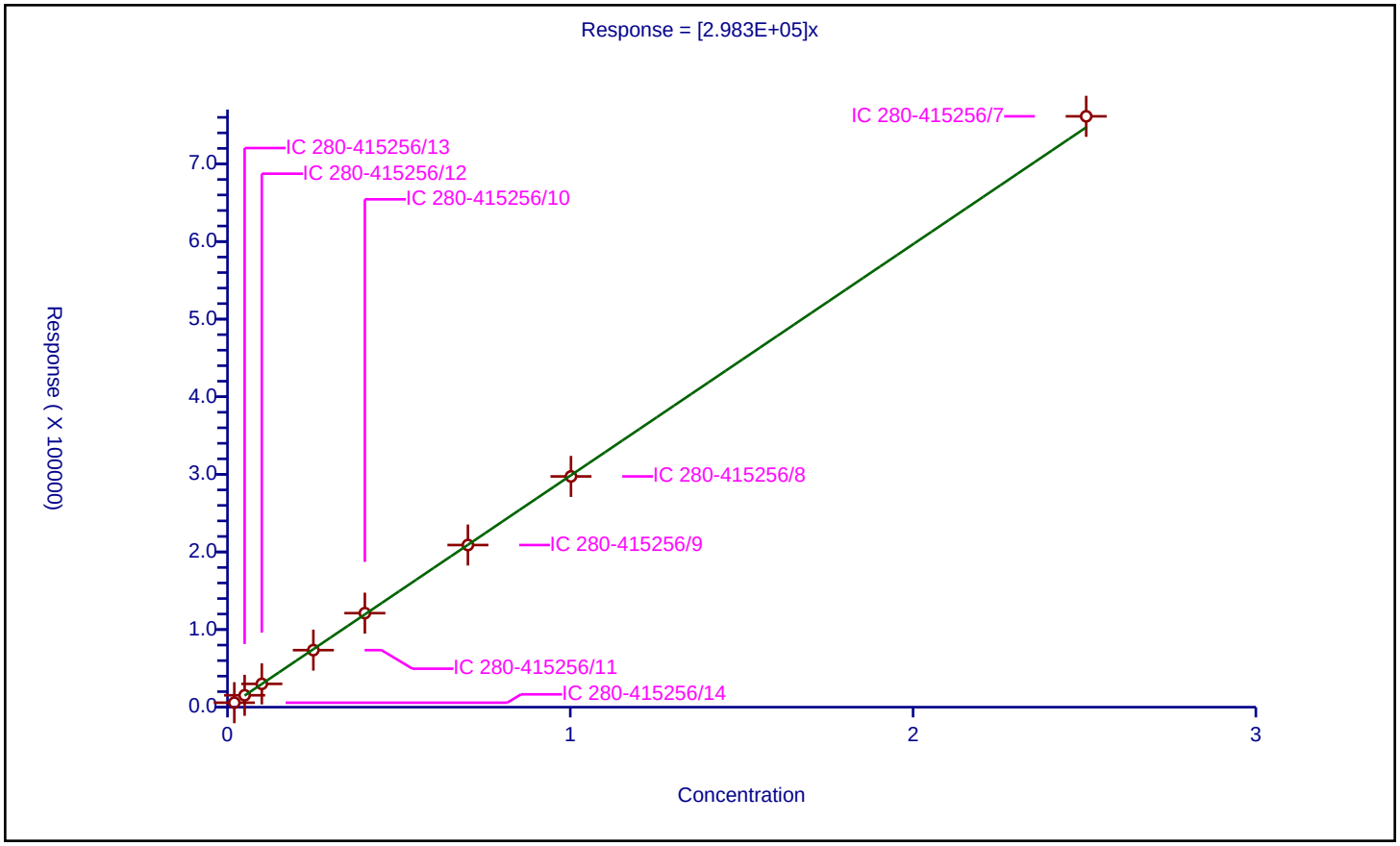
Curve Coefficients

Intercept:	0
Slope:	2.983E+05

Error Coefficients

Standard Error:	5460
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	5750.0			286926.147705	Y
2	IC 280-415256/13	0.0501	15313.0			305648.702595	Y
3	IC 280-415256/12	0.1002	30008.0			299481.037924	Y
4	IC 280-415256/11	0.2505	73471.0			293297.40519	Y
5	IC 280-415256/10	0.4008	121158.0			302290.419162	Y
6	IC 280-415256/9	0.7014	208912.0			297850.014257	Y
7	IC 280-415256/8	1.002	297313.0			296719.560878	Y
8	IC 280-415256/7	2.505	761362.0			303936.926148	Y



Calibration / o-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

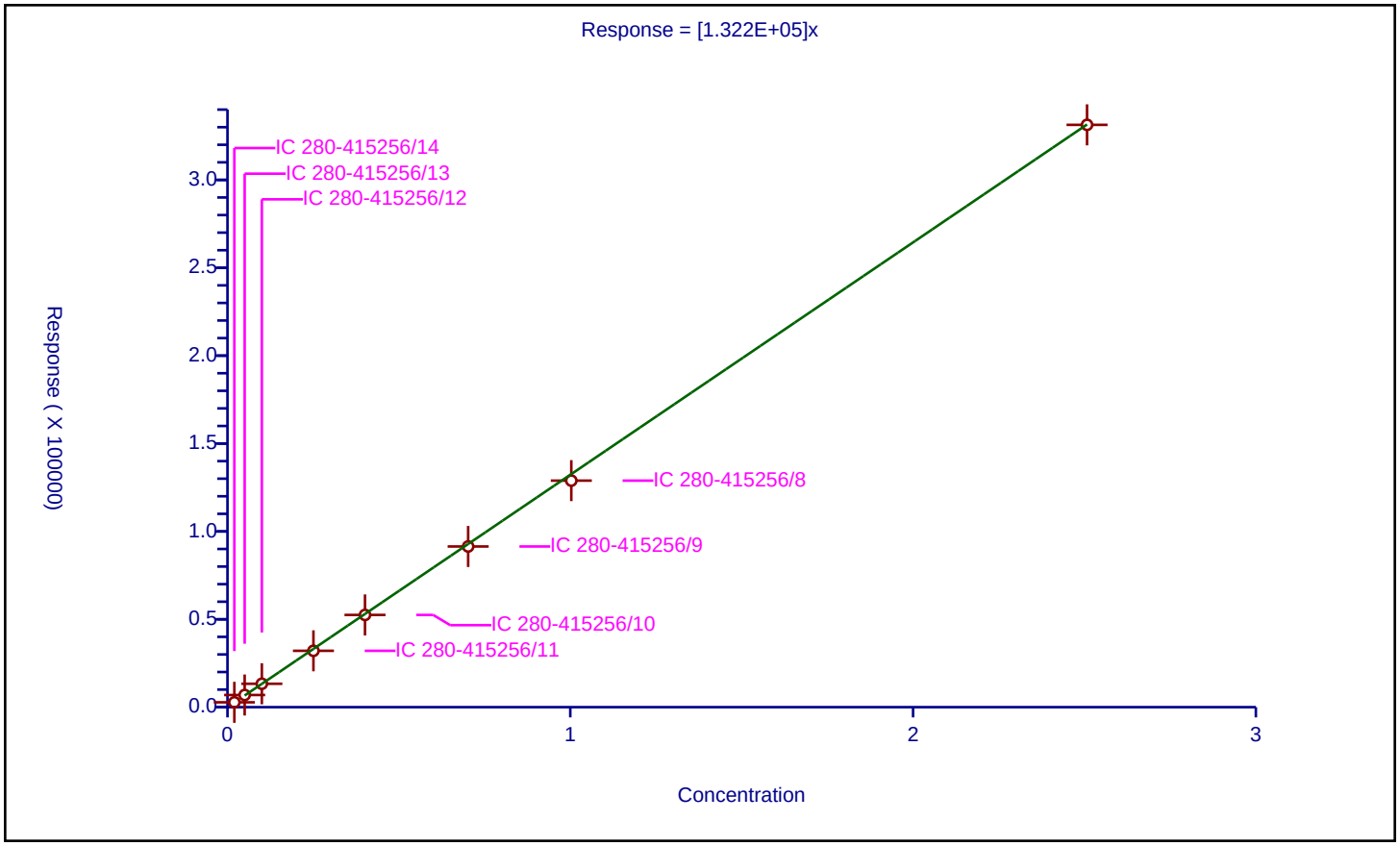
Curve Coefficients

Intercept:	0
Slope:	1.322E+05

Error Coefficients

Standard Error:	1580
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	2761.0			137637.088734	Y
2	IC 280-415256/13	0.05015	6915.0			137886.340977	Y
3	IC 280-415256/12	0.1003	13314.0			132741.774676	Y
4	IC 280-415256/11	0.25075	32062.0			127864.40678	Y
5	IC 280-415256/10	0.4012	52478.0			130802.592223	Y
6	IC 280-415256/9	0.7021	91427.0			130219.341974	Y
7	IC 280-415256/8	1.003	128893.0			128507.477567	Y
8	IC 280-415256/7	2.5075	331335.0			132137.587238	Y



Calibration / p-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

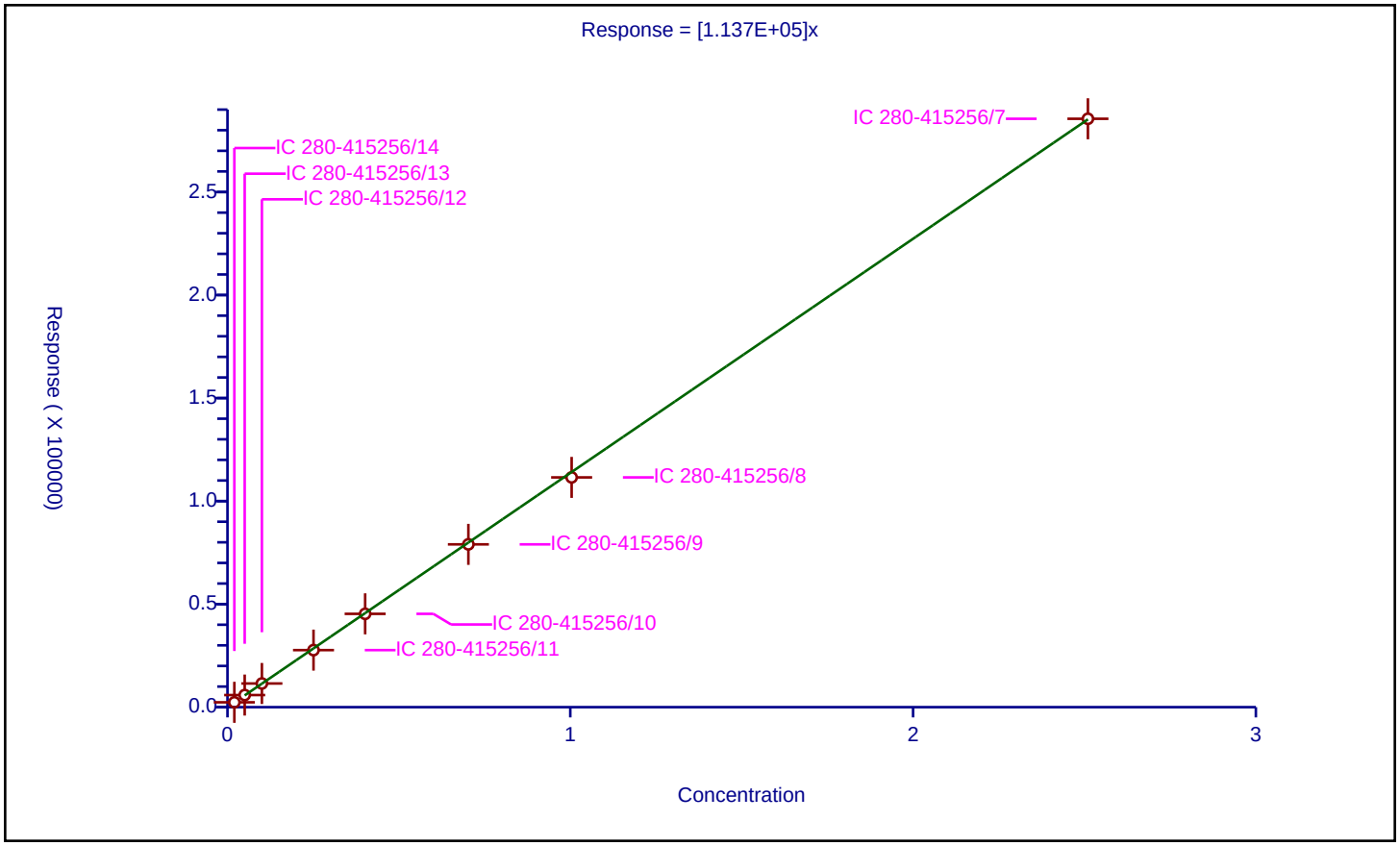
Curve Coefficients

Intercept:	0
Slope:	1.137E+05

Error Coefficients

Standard Error:	1100
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	2355.0			117280.876494	Y
2	IC 280-415256/13	0.0502	5884.0			117211.155378	Y
3	IC 280-415256/12	0.1004	11487.0			114412.350598	Y
4	IC 280-415256/11	0.251	27683.0			110290.836653	Y
5	IC 280-415256/10	0.4016	45295.0			112786.354582	Y
6	IC 280-415256/9	0.7028	79009.0			112420.318725	Y
7	IC 280-415256/8	1.004	111505.0			111060.756972	Y
8	IC 280-415256/7	2.51	285557.0			113767.729084	Y



Calibration / m-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

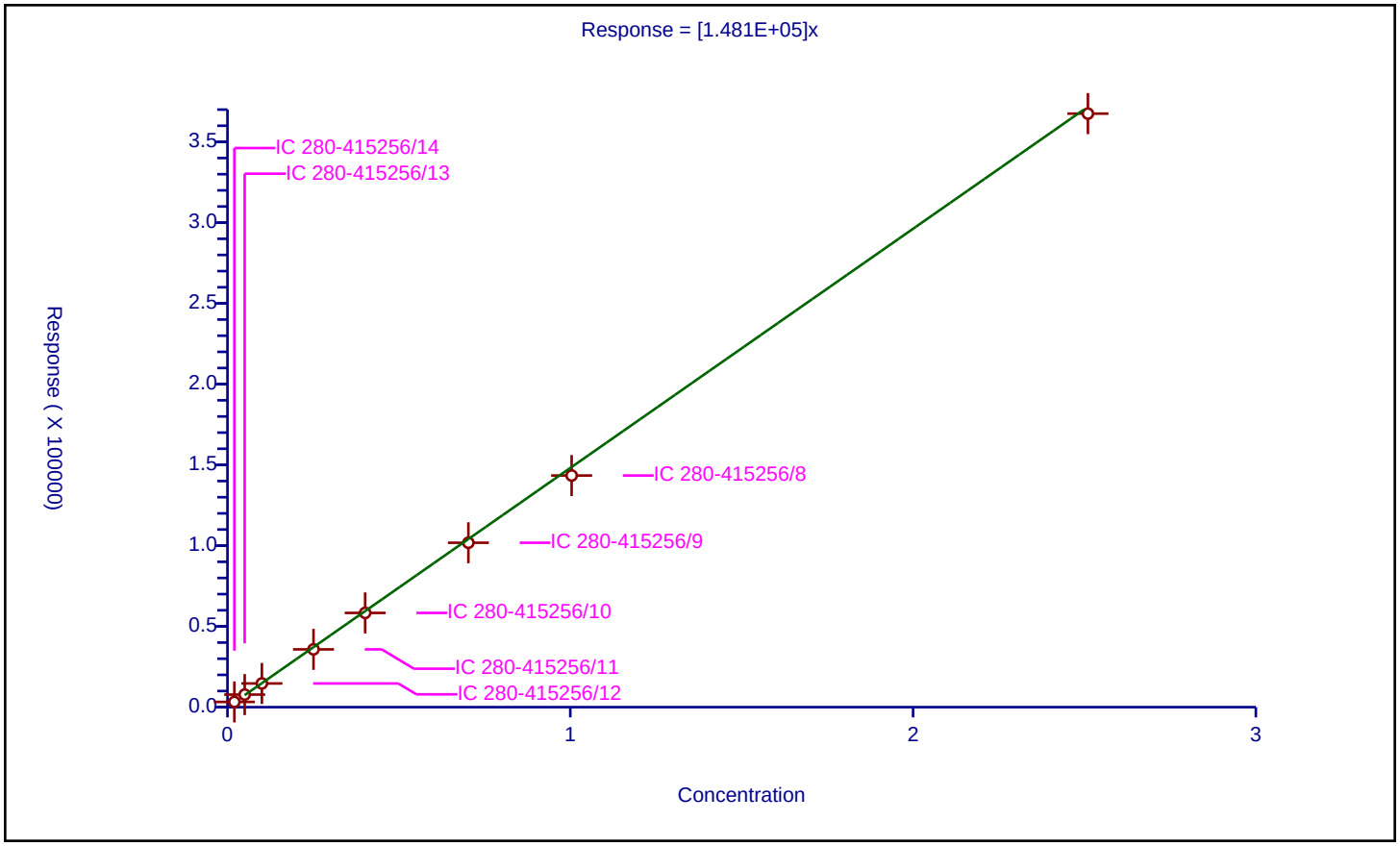
Curve Coefficients

Intercept:	0
Slope:	1.481E+05

Error Coefficients

Standard Error:	2790
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	3245.0			161603.585657	Y
2	IC 280-415256/13	0.0502	7786.0			155099.601594	Y
3	IC 280-415256/12	0.1004	14675.0			146165.338645	Y
4	IC 280-415256/11	0.251	35788.0			142581.673307	Y
5	IC 280-415256/10	0.4016	58353.0			145301.294821	Y
6	IC 280-415256/9	0.7028	101807.0			144859.134889	Y
7	IC 280-415256/8	1.004	143426.0			142854.581673	Y
8	IC 280-415256/7	2.51	367509.0			146417.928287	Y



Calibration / PETN

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

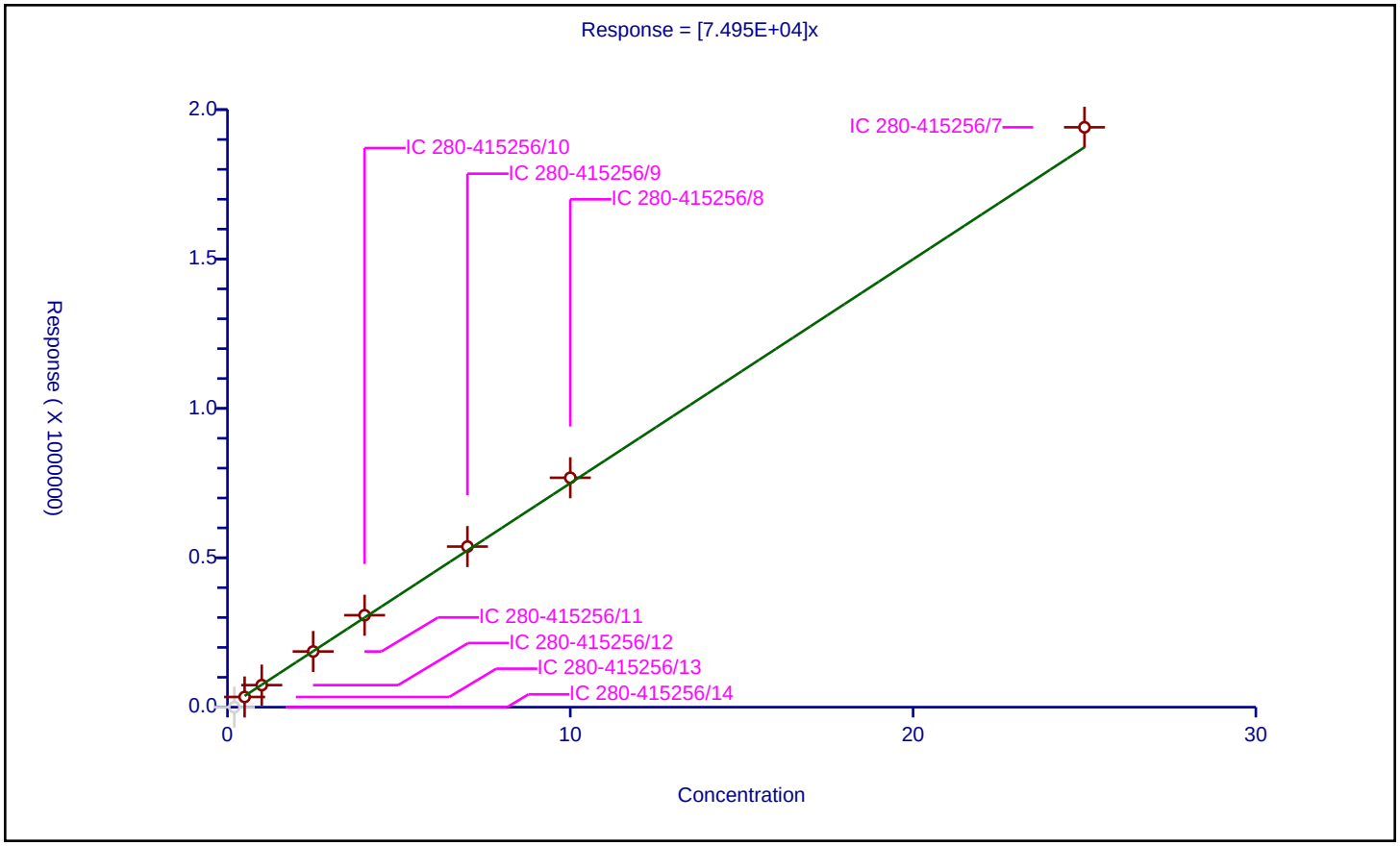
Curve Coefficients

Intercept:	0
Slope:	7.495E+04

Error Coefficients

Standard Error:	29000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	0.0			0.0	N
2	IC 280-415256/13	0.5	34097.0			68194.0	Y
3	IC 280-415256/12	1.0	73842.0			73842.0	Y
4	IC 280-415256/11	2.5	186281.0			74512.4	Y
5	IC 280-415256/10	4.0	307741.0			76935.25	Y
6	IC 280-415256/9	7.0	537514.0			76787.714286	Y
7	IC 280-415256/8	10.0	767790.0			76779.0	Y
8	IC 280-415256/7	25.0	1940836.0			77633.44	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433312/15 Calibration Date: 10/13/2018 21:03

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 10130015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Ave	175530	164130		374	400	-6.5	20.0
HMX	Ave	190873	163040		342	400	-14.6	20.0
RDX	Ave	240568	205278		341	400	-14.7	20.0
Nitrobenzene	Ave	436516	402705		369	400	-7.7	20.0
3,5-Dinitroaniline	Lin2		455585		359	400	-10.3	20.0
Nitroglycerin	Ave	195290	170580		3490	4000	-12.7	20.0
1,3-Dinitrobenzene	Ave	697670	622870		357	400	-10.7	20.0
2-Nitrotoluene	Ave	274675	248953		363	400	-9.4	20.0
4-Nitrotoluene	Ave	235818	225210		382	400	-4.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	326821	290775		356	400	-11.0	20.0
3-Nitrotoluene	Ave	312824	277105		354	400	-11.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	482281	410053		340	400	-15.0	20.0
1,3,5-Trinitrobenzene	Ave	508674	458213		360	400	-9.9	20.0
2,6-Dinitrotoluene	Ave	328921	281518		342	400	-14.4	20.0
2,4-Dinitrotoluene	Ave	629622	554770		352	400	-11.9	20.0
Tetryl	Ave	390101	337900		346	400	-13.4	20.0
2,4,6-Trinitrotoluene	Ave	448100	381930		341	400	-14.8	20.0
PETN	Ave	140771	126804		3600	4000	-9.9	20.0
1,2-Dinitrobenzene	Ave	308876	269188		349	400	-12.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-433312/15 Calibration Date: 10/13/2018 21:03

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 10130015.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	6.06	5.93	6.23
HMX	7.13	7.00	7.30
RDX	9.19	9.07	9.37
Nitrobenzene	12.12	12.01	12.31
3,5-Dinitroaniline	15.08	14.96	15.26
Nitroglycerin	15.64	15.52	15.82
1,3-Dinitrobenzene	15.68	15.56	15.86
2-Nitrotoluene	16.44	16.32	16.62
4-Nitrotoluene	16.78	16.66	16.96
4-Amino-2,6-dinitrotoluene	17.19	17.07	17.37
3-Nitrotoluene	17.69	17.57	17.87
2-Amino-4,6-dinitrotoluene	18.23	18.10	18.40
1,3,5-Trinitrobenzene	19.00	18.87	19.17
2,6-Dinitrotoluene	19.80	19.68	19.98
2,4-Dinitrotoluene	20.37	20.24	20.54
Tetryl	23.71	23.57	23.87
2,4,6-Trinitrotoluene	24.72	24.58	24.88
PETN	25.14	24.99	25.29
1,2-Dinitrobenzene	13.13	13.01	13.31

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130015.D
Lims ID: ICV FULL 8330
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:03:26 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV FULL 8330
Misc. Info.: 280-0075057-015
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist:

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 14-Oct-2018 14:03:04 Calib Date: 13-Oct-2018 20:28:27
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0302

First Level Reviewer: fiedlerh Date: 14-Oct-2018 13:54:52

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.382	4.401	-0.019	171602	0.4000	0.3920	
3 2,4-diamino-6-nitrotoluene	1	4.988	4.954	0.034	95793	0.4000	0.3450	M
4 2,4,6-Trinitrophenol	1	6.055	6.081	-0.026	65652	0.4000	0.3740	
5 HMX	1	7.128	7.148	-0.020	65216	0.4000	0.3417	
7 RDX	1	9.188	9.221	-0.033	82111	0.4000	0.3413	
8 Nitrobenzene	1	12.115	12.161	-0.046	161082	0.4000	0.3690	
$ 9 1,2-Dinitrobenzene	1	13.128	13.161	-0.033	107675	0.4000	0.3486	
10 3,5-Dinitroaniline	1	15.082	15.114	-0.032	182234	0.4000	0.3586	
12 Nitroglycerin	2	15.642	15.667	-0.025	682321	4.00	3.49	
11 1,3-Dinitrobenzene	1	15.682	15.707	-0.025	249148	0.4000	0.3571	
13 o-Nitrotoluene	1	16.442	16.474	-0.032	99581	0.4000	0.3625	
14 p-Nitrotoluene	1	16.775	16.814	-0.039	90084	0.4000	0.3820	
15 4-Amino-2,6-dinitrotoluene	1	17.188	17.221	-0.033	116310	0.4000	0.3559	
16 m-Nitrotoluene	1	17.688	17.721	-0.033	110842	0.4000	0.3543	
17 2-Amino-4,6-dinitrotoluene	1	18.228	18.254	-0.026	164021	0.4000	0.3401	
18 1,3,5-Trinitrobenzene	1	18.995	19.021	-0.026	183285	0.4000	0.3603	
19 2,6-Dinitrotoluene	1	19.802	19.834	-0.032	112607	0.4000	0.3424	
20 2,4-Dinitrotoluene	1	20.368	20.394	-0.026	221908	0.4000	0.3524	
21 Tetryl	1	23.708	23.721	-0.013	135160	0.4000	0.3465	
22 2,4,6-Trinitrotoluene	1	24.715	24.734	-0.019	152772	0.4000	0.3409	
23 PETN	2	25.135	25.141	-0.006	507215	4.00	3.60	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

3,5-DNA LCS_00031	Amount Added:	40.00	Units: uL
8330Surrogate_00098	Amount Added:	40.00	Units: uL
8330DiaminLCS_00030	Amount Added:	40.00	Units: uL
8330 LCS_00081	Amount Added:	40.00	Units: uL

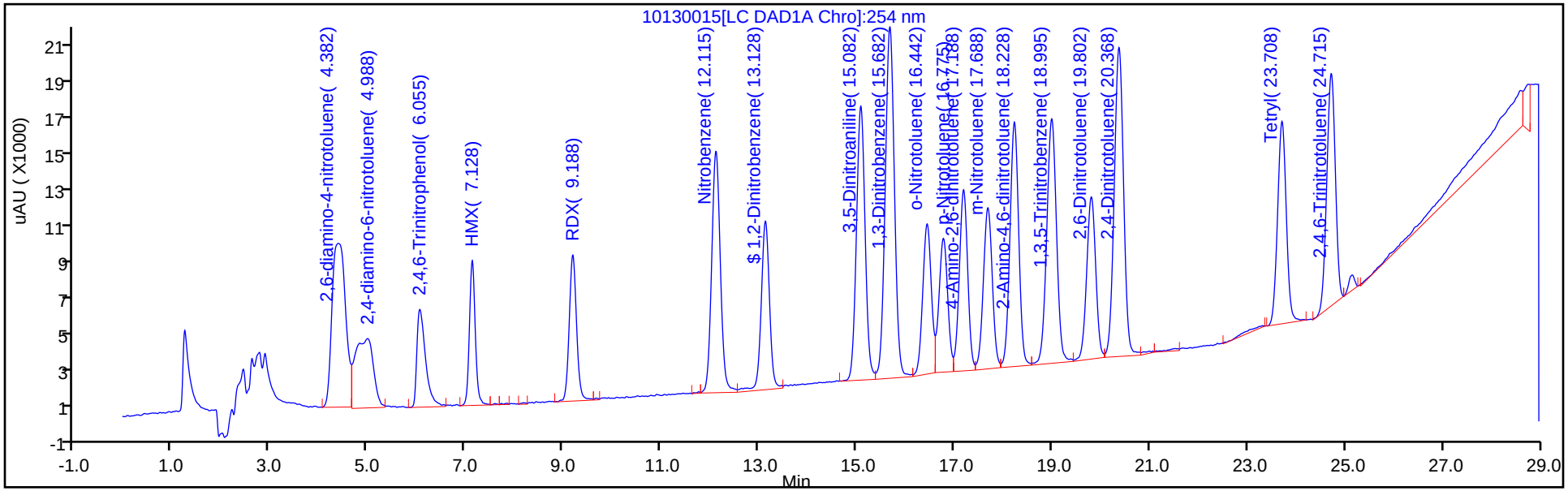
Report Date: 14-Oct-2018 14:03:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

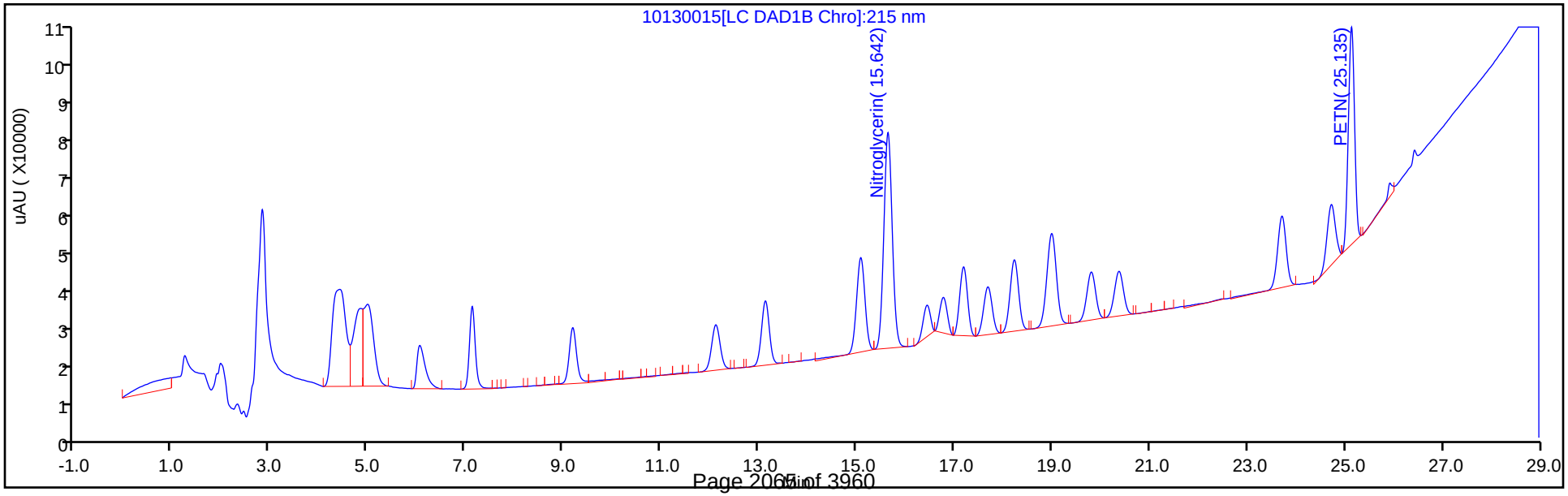
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130015.D

Injection Date:	13-Oct-2018 21:03:26	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	ICV FULL 8330			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436121/28 Calibration Date: 11/03/2018 06:34

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11020028.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Ave	175530	193820		276	250	10.4	20.0
HMX	Ave	190873	215240		282	250	12.8	20.0
RDX	Ave	240568	247948		258	250	3.1	20.0
Nitrobenzene	Ave	436516	397840		228	251	-8.9	20.0
3,5-Dinitroaniline	Lin2		505800		249	250	-0.5	20.0
Nitroglycerin	Ave	195290	203725		2610	2500	4.3	20.0
1,3-Dinitrobenzene	Ave	697670	713630		256	250	2.3	20.0
2-Nitrotoluene	Ave	274675	226158		206	251	-17.7	20.0
4-Nitrotoluene	Ave	235818	204673		218	251	-13.2	20.0
4-Amino-2,6-dinitrotoluene	Ave	326821	331681		254	251	1.5	20.0
3-Nitrotoluene	Ave	312824	258641		208	251	-17.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	482281	477527		248	251	-1.0	20.0
1,3,5-Trinitrobenzene	Ave	508674	520936		256	250	2.4	20.0
2,6-Dinitrotoluene	Ave	328921	329571		251	251	0.2	20.0
2,4-Dinitrotoluene	Ave	629622	648160		258	251	2.9	20.0
Tetryl	Ave	390101	401236		257	250	2.9	20.0
2,4,6-Trinitrotoluene	Ave	448100	476243		267	251	6.3	20.0
PETN	Ave	140771	158145		2810	2500	12.3	20.0
1,2-Dinitrobenzene	Ave	308876	324448		263	250	5.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436121/28 Calibration Date: 11/03/2018 06:34

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11020028.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	6.44	6.43	6.73
HMX	7.14	7.02	7.32
RDX	9.22	9.11	9.41
Nitrobenzene	12.18	12.07	12.37
3,5-Dinitroaniline	15.12	15.02	15.32
Nitroglycerin	15.66	15.57	15.87
1,3-Dinitrobenzene	15.72	15.62	15.92
2-Nitrotoluene	16.49	16.39	16.69
4-Nitrotoluene	16.82	16.73	17.03
4-Amino-2,6-dinitrotoluene	17.23	17.13	17.43
3-Nitrotoluene	17.73	17.63	17.93
2-Amino-4,6-dinitrotoluene	18.26	18.17	18.47
1,3,5-Trinitrobenzene	19.01	18.92	19.22
2,6-Dinitrotoluene	19.83	19.74	20.04
2,4-Dinitrotoluene	20.39	20.31	20.61
Tetryl	23.70	23.61	23.91
2,4,6-Trinitrotoluene	24.72	24.62	24.92
PETN	25.13	25.03	25.33
1,2-Dinitrobenzene	13.18	13.08	13.38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020028.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 06:34:43 ALS Bottle#: 7 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075779-028
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-Nov-2018 11:35:08 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0304

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.455	4.478	-0.023	107522	0.2500	0.2456	
3 2,4-diamino-6-nitrotoluene	1	5.008	5.031	-0.023	55989	0.2500	0.2016	
4 2,4,6-Trinitrophenol	1	6.435	6.578	-0.143	48455	0.2500	0.2761	
5 HMX	1	7.142	7.171	-0.029	53810	0.2500	0.2819	
7 RDX	1	9.222	9.264	-0.042	61987	0.2500	0.2577	
8 Nitrobenzene	1	12.175	12.224	-0.049	99659	0.2505	0.2283	
$ 9 1,2-Dinitrobenzene	1	13.175	13.231	-0.056	81112	0.2500	0.2626	
10 3,5-Dinitroaniline	1	15.122	15.171	-0.049	126450	0.2500	0.2488	
12 Nitroglycerin	2	15.662	15.724	-0.062	509313	2.50	2.61	
11 1,3-Dinitrobenzene	1	15.722	15.771	-0.049	178586	0.2503	0.2560	
13 o-Nitrotoluene	1	16.488	16.544	-0.056	56709	0.2508	0.2065	
14 p-Nitrotoluene	1	16.822	16.878	-0.056	51373	0.2510	0.2178	
15 4-Amino-2,6-dinitrotoluene	1	17.228	17.284	-0.056	83169	0.2508	0.2545	
16 m-Nitrotoluene	1	17.728	17.784	-0.056	64919	0.2510	0.2075	
17 2-Amino-4,6-dinitrotoluene	1	18.255	18.324	-0.069	119740	0.2508	0.2483	
18 1,3,5-Trinitrobenzene	1	19.008	19.071	-0.063	130234	0.2500	0.2560	
19 2,6-Dinitrotoluene	1	19.828	19.891	-0.063	82640	0.2508	0.2512	
20 2,4-Dinitrotoluene	1	20.388	20.458	-0.070	162364	0.2505	0.2579	
21 Tetryl	1	23.702	23.758	-0.056	100309	0.2500	0.2571	
22 2,4,6-Trinitrotoluene	1	24.722	24.771	-0.049	119537	0.2510	0.2668	
23 PETN	2	25.128	25.178	-0.050	395363	2.50	2.81	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL
8330_ADDs_00017 Amount Added: 12.50 Units: uL

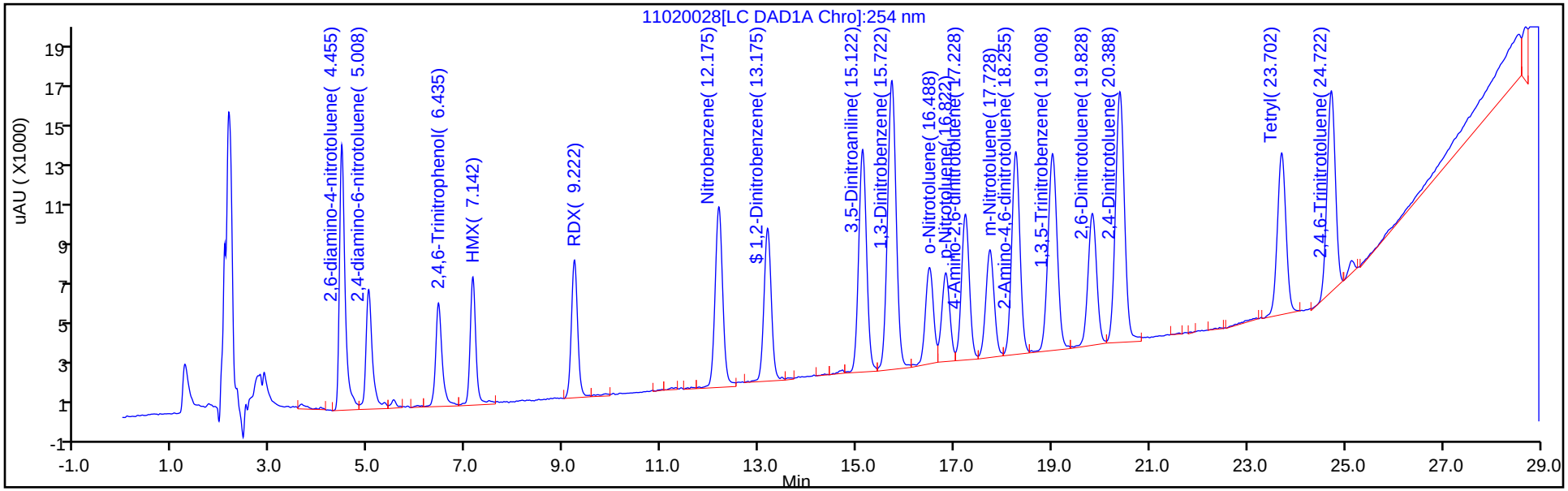
Report Date: 05-Nov-2018 11:35:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

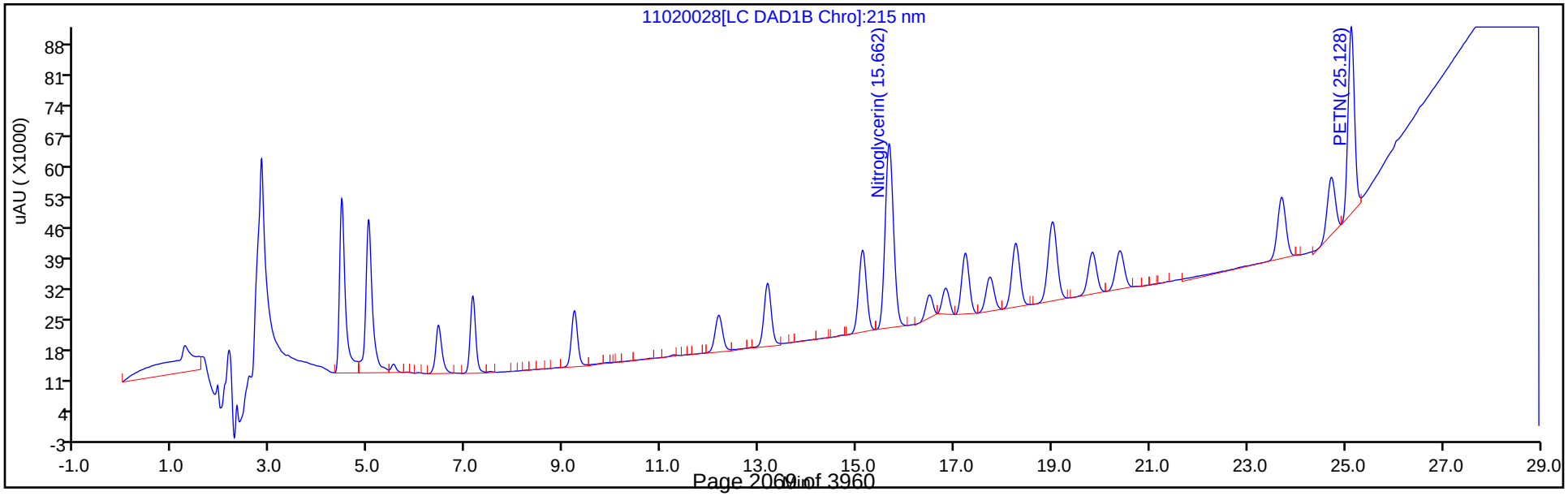
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020028.D

Injection Date:	03-Nov-2018 06:34:43	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	CCV			Worklist Smp#:	28
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436121/39 Calibration Date: 11/03/2018 12:59

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11020039.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Ave	175530	190840		272	250	8.7	20.0
HMX	Ave	190873	216188		283	250	13.3	20.0
RDX	Ave	240568	246324		256	250	2.4	20.0
Nitrobenzene	Ave	436516	355936		204	251	-18.5	20.0
3,5-Dinitroaniline	Lin2		507988		250	250	-0.0	20.0
Nitroglycerin	Ave	195290	204873		2620	2500	4.9	20.0
1,3-Dinitrobenzene	Ave	697670	720272		258	250	3.2	20.0
2-Nitrotoluene	Ave	274675	203960		186	251	-25.7*	20.0
4-Nitrotoluene	Ave	235818	191219		204	251	-18.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	326821	332399		255	251	1.7	20.0
3-Nitrotoluene	Ave	312824	235044		189	251	-24.9*	20.0
2-Amino-4,6-dinitrotoluene	Ave	482281	491202		255	251	1.8	20.0
1,3,5-Trinitrobenzene	Ave	508674	532708		262	250	4.7	20.0
2,6-Dinitrotoluene	Ave	328921	332175		253	251	1.0	20.0
2,4-Dinitrotoluene	Ave	629622	664691		264	251	5.6	20.0
Tetryl	Ave	390101	454768		291	250	16.6	20.0
2,4,6-Trinitrotoluene	Ave	448100	484586		271	251	8.1	20.0
PETN	Ave	140771	159433		2830	2500	13.3	20.0
1,2-Dinitrobenzene	Ave	308876	326296		264	250	5.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436121/39 Calibration Date: 11/03/2018 12:59

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11020039.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	6.42	6.43	6.73
HMX	7.14	7.02	7.32
RDX	9.22	9.11	9.41
Nitrobenzene	12.18	12.07	12.37
3,5-Dinitroaniline	15.12	15.02	15.32
Nitroglycerin	15.66	15.57	15.87
1,3-Dinitrobenzene	15.72	15.62	15.92
2-Nitrotoluene	16.49	16.39	16.69
4-Nitrotoluene	16.83	16.73	17.03
4-Amino-2,6-dinitrotoluene	17.22	17.13	17.43
3-Nitrotoluene	17.73	17.63	17.93
2-Amino-4,6-dinitrotoluene	18.26	18.17	18.47
1,3,5-Trinitrobenzene	19.01	18.92	19.22
2,6-Dinitrotoluene	19.83	19.74	20.04
2,4-Dinitrotoluene	20.39	20.31	20.61
Tetryl	23.70	23.61	23.91
2,4,6-Trinitrotoluene	24.72	24.62	24.92
PETN	25.13	25.03	25.33
1,2-Dinitrobenzene	13.17	13.08	13.38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020039.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 12:59:28 ALS Bottle#: 7 Worklist Smp#: 39
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075779-039
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 05-Nov-2018 11:35:35 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0304

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.457	4.478	-0.021	106884	0.2500	0.2442	
3 2,4-diamino-6-nitrotoluene	1	5.011	5.031	-0.020	54645	0.2500	0.1968	
4 2,4,6-Trinitrophenol	1	6.417	6.578	-0.161	47710	0.2500	0.2718	
5 HMX	1	7.144	7.171	-0.027	54047	0.2500	0.2832	
7 RDX	1	9.217	9.264	-0.047	61581	0.2500	0.2560	
8 Nitrobenzene	1	12.177	12.224	-0.047	89162	0.2505	0.2043	
$ 9 1,2-Dinitrobenzene	1	13.171	13.231	-0.060	81574	0.2500	0.2641	
10 3,5-Dinitroaniline	1	15.117	15.171	-0.054	126997	0.2500	0.2499	
12 Nitroglycerin	2	15.664	15.724	-0.060	512183	2.50	2.62	
11 1,3-Dinitrobenzene	1	15.724	15.771	-0.047	180248	0.2503	0.2584	
13 o-Nitrotoluene	1	16.491	16.544	-0.053	51143	0.2508	0.1862	
14 p-Nitrotoluene	1	16.831	16.878	-0.047	47996	0.2510	0.2035	
15 4-Amino-2,6-dinitrotoluene	1	17.224	17.284	-0.060	83349	0.2508	0.2550	
16 m-Nitrotoluene	1	17.731	17.784	-0.053	58996	0.2510	0.1886	
17 2-Amino-4,6-dinitrotoluene	1	18.257	18.324	-0.067	123169	0.2508	0.2554	
18 1,3,5-Trinitrobenzene	1	19.011	19.071	-0.060	133177	0.2500	0.2618	
19 2,6-Dinitrotoluene	1	19.831	19.891	-0.060	83293	0.2508	0.2532	
20 2,4-Dinitrotoluene	1	20.391	20.458	-0.067	166505	0.2505	0.2645	
21 Tetryl	1	23.704	23.758	-0.054	113692	0.2500	0.2914	
22 2,4,6-Trinitrotoluene	1	24.724	24.771	-0.047	121631	0.2510	0.2714	
23 PETN	2	25.131	25.178	-0.047	398583	2.50	2.83	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL
8330_ADDs_00017 Amount Added: 12.50 Units: uL

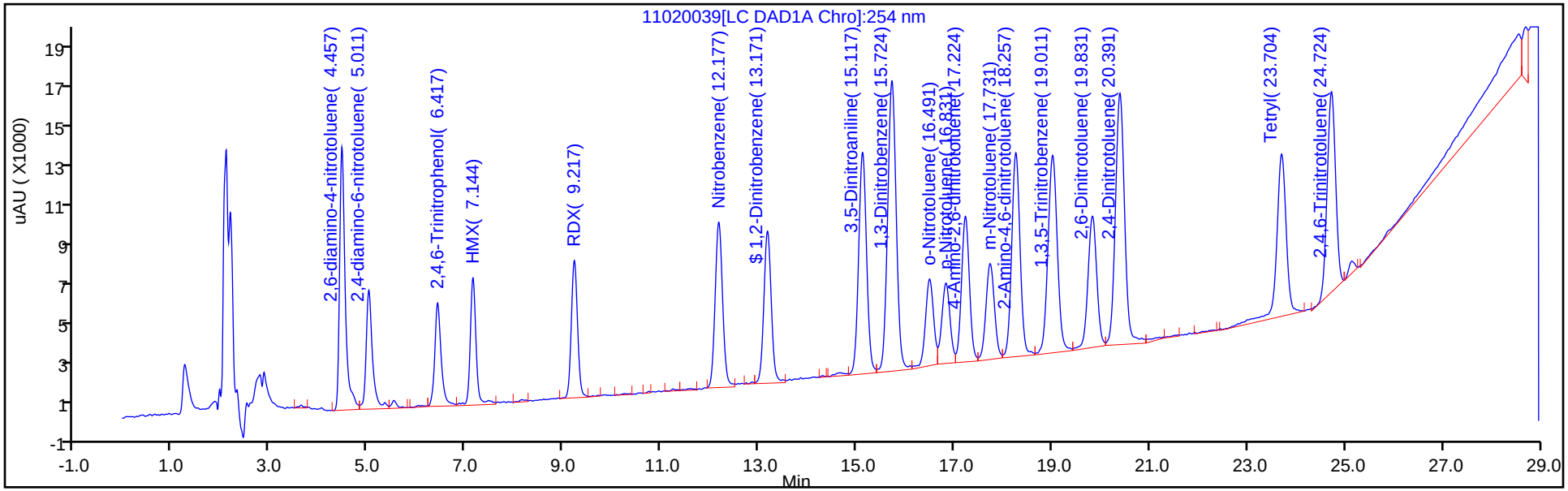
Report Date: 05-Nov-2018 11:35:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

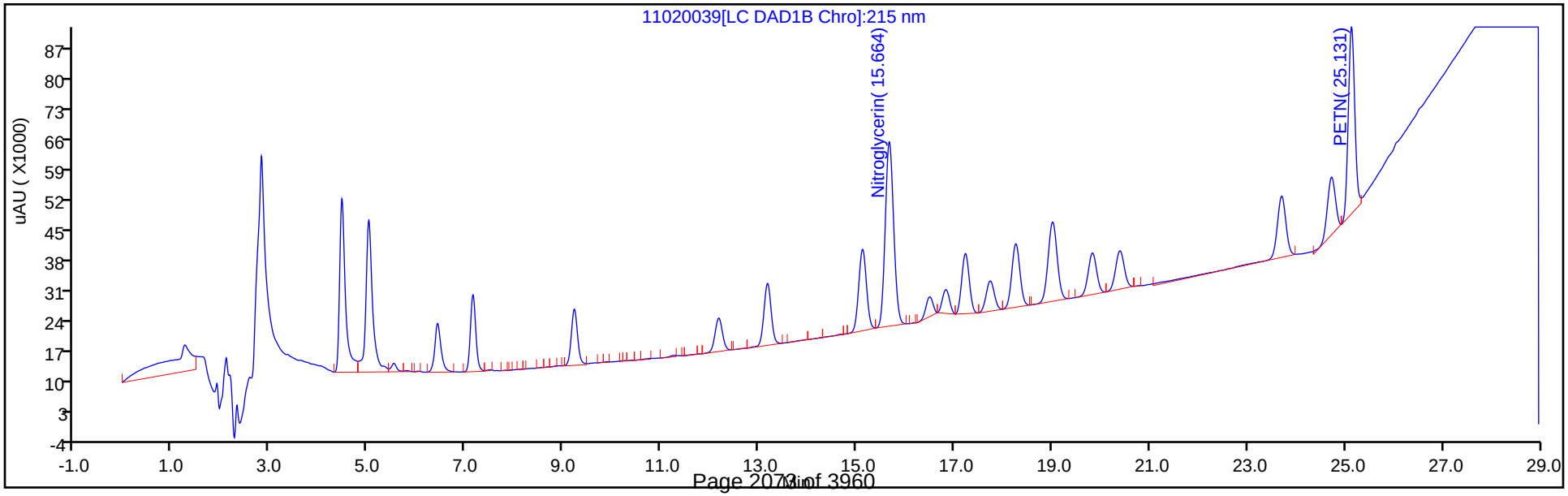
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181102-75779.b\11020039.D

Injection Date:	03-Nov-2018 12:59:28	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	CCV			Worklist Smp#:	39
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436697/7 Calibration Date: 11/07/2018 17:43

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11070007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Ave	175530	188992		269	250	7.7	20.0
HMX	Ave	190873	202388		265	250	6.0	20.0
RDX	Ave	240568	242636		252	250	0.9	20.0
Nitrobenzene	Ave	436516	443980		255	251	1.7	20.0
3,5-Dinitroaniline	Lin2		507356		250	250	-0.2	20.0
Nitroglycerin	Ave	195290	197648		2530	2500	1.2	20.0
1,3-Dinitrobenzene	Ave	697670	702513		252	250	0.7	20.0
2-Nitrotoluene	Ave	274675	273436		250	251	-0.5	20.0
4-Nitrotoluene	Ave	235818	236207		251	251	0.2	20.0
4-Amino-2,6-dinitrotoluene	Ave	326821	334999		257	251	2.5	20.0
3-Nitrotoluene	Ave	312824	307171		246	251	-1.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	482281	485707		253	251	0.7	20.0
1,3,5-Trinitrobenzene	Ave	508674	516860		254	250	1.6	20.0
2,6-Dinitrotoluene	Ave	328921	322341		246	251	-2.0	20.0
2,4-Dinitrotoluene	Ave	629622	635601		253	251	0.9	20.0
Tetryl	Ave	390101	394040		253	250	1.0	20.0
2,4,6-Trinitrotoluene	Ave	448100	468088		262	251	4.5	20.0
PETN	Ave	140771	152238		2700	2500	8.1	20.0
1,2-Dinitrobenzene	Ave	308876	310576		251	250	0.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436697/7 Calibration Date: 11/07/2018 17:43

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11070007.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	6.51	6.36	6.66
HMX	7.17	7.02	7.32
RDX	9.24	9.09	9.39
Nitrobenzene	12.19	12.04	12.34
3,5-Dinitroaniline	15.17	15.02	15.32
Nitroglycerin	15.69	15.54	15.84
1,3-Dinitrobenzene	15.75	15.60	15.90
2-Nitrotoluene	16.51	16.36	16.66
4-Nitrotoluene	16.84	16.69	16.99
4-Amino-2,6-dinitrotoluene	17.27	17.12	17.42
3-Nitrotoluene	17.75	17.60	17.90
2-Amino-4,6-dinitrotoluene	18.31	18.16	18.46
1,3,5-Trinitrobenzene	19.06	18.91	19.21
2,6-Dinitrotoluene	19.87	19.72	20.02
2,4-Dinitrotoluene	20.44	20.29	20.59
Tetryl	23.78	23.63	23.93
2,4,6-Trinitrotoluene	24.78	24.63	24.93
PETN	25.16	25.01	25.31
1,2-Dinitrobenzene	13.21	13.06	13.36

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070007.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 07-Nov-2018 17:43:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075940-007
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 08-Nov-2018 09:58:41 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0306

First Level Reviewer: fiedlerh Date: 08-Nov-2018 09:54:56

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
2 2,6-diamino-4-nitrotoluene	1	4.412	4.412	0.000	108821	0.2500	0.2486	
3 2,4-diamino-6-nitrotoluene	1	5.005	5.005	0.000	66392	0.2500	0.2391	
4 2,4,6-Trinitrophenol	1	6.505	6.505	0.000	47248	0.2500	0.2692	
5 HMX	1	7.172	7.172	0.000	50597	0.2500	0.2651	
7 RDX	1	9.238	9.238	0.000	60659	0.2500	0.2521	
8 Nitrobenzene	1	12.185	12.185	0.000	111217	0.2505	0.2548	
$ 9 1,2-Dinitrobenzene	1	13.205	13.205	0.000	77644	0.2500	0.2514	
10 3,5-Dinitroaniline	1	15.165	15.165	0.000	126839	0.2500	0.2496	
12 Nitroglycerin	2	15.685	15.685	0.000	494120	2.50	2.53	
11 1,3-Dinitrobenzene	1	15.752	15.752	0.000	175804	0.2503	0.2520	
13 o-Nitrotoluene	1	16.505	16.505	0.000	68564	0.2508	0.2496	
14 p-Nitrotoluene	1	16.838	16.838	0.000	59288	0.2510	0.2514	
15 4-Amino-2,6-dinitrotoluene	1	17.272	17.272	0.000	84001	0.2508	0.2570	
16 m-Nitrotoluene	1	17.752	17.752	0.000	77100	0.2510	0.2465	
17 2-Amino-4,6-dinitrotoluene	1	18.312	18.312	0.000	121791	0.2508	0.2525	
18 1,3,5-Trinitrobenzene	1	19.058	19.058	0.000	129215	0.2500	0.2540	
19 2,6-Dinitrotoluene	1	19.872	19.872	0.000	80827	0.2508	0.2457	
20 2,4-Dinitrotoluene	1	20.438	20.438	0.000	159218	0.2505	0.2529	
21 Tetryl	1	23.779	23.779	0.000	98510	0.2500	0.2525	
22 2,4,6-Trinitrotoluene	1	24.779	24.779	0.000	117490	0.2510	0.2622	
23 PETN	2	25.159	25.159	0.000	380596	2.50	2.70	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL
8330_ADDs_00017 Amount Added: 12.50 Units: uL

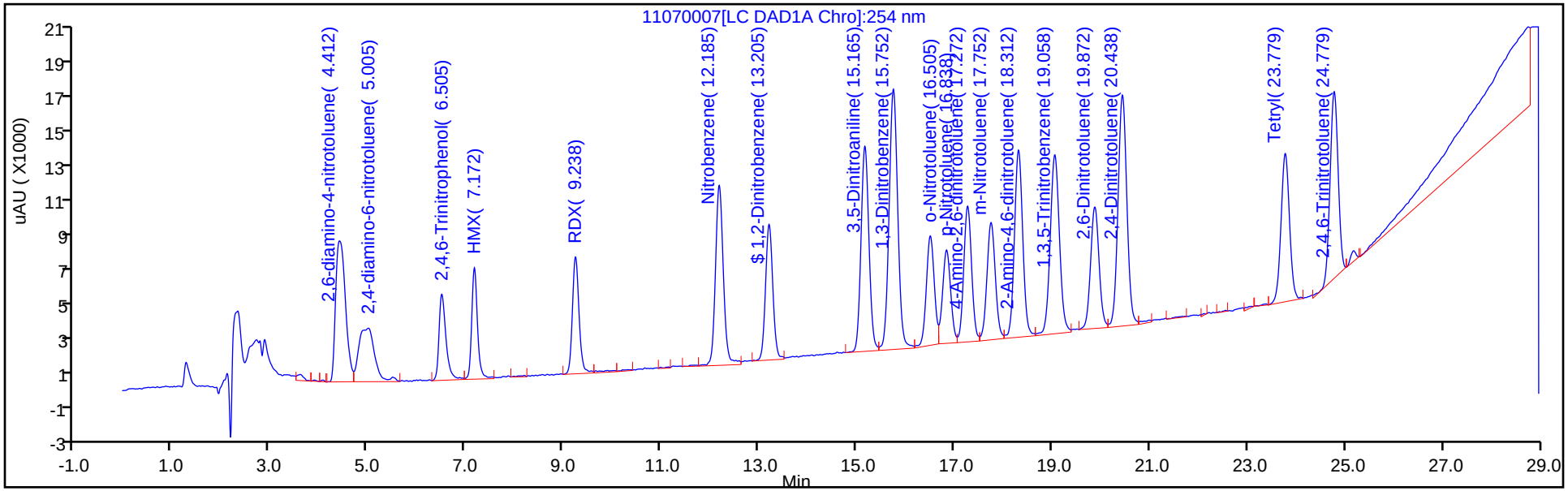
Report Date: 08-Nov-2018 09:58:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

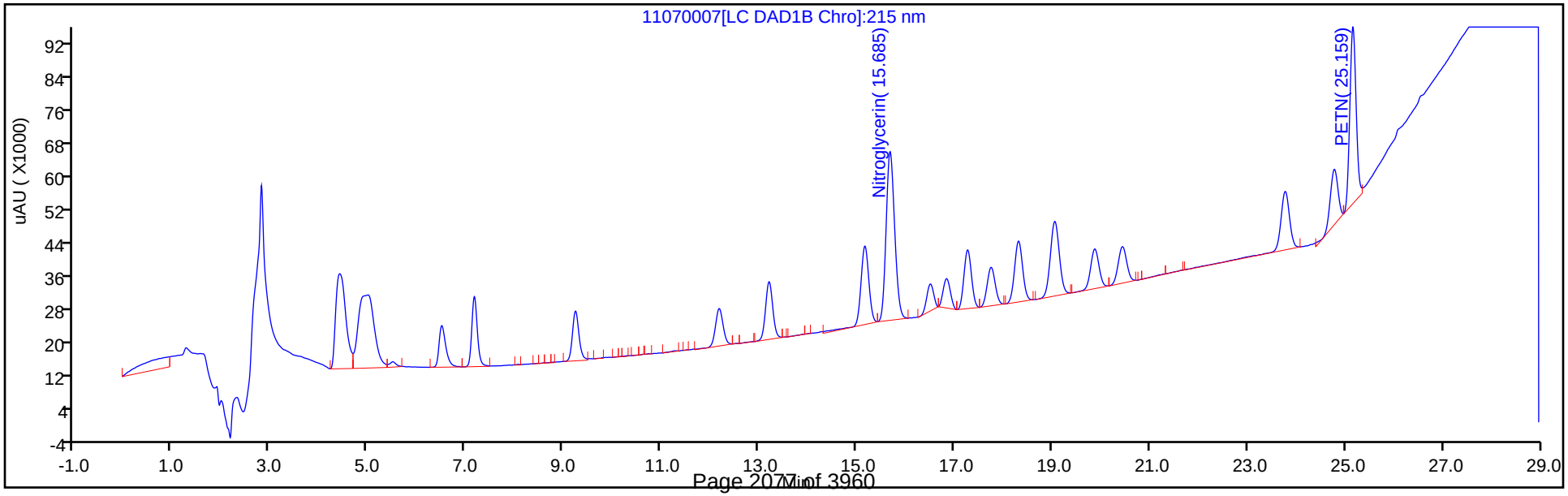
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070007.D

Injection Date:	07-Nov-2018 17:43:48	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	CCV			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436697/14 Calibration Date: 11/07/2018 21:48

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11070014.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Ave	175530	194416		277	250	10.8	20.0
HMX	Ave	190873	202288		265	250	6.0	20.0
RDX	Ave	240568	241912		251	250	0.6	20.0
Nitrobenzene	Ave	436516	429325		246	251	-1.6	20.0
3,5-Dinitroaniline	Lin2		514944		253	250	1.3	20.0
Nitroglycerin	Ave	195290	197915		2530	2500	1.3	20.0
1,3-Dinitrobenzene	Ave	697670	704108		253	250	0.9	20.0
2-Nitrotoluene	Ave	274675	269093		246	251	-2.0	20.0
4-Nitrotoluene	Ave	235818	234526		250	251	-0.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	326821	331466		254	251	1.4	20.0
3-Nitrotoluene	Ave	312824	302873		243	251	-3.2	20.0
2-Amino-4,6-dinitrotoluene	Ave	482281	481703		250	251	-0.1	20.0
1,3,5-Trinitrobenzene	Ave	508674	522748		257	250	2.8	20.0
2,6-Dinitrotoluene	Ave	328921	329460		251	251	0.2	20.0
2,4-Dinitrotoluene	Ave	629622	638144		254	251	1.4	20.0
Tetryl	Ave	390101	417748		268	250	7.1	20.0
2,4,6-Trinitrotoluene	Ave	448100	471849		264	251	5.3	20.0
PETN	Ave	140771	153908		2730	2500	9.3	20.0
1,2-Dinitrobenzene	Ave	308876	307676		249	250	-0.4	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436697/14 Calibration Date: 11/07/2018 21:48

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/13/2018 16:23

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/13/2018 20:28

Lab File ID: 11070014.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	6.41	6.36	6.66
HMX	7.16	7.02	7.32
RDX	9.22	9.09	9.39
Nitrobenzene	12.17	12.04	12.34
3,5-Dinitroaniline	15.15	15.02	15.32
Nitroglycerin	15.67	15.54	15.84
1,3-Dinitrobenzene	15.74	15.60	15.90
2-Nitrotoluene	16.50	16.36	16.66
4-Nitrotoluene	16.83	16.69	16.99
4-Amino-2,6-dinitrotoluene	17.26	17.12	17.42
3-Nitrotoluene	17.74	17.60	17.90
2-Amino-4,6-dinitrotoluene	18.29	18.16	18.46
1,3,5-Trinitrobenzene	19.04	18.91	19.21
2,6-Dinitrotoluene	19.86	19.72	20.02
2,4-Dinitrotoluene	20.42	20.29	20.59
Tetryl	23.76	23.63	23.93
2,4,6-Trinitrotoluene	24.76	24.63	24.93
PETN	25.14	25.01	25.31
1,2-Dinitrobenzene	13.19	13.06	13.36

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070014.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 07-Nov-2018 21:48:40 ALS Bottle#: 7 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0075940-014
Operator ID: HKF Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 08-Nov-2018 09:59:03 Calib Date: 14-Oct-2018 01:43:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\G2_LUNA\20181013-75057.b\10130023.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0306

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	2 2,6-diamino-4-nitrotoluene	1	4.408	4.412	-0.004	109035	0.2500	0.2491	
	3 2,4-diamino-6-nitrotoluene	1	4.975	5.005	-0.030	65947	0.2500	0.2375	
	4 2,4,6-Trinitrophenol	1	6.408	6.505	-0.097	48604	0.2500	0.2769	
	5 HMX	1	7.155	7.172	-0.017	50572	0.2500	0.2650	
	7 RDX	1	9.221	9.238	-0.017	60478	0.2500	0.2514	
	8 Nitrobenzene	1	12.168	12.185	-0.017	107546	0.2505	0.2464	
$	9 1,2-Dinitrobenzene	1	13.188	13.205	-0.017	76919	0.2500	0.2490	
	10 3,5-Dinitroaniline	1	15.148	15.165	-0.017	128736	0.2500	0.2533	
	12 Nitroglycerin	2	15.668	15.685	-0.017	494788	2.50	2.53	
	11 1,3-Dinitrobenzene	1	15.741	15.752	-0.011	176203	0.2503	0.2526	
	13 o-Nitrotoluene	1	16.501	16.505	-0.004	67475	0.2508	0.2457	
	14 p-Nitrotoluene	1	16.834	16.838	-0.004	58866	0.2510	0.2496	
	15 4-Amino-2,6-dinitrotoluene	1	17.261	17.272	-0.011	83115	0.2508	0.2543	
	16 m-Nitrotoluene	1	17.741	17.752	-0.011	76021	0.2510	0.2430	
	17 2-Amino-4,6-dinitrotoluene	1	18.294	18.312	-0.018	120787	0.2508	0.2504	
	18 1,3,5-Trinitrobenzene	1	19.041	19.058	-0.017	130687	0.2500	0.2569	
	19 2,6-Dinitrotoluene	1	19.861	19.872	-0.011	82612	0.2508	0.2512	
	20 2,4-Dinitrotoluene	1	20.421	20.438	-0.017	159855	0.2505	0.2539	
	21 Tetryl	1	23.755	23.779	-0.024	104437	0.2500	0.2677	
	22 2,4,6-Trinitrotoluene	1	24.761	24.779	-0.018	118434	0.2510	0.2643	
	23 PETN	2	25.141	25.159	-0.018	384770	2.50	2.73	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL
8330_ADDs_00017 Amount Added: 12.50 Units: uL

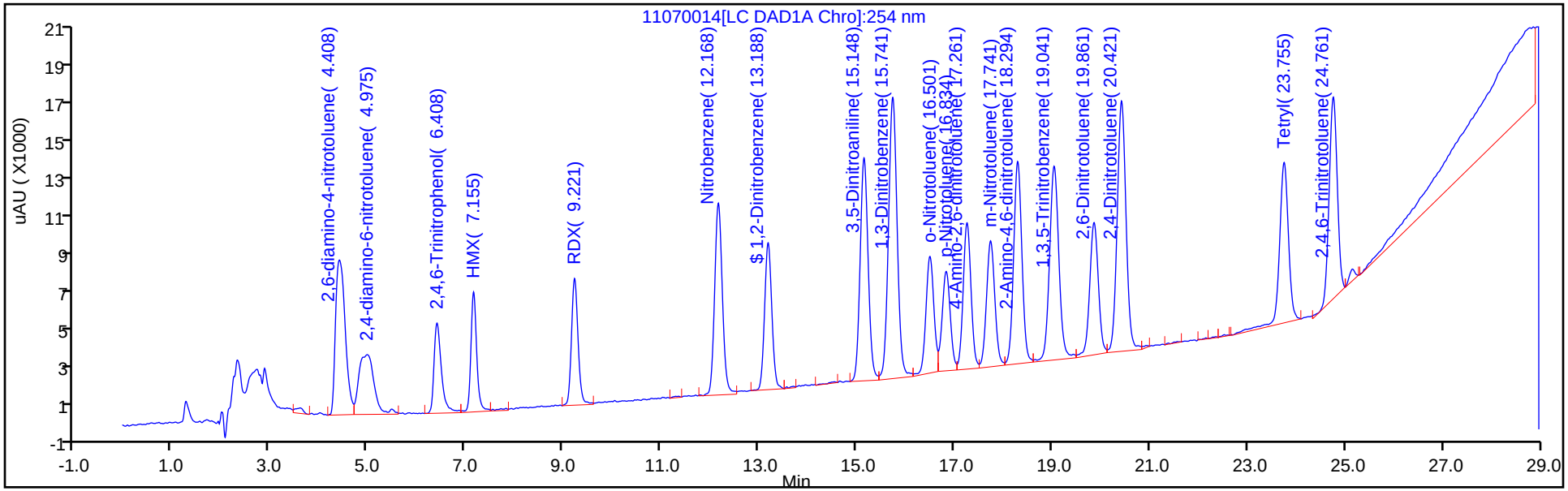
Report Date: 08-Nov-2018 09:59:04 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

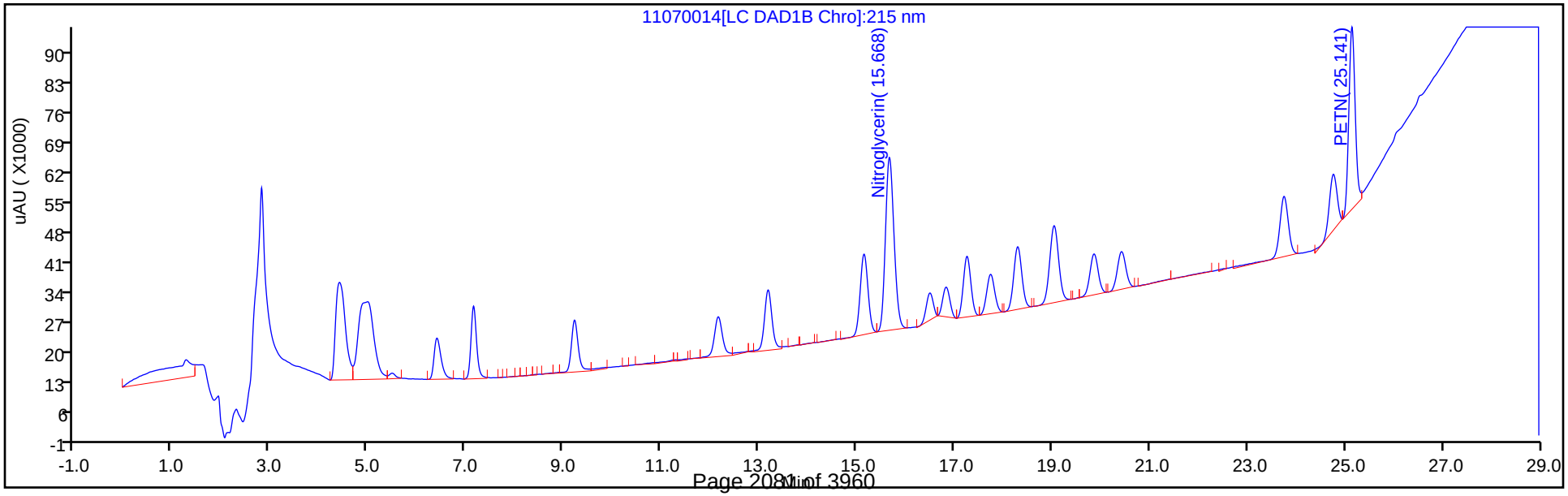
Data File: \\ChromNA\Denver\ChromData\G2_LUNA\20181107-75940.b\11070014.D

Injection Date:	07-Nov-2018 21:48:40	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	HKF
Lims ID:	CCV			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
MNX	Ave	13140	139188			400	959.2*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
MNX	7.30	7.15	7.45

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

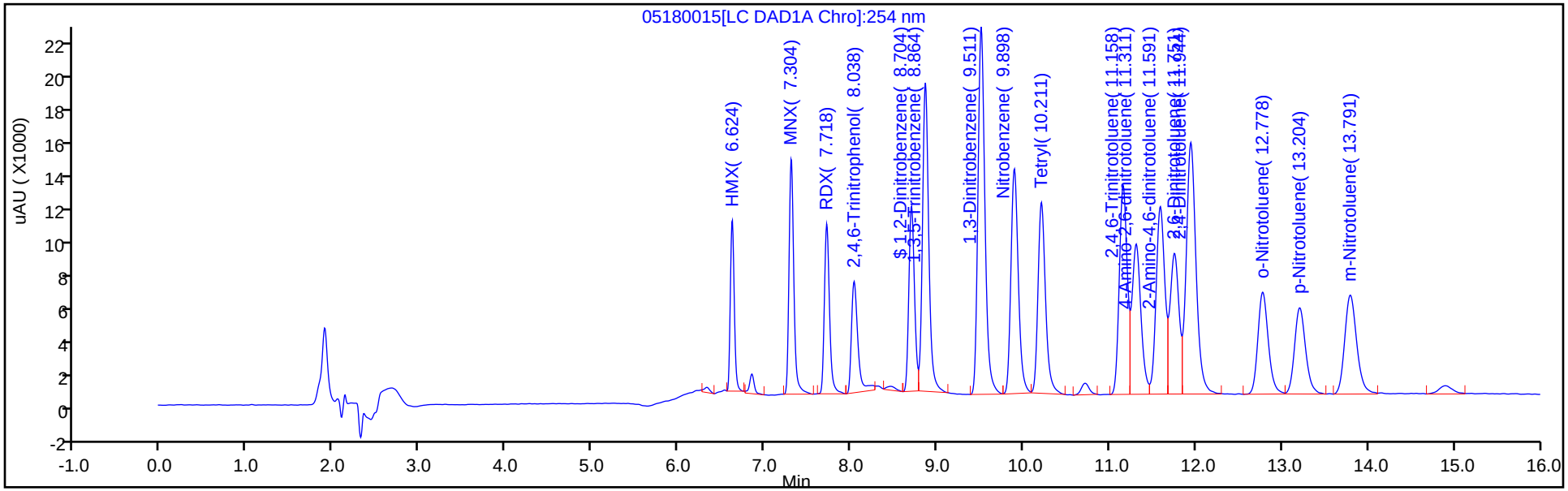
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

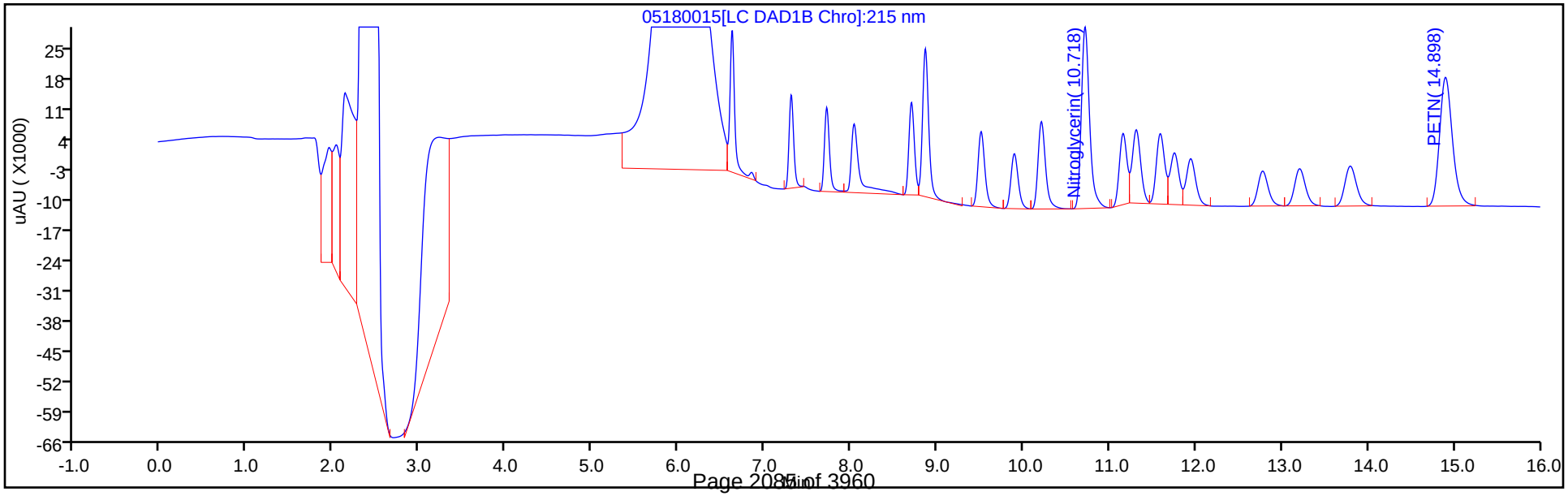
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	82798		390	400	-2.5	20.0
RDX	Ave	104577	107300		410	400	2.6	20.0
Picric acid	Ave	84340	88468		420	400	4.9	20.0
1,3,5-Trinitrobenzene	Ave	228408	236678		414	400	3.6	20.0
1,3-Dinitrobenzene	Ave	301023	314290		418	400	4.4	20.0
Nitrobenzene	Ave	198781	203228		409	400	2.2	20.0
Tetryl	Ave	163448	176798		433	400	8.2	20.0
Nitroglycerin	Ave	67945	69335		4080	4000	2.0	20.0
2,4,6-Trinitrotoluene	Ave	214478	203085		379	400	-5.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	166093		401	400	0.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	200635		402	400	0.6	20.0
2,6-Dinitrotoluene	Ave	153065	155268		406	400	1.4	20.0
2,4-Dinitrotoluene	Ave	298269	302013		405	400	1.3	20.0
2-Nitrotoluene	Ave	132225	130453		395	400	-1.3	20.0
4-Nitrotoluene	Ave	113654	117055		412	400	3.0	20.0
3-Nitrotoluene	Ave	148110	145963		394	400	-1.5	20.0
PETN	Ave	74955	77410		4130	4000	3.3	20.0
1,2-Dinitrobenzene	Ave	128727	128060		398	400	-0.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.62	6.47	6.77
RDX	7.72	7.57	7.87
Picric acid	8.04	7.89	8.19
1,3,5-Trinitrobenzene	8.86	8.71	9.01
1,3-Dinitrobenzene	9.51	9.36	9.66
Nitrobenzene	9.90	9.75	10.05
Tetryl	10.21	10.06	10.36
Nitroglycerin	10.72	10.57	10.87
2,4,6-Trinitrotoluene	11.16	11.06	11.26
4-Amino-2,6-dinitrotoluene	11.31	11.21	11.41
2-Amino-4,6-dinitrotoluene	11.59	11.49	11.69
2,6-Dinitrotoluene	11.75	11.65	11.85
2,4-Dinitrotoluene	11.94	11.84	12.04
2-Nitrotoluene	12.78	12.63	12.93
4-Nitrotoluene	13.20	13.05	13.35
3-Nitrotoluene	13.79	13.64	13.94
PETN	14.90	14.75	15.05
1,2-Dinitrobenzene	8.70	8.55	8.85

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

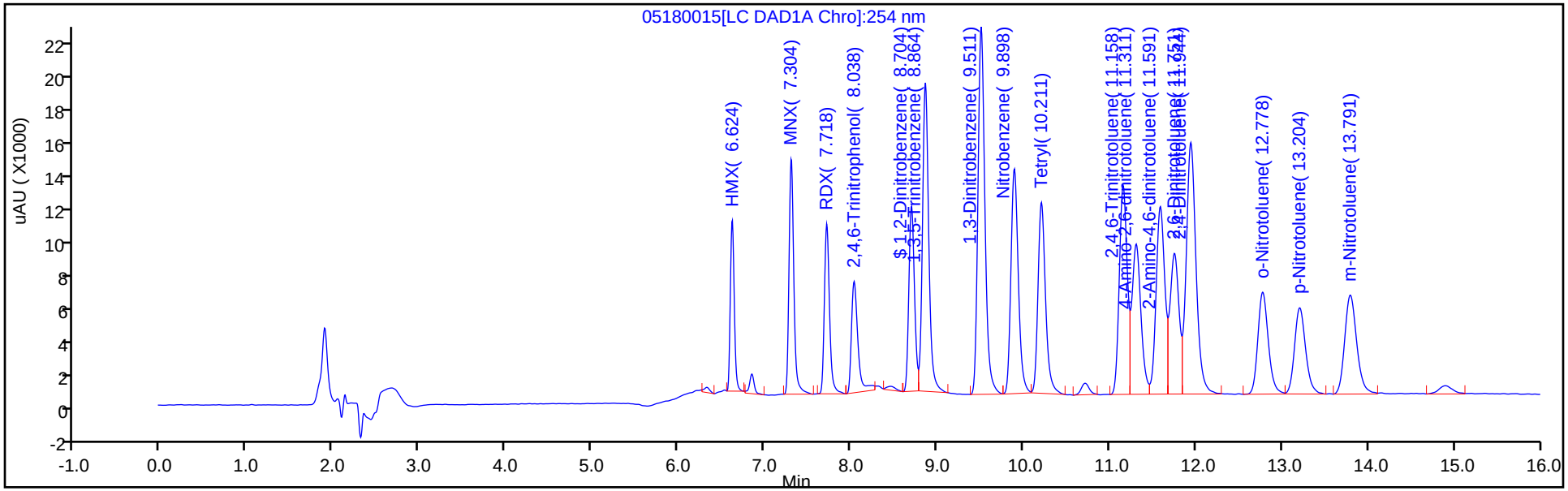
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

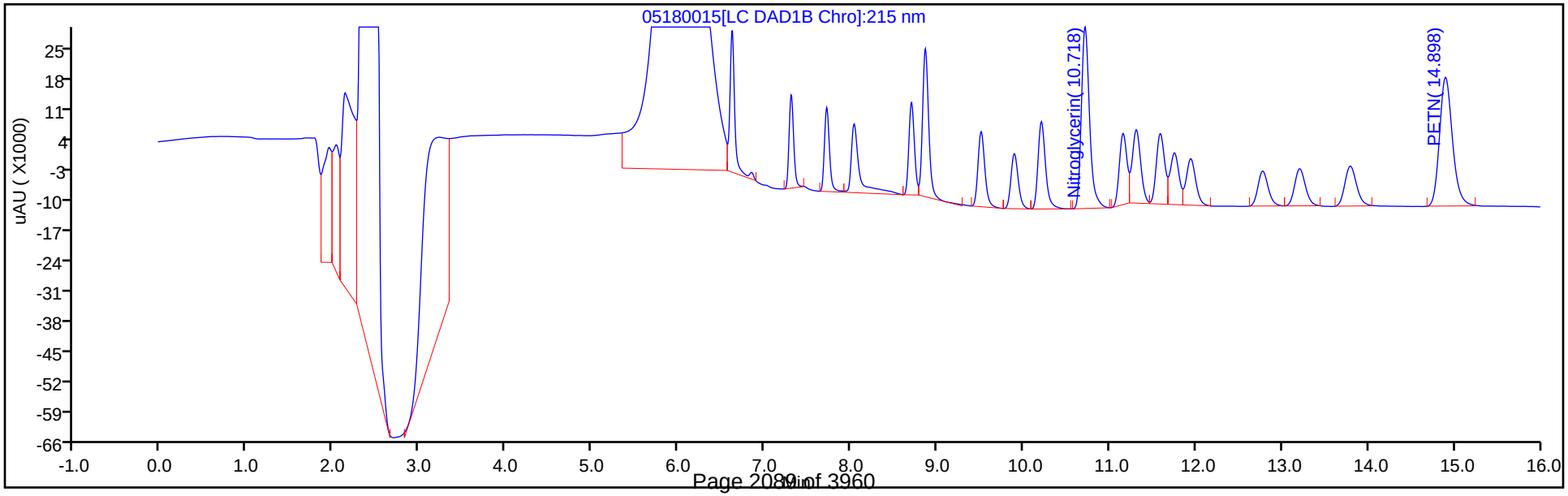
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-435887/39 Calibration Date: 11/02/2018 03:55

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11010039.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	94772		279	250	11.6	20.0
RDX	Ave	104577	116152		278	250	11.1	20.0
Picric acid	Ave	84340	93608		277	250	11.0	20.0
1,3,5-Trinitrobenzene	Ave	228408	251424		275	250	10.1	20.0
1,3-Dinitrobenzene	Ave	301023	324779		270	250	7.9	20.0
Nitrobenzene	Ave	198781	191792		242	251	-3.5	20.0
Tetryl	Ave	163448	192380		294	250	17.7	20.0
Nitroglycerin	Ave	67945	77604		2860	2500	14.2	20.0
2,4,6-Trinitrotoluene	Ave	214478	246080		288	251	14.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	166636		252	251	0.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	215342		271	251	8.0	20.0
2,6-Dinitrotoluene	Ave	153065	164921		270	251	7.7	20.0
2,4-Dinitrotoluene	Ave	298269	313385		263	251	5.1	20.0
2-Nitrotoluene	Ave	132225	127202		241	251	-3.8	20.0
4-Nitrotoluene	Ave	113654	113920		252	251	0.2	20.0
3-Nitrotoluene	Ave	148110	138924		235	251	-6.2	20.0
PETN	Ave	74955	82090		2740	2500	9.5	20.0
1,2-Dinitrobenzene	Ave	128727	146512		285	250	13.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-435887/39 Calibration Date: 11/02/2018 03:55

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11010039.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.52	6.82
RDX	7.78	7.63	7.93
Picric acid	8.10	7.95	8.25
1,3,5-Trinitrobenzene	8.93	8.79	9.09
1,3-Dinitrobenzene	9.60	9.45	9.75
Nitrobenzene	9.98	9.83	10.13
Tetryl	10.32	10.16	10.46
Nitroglycerin	10.82	10.67	10.97
2,4,6-Trinitrotoluene	11.28	11.18	11.38
4-Amino-2,6-dinitrotoluene	11.46	11.36	11.56
2-Amino-4,6-dinitrotoluene	11.76	11.65	11.85
2,6-Dinitrotoluene	11.90	11.79	11.99
2,4-Dinitrotoluene	12.10	11.99	12.19
2-Nitrotoluene	12.94	12.79	13.09
4-Nitrotoluene	13.39	13.23	13.53
3-Nitrotoluene	13.99	13.83	14.13
PETN	15.11	14.95	15.25
1,2-Dinitrobenzene	8.77	8.62	8.92

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010039.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 02-Nov-2018 03:55:24 ALS Bottle#: 7 Worklist Smp#: 39
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0075718-039
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:43 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.664	6.669	-0.005	23693	0.2500	0.2789	
	5 RDX	1	7.784	7.782	0.002	29038	0.2500	0.2777	
	6 2,4,6-Trinitrophenol	1	8.104	8.095	0.009	23402	0.2500	0.2775	
$	7 1,2-Dinitrobenzene	1	8.770	8.769	0.001	36628	0.2500	0.2845	
	8 1,3,5-Trinitrobenzene	1	8.930	8.935	-0.005	62856	0.2500	0.2752	
	9 1,3-Dinitrobenzene	1	9.597	9.595	0.002	81276	0.2503	0.2700	
	11 Nitrobenzene	1	9.983	9.982	0.001	48044	0.2505	0.2417	
	12 Tetryl	1	10.317	10.308	0.009	48095	0.2500	0.2943	
	13 Nitroglycerin	2	10.823	10.815	0.008	194010	2.50	2.86	
	14 2,4,6-Trinitrotoluene	1	11.277	11.275	0.002	61766	0.2510	0.2880	
	15 4-Amino-2,6-dinitrotoluene	1	11.463	11.462	0.001	41784	0.2508	0.2525	
	16 2-Amino-4,6-dinitrotoluene	1	11.757	11.748	0.009	53997	0.2508	0.2707	
	17 2,6-Dinitrotoluene	1	11.897	11.888	0.009	41354	0.2508	0.2702	
	18 2,4-Dinitrotoluene	1	12.097	12.088	0.009	78503	0.2505	0.2632	
	19 o-Nitrotoluene	1	12.943	12.935	0.008	31896	0.2508	0.2412	
	20 p-Nitrotoluene	1	13.390	13.382	0.008	28594	0.2510	0.2516	
	21 m-Nitrotoluene	1	13.990	13.982	0.008	34870	0.2510	0.2354	
	22 PETN	2	15.110	15.102	0.008	205226	2.50	2.74	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

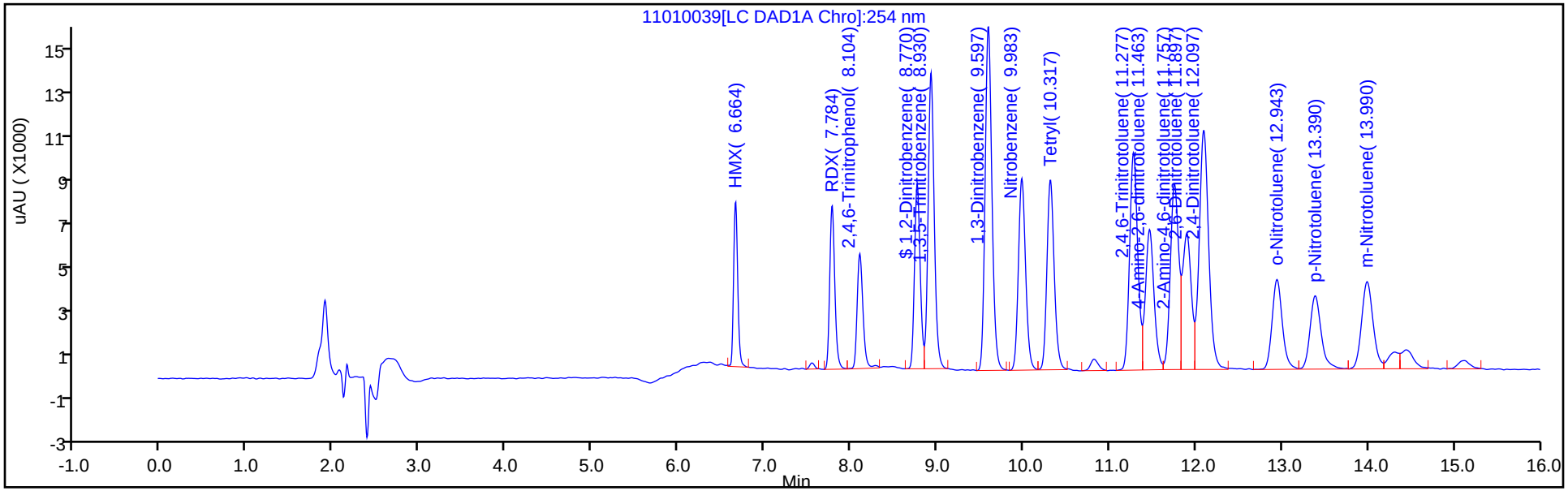
Report Date: 02-Nov-2018 16:14:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

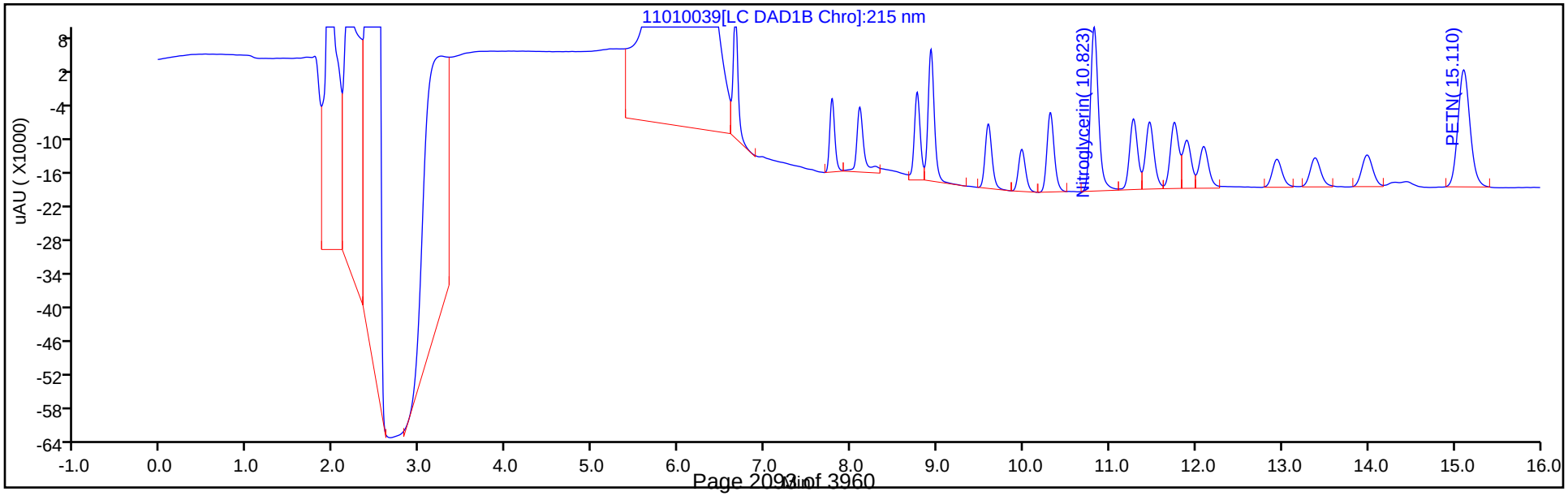
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010039.D

Injection Date:	02-Nov-2018 03:55:24	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	39
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-435887/51 Calibration Date: 11/02/2018 08:30

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11010051.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	95276		280	250	12.2	20.0
RDX	Ave	104577	115616		276	250	10.6	20.0
Picric acid	Ave	84340	93520		277	250	10.9	20.0
1,3,5-Trinitrobenzene	Ave	228408	253348		277	250	10.9	20.0
1,3-Dinitrobenzene	Ave	301023	324352		270	250	7.7	20.0
Nitrobenzene	Ave	198781	187585		236	251	-5.6	20.0
Tetryl	Ave	163448	193436		296	250	18.3	20.0
Nitroglycerin	Ave	67945	77726		2860	2500	14.4	20.0
2,4,6-Trinitrotoluene	Ave	214478	247498		290	251	15.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	168259		255	251	1.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	222796		280	251	11.7	20.0
2,6-Dinitrotoluene	Ave	153065	158808		260	251	3.8	20.0
2,4-Dinitrotoluene	Ave	298269	313198		263	251	5.0	20.0
2-Nitrotoluene	Ave	132225	123494		234	251	-6.6	20.0
4-Nitrotoluene	Ave	113654	112661		249	251	-0.9	20.0
3-Nitrotoluene	Ave	148110	131235		222	251	-11.4	20.0
PETN	Ave	74955	81426		2720	2500	8.6	20.0
1,2-Dinitrobenzene	Ave	128727	146856		285	250	14.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-435887/51 Calibration Date: 11/02/2018 08:30

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11010051.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.52	6.82
RDX	7.78	7.63	7.93
Picric acid	8.10	7.95	8.25
1,3,5-Trinitrobenzene	8.93	8.79	9.09
1,3-Dinitrobenzene	9.59	9.45	9.75
Nitrobenzene	9.98	9.83	10.13
Tetryl	10.32	10.16	10.46
Nitroglycerin	10.82	10.67	10.97
2,4,6-Trinitrotoluene	11.28	11.18	11.38
4-Amino-2,6-dinitrotoluene	11.46	11.36	11.56
2-Amino-4,6-dinitrotoluene	11.76	11.65	11.85
2,6-Dinitrotoluene	11.90	11.79	11.99
2,4-Dinitrotoluene	12.10	11.99	12.19
2-Nitrotoluene	12.94	12.79	13.09
4-Nitrotoluene	13.39	13.23	13.53
3-Nitrotoluene	13.99	13.83	14.13
PETN	15.11	14.95	15.25
1,2-Dinitrobenzene	8.77	8.62	8.92

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010051.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 02-Nov-2018 08:30:56 ALS Bottle#: 7 Worklist Smp#: 51
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0075718-051
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:52 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.662	6.669	-0.007	23819	0.2500	0.2804	
	5 RDX	1	7.782	7.782	0.000	28904	0.2500	0.2764	
	6 2,4,6-Trinitrophenol	1	8.102	8.095	0.007	23380	0.2500	0.2772	
$	7 1,2-Dinitrobenzene	1	8.769	8.769	0.000	36714	0.2500	0.2852	
	8 1,3,5-Trinitrobenzene	1	8.929	8.935	-0.006	63337	0.2500	0.2773	
	9 1,3-Dinitrobenzene	1	9.589	9.595	-0.006	81169	0.2503	0.2696	
	11 Nitrobenzene	1	9.982	9.982	0.000	46990	0.2505	0.2364	
	12 Tetryl	1	10.315	10.308	0.007	48359	0.2500	0.2959	
	13 Nitroglycerin	2	10.822	10.815	0.007	194314	2.50	2.86	
	14 2,4,6-Trinitrotoluene	1	11.275	11.275	0.000	62122	0.2510	0.2896	
	15 4-Amino-2,6-dinitrotoluene	1	11.462	11.462	0.000	42191	0.2508	0.2549	
	16 2-Amino-4,6-dinitrotoluene	1	11.755	11.748	0.007	55866	0.2508	0.2801	
	17 2,6-Dinitrotoluene	1	11.895	11.888	0.007	39821	0.2508	0.2602	
	18 2,4-Dinitrotoluene	1	12.095	12.088	0.007	78456	0.2505	0.2630	
	19 o-Nitrotoluene	1	12.942	12.935	0.007	30966	0.2508	0.2342	
	20 p-Nitrotoluene	1	13.389	13.382	0.007	28278	0.2510	0.2488	
	21 m-Nitrotoluene	1	13.989	13.982	0.007	32940	0.2510	0.2224	
	22 PETN	2	15.109	15.102	0.007	203565	2.50	2.72	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

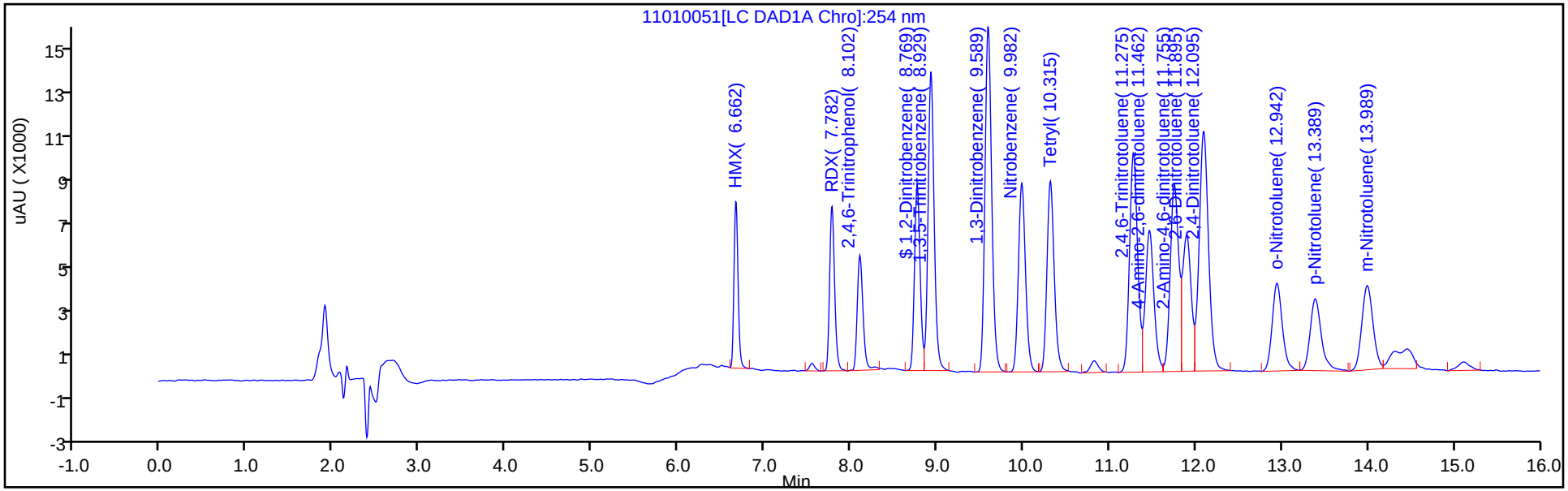
Report Date: 02-Nov-2018 16:14:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

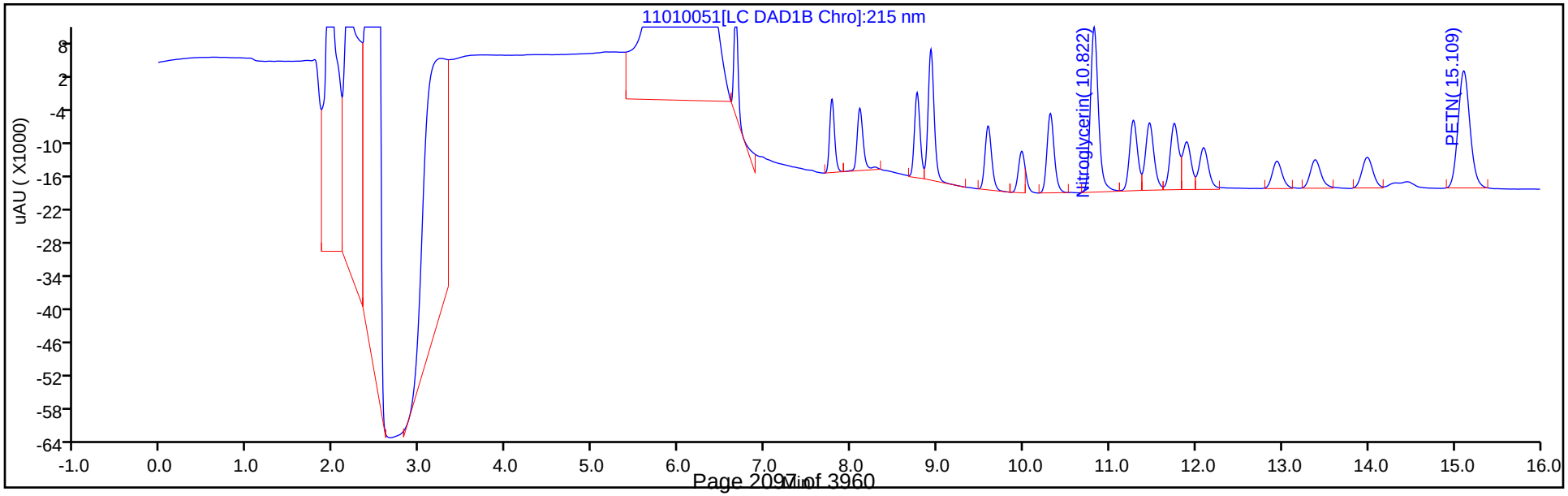
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010051.D

Injection Date:	02-Nov-2018 08:30:56	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	51
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436503/11 Calibration Date: 11/06/2018 15:50

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11060011.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	93568		275	250	10.2	20.0
RDX	Ave	104577	114832		275	250	9.8	20.0
Picric acid	Ave	84340	91140		270	250	8.1	20.0
1,3,5-Trinitrobenzene	Ave	228408	252264		276	250	10.4	20.0
1,3-Dinitrobenzene	Ave	301023	324452		270	250	7.8	20.0
Nitrobenzene	Ave	198781	198088		250	251	-0.3	20.0
Tetryl	Ave	163448	193752		296	250	18.5	20.0
Nitroglycerin	Ave	67945	76344		2810	2500	12.4	20.0
2,4,6-Trinitrotoluene	Ave	214478	244506		286	251	14.0	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	164506		249	251	-0.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	213990		269	251	7.3	20.0
2,6-Dinitrotoluene	Ave	153065	162329		266	251	6.1	20.0
2,4-Dinitrotoluene	Ave	298269	313138		263	251	5.0	20.0
2-Nitrotoluene	Ave	132225	139773		265	251	5.7	20.0
4-Nitrotoluene	Ave	113654	127821		282	251	12.5	20.0
3-Nitrotoluene	Ave	148110	136996		232	251	-7.5	20.0
PETN	Ave	74955	80666		2690	2500	7.6	20.0
1,2-Dinitrobenzene	Ave	128727	145756		283	250	13.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436503/11 Calibration Date: 11/06/2018 15:50

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11060011.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.66	6.51	6.81
RDX	7.78	7.62	7.92
Picric acid	8.12	7.93	8.23
1,3,5-Trinitrobenzene	8.93	8.77	9.07
1,3-Dinitrobenzene	9.60	9.43	9.73
Nitrobenzene	9.99	9.82	10.12
Tetryl	10.32	10.15	10.45
Nitroglycerin	10.83	10.65	10.95
2,4,6-Trinitrotoluene	11.28	11.16	11.36
4-Amino-2,6-dinitrotoluene	11.48	11.34	11.54
2-Amino-4,6-dinitrotoluene	11.77	11.63	11.83
2,6-Dinitrotoluene	11.90	11.77	11.97
2,4-Dinitrotoluene	12.10	11.97	12.17
2-Nitrotoluene	12.96	12.77	13.07
4-Nitrotoluene	13.40	13.21	13.51
3-Nitrotoluene	14.01	13.81	14.11
PETN	15.14	14.91	15.21
1,2-Dinitrobenzene	8.77	8.61	8.91

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060011.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 06-Nov-2018 15:50:22 ALS Bottle#: 7 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0075889-011
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Nov-2018 09:06:38 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.663	6.656	0.007	23392	0.2500	0.2754	
	5 RDX	1	7.783	7.769	0.014	28708	0.2500	0.2745	
	6 2,4,6-Trinitrophenol	1	8.117	8.083	0.034	22785	0.2500	0.2702	
$	7 1,2-Dinitrobenzene	1	8.770	8.756	0.014	36439	0.2500	0.2831	
	8 1,3,5-Trinitrobenzene	1	8.930	8.916	0.014	63066	0.2500	0.2761	
	9 1,3-Dinitrobenzene	1	9.596	9.576	0.020	81194	0.2503	0.2697	
	11 Nitrobenzene	1	9.990	9.969	0.021	49621	0.2505	0.2496	
	12 Tetryl	1	10.323	10.296	0.027	48438	0.2500	0.2964	
	13 Nitroglycerin	2	10.830	10.796	0.034	190861	2.50	2.81	
	14 2,4,6-Trinitrotoluene	1	11.283	11.256	0.027	61371	0.2510	0.2861	
	15 4-Amino-2,6-dinitrotoluene	1	11.476	11.442	0.034	41250	0.2508	0.2492	
	16 2-Amino-4,6-dinitrotoluene	1	11.770	11.729	0.041	53658	0.2508	0.2690	
	17 2,6-Dinitrotoluene	1	11.903	11.869	0.034	40704	0.2508	0.2659	
	18 2,4-Dinitrotoluene	1	12.103	12.069	0.034	78441	0.2505	0.2630	
	19 o-Nitrotoluene	1	12.956	12.916	0.040	35048	0.2508	0.2651	
	20 p-Nitrotoluene	1	13.403	13.356	0.047	32083	0.2510	0.2823	
	21 m-Nitrotoluene	1	14.010	13.956	0.054	34386	0.2510	0.2322	
	22 PETN	2	15.136	15.062	0.074	201664	2.50	2.69	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

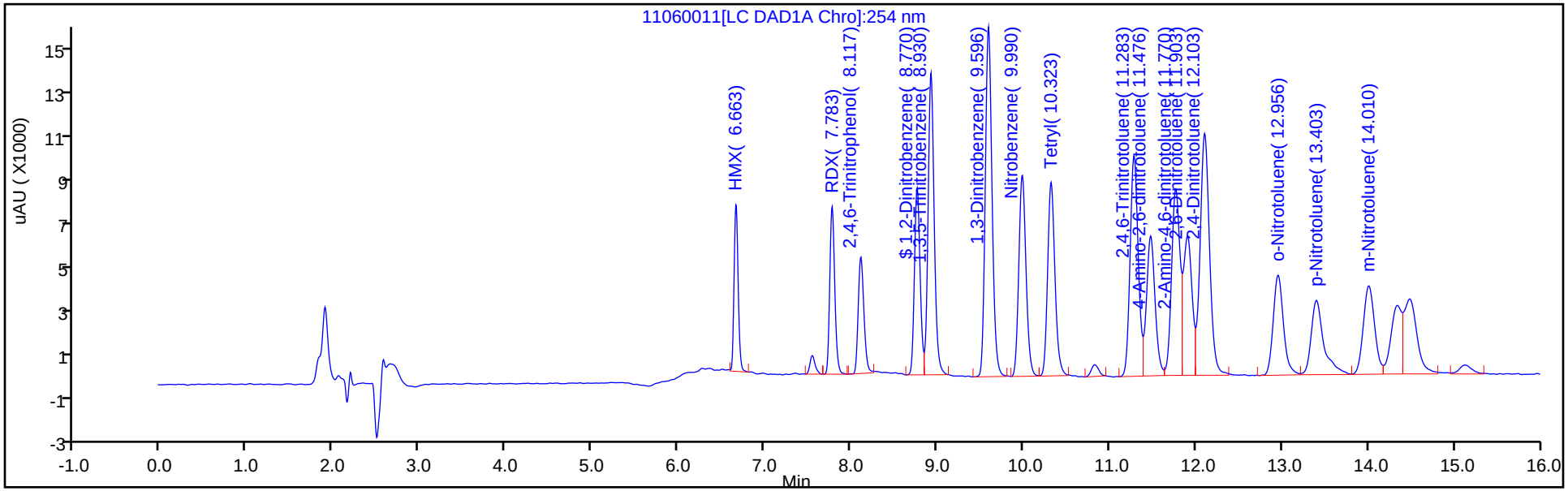
Report Date: 07-Nov-2018 09:06:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

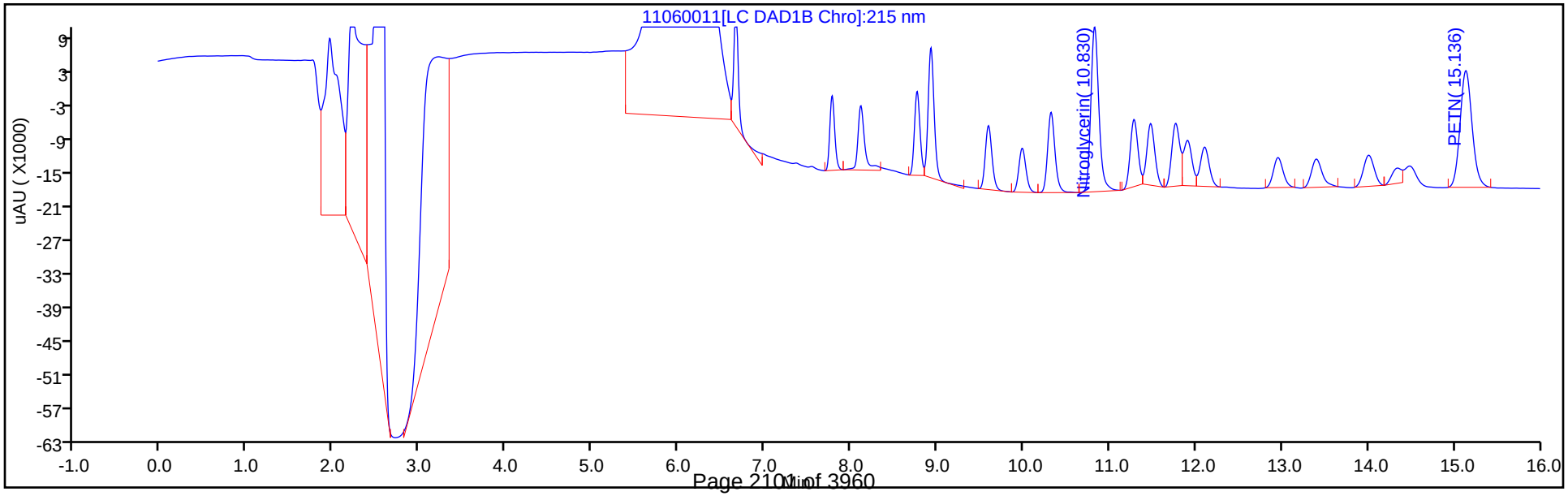
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060011.D

Injection Date:	06-Nov-2018 15:50:22	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436503/23 Calibration Date: 11/06/2018 20:25

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11060023.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	94476		278	250	11.2	20.0
RDX	Ave	104577	115244		275	250	10.2	20.0
Picric acid	Ave	84340	92508		274	250	9.7	20.0
1,3,5-Trinitrobenzene	Ave	228408	253116		277	250	10.8	20.0
1,3-Dinitrobenzene	Ave	301023	325375		270	250	8.1	20.0
Nitrobenzene	Ave	198781	188878		238	251	-5.0	20.0
Tetryl	Ave	163448	194112		297	250	18.8	20.0
Nitroglycerin	Ave	67945	76306		2810	2500	12.3	20.0
2,4,6-Trinitrotoluene	Ave	214478	243841		285	251	13.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	162497		246	251	-1.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	211904		266	251	6.2	20.0
2,6-Dinitrotoluene	Ave	153065	163230		267	251	6.6	20.0
2,4-Dinitrotoluene	Ave	298269	317341		267	251	6.4	20.0
2-Nitrotoluene	Ave	132225	132726		252	251	0.4	20.0
4-Nitrotoluene	Ave	113654	126697		280	251	11.5	20.0
3-Nitrotoluene	Ave	148110	131940		224	251	-10.9	20.0
PETN	Ave	74955	80562		2690	2500	7.5	20.0
1,2-Dinitrobenzene	Ave	128727	145116		282	250	12.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: CCV 280-436503/23 Calibration Date: 11/06/2018 20:25

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11060023.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.67	6.51	6.81
RDX	7.78	7.62	7.92
Picric acid	8.11	7.93	8.23
1,3,5-Trinitrobenzene	8.93	8.77	9.07
1,3-Dinitrobenzene	9.59	9.43	9.73
Nitrobenzene	9.99	9.82	10.12
Tetryl	10.32	10.15	10.45
Nitroglycerin	10.82	10.65	10.95
2,4,6-Trinitrotoluene	11.28	11.16	11.36
4-Amino-2,6-dinitrotoluene	11.47	11.34	11.54
2-Amino-4,6-dinitrotoluene	11.77	11.63	11.83
2,6-Dinitrotoluene	11.90	11.77	11.97
2,4-Dinitrotoluene	12.10	11.97	12.17
2-Nitrotoluene	12.95	12.77	13.07
4-Nitrotoluene	13.40	13.21	13.51
3-Nitrotoluene	14.00	13.81	14.11
PETN	15.13	14.91	15.21
1,2-Dinitrobenzene	8.77	8.61	8.91

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060023.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 06-Nov-2018 20:25:46 ALS Bottle#: 7 Worklist Smp#: 23
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0075889-023
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Nov-2018 09:07:19 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.667	6.656	0.011	23619	0.2500	0.2780	
	5 RDX	1	7.780	7.769	0.011	28811	0.2500	0.2755	
	6 2,4,6-Trinitrophenol	1	8.114	8.083	0.031	23127	0.2500	0.2742	
$	7 1,2-Dinitrobenzene	1	8.767	8.756	0.011	36279	0.2500	0.2818	
	8 1,3,5-Trinitrobenzene	1	8.927	8.916	0.011	63279	0.2500	0.2770	
	9 1,3-Dinitrobenzene	1	9.593	9.576	0.017	81425	0.2503	0.2705	
	11 Nitrobenzene	1	9.987	9.969	0.018	47314	0.2505	0.2380	
	12 Tetryl	1	10.320	10.296	0.024	48528	0.2500	0.2969	
	13 Nitroglycerin	2	10.820	10.796	0.024	190764	2.50	2.81	
	14 2,4,6-Trinitrotoluene	1	11.280	11.256	0.024	61204	0.2510	0.2854	
	15 4-Amino-2,6-dinitrotoluene	1	11.473	11.442	0.031	40746	0.2508	0.2462	
	16 2-Amino-4,6-dinitrotoluene	1	11.767	11.729	0.038	53135	0.2508	0.2664	
	17 2,6-Dinitrotoluene	1	11.900	11.869	0.031	40930	0.2508	0.2674	
	18 2,4-Dinitrotoluene	1	12.100	12.069	0.031	79494	0.2505	0.2665	
	19 o-Nitrotoluene	1	12.953	12.916	0.037	33281	0.2508	0.2517	
	20 p-Nitrotoluene	1	13.400	13.356	0.044	31801	0.2510	0.2798	
	21 m-Nitrotoluene	1	14.000	13.956	0.044	33117	0.2510	0.2236	
	22 PETN	2	15.127	15.062	0.065	201404	2.50	2.69	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

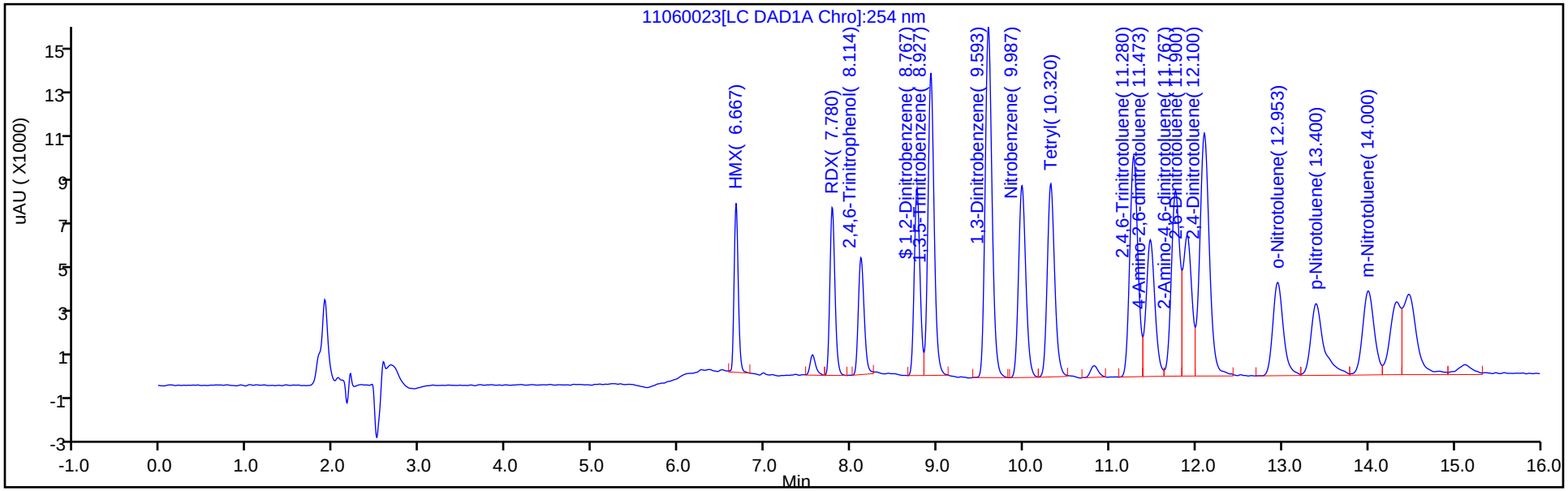
Report Date: 07-Nov-2018 09:07:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

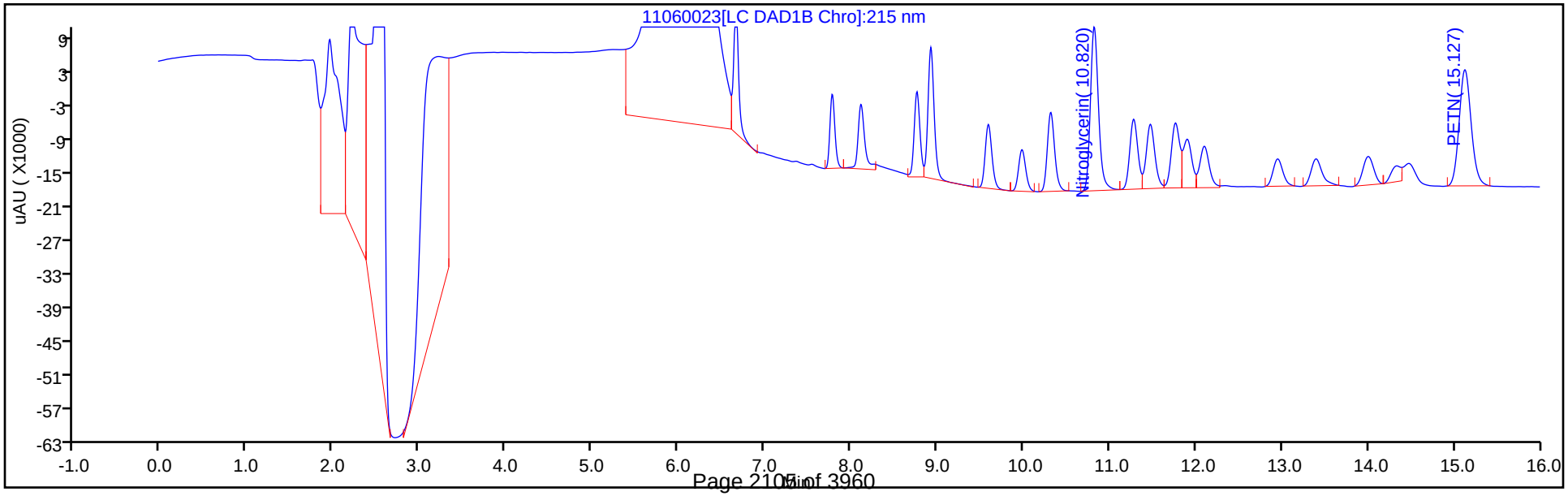
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060023.D

Injection Date:	06-Nov-2018 20:25:46	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	23
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-435507/1-A

Matrix: Water | Lab File ID: 11010041.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 500(mL) | Date Analyzed: 11/02/2018 04:41

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051
88-72-2	2-Nitrotoluene	0.20	U	0.40	0.20	0.086
99-08-1	3-Nitrotoluene	0.20	U	0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U	1.0	0.40	0.20
2691-41-0	HMX	0.20	U	0.40	0.20	0.088
98-95-3	Nitrobenzene	0.20	U	0.40	0.20	0.091
55-63-0	Nitroglycerin	2.0	U	3.0	2.0	0.92
78-11-5	PETN	1.2	U	2.0	1.2	0.42
121-82-4	RDX	0.12	U	0.20	0.12	0.052
479-45-8	Tetryl	0.20	U	0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	101		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010041.D
Lims ID: MB 280-435507/1-A
Client ID:
Sample Type: MB
Inject. Date: 02-Nov-2018 04:41:21 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-435507/1-
Misc. Info.: 280-0075718-041
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:44 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 2,6-diamino-4-nitrotoluene	1		6.513				ND	
	25 TNX	1		6.546				ND	
	2 HMX	1		6.669				ND	
	3 2,4-diamino-6-nitrotoluene	1		6.700				ND	
	24 DNX	1		6.866				ND	
	4 MNX	1		7.326				ND	
	5 RDX	1		7.782				ND	
	6 2,4,6-Trinitrophenol	1		8.095				ND	
$	7 1,2-Dinitrobenzene	1	8.768	8.769	-0.001	26096	0.2000	0.2027	
	8 1,3,5-Trinitrobenzene	1		8.935				ND	
	9 1,3-Dinitrobenzene	1		9.595				ND	
	11 Nitrobenzene	1		9.982				ND	
	10 3,5-Dinitroaniline	1		10.227				ND	
	12 Tetryl	1		10.308				ND	
	13 Nitroglycerin	2		10.815				ND	
	14 2,4,6-Trinitrotoluene	1		11.275				ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.462				ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.748				ND	
	17 2,6-Dinitrotoluene	1		11.888				ND	
	18 2,4-Dinitrotoluene	1		12.088				ND	
	19 o-Nitrotoluene	1		12.935				ND	
	20 p-Nitrotoluene	1		13.382				ND	
	21 m-Nitrotoluene	1		13.982				ND	
	22 PETN	2		15.102				ND	
	23 Ammonium Picrate	1		0.000				ND	

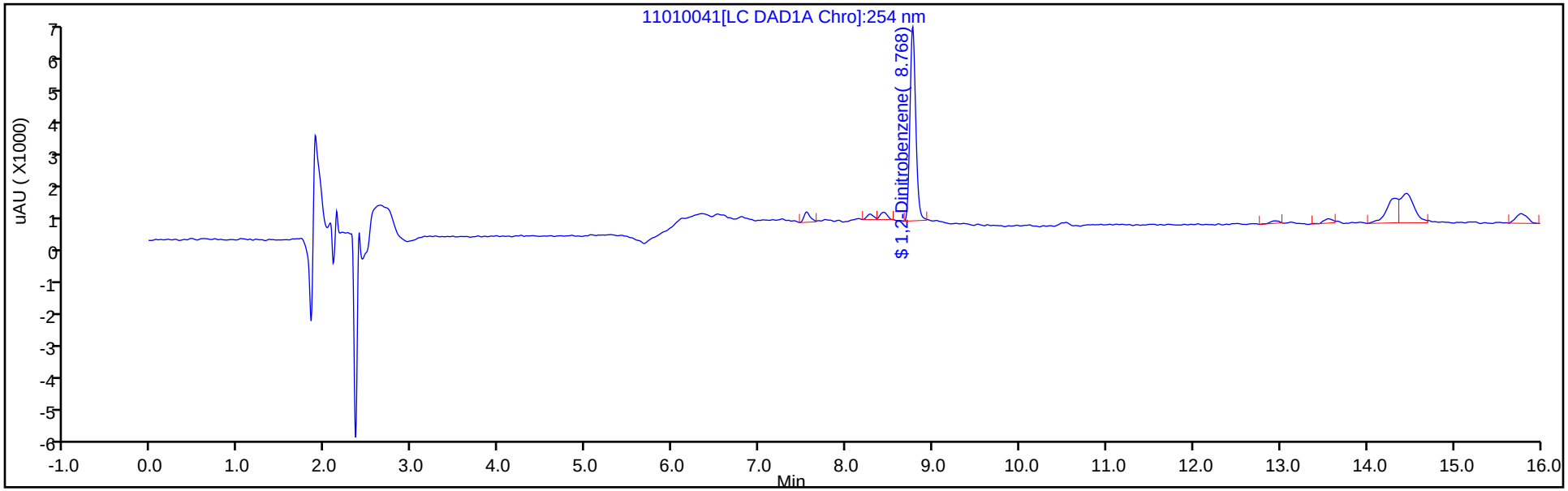
Report Date: 02-Nov-2018 16:14:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

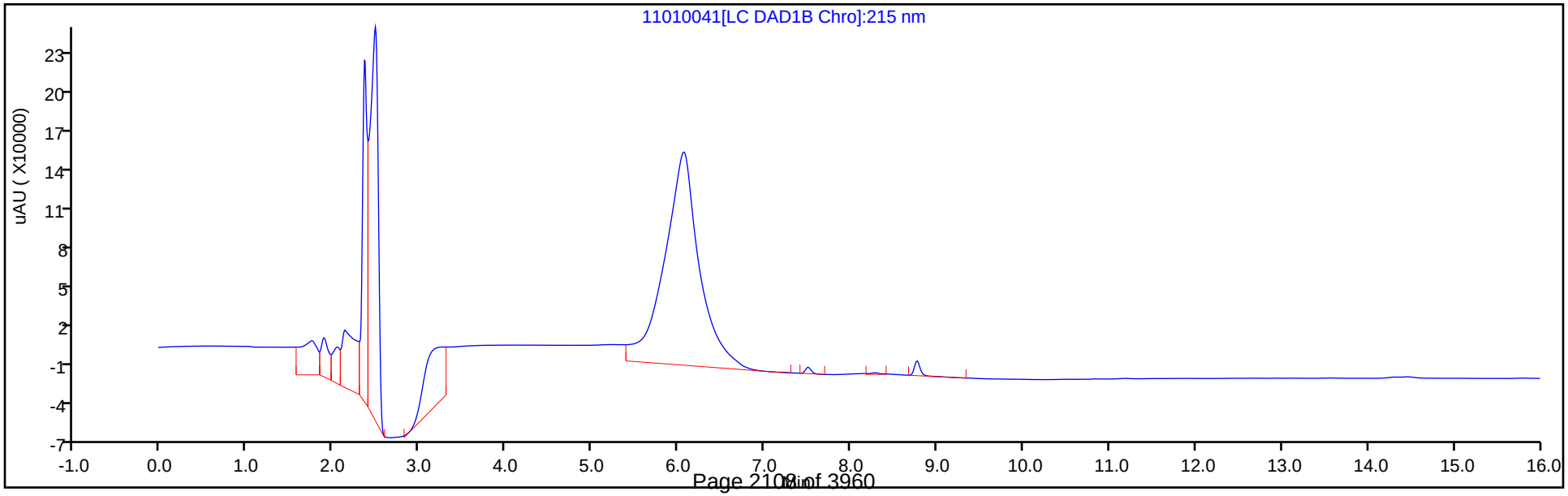
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010041.D

Injection Date:	02-Nov-2018 04:41:21	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	MB 280-435507/1-A			Worklist Smp#:	41
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010041.D				
Lims ID:	MB 280-435507/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	02-Nov-2018 04:41:21	ALS Bottle#:	41	Worklist Smp#:	41
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-435507/1-				
Misc. Info.:	280-0075718-041				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Nov-2018 16:14:44	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0315				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2027	101.36

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-435841/1-A

Matrix: Water | Lab File ID: 11060013.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/01/2018 12:42

Sample wt/vol: 500(mL) | Date Analyzed: 11/06/2018 16:36

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436503 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051
88-72-2	2-Nitrotoluene	0.20	U M	0.40	0.20	0.086
99-08-1	3-Nitrotoluene	0.20	U	0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U	1.0	0.40	0.20
2691-41-0	HMX	0.20	U	0.40	0.20	0.088
98-95-3	Nitrobenzene	0.20	U	0.40	0.20	0.091
55-63-0	Nitroglycerin	2.0	U	3.0	2.0	0.92
78-11-5	PETN	1.2	U	2.0	1.2	0.42
121-82-4	RDX	0.12	U	0.20	0.12	0.052
479-45-8	Tetryl	0.20	U	0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	109		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060013.D
Lims ID: MB 280-435841/1-A
Client ID:
Sample Type: MB
Inject. Date: 06-Nov-2018 16:36:17 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-435841/1-
Misc. Info.: 280-0075889-013
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Nov-2018 09:06:42 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: fiedlerh Date: 07-Nov-2018 08:29:31

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 2,6-diamino-4-nitrotoluene	1		6.513				ND	
	25 TNX	1		6.546				ND	
	2 HMX	1		6.656				ND	
	3 2,4-diamino-6-nitrotoluene	1		6.700				ND	
	24 DNX	1		6.866				ND	
	4 MNX	1		7.326				ND	
	5 RDX	1		7.769				ND	
	6 2,4,6-Trinitrophenol	1		8.083				ND	
$	7 1,2-Dinitrobenzene	1	8.768	8.756	0.012	28077	0.2000	0.2181	
	8 1,3,5-Trinitrobenzene	1		8.916				ND	
	9 1,3-Dinitrobenzene	1		9.576				ND	
	11 Nitrobenzene	1		9.969				ND	
	10 3,5-Dinitroaniline	1		10.227				ND	
	12 Tetryl	1		10.296				ND	
	13 Nitroglycerin	2		10.796				ND	
	14 2,4,6-Trinitrotoluene	1		11.256				ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.442				ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.729				ND	
	17 2,6-Dinitrotoluene	1		11.869				ND	
	18 2,4-Dinitrotoluene	1		12.069				ND	
	19 o-Nitrotoluene	1		12.916				ND	U
	20 p-Nitrotoluene	1		13.356				ND	
	21 m-Nitrotoluene	1		13.956				ND	
	22 PETN	2		15.062				ND	
	23 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

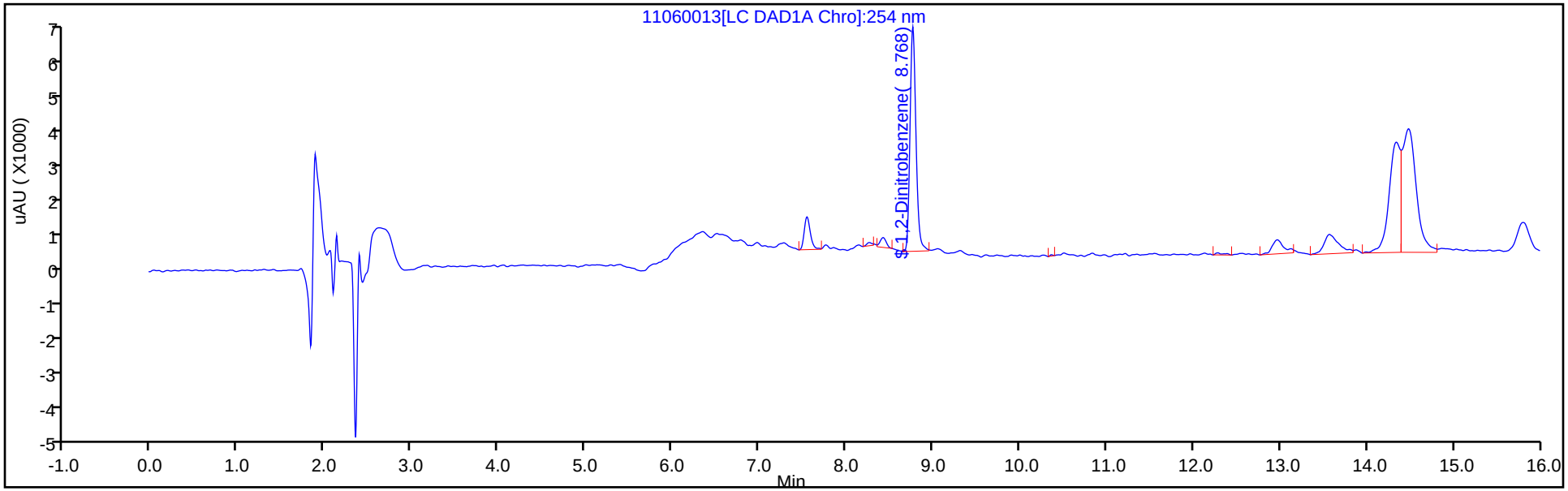
Report Date: 07-Nov-2018 09:06:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

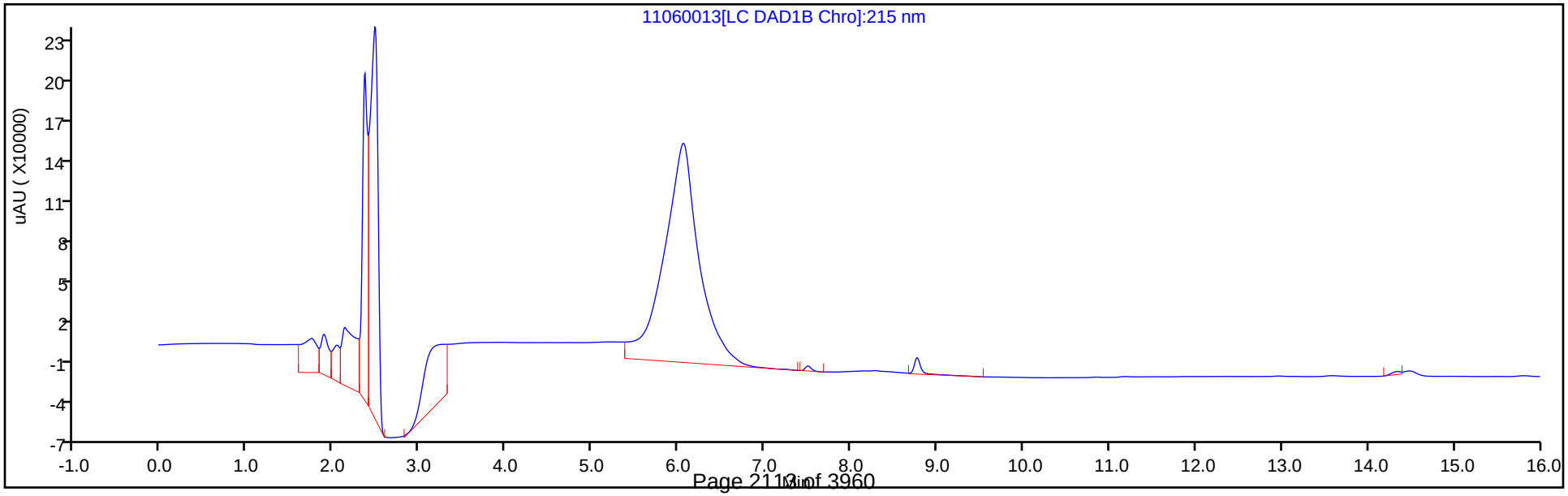
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060013.D

Injection Date:	06-Nov-2018 16:36:17	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	MB 280-435841/1-A			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060013.D				
Lims ID:	MB 280-435841/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	06-Nov-2018 16:36:17	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-435841/1-				
Misc. Info.:	280-0075889-013				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	07-Nov-2018 09:06:42	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: fiedlerh		Date:	07-Nov-2018 08:29:31		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2181	109.06

User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060013.D

Injection Date: 06-Nov-2018 16:36:17 Instrument ID: CHHPLC_X3

Lims ID: MB 280-435841/1-A

Client ID:

Operator ID: hkf ALS Bottle#: 13 Worklist Smp#: 13

Injection Vol: 100.0 ul Dil. Factor: 1.0000

Method: 8330_X3 Limit Group: GCSV - 8330

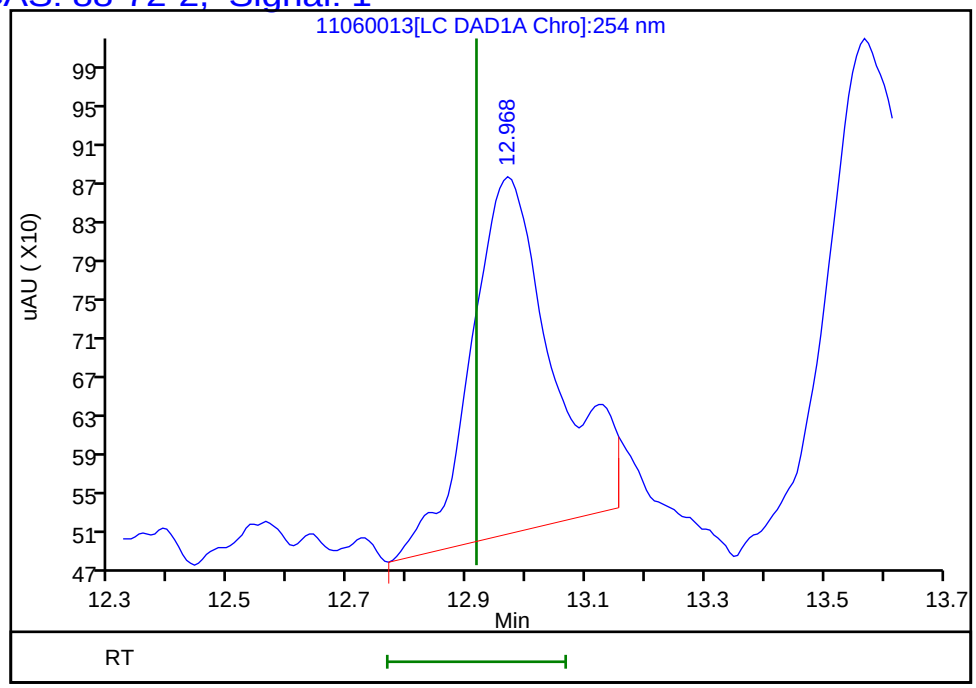
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

19 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 12.97

Response: 3520

Amount: 0.026621



Reviewer: fiedlerh, 07-Nov-2018 08:29:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-435507/2-A

Matrix: Water | Lab File ID: 11010042.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 10/30/2018 13:27

Sample wt/vol: 500(mL) | Date Analyzed: 11/02/2018 05:04

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 435887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.14		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.04		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	1.96		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	1.90		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	1.94		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.88		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.54		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.43	Q	0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.72		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	1.72		1.0	0.40	0.20
2691-41-0	HMX	1.97		0.40	0.20	0.088
98-95-3	Nitrobenzene	1.78		0.40	0.20	0.091
55-63-0	Nitroglycerin	20.6		3.0	2.0	0.92
78-11-5	PETN	19.9		2.0	1.2	0.42
121-82-4	RDX	2.05		0.20	0.12	0.052
479-45-8	Tetryl	2.16		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010042.D
Lims ID: LCS 280-435507/2-A
Client ID:
Sample Type: LCS
Inject. Date: 02-Nov-2018 05:04:16 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-435507/2
Misc. Info.: 280-0075718-042
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Nov-2018 16:14:44 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0315

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.667	6.669	-0.002	16763	0.2000	0.1973	
	5 RDX	1	7.780	7.782	-0.002	21436	0.2000	0.2050	
	6 2,4,6-Trinitrophenol	1	8.093	8.095	-0.002	17559	0.2000	0.2082	
$	7 1,2-Dinitrobenzene	1	8.767	8.769	-0.002	26389	0.2000	0.2050	
	8 1,3,5-Trinitrobenzene	1	8.927	8.935	-0.008	48928	0.2000	0.2142	
	9 1,3-Dinitrobenzene	1	9.593	9.595	-0.002	61423	0.2000	0.2040	
	11 Nitrobenzene	1	9.980	9.982	-0.002	35376	0.2000	0.1780	
	12 Tetryl	1	10.313	10.308	0.005	35343	0.2000	0.2162	
	13 Nitroglycerin	2	10.820	10.815	0.005	139859	2.00	2.06	
	14 2,4,6-Trinitrotoluene	1	11.280	11.275	0.005	42029	0.2000	0.1960	
	15 4-Amino-2,6-dinitrotoluene	1	11.460	11.462	-0.002	28426	0.2000	0.1718	
	16 2-Amino-4,6-dinitrotoluene	1	11.753	11.748	0.005	37416	0.2000	0.1876	
	17 2,6-Dinitrotoluene	1	11.893	11.888	0.005	29696	0.2000	0.1940	
	18 2,4-Dinitrotoluene	1	12.086	12.088	-0.002	56615	0.2000	0.1898	
	19 o-Nitrotoluene	1	12.940	12.935	0.005	20395	0.2000	0.1542	
	20 p-Nitrotoluene	1	13.386	13.382	0.004	19493	0.2000	0.1715	
	21 m-Nitrotoluene	1	13.993	13.982	0.011	21142	0.2000	0.1427	
	22 PETN	2	15.113	15.102	0.011	148815	2.00	1.99	

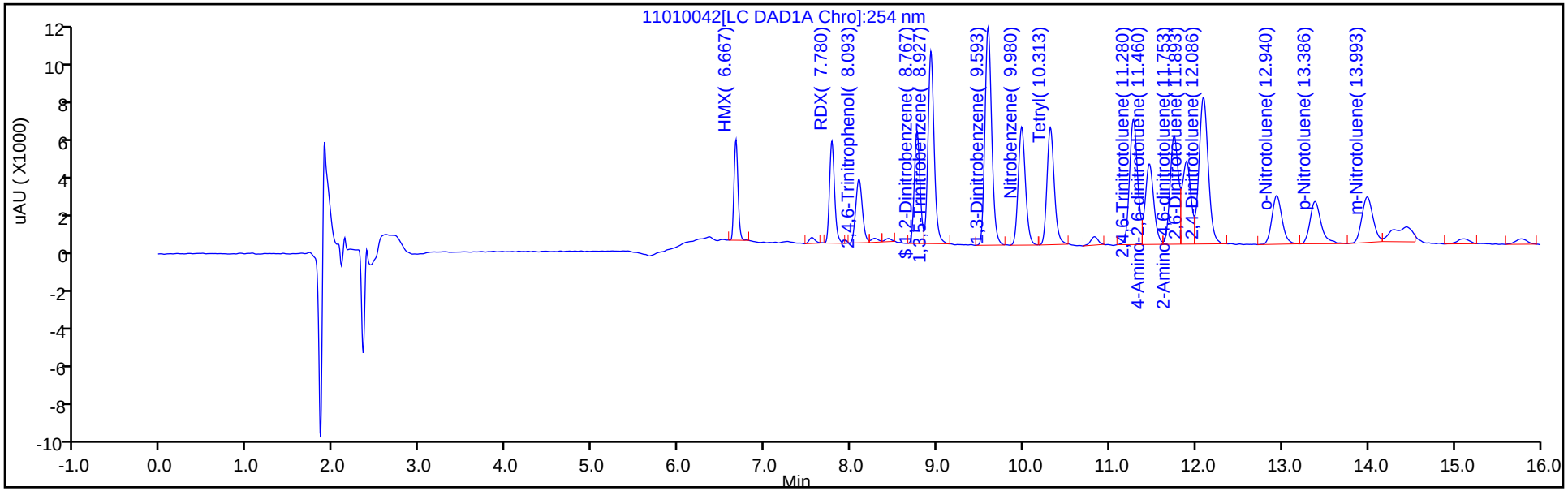
Report Date: 02-Nov-2018 16:14:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

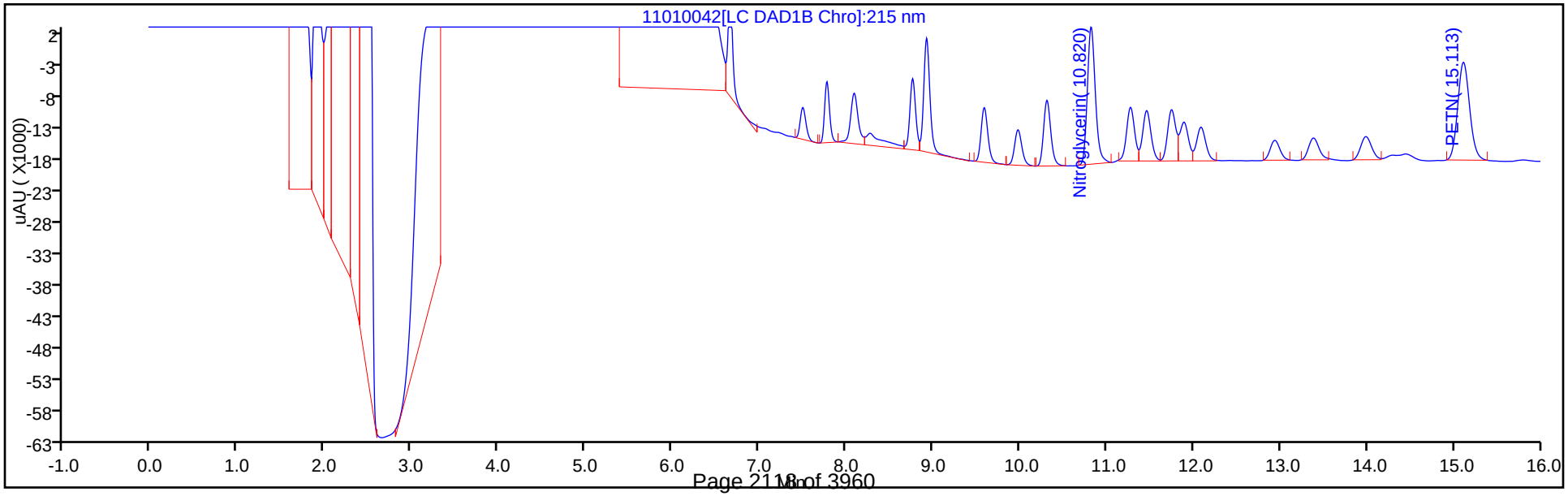
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010042.D

Injection Date:	02-Nov-2018 05:04:16	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	LCS 280-435507/2-A			Worklist Smp#:	42
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\11010042.D				
Lims ID:	LCS 280-435507/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	02-Nov-2018 05:04:16	ALS Bottle#:	42	Worklist Smp#:	42
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-435507/2				
Misc. Info.:	280-0075718-042				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181101-75718.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Nov-2018 16:14:44	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0315				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2050	102.50

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-435841/2-A

Matrix: Water | Lab File ID: 11060014.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/01/2018 12:42

Sample wt/vol: 500(mL) | Date Analyzed: 11/06/2018 16:59

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436503 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.12		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.04		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	1.97		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	1.96		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	1.93		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.93		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.95		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.69		0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.77		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	2.22		1.0	0.40	0.20
2691-41-0	HMX	2.02		0.40	0.20	0.088
98-95-3	Nitrobenzene	1.84		0.40	0.20	0.091
55-63-0	Nitroglycerin	20.3		3.0	2.0	0.92
78-11-5	PETN	19.6		2.0	1.2	0.42
121-82-4	RDX	2.04		0.20	0.12	0.052
479-45-8	Tetryl	2.15		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	100		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060014.D
Lims ID: LCS 280-435841/2-A
Client ID:
Sample Type: LCS
Inject. Date: 06-Nov-2018 16:59:12 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-435841/2
Misc. Info.: 280-0075889-014
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Nov-2018 09:06:42 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.663	6.656	0.007	17145	0.2000	0.2018	
	5 RDX	1	7.776	7.769	0.007	21321	0.2000	0.2039	
	6 2,4,6-Trinitrophenol	1	8.103	8.083	0.020	19526	0.2000	0.2315	
$	7 1,2-Dinitrobenzene	1	8.770	8.756	0.014	25768	0.2000	0.2002	
	8 1,3,5-Trinitrobenzene	1	8.930	8.916	0.014	48428	0.2000	0.2120	
	9 1,3-Dinitrobenzene	1	9.589	9.576	0.013	61381	0.2000	0.2039	
	11 Nitrobenzene	1	9.983	9.969	0.014	36661	0.2000	0.1844	
	12 Tetryl	1	10.316	10.296	0.020	35128	0.2000	0.2149	
	13 Nitroglycerin	2	10.823	10.796	0.027	138016	2.00	2.03	
	14 2,4,6-Trinitrotoluene	1	11.276	11.256	0.020	42309	0.2000	0.1973	
	15 4-Amino-2,6-dinitrotoluene	1	11.469	11.442	0.027	29212	0.2000	0.1765	
	16 2-Amino-4,6-dinitrotoluene	1	11.756	11.729	0.027	38582	0.2000	0.1934	
	17 2,6-Dinitrotoluene	1	11.896	11.869	0.027	29608	0.2000	0.1934	
	18 2,4-Dinitrotoluene	1	12.096	12.069	0.027	58359	0.2000	0.1957	
	19 o-Nitrotoluene	1	12.949	12.916	0.033	25764	0.2000	0.1949	
	20 p-Nitrotoluene	1	13.396	13.356	0.040	25250	0.2000	0.2222	
	21 m-Nitrotoluene	1	14.003	13.956	0.047	25081	0.2000	0.1693	
	22 PETN	2	15.136	15.062	0.074	146588	2.00	1.96	

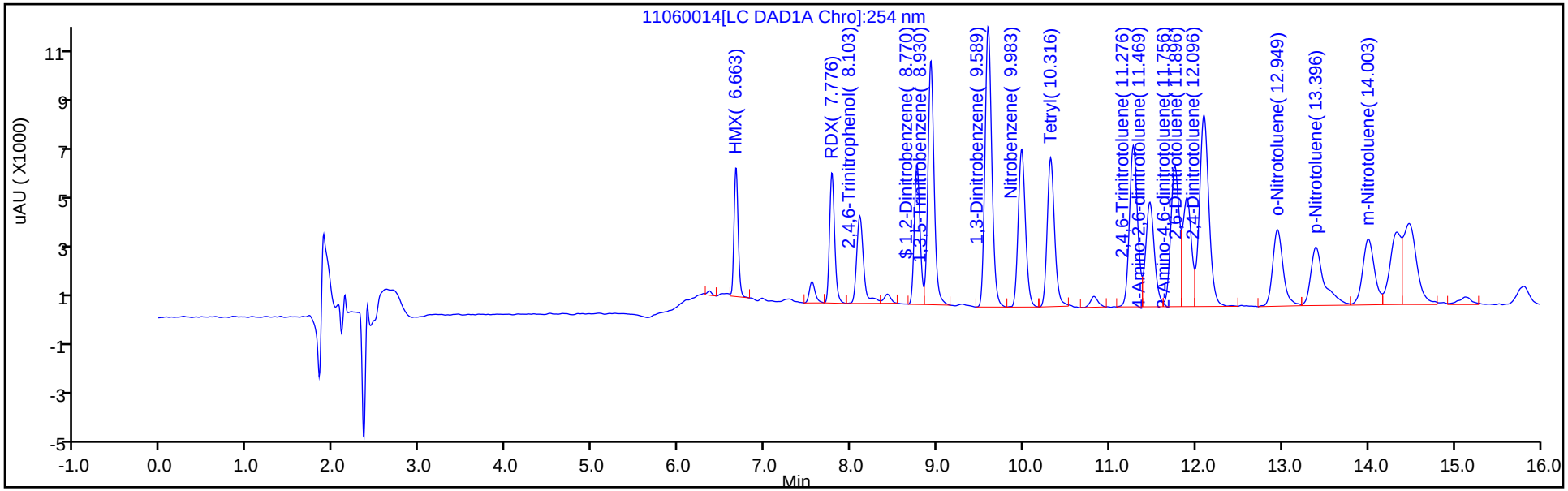
Report Date: 07-Nov-2018 09:06:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

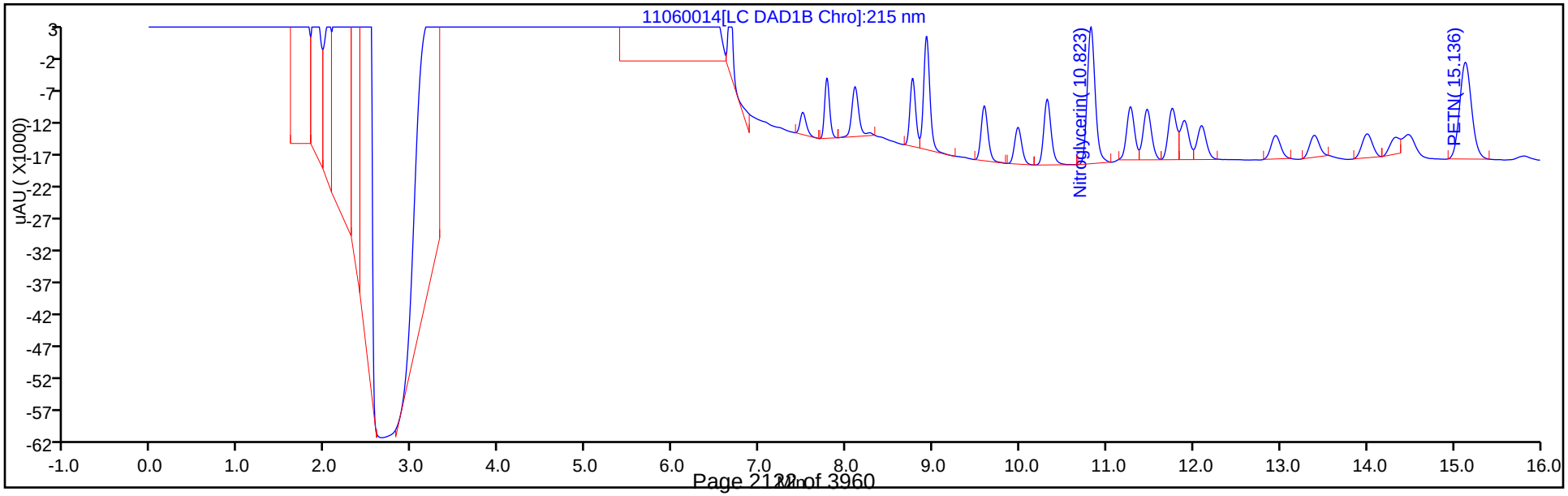
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060014.D

Injection Date:	06-Nov-2018 16:59:12	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	LCS 280-435841/2-A			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\11060014.D
Lims ID: LCS 280-435841/2-A
Client ID:
Sample Type: LCS
Inject. Date: 06-Nov-2018 16:59:12 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-435841/2
Misc. Info.: 280-0075889-014
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181106-75889.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Nov-2018 09:06:42 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2002	100.09

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/18/2018 10:34

Analysis Batch Number: 415256 End Date: 05/18/2018 18:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-415256/7		05/18/2018 10:34	1	05180007.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/8		05/18/2018 10:57	1	05180008.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/9		05/18/2018 11:19	1	05180009.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/10		05/18/2018 11:42	1	05180010.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/11		05/18/2018 12:05	1	05180011.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/12		05/18/2018 12:28	1	05180012.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/13		05/18/2018 12:51	1	05180013.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/14		05/18/2018 13:14	1	05180014.D	UltraCarb5uODS 4.6(mm)
ICV 280-415256/15		05/18/2018 13:37	1	05180015.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/16		05/18/2018 14:00	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/17		05/18/2018 14:23	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/18		05/18/2018 14:46	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/19		05/18/2018 15:09	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/20		05/18/2018 15:32	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/21		05/18/2018 15:55	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/22		05/18/2018 16:18	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/23		05/18/2018 16:41	1		UltraCarb5uODS 4.6(mm)
ICV 280-415256/24		05/18/2018 17:04	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:27	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:50	10		UltraCarb5uODS 4.6(mm)
CCV 280-415256/27		05/18/2018 18:13	1		UltraCarb5uODS 4.6(mm)
CCV 280-415256/28		05/18/2018 18:36	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 10/13/2018 16:23

Analysis Batch Number: 433312 End Date: 10/14/2018 07:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-433312/7		10/13/2018 16:23	1	10130007.D	Luna-phenylhex 4.6(mm)
IC 280-433312/8		10/13/2018 16:58	1	10130008.D	Luna-phenylhex 4.6(mm)
IC 280-433312/9		10/13/2018 17:33	1	10130009.D	Luna-phenylhex 4.6(mm)
IC 280-433312/10		10/13/2018 18:08	1	10130010.D	Luna-phenylhex 4.6(mm)
IC 280-433312/11		10/13/2018 18:43	1	10130011.D	Luna-phenylhex 4.6(mm)
IC 280-433312/12		10/13/2018 19:18	1	10130012.D	Luna-phenylhex 4.6(mm)
IC 280-433312/13		10/13/2018 19:53	1	10130013.D	Luna-phenylhex 4.6(mm)
IC 280-433312/14		10/13/2018 20:28	1	10130014.D	Luna-phenylhex 4.6(mm)
ICV 280-433312/15		10/13/2018 21:03	1	10130015.D	Luna-phenylhex 4.6(mm)
IC 280-433312/16		10/13/2018 21:38	1		Luna-phenylhex 4.6(mm)
IC 280-433312/17		10/13/2018 22:13	1		Luna-phenylhex 4.6(mm)
IC 280-433312/18		10/13/2018 22:48	1		Luna-phenylhex 4.6(mm)
IC 280-433312/19		10/13/2018 23:23	1		Luna-phenylhex 4.6(mm)
IC 280-433312/20		10/13/2018 23:58	1		Luna-phenylhex 4.6(mm)
IC 280-433312/21		10/14/2018 00:33	1		Luna-phenylhex 4.6(mm)
IC 280-433312/22		10/14/2018 01:08	1		Luna-phenylhex 4.6(mm)
IC 280-433312/23		10/14/2018 01:43	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 02:18	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 02:53	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 03:28	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 04:02	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 04:37	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 05:12	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 05:47	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/14/2018 06:22	1		Luna-phenylhex 4.6(mm)
CCV 280-433312/32		10/14/2018 06:57	1		Luna-phenylhex 4.6(mm)
CCV 280-433312/33		10/14/2018 07:32	1		Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 11/02/2018 03:55

Analysis Batch Number: 435887 End Date: 11/02/2018 11:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-435887/39		11/02/2018 03:55	1	11010039.D	UltraCarb5uODS 4.6(mm)
CCV 280-435887/40		11/02/2018 04:18	1		UltraCarb5uODS 4.6(mm)
MB 280-435507/1-A		11/02/2018 04:41	1	11010041.D	UltraCarb5uODS 4.6(mm)
LCS 280-435507/2-A		11/02/2018 05:04	1	11010042.D	UltraCarb5uODS 4.6(mm)
280-116270-8		11/02/2018 05:27	1	11010043.D	UltraCarb5uODS 4.6(mm)
280-116270-11		11/02/2018 05:50	1	11010044.D	UltraCarb5uODS 4.6(mm)
280-116270-12		11/02/2018 06:13	1	11010045.D	UltraCarb5uODS 4.6(mm)
280-116270-13		11/02/2018 06:36	1	11010046.D	UltraCarb5uODS 4.6(mm)
280-116270-14		11/02/2018 06:59	1	11010047.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		11/02/2018 07:22	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/02/2018 07:45	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/02/2018 08:07	1		UltraCarb5uODS 4.6(mm)
CCV 280-435887/51		11/02/2018 08:30	1	11010051.D	UltraCarb5uODS 4.6(mm)
CCV 280-435887/52		11/02/2018 08:53	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/02/2018 09:16	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/02/2018 09:39	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/02/2018 10:02	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/02/2018 10:25	1		UltraCarb5uODS 4.6(mm)
CCV 280-435887/57		11/02/2018 10:48	1		UltraCarb5uODS 4.6(mm)
CCV 280-435887/58		11/02/2018 11:11	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 11/03/2018 06:34

Analysis Batch Number: 436121 End Date: 11/03/2018 12:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-436121/28		11/03/2018 06:34	1	11020028.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 07:09	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 07:44	1		Luna-phenylhex 4.6(mm)
280-116270-11		11/03/2018 08:19	1	11020031.D	Luna-phenylhex 4.6(mm)
280-116270-12		11/03/2018 08:54	1	11020032.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 09:29	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 10:04	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 10:39	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 11:14	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 11:49	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/03/2018 12:24	1		Luna-phenylhex 4.6(mm)
CCV 280-436121/39		11/03/2018 12:59	1	11020039.D	Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 11/06/2018 15:50

Analysis Batch Number: 436503 End Date: 11/06/2018 23:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-436503/11		11/06/2018 15:50	1	11060011.D	UltraCarb5uODS 4.6(mm)
CCV 280-436503/12		11/06/2018 16:13	1		UltraCarb5uODS 4.6(mm)
MB 280-435841/1-A		11/06/2018 16:36	1	11060013.D	UltraCarb5uODS 4.6(mm)
LCS 280-435841/2-A		11/06/2018 16:59	1	11060014.D	UltraCarb5uODS 4.6(mm)
280-116270-1		11/06/2018 17:22	1	11060015.D	UltraCarb5uODS 4.6(mm)
280-116270-9		11/06/2018 17:45	1	11060016.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 18:08	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 18:31	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 18:53	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 19:16	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 19:39	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 20:02	1		UltraCarb5uODS 4.6(mm)
CCV 280-436503/23		11/06/2018 20:25	1	11060023.D	UltraCarb5uODS 4.6(mm)
CCV 280-436503/24		11/06/2018 20:48	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 21:11	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 21:34	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 21:57	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/06/2018 22:20	1		UltraCarb5uODS 4.6(mm)
CCV 280-436503/29		11/06/2018 22:43	1		UltraCarb5uODS 4.6(mm)
CCV 280-436503/30		11/06/2018 23:06	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 11/07/2018 17:43

Analysis Batch Number: 436697 End Date: 11/08/2018 02:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-436697/7		11/07/2018 17:43	1	11070007.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 18:18	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 18:53	1		Luna-phenylhex 4.6(mm)
280-116270-1		11/07/2018 19:28	1	11070010.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 20:03	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 20:38	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 21:13	1		Luna-phenylhex 4.6(mm)
CCV 280-436697/14		11/07/2018 21:48	1	11070014.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 22:23	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 22:58	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/07/2018 23:33	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/08/2018 00:08	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/08/2018 00:43	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/08/2018 01:18	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/08/2018 01:53	1		Luna-phenylhex 4.6(mm)
CCV 280-436697/22		11/08/2018 02:28	1		Luna-phenylhex 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435507 Batch Start Date: 10/30/18 13:27 Batch Analyst: Becker, Chad B

Batch Method: 3535 Batch End Date: 10/30/18 16:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00083	8330Surrogate 00100
MB 280-435507/1		3535, 8330B				500 mL	5 mL		0.1 mL
LCS 280-435507/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
280-116270-D-8	FWGmw-016-181001-GW	3535, 8330B	T	734.9 g	284.2 g	450.7 mL	5 mL		0.1 mL
280-116270-B-11	LL3mw-237-181001-GW	3535, 8330B	T	752.1 g	288.6 g	463.5 mL	5 mL		0.1 mL
280-116270-F-12	LL3mw-244-181001-GW	3535, 8330B	T	764.1 g	284.1 g	480 mL	5 mL		0.1 mL
280-116270-F-13	SCFmw-004-181001-GW	3535, 8330B	T	755.1 g	286.0 g	469.1 mL	5 mL		0.1 mL
280-116270-C-14	LL1mw-087-181001-GW	3535, 8330B	T	714.2 g	285.7 g	428.5 mL	5 mL		0.1 mL

Batch Notes	
Acid ID	0.1%AAinACN_00119
Acid Name	0.1%AAinACN
Balance ID	24350888
Batch Comment	N. Elga, CaCl_Sol_00062 Reviewer: AP
First End time	10/30/2018 16:40
Pipette/Syringe/Dispenser ID	JiJi, soot
Solvent Lot #	Acetonitrile_00018, MeCl2_Cycl_00410
Solvent Name	ACN, MeCl2
SPE Cartridge Lot ID	004838184A
SPE Cartridge Type	Porapak Rdx WAT047220
Solid Phase Extraction Disk ID	S18-003691
Analyst ID - Spike Analyst	CB
First Start time	10/30/2018 13:42

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435841 Batch Start Date: 11/01/18 12:42 Batch Analyst: Becker, Chad B

Batch Method: 3535 Batch End Date: 11/01/18 16:01

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00082	8330Surrogate 00100
MB 280-435841/1		3535, 8330B				500 mL	5 mL		0.1 mL
LCS 280-435841/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
280-116270-G-1	FWGmw-018-181001-GW	3535, 8330B	T	763.4 g	285.1 g	478.3 mL	5 mL		0.1 mL
280-116270-G-9	FWGmw-020-181001-GW	3535, 8330B	T	737.5 g	285.4 g	452.1 mL	5 mL		0.1 mL

Batch Notes	
Acid ID	0.1%AAinACN_00119
Acid Name	0.1%AAinACN
Balance ID	24350888
Batch Comment	N. Elga, CaCl_Sol_00062 Reviewer: MF
First End time	11/01/2018 16:01
Pipette/Syringe/Dispenser ID	JiJi, soot
Solvent Lot #	Acetonitrile_00018, MeCl2_Cycl_00410
Solvent Name	ACN, MeCl2
SPE Cartridge Lot ID	004838184A / 004938274A
SPE Cartridge Type	Porapak Rdx WAT047220
Solid Phase Extraction Disk ID	S18-003691
Analyst ID - Spike Analyst	CB
Analyst ID - Spike Witness Analyst	CB
First Start time	11/01/2018 13:00

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
FWGmw-018-181001-GW	280-116270-1
FWGmw-016-181001-GW	280-116270-8
FWGmw-020-181001-GW	280-116270-9
LL3mw-244-181001-GW	280-116270-12
SCFmw-004-181001-GW	280-116270-13
LL1mw-087-181001-GW	280-116270-14

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: FWGmw-018-181001-GW
Lab Sample ID: 280-116270-1
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 09:30
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	70	300	70	18	ug/L	U		1	6010C
Calcium	91000	1000	140	35	ug/L			1	6010C
Iron	540	100	85	22	ug/L			1	6010C
Magnesium	27000	500	40	11	ug/L			1	6010C
Potassium	2200	3000	940	240	ug/L	J		1	6010C
Sodium	16000	5000	350	120	ug/L			1	6010C
Antimony	1.0	6.0	1.0	0.40	ug/L	U		1	6020A
Arsenic	23	5.0	1.0	0.33	ug/L			1	6020A
Barium	70	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	2.3	1.0	0.20	0.054	ug/L			1	6020A
Copper	1.8	2.0	1.8	0.56	ug/L	U		1	6020A
Lead	0.70	3.0	0.70	0.18	ug/L	U		1	6020A
Manganese	170	3.5	0.95	0.31	ug/L			1	6020A
Nickel	3.2	3.0	1.0	0.30	ug/L			1	6020A
Selenium	2.0	5.0	2.0	0.70	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.20	1.0	0.20	0.050	ug/L	U		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	8.0	20	8.0	2.0	ug/L	U		1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: FWGmw-016-181001-GW
Lab Sample ID: 280-116270-8
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/25/2018 15:40
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	70	300	70	18	ug/L	U		1	6010C
Calcium	100000	1000	140	35	ug/L			1	6010C
Iron	680	100	85	22	ug/L			1	6010C
Magnesium	28000	500	40	11	ug/L			1	6010C
Potassium	2200	3000	940	240	ug/L	J		1	6010C
Sodium	11000	5000	350	120	ug/L			1	6010C
Antimony	1.0	6.0	1.0	0.40	ug/L	U		1	6020A
Arsenic	4.0	5.0	1.0	0.33	ug/L	J		1	6020A
Barium	49	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	0.20	1.0	0.20	0.054	ug/L	U		1	6020A
Copper	1.8	2.0	1.8	0.56	ug/L	U		1	6020A
Lead	0.70	3.0	0.70	0.18	ug/L	U		1	6020A
Manganese	200	3.5	0.95	0.31	ug/L			1	6020A
Nickel	0.88	3.0	1.0	0.30	ug/L	J		1	6020A
Selenium	2.0	5.0	2.0	0.70	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.20	1.0	0.20	0.050	ug/L	U		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	8.0	20	8.0	2.0	ug/L	U		1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: FWGmw-020-181001-GW
Lab Sample ID: 280-116270-9
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 10:00
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	70	300	70	18	ug/L	U		1	6010C
Calcium	100000	1000	140	35	ug/L			1	6010C
Iron	890	100	85	22	ug/L			1	6010C
Magnesium	34000	500	40	11	ug/L			1	6010C
Potassium	4400	3000	940	240	ug/L			1	6010C
Sodium	16000	5000	350	120	ug/L			1	6010C
Antimony	1.0	6.0	1.0	0.40	ug/L	U		1	6020A
Arsenic	27	5.0	1.0	0.33	ug/L			1	6020A
Barium	81	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	3.8	1.0	0.20	0.054	ug/L			1	6020A
Copper	1.8	2.0	1.8	0.56	ug/L	U		1	6020A
Lead	0.70	3.0	0.70	0.18	ug/L	U		1	6020A
Manganese	72	3.5	0.95	0.31	ug/L			1	6020A
Nickel	2.3	3.0	1.0	0.30	ug/L	J		1	6020A
Selenium	2.0	5.0	2.0	0.70	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.20	1.0	0.20	0.050	ug/L	U		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	8.0	20	8.0	2.0	ug/L	U		1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: LL3mw-244-181001-GW
Lab Sample ID: 280-116270-12
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 08:50
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	70	300	70	18	ug/L	U		1	6010C
Calcium	23000	1000	140	35	ug/L			1	6010C
Iron	85	100	85	22	ug/L	U		1	6010C
Magnesium	7400	500	40	11	ug/L			1	6010C
Potassium	1300	3000	940	240	ug/L	J		1	6010C
Sodium	3200	5000	350	120	ug/L	J		1	6010C
Antimony	0.54	6.0	1.0	0.40	ug/L	J		1	6020A
Arsenic	1.0	5.0	1.0	0.33	ug/L	U		1	6020A
Barium	17	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	0.20	1.0	0.20	0.054	ug/L	U		1	6020A
Copper	1.8	2.0	1.8	0.56	ug/L	U		1	6020A
Lead	0.70	3.0	0.70	0.18	ug/L	U		1	6020A
Manganese	0.50	3.5	0.95	0.31	ug/L	J		1	6020A
Nickel	3.6	3.0	1.0	0.30	ug/L			1	6020A
Selenium	2.0	5.0	2.0	0.70	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.20	1.0	0.20	0.050	ug/L	U		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	3.0	20	8.0	2.0	ug/L	J		1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SCFmw-004-181001-GW
Lab Sample ID: 280-116270-13
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 13:35
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	31	300	70	18	ug/L	J		1	6010C
Calcium	170000	1000	140	35	ug/L			1	6010C
Iron	38	100	85	22	ug/L	J		1	6010C
Magnesium	67000	500	40	11	ug/L			1	6010C
Potassium	2800	3000	940	240	ug/L	J		1	6010C
Sodium	13000	5000	350	120	ug/L			1	6010C
Antimony	1.0	6.0	1.0	0.40	ug/L	U		1	6020A
Arsenic	1.0	5.0	1.0	0.33	ug/L	U		1	6020A
Barium	56	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	0.20	1.0	0.20	0.054	ug/L	U		1	6020A
Copper	7.6	2.0	1.8	0.56	ug/L			1	6020A
Lead	2.1	3.0	0.70	0.18	ug/L	J		1	6020A
Manganese	780	3.5	0.95	0.31	ug/L			1	6020A
Nickel	1.0	3.0	1.0	0.30	ug/L	U		1	6020A
Selenium	2.0	5.0	2.0	0.70	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.20	1.0	0.20	0.050	ug/L	U		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	42	20	8.0	2.0	ug/L			1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: LL1mw-087-181001-GW
Lab Sample ID: 280-116270-14
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 13:30
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	55	300	70	18	ug/L	J		1	6010C
Calcium	130000	1000	140	35	ug/L			1	6010C
Iron	140	100	85	22	ug/L			1	6010C
Magnesium	42000	500	40	11	ug/L			1	6010C
Potassium	920	3000	940	240	ug/L	J		1	6010C
Sodium	14000	5000	350	120	ug/L			1	6010C
Antimony	1.0	6.0	1.0	0.40	ug/L	U		1	6020A
Arsenic	1.0	5.0	1.0	0.33	ug/L	U		1	6020A
Barium	24	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	0.50	10	1.8	0.50	ug/L	J		1	6020A
Cobalt	0.45	1.0	0.20	0.054	ug/L	J		1	6020A
Copper	0.72	2.0	1.8	0.56	ug/L	J		1	6020A
Lead	0.70	3.0	0.70	0.18	ug/L	U		1	6020A
Manganese	140	3.5	0.95	0.31	ug/L			1	6020A
Nickel	2.1	3.0	1.0	0.30	ug/L	J		1	6020A
Selenium	2.0	5.0	2.0	0.70	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.069	1.0	0.20	0.050	ug/L	J		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	3.5	20	8.0	2.0	ug/L	J		1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICVH_00791 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	ICVH 280-436608/6 11/06/2018 11:04				ICVH 280-436608/7 11/06/2018 11:08				CCVH 280-436608/116 11/06/2018 18:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	41800		40000	105	41700		40000	104	251000		250000	100
Aluminum	40500		40000	101	40000		40000	100	48400		50000	97
Iron	79900		80000	100	81200		80000	102	48800		50000	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICVH_00791 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	CCVH 280-436608/130 11/06/2018 19:17				CCVH 280-436608/144 11/06/2018 20:04							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	254000		250000	101	253000		250000	101				
Aluminum	48500		50000	97	48500		50000	97				
Iron	49100		50000	98	49100		50000	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICV_00677 Concentration Units: ug/L

CCV Source: ICP CCV_00350

Analyte	ICV 280-436608/8 11/06/2018 11:11				ICV 280-436608/9 11/06/2018 11:14				CCV 280-436608/117 11/06/2018 18:33			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	2060	J	2000	103	2060	J	2000	103	4980	J	5000	100
Aluminum	250	J	250	100	245	J	250	98	512		500	102
Calcium	2020		2000	101	2010		2000	101	4980		5000	100
Iron	258		250	103	254		250	102	2440		2500	98
Magnesium	9970		10000	100	9930		10000	99	19300		20000	96
Potassium	20400		20000	102	20400		20000	102	49200		50000	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICV_00677 Concentration Units: ug/L

CCV Source: ICP CCV_00350

Analyte	CCV 280-436608/131 11/06/2018 19:21				CCV 280-436608/145 11/06/2018 20:08							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	5000		5000	100	5040		5000	101				
Aluminum	518		500	104	517		500	103				
Calcium	5050		5000	101	5060		5000	101				
Iron	2460		2500	99	2460		2500	99				
Magnesium	19400		20000	97	19900		20000	99				
Potassium	49300		50000	99	49500		50000	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP LLCCV_02393 Concentration Units: ug/L

CCV Source: ICP LLCCV_02393

Analyte	ICVL 280-436608/10 11/06/2018 11:18				CCVL 280-436608/119 11/06/2018 18:40				CCVL 280-436608/133 11/06/2018 19:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	1050	J	1000	105	1070	J	1000	107	1080	J	1000	108
Aluminum	98.2	J	100	98	101	J	100	101	103	J	100	103
Calcium	212	J	200	106	210	J	200	105	214	J	200	107
Iron	102		100	102	99.3	J	100	99	100		100	100
Magnesium	200	J	200	100	198	J	200	99	199	J	200	100
Potassium	3210		3000	107	3160		3000	105	3230		3000	108

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP LLCCV_02393 Concentration Units: ug/L

CCV Source: ICP LLCCV_02393

Analyte	CCVL 280-436608/147 11/06/2018 20:15											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	1090	J	1000	109								
Aluminum	101	J	100	101								
Calcium	213	J	200	107								
Iron	99.3	J	100	99								
Magnesium	204	J	200	102								
Potassium	3230		3000	108								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICVH_52_00049 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	ICVH 280-436427/8 11/05/2018 14:07				ICVH 280-436427/9 11/05/2018 14:11				CCVH 280-436427/36 11/05/2018 21:53			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	40600		40000	101	40600		40000	101	49800		50000	100
Iron	80800		80000	101	80900		80000	101	49500		50000	99
Sodium	81100		80000	101	80900		80000	101	256000		250000	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICVH_52_00049 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	CCVH 280-436427/50 11/05/2018 22:41				CCVH 280-436427/64 11/05/2018 23:30							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	49900		50000	100	50100		50000	100				
Iron	49500		50000	99	49700		50000	99				
Sodium	256000		250000	102	254000		250000	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICV_00676 Concentration Units: ug/L

CCV Source: ICP CCV_52_00013

Analyte	ICV 280-436427/10 11/05/2018 14:14				ICV 280-436427/11 11/05/2018 14:18				CCV 280-436427/37 11/05/2018 21:57			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	249	J	250	99	248	J	250	99	506		500	101
Calcium	2020		2000	101	2020		2000	101	5030		5000	101
Iron	247		250	99	247		250	99	2520		2500	101
Magnesium	10000		10000	100	9960		10000	100	20300		20000	101
Potassium	20100		20000	101	20000		20000	100	50400		50000	101
Sodium	2020	J	2000	101	2050	J	2000	103	25500		25000	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP ICV_00676 Concentration Units: ug/L

CCV Source: ICP CCV_52_00013

Analyte	CCV 280-436427/51 11/05/2018 22:45				CCV 280-436427/65 11/05/2018 23:33							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	507		500	101	509		500	102				
Calcium	5030		5000	101	5040		5000	101				
Iron	2540		2500	102	2530		2500	101				
Magnesium	20300		20000	102	20400		20000	102				
Potassium	50300		50000	101	50500		50000	101				
Sodium	25400		25000	101	25600		25000	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP LLCCV_02392 Concentration Units: ug/L

CCV Source: ICP LLCCV_02392

Analyte	ICVL 280-436427/12 11/05/2018 14:21				CCVL 280-436427/39 11/05/2018 22:04				CCVL 280-436427/53 11/05/2018 22:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	100	J	100	100	99.9	J	100	100	99.6	J	100	100
Calcium	193	J	200	96	201	J	200	100	195	J	200	97
Iron	97.3	J	100	97	99.1	J	100	99	100		100	100
Magnesium	207	J	200	103	210	J	200	105	207	J	200	103
Potassium	3020		3000	101	2990	J	3000	100	3050		3000	102
Sodium	1070	J	1000	107								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: ICP LLCCV_02392 Concentration Units: ug/L

CCV Source: ICP LLCCV_02392

Analyte	CCVL 280-436427/67 11/05/2018 23:40											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	99.4	J	100	99								
Calcium	199	J	200	100								
Iron	101		100	101								
Magnesium	208	J	200	104								
Potassium	2840	J	3000	95								
Sodium	1280	J	1000	128								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: MS 77 ICV_01910 Concentration Units: ug/L

CCV Source: ms 77 ccv_01914

Analyte	ICV 280-437321/9 11/12/2018 10:41				CCV 280-437321/30 11/12/2018 15:43				CCV 280-437321/37 11/12/2018 16:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.5		40.0	101	51.0		50.0	102	49.9		50.0	100
Arsenic	38.0		40.0	95	50.5		50.0	101	50.5		50.0	101
Barium	40.0		40.0	100	50.5		50.0	101	50.3		50.0	101
Beryllium	37.9		40.0	95	51.0		50.0	102	49.8		50.0	100
Cadmium	38.3		40.0	96	51.1		50.0	102	51.1		50.0	102
Chromium	40.0		40.0	100	51.0		50.0	102	50.9		50.0	102
Cobalt	39.5		40.0	99	51.2		50.0	102	50.4		50.0	101
Copper	40.0		40.0	100	51.2		50.0	102	50.2		50.0	100
Lead	39.7		40.0	99	51.3		50.0	103	51.2		50.0	102
Manganese	40.9		40.0	102	51.4		50.0	103	50.8		50.0	102
Nickel	39.2		40.0	98	50.4		50.0	101	50.5		50.0	101
Selenium	36.0		40.0	90	51.2		50.0	102	50.0		50.0	100
Silver	37.8		40.0	94	50.6		50.0	101	50.0		50.0	100
Thallium	39.8		40.0	99	51.5		50.0	103	50.7		50.0	101
Vanadium	40.4		40.0	101	50.1		50.0	100	49.6		50.0	99
Zinc	38.6		40.0	96	48.5		50.0	97	47.6		50.0	95

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: MS 77 ICV_01910 Concentration Units: ug/L

CCV Source: ms 77 ccv_01914

Analyte	CCV 280-437321/49 11/12/2018 16:58				CCV 280-437321/60 11/12/2018 17:39							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	50.6		50.0	101	50.0		50.0	100				
Arsenic	50.5		50.0	101	50.4		50.0	101				
Barium	50.2		50.0	100	48.3		50.0	97				
Beryllium	48.2		50.0	96	47.9		50.0	96				
Cadmium	51.7		50.0	103	48.1		50.0	96				
Chromium	49.8		50.0	100	49.7		50.0	99				
Cobalt	50.2		50.0	100	49.9		50.0	100				
Copper	50.4		50.0	101	49.5		50.0	99				
Lead	51.2		50.0	102	50.7		50.0	101				
Manganese	51.1		50.0	102	51.4		50.0	103				
Nickel	50.0		50.0	100	48.7		50.0	97				
Selenium	51.1		50.0	102	50.5		50.0	101				
Silver	49.5		50.0	99	48.2		50.0	96				
Thallium	50.8		50.0	102	50.2		50.0	100				
Vanadium	50.1		50.0	100	48.4		50.0	97				
Zinc	47.4		50.0	95	44.9		50.0	90				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: MS 77 LLCCV_01716 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01716

Analyte	ICVL 280-437321/11 11/12/2018 10:48				CCVL 280-437321/32 11/12/2018 15:52				CCVL 280-437321/39 11/12/2018 16:20			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	2.19		2.00	109	2.09		2.00	105	2.02		2.00	101
Arsenic	4.76	J	5.00	95	4.26	J	5.00	85	4.72	J	5.00	94
Barium	0.945	J	1.00	95	0.881	J	1.00	88	0.834	J	1.00	83
Beryllium	0.751	J	1.00	75	1.14		1.00	114	0.930	J	1.00	93
Cadmium	0.925	J	1.00	93	0.812	J	1.00	81	1.11		1.00	111
Chromium	2.08		2.00	104	2.15		2.00	107	1.98	J	2.00	99
Cobalt	1.05		1.00	105	1.04		1.00	104	0.963	J	1.00	96
Copper	2.04		2.00	102	2.07		2.00	104	2.18		2.00	109
Lead	0.973	J	1.00	97	1.01		1.00	101	1.04		1.00	104
Manganese	0.974	J	1.00	97	1.10		1.00	110	0.918	J	1.00	92
Nickel	2.19		2.00	109	2.36		2.00	118	2.39		2.00	120
Selenium	4.82	J	5.00	96	4.77	J	5.00	95	4.81	J	5.00	96
Silver	5.09		5.00	102	5.16		5.00	103	4.95	J	5.00	99
Thallium	0.967	J	1.00	97	1.01		1.00	101	0.972	J	1.00	97
Vanadium	5.59		5.00	112	5.02		5.00	100	4.53	J	5.00	91
Zinc	10.1		10.0	101	10.1		10.0	101	10.8		10.0	108

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: MS 77 LLCCV_01716 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01716

Analyte	CCVL 280-437321/51 11/12/2018 17:05				CCVL 280-437321/62 11/12/2018 17:47							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	2.12		2.00	106	2.12		2.00	106				
Arsenic	4.47	J	5.00	89	4.50	J	5.00	90				
Barium	1.07		1.00	107	0.861	J	1.00	86				
Beryllium	0.989	J	1.00	99	1.01		1.00	101				
Cadmium	1.03		1.00	103	1.21		1.00	121				
Chromium	1.96	J	2.00	98	1.96	J	2.00	98				
Cobalt	0.977	J	1.00	98	1.07		1.00	107				
Copper	2.07		2.00	103	1.86	J	2.00	93				
Lead	0.983	J	1.00	98	0.995	J	1.00	100				
Manganese	1.14		1.00	114	0.930	J	1.00	93				
Nickel	2.38		2.00	119	2.49		2.00	125				
Selenium	4.64	J	5.00	93	4.94	J	5.00	99				
Silver	5.05		5.00	101	5.05		5.00	101				
Thallium	0.978	J	1.00	98	1.01		1.00	101				
Vanadium	4.17	J	5.00	83	4.12	J	5.00	82				
Zinc	10.0		10.0	100	9.55	J	10.0	95				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: Hg Biwk ICV_00261 Concentration Units: ug/L

CCV Source: Hg Daily Spk_02288

Analyte	ICV 280-437200/9-A 11/12/2018 13:04				CCV 280-437200/12-A 11/12/2018 14:31				CCV 280-437200/12-A 11/12/2018 14:58			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.05		4.00	101	5.22		5.00	104	5.18		5.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICV Source: Hg Biwk ICV_00261 Concentration Units: ug/L

CCV Source: Hg Daily Spk_02288

Analyte	CCV 280-437200/12-A 11/12/2018 15:24				CCV 280-437200/12-A 11/12/2018 15:51							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.24		5.00	105	5.24		5.00	105				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Method: 6010C Instrument ID: MT_051

Lab Sample ID: CRI 280-436608/14 Concentration Units: ug/L

CRQL Check Standard Source: ICP LLCCV_02393

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	100	99.3	J	99	80-120
Calcium	200	217	J	108	80-120
Iron	100	114		114	80-120
Magnesium	200	199	J	99	80-120
Potassium	3000	3150		105	80-120
Sodium	1000	1060	J	106	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Method: 6010C Instrument ID: MT_052

Lab Sample ID: CRI 280-436427/16 Concentration Units: ug/L

CRQL Check Standard Source: ICP LLCCV_02392

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	100	101	J	101	80-120
Calcium	200	191	J	96	80-120
Iron	100	94.8	J	95	80-120
Magnesium	200	200	J	100	80-120
Potassium	3000	3050		102	80-120
Sodium	1000	1080	J	108	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Method: 6020A Instrument ID: MT_077

Lab Sample ID: CRI 280-437321/12 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 RL_01798

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.06	J	106	80-120
Arsenic	1.00	0.909	J	91	80-120
Barium	1.00	0.911	J	91	80-120
Beryllium	1.00	0.973	J	97	80-120
Cadmium	1.00	0.998	J	100	80-120
Chromium	1.00	1.12	J	112	80-120
Cobalt	1.00	1.05		105	80-120
Copper	1.00	1.03	J	103	80-120
Lead	1.00	1.00		100	80-120
Manganese	1.00	1.15		115	80-120
Nickel	1.00	1.06	J	106	80-120
Selenium	1.00	0.936	J	94	80-120
Silver	1.00	1.02	J	102	80-120
Thallium	1.00	1.01		101	80-120

Lab Sample ID: CRI 280-437321/14 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 alt RL_01074

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Vanadium	5.00	5.30		106	80-120
Zinc	10.0	8.67	J	87	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-436608/13 11/06/2018 11:28		CCB 280-436608/118 11/06/2018 18:37		CCB 280-436608/132 11/06/2018 19:24		CCB 280-436608/146 11/06/2018 20:11	
		Found	C	Found	C	Found	C	Found	C
Sodium	5000	350	U	350	U	350	U	350	U
Aluminum	300	70	U	70	U	70	U	70	U
Calcium	1000	140	U	140	U	140	U	140	U
Iron	100	85	U	85	U	85	U	85	U
Magnesium	500	40	U	40	U	40	U	40	U
Potassium	3000	940	U	940	U	940	U	940	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-436427/15 11/05/2018 14:43		CCB 280-436427/38 11/05/2018 22:00		CCB 280-436427/52 11/05/2018 22:49		CCB 280-436427/66 11/05/2018 23:37	
		Found	C	Found	C	Found	C	Found	C
Aluminum	300	70	U	70	U	70	U	70	U
Calcium	1000	140	U	140	U	140	U	140	U
Iron	100	85	U	85	U	85	U	85	U
Magnesium	500	40	U	40	U	40	U	40	U
Potassium	3000	940	U	940	U	940	U	940	U
Sodium	5000	350	U			221	J	207	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-437321/10 11/12/2018 10:45		CCB 280-437321/31 11/12/2018 15:48		CCB 280-437321/38 11/12/2018 16:16		CCB 280-437321/50 11/12/2018 17:01	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	1.0	U	1.0	U	1.0	U	1.0	U
Arsenic	5.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	0.95	U	0.95	U	0.95	U	0.95	U
Beryllium	1.0	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	1.8	U	1.8	U	1.8	U	1.8	U
Cobalt	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Copper	2.0	1.8	U	1.8	U	1.8	U	1.8	U
Lead	1.0	0.70	U	0.70	U	0.70	U	0.70	U
Manganese	1.0	0.95	U	0.95	U	0.95	U	0.95	U
Nickel	2.0	1.0	U	1.0	U	1.0	U	1.0	U
Selenium	5.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	5.0	0.10	U	0.10	U	0.10	U	0.10	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.856	J	2.0	U	2.0	U	2.0	U
Zinc	10	8.0	U	8.0	U	8.0	U	8.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-437321/61 11/12/2018 17:43							
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.471	J						
Arsenic	5.0	1.0	U						
Barium	1.0	0.95	U						
Beryllium	1.0	0.30	U						
Cadmium	1.0	1.0	U						
Chromium	2.0	1.8	U						
Cobalt	1.0	0.20	U						
Copper	2.0	1.8	U						
Lead	1.0	0.70	U						
Manganese	1.0	0.95	U						
Nickel	2.0	1.0	U						
Selenium	5.0	2.0	U						
Silver	5.0	0.10	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	2.0	U						
Zinc	10	8.0	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-437200/10-A 11/12/2018 13:07		CCB 280-437200/13-A 11/12/2018 14:33		CCB 280-437200/13-A 11/12/2018 15:00		CCB 280-437200/13-A 11/12/2018 15:27	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.080	U	0.080	U	0.080	U	0.080	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-437200/13-A 11/12/2018 15:53							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.080	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-435537/1-A

Instrument Code: MT_052 Batch No.: 436427

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	70	U		6010C_DOD5
7440-70-2	Calcium	140	U		6010C_DOD5
7439-89-6	Iron	85	U		6010C_DOD5
7439-95-4	Magnesium	40	U		6010C_DOD5
7440-09-7	Potassium	940	U		6010C_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-435537/1-A

Instrument Code: MT_051 Batch No.: 436608

CAS No.	Analyte	Concentration	C	Q	Method
7440-23-5	Sodium	350	U		6010C_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-437198/1-A

Instrument Code: MT_033 Batch No.: 437317

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.080	U		7470A_DOD5

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSA 280-436608/15 Instrument ID: MT_051

Lab File ID: 51A110618A.csv ICS Source: ICP ICSA_00173

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Sodium		**29.7**	
Aluminum	*500000*	*517212*	*103*
Antimony		*-6.10*	
Arsenic		*5.09*	
Barium		*-1.08*	
Beryllium		*-0.647*	
Boron		*4.13*	
Cadmium		*-0.955*	
Calcium	*500000*	*499452*	*100*
Chromium		*-0.436*	
Cobalt		*-3.10*	
Copper		*-5.97*	
Iron	*200000*	*194329*	*97*
Lead		*-4.11*	
Lithium		*5.55*	
Magnesium	*500000*	*510501*	*102*
Manganese		*0.388*	
Molybdenum		*-0.429*	
Nickel		*-0.753*	
Phosphorus		*2.95*	
Potassium		*53.4*	
Selenium		*6.12*	
Silicon		*26.8*	
Silver		*0.396*	
Thallium		*2.07*	
Tin		*5.36*	
Titanium		*-0.903*	
Vanadium		*1.01*	
Zinc		*-7.06*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSAB 280-436608/16 Instrument ID: MT_051

Lab File ID: 51A110618A.csv ICS Source: ICP ICSAB_00194

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Sodium	**50000**	**57044**	**114**
Aluminum	*500000*	*519326*	*104*
Antimony	*1000*	*1067*	*107*
Arsenic	*2000*	*2127*	*106*
Barium	*500*	*507*	*101*
Beryllium	*500*	*509*	*102*
Boron	*2000*	*2177*	*109*
Cadmium	*1000*	*978*	*98*
Calcium	*500000*	*497046*	*99*
Chromium	*500*	*493*	*99*
Cobalt	*500*	*468*	*94*
Copper	*500*	*527*	*105*
Iron	*200000*	*193581*	*97*
Lead	*1000*	*995*	*99*
Lithium	*1000*	*1102*	*110*
Magnesium	*500000*	*520340*	*104*
Manganese	*500*	*500*	*100*
Molybdenum	*1000*	*1008*	*101*
Nickel	*1000*	*938*	*94*
Phosphorus	*2000*	*2072*	*104*
Potassium	*50000*	*55949*	*112*
Selenium	*5000*	*5216*	*104*
Silicon	*10000*	*10694*	*107*
Silver	*1000*	*1134*	*113*
Strontium	*1000*	*1033*	*103*
Thallium	*10000*	*9842*	*98*
Tin	*10000*	*9719*	*97*
Titanium	*1000*	*1032*	*103*
Vanadium	*500*	*516*	*103*
Zinc	*1000*	*967*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSA 280-436427/17 Instrument ID: MT_052

Lab File ID: 52A110518B.csv ICS Source: ICP ICSA_00173

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**500000**	**521096**	**104**
Calcium	**500000**	**490001**	**98**
Iron	**200000**	**192626**	**96**
Magnesium	**500000**	**510866**	**102**
Potassium		**48.7**	
Antimony		*-3.06*	
Arsenic		*-14.0*	
Barium		*-0.647*	
Beryllium		*0.512*	
Cadmium		*1.18*	
Chromium		*1.82*	
Copper		*-6.59*	
Lead		*5.87*	
Lithium		*10.3*	
Molybdenum		*-0.647*	
Nickel		*-4.30*	
Phosphorus		*-3.79*	
Selenium		*-1.21*	
Silver		*0.251*	
Sodium		*35.2*	
Thallium		*0.954*	
Tin		*-6.39*	
Titanium		*0.499*	
Vanadium		*1.91*	
Zinc		*-1.14*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSAB 280-436427/18 Instrument ID: MT_052

Lab File ID: 52A110518B.csv ICS Source: ICP ICSAB_00194

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	**500000**	**515301**	**103**
Calcium	**500000**	**485149**	**97**
Iron	**200000**	**190773**	**95**
Magnesium	**500000**	**509379**	**102**
Potassium	**50000**	**54677**	**109**
Antimony	*1000*	*1067*	*107*
Arsenic	*2000*	*2160*	*108*
Barium	*500*	*511*	*102*
Beryllium	*500*	*506*	*101*
Boron	*2000*	*2200*	*110*
Cadmium	*1000*	*975*	*98*
Chromium	*500*	*497*	*99*
Cobalt	*500*	*468*	*94*
Copper	*500*	*526*	*105*
Lead	*1000*	*1016*	*102*
Lithium	*1000*	*1093*	*109*
Manganese	*500*	*495*	*99*
Molybdenum	*1000*	*1011*	*101*
Nickel	*1000*	*928*	*93*
Phosphorus	*2000*	*2116*	*106*
Selenium	*5000*	*5315*	*106*
Silicon	*10000*	*10475*	*105*
Silver	*1000*	*1137*	*114*
Sodium	*50000*	*53424*	*107*
Strontium	*1000*	*1030*	*103*
Thallium	*10000*	*9700*	*97*
Tin	*10000*	*9766*	*98*
Titanium	*1000*	*1042*	*104*
Vanadium	*500*	*509*	*102*
Zinc	*1000*	*964*	*96*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSA 280-437321/15 Instrument ID: MT_077

Lab File ID: 015ICSA.d ICS Source: ms 77 icsa_00386

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.0750**	
Arsenic		**0.0450**	
Barium		**0.0520**	
Beryllium		**-0.0320**	
Cadmium		**0.537**	
Chromium		**0.284**	
Cobalt		**0.0130**	
Copper		**0.632**	
Lead		**0.107**	
Manganese		**0.599**	
Nickel		**0.317**	
Selenium		**-0.0680**	
Silver		**0.0080**	
Thallium		**0.0010**	
Vanadium		**0.998**	
Zinc		**0.639**	
Molybdenum	*2000*	*1967*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSAB 280-437321/16 Instrument ID: MT_077

Lab File ID: 016ICSB.d ICS Source: ms 77 icsab_00385

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**100**	**107**	**107**
Arsenic	**100**	**95.8**	**96**
Barium	**100**	**102**	**102**
Beryllium	**100**	**103**	**103**
Cadmium	**100**	**97.2**	**97**
Chromium	**100**	**98.1**	**98**
Cobalt	**100**	**99.6**	**100**
Copper	**100**	**96.7**	**97**
Lead	**100**	**95.7**	**96**
Manganese	**100**	**103**	**103**
Nickel	**100**	**96.9**	**97**
Selenium	**100**	**96.8**	**97**
Silver	**100**	**94.5**	**95**
Thallium	**100**	**95.8**	**96**
Vanadium	**100**	**100**	**100**
Zinc	**100**	**92.9**	**93**
Molybdenum	*2100*	*2034*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSA 280-437321/34 Instrument ID: MT_077

Lab File ID: 090ICSA.d ICS Source: ms 77 icsa_00386

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.0590**	
Arsenic		**0.0820**	
Barium		**0.0730**	
Beryllium		**0.0090**	
Cadmium		**0.321**	
Chromium		**0.202**	
Cobalt		**0.0110**	
Copper		**0.687**	
Lead		**0.0550**	
Manganese		**0.832**	
Nickel		**0.210**	
Selenium		**0.219**	
Silver		**0.0160**	
Thallium		**0.0030**	
Vanadium		**-0.724**	
Zinc		**0.709**	
Molybdenum	*2000*	*2005*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSAB 280-437321/35 Instrument ID: MT_077

Lab File ID: 091ICSB.d ICS Source: ms 77 icsab_00385

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**96.3**	**96**
Barium	**100**	**99.6**	**100**
Beryllium	**100**	**101**	**101**
Cadmium	**100**	**97.4**	**97**
Chromium	**100**	**95.8**	**96**
Cobalt	**100**	**96.8**	**97**
Copper	**100**	**93.3**	**93**
Lead	**100**	**95.3**	**95**
Manganese	**100**	**99.5**	**99**
Nickel	**100**	**94.1**	**94**
Selenium	**100**	**98.0**	**98**
Silver	**100**	**93.7**	**94**
Thallium	**100**	**95.2**	**95**
Vanadium	**100**	**96.8**	**97**
Zinc	**100**	**89.2**	**89**
Molybdenum	*2100*	*2059*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSA 280-437321/189 Instrument ID: MT_077

Lab File ID: 245ICSA.d ICS Source: ms 77 icsa_00386

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.146**	
Arsenic		**0.165**	
Barium		**0.0170**	
Beryllium		**0.0030**	
Cadmium		**0.484**	
Chromium		**0.220**	
Cobalt		**0.0030**	
Copper		**0.391**	
Lead		**0.0730**	
Manganese		**0.889**	
Nickel		**0.102**	
Selenium		**0.106**	
Silver		**0.0250**	
Thallium		**0.0010**	
Vanadium		**-0.0820**	
Zinc		**0.521**	
Molybdenum	*2000*	*2050*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Lab Sample ID: ICSAB 280-437321/190 Instrument ID: MT_077

Lab File ID: 246ICSB.d ICS Source: ms 77 icsab_00385

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**100**	**99.2**	**99**
Arsenic	**100**	**92.6**	**93**
Barium	**100**	**94.4**	**94**
Beryllium	**100**	**91.8**	**92**
Cadmium	**100**	**94.7**	**95**
Chromium	**100**	**95.3**	**95**
Cobalt	**100**	**95.0**	**95**
Copper	**100**	**93.8**	**94**
Lead	**100**	**91.0**	**91**
Manganese	**100**	**95.5**	**96**
Nickel	**100**	**93.8**	**94**
Selenium	**100**	**92.5**	**93**
Silver	**100**	**92.7**	**93**
Thallium	**100**	**90.6**	**91**
Vanadium	**100**	**97.2**	**97**
Zinc	**100**	**96.2**	**96**
Molybdenum	*2100*	*2092*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: FWGmw-020-181001-GW MS
Lab ID: 280-116270-9 MS
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	5.19		0.080	U	5.00	104	82-119		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: FWGmw-020-181001-GW MSD
Lab ID: 280-116270-9 MSD
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	5.15		5.00	103	82-119	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: FWGmw-020-181001-GW PDS Lab ID: 280-116270-9 PDS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	4.79		0.080	U	5.00	96	80-120		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-435537/2-A

Lab Name: TestAmerica Denver Job No.: 280-116270-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Aluminum	2000	2070		104	86	115		6010C
Calcium	50000	50800		102	87	113		6010C
Iron	1000	1030		103	87	115		6010C
Magnesium	50000	50400		101	85	113		6010C
Potassium	50000	51900		104	86	114		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-435537/3-A

Lab Name: TestAmerica Denver Job No.: 280-116270-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	2100		2000	105	86-115	1	20		6010C
Calcium	51400		50000	103	87-113	1	20		6010C
Iron	1040		1000	104	87-115	0	20		6010C
Magnesium	51100		50000	102	85-113	1	20		6010C
Potassium	52400		50000	105	86-114	1	20		6010C

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-435537/2-A

Lab Name: TestAmerica Denver Job No.: 280-116270-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Sodium	50000	53000		106	87	115		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-435537/3-A

Lab Name: TestAmerica Denver Job No.: 280-116270-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Sodium	53600		50000	107	87-115	1	20		6010C

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-437198/2-A

Lab Name: TestAmerica Denver Job No.: 280-116270-1

Sample Matrix: Water LCS Source: Hg Daily Spk_02288

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.26		105	82	119		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-437198/3-A

Lab Name: TestAmerica Denver | Job No.: 280-116270-1

Sample Matrix: Water | LCS Source: Hg Daily Spk_02288

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	5.13		5.00	103	82-119	2	20		7470A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 280-116270-9

SDG No:

Lab Name: TestAmerica Denver Job No: 280-116270-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Mercury	0.080	U	0.40	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_051

Method: 6010C DL Date: 08/01/2018 00:00

Prep Method: 3010A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Sodium	589.5	5000	117

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_051

Method: 6010C XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Sodium		5000	117

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_052

Method: 6010C DL Date: 08/01/2018 00:00

Prep Method: 3010A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Aluminum	167	300	18
Calcium	317.9	1000	34.5
Iron	259.9	100	22
Magnesium	279	500	10.7
Potassium	766.4	3000	237

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_052

Method: 6010C XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum		300	18
Calcium		1000	34.5
Iron		100	22
Magnesium		500	10.7
Potassium		3000	237

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A DL Date: 08/01/2018 00:00

Prep Method: 3020A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Antimony	121	6	0.4
Arsenic	75	5	0.33
Barium	137	3	0.29
Beryllium	9	1	0.08
Cadmium	111	1	0.265
Chromium	52	10	0.5
Cobalt	59	1	0.054
Copper	63	2	0.56
Lead	208	3	0.18
Manganese	55	3.5	0.31
Nickel	60	3	0.3
Selenium	78	5	0.7
Silver	107	5	0.033
Thallium	205	1	0.05
Vanadium	51	6	0.5
Zinc	66	20	2

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.33
Barium		1	0.29
Beryllium		1	0.08
Cadmium		1	0.265
Chromium		2	0.5
Cobalt		1	0.054
Copper		2	0.56
Lead		1	0.18
Manganese		1	0.31
Nickel		2	0.3
Selenium		5	0.7
Silver		5	0.033
Thallium		1	0.05
Vanadium		5	0.5
Zinc		10	2

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_033

Method: 7470A DL Date: 08/09/2015 00:00

Prep Method: 7470A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Mercury	253.7	0.2	0.027

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: MT_033

Method: 7470A XMDL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.027

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum	167.019													0.0012	
Aluminum	396.152								0.000173						
Antimony	206.834		-0.000014									0.011394		-0.000086	
Arsenic	188.98													-0.000007	
Barium	493.408			-0.000045			0.000255		0.000002					0.000008	
Beryllium	234.861							0.000015						0.000104	
Bismuth	223.061													0.000065	
Boron	249.678		.0								0.001755			-0.00006	
Cadmium	214.439										0.000016			0.0000116	
Calcium	315.887									0.000711					
Chromium	205.56						-0.00057							-0.000018	
Cobalt	237.863														
Copper	324.754		0.000007						-0.000011					0.000016	
Iron	238.204														
Iron	259.94														
Lead	220.353		-0.0001111											0.00003	
Lithium	670.783														
Magnesium	279.078													-0.00029	
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604													0.000006	
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026		0.000015											-0.0002	
Silicon	288.158														
Silver	328.066														
Sodium	589.592					0.451997									
Sodium	589.593					0.38916									
Strontium	407.771														
Sulfur	181.972														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Thallium	190.794								0		0.001808	0		-0.000012	
Thorium	288.505						-0.01079							-0.00002	
Tin	189.925														
Titanium	336.122								0.000022						
Uranium	409.013								-0.0000416					0.000203	
Vanadium	292.401											-0.00679		0	
Zinc	206.2														
Zirconium	343.823													0.000022	

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Aluminum	396.152				0.031769										
Aluminum	167.019														
Antimony	206.834				-0.00208									0.000337	
Arsenic	188.98														
Barium	493.408														
Beryllium	234.861				-0.00022										
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.56				-0.00012										
Cobalt	237.863														
Copper	324.754				0.000505										
Iron	238.204														
Iron	259.94														
Lead	220.353				-0.00158										
Lithium	670.783														
Magnesium	279.078														
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604														
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026			000816.											
Silicon	288.158														
Silver	328.066														
Sodium	589.593														
Sodium	589.592														
Strontium	407.771														
Sulfur	181.972			0.00474											

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Thallium	190.794				-0.00112										
Thorium	288.505		0	-0.0025											
Tin	189.925														
Titanium	336.122														
Uranium	409.013														
Vanadium	292.401				-0.000580										
Zinc	206.2														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Aluminum	167.019														
Aluminum	396.152														
Antimony	206.834		0.000287		-0.0011			-0.00142							
Arsenic	188.98														
Barium	493.408														
Beryllium	234.861														
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.56														
Cobalt	237.863		0.001949												
Copper	324.754	0.00368	-0.00033		-0.00091										
Iron	238.204														
Iron	259.94														
Lead	220.353				0.0010										
Lithium	670.783														
Magnesium	279.078				-0.00469										
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604			0.000176											
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026														
Silicon	288.158														
Silver	328.066				-0.00053	-0.0046		0.0047							
Sodium	589.592														
Sodium	589.593														
Strontium	407.771														
Sulfur	181.972														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_051 Date: 06/14/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Thallium	190.794		-0.002												
Thorium	288.505				0.007837	0.01375									
Tin	189.925														
Titanium	336.122														
Uranium	409.013							-0.01707							
Vanadium	292.401	0.002372	0.000675		-0.00164										
Zinc	206.2														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 10/12/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum	394.401														
Aluminum	396.152								-0.000104					-0.000023	
Antimony	206.834		0									0.006677		0.00005	
Arsenic	188.980		-0.000012											-0.000018	
Barium	493.408													0.000008	
Beryllium	234.861													-0.000272	
Bismuth	223.061													0.000079	0.000001
Boron	249.678													-0.000081	
Cadmium	214.439														
Calcium	315.887		0.000314												
Chromium	205.560		-0.000004				-0.000136								
Cobalt	228.615													0.000047	
Copper	324.754		0.000005						-0.000012					0.000025	
Iron	238.204														
Iron	259.940														
Lead	220.353		-0.000062									-0.000509			
Lithium	670.783														
Magnesium	279.078													-0.000401	
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604								0					0.000039	
Phosphorus	213.618												-0.038774		
Potassium	766.491														
Selenium	196.026													-0.000171	
Silicon	288.158													0	
Silver	328.068														
Sodium	589.592					-0.030677									
Sodium	589.593					-0.275847									
Strontium	421.552													0.000001	
Sulfur	181.972								0.000105					-0.000009	

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 10/12/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Thallium	190.794		-0.000063						-0.000017		0.00204			-0.000053	
Thorium	288.505						-0.005957		-0.000006					-0.000106	
Tin	189.925													0	
Titanium	336.122								0.000026					-	
Uranium	409.013								-0.000041					0.000232	
Vanadium	292.401											-0.00709			
Zinc	206.200													0.000031	
Zirconium	343.823													0	

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 10/12/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Aluminum	396.152				0.040824										0.190657
Aluminum	394.401														0.02099
Antimony	206.834				-0.003886									-0.000291	
Arsenic	188.980														
Barium	493.408														
Beryllium	234.861				-0.000327										
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.560				-0.000696		-0.000286								
Cobalt	228.615						0.0001								
Copper	324.754				0.000286										
Iron	238.204														
Iron	259.940														
Lead	220.353				-0.000822										
Lithium	670.783														
Magnesium	279.078														
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604														
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026			0.000916	0.000109										
Silicon	288.158														
Silver	328.068														
Sodium	589.593														
Sodium	589.592														
Strontium	421.552														
Sulfur	181.972			0.006869											

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 10/12/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Thallium	190.794				-0.002337										
Thorium	288.505			0.010208											
Tin	189.925														
Titanium	336.122						0.000067								
Uranium	409.013														
Vanadium	292.401				-0.001399										
Zinc	206.200														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 10/12/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Aluminum	394.401	-0.021133			0.011488										
Aluminum	396.152														
Antimony	206.834		0.002608					-0.001135							
Arsenic	188.980														
Barium	493.408														
Beryllium	234.861														
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.560														
Cobalt	228.615		0.001881												
Copper	324.754	0.004174	-0.000232		-0.001247										
Iron	238.204														
Iron	259.940														
Lead	220.353		-0.000427		0.000755										
Lithium	670.783														
Magnesium	279.078				-0.004857										
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604			0.000222											
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026														
Silicon	288.158														
Silver	328.068				-0.000389	-0.009028		0.006919							
Sodium	589.592														
Sodium	589.593														
Strontium	421.552														
Sulfur	181.972														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

ICP-AES Instrument ID: MT_052 Date: 10/12/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Thallium	190.794		-0.00212												
Thorium	288.505		-0.000396		0.002914	-0.06422									
Tin	189.925														
Titanium	336.122														
Uranium	409.013							-0.039324							
Vanadium	292.401	0.002016	0.000703		-0.000998										
Zinc	206.200														
Zirconium	343.823														

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-116270-1

SDG No.:

Instrument ID: MT_051 Date: 10/07/2018 00:00

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Sodium		2500	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-116270-1

SDG No.:

Instrument ID: MT_052 Date: 09/01/2018 10:17

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Aluminum		1000	6010C
Calcium		2000	6010C
Iron		500	6010C
Magnesium		1000	6010C
Potassium		500	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-116270-1

SDG No.:

Instrument ID: MT_077 Date: 10/07/2018 00:00

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		3600	6020A
Arsenic		3600	6020A
Barium		4500	6020A
Beryllium		3600	6020A
Cadmium		3600	6020A
Chromium		4500	6020A
Cobalt		3600	6020A
Copper		4500	6020A
Lead		4500	6020A
Manganese		18000	6020A
Nickel		4500	6020A
Selenium		3600	6020A
Silver		270	6020A
Thallium		3600	6020A
Vanadium		3600	6020A
Zinc		4500	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Prep Method: 3010A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-435537/1-A	11/02/2018 16:00	435537		50	50
LCS 280-435537/2-A	11/02/2018 16:00	435537		50	50
LCSD 280-435537/3-A	11/02/2018 16:00	435537		50	50
280-116270-1	11/02/2018 16:00	435537		50	50
280-116270-8	11/02/2018 16:00	435537		50	50
280-116270-9	11/02/2018 16:00	435537		50	50
280-116270-12	11/02/2018 16:00	435537		50	50
280-116270-13	11/02/2018 16:00	435537		50	50
280-116270-14	11/02/2018 16:00	435537		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Prep Method: 3020A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
280-116270-1	11/07/2018 18:00	435538		50	50
280-116270-8	11/07/2018 18:00	435538		50	50
280-116270-9	11/07/2018 18:00	435538		50	50
280-116270-12	11/07/2018 18:00	435538		50	50
280-116270-13	11/07/2018 18:00	435538		50	50
280-116270-14	11/07/2018 18:00	435538		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-437198/1-A	11/12/2018 09:34	437198		30	50
LCS 280-437198/2-A	11/12/2018 09:34	437198		30	50
LCSD 280-437198/3-A	11/12/2018 09:34	437198		30	50
280-116270-1	11/12/2018 09:34	437198		30	50
280-116270-8	11/12/2018 09:34	437198		30	50
280-116270-9	11/12/2018 09:34	437198		30	50
280-116270-9 MS	11/12/2018 09:34	437198		30	50
280-116270-9 MSD	11/12/2018 09:34	437198		30	50
280-116270-12	11/12/2018 09:34	437198		30	50
280-116270-13	11/12/2018 09:34	437198		30	50
280-116270-14	11/12/2018 09:34	437198		30	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/06/2018 10:47 End Date: 11/06/2018 20:15

Lab Sample Id	D/F	Type	Time	Analytes
				Na
ICIS 280-436608/1	1		10:47	X
IC 280-436608/2			10:51	X
IC 280-436608/3			10:54	X
ZZZZZZ			10:58	
ZZZZZZ			11:01	
ICVH 280-436608/6	1		11:04	X
ICVH 280-436608/7	1		11:08	X
ICV 280-436608/8	1		11:11	X
ICV 280-436608/9	1		11:14	X
ICVL 280-436608/10	1		11:18	X
CCVH 280-436608/11			11:21	
CCV 280-436608/12			11:25	
ICB 280-436608/13	1		11:28	X
CRI 280-436608/14	1		11:31	X
ICSA 280-436608/15	1		11:35	X
ICSAB 280-436608/16	1		11:42	X
LRA 280-436608/17			11:45	
CCVH 280-436608/18			11:49	
CCV 280-436608/19			11:52	
CCB 280-436608/20			11:55	
CCVL 280-436608/21			11:59	
ZZZZZZ			13:13	
ZZZZZZ			13:16	
ZZZZZZ			13:20	
ZZZZZZ			13:23	
ZZZZZZ			13:26	
ZZZZZZ			13:30	
ZZZZZZ			13:33	
ZZZZZZ			13:37	
ZZZZZZ			13:40	
ZZZZZZ			13:43	
CCVH 280-436608/32			13:47	
CCV 280-436608/33			13:50	
CCB 280-436608/34			13:53	
CCVL 280-436608/35			13:57	
ZZZZZZ			14:00	
ZZZZZZ			14:04	
ZZZZZZ			14:07	
ZZZZZZ			14:10	
ZZZZZZ			14:14	
ZZZZZZ			14:17	
ZZZZZZ			14:20	

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/06/2018 10:47 End Date: 11/06/2018 20:15

Lab Sample Id	D/F	Type	Time	Analytes
				Na
ZZZZZZ			14:24	
ZZZZZZ			14:27	
ZZZZZZ			14:31	
CCVH 280-436608/46			14:34	
CCV 280-436608/47			14:37	
CCB 280-436608/48			14:41	
CCVL 280-436608/49			14:44	
ZZZZZZ			14:47	
ZZZZZZ			14:51	
ZZZZZZ			14:54	
ZZZZZZ			14:58	
ZZZZZZ			15:01	
ZZZZZZ			15:04	
ZZZZZZ			15:08	
ZZZZZZ			15:11	
ZZZZZZ			15:14	
ZZZZZZ			15:18	
CCVH 280-436608/60			15:21	
CCV 280-436608/61			15:25	
CCB 280-436608/62			15:28	
CCVL 280-436608/63			15:31	
ZZZZZZ			15:35	
ZZZZZZ			15:38	
ZZZZZZ			15:41	
ZZZZZZ			15:45	
ZZZZZZ			15:48	
ZZZZZZ			15:51	
ZZZZZZ			15:55	
ZZZZZZ			15:58	
ZZZZZZ			16:02	
CCVH 280-436608/73			16:05	
CCV 280-436608/74			16:08	
CCB 280-436608/75			16:12	
CCVL 280-436608/76			16:15	
ZZZZZZ			16:18	
RINSE 280-436608/78			16:22	
ZZZZZZ			16:25	
RINSE 280-436608/80			16:29	
CCVH 280-436608/81			16:32	
CCV 280-436608/82			16:35	
CCB 280-436608/83			16:39	
CCVL 280-436608/84			16:42	

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/06/2018 10:47 End Date: 11/06/2018 20:15

Lab Sample Id	D/F	Type	Time	Analytes
				Na
ZZZZZZ			16:46	
ZZZZZZ			16:49	
ZZZZZZ			16:52	
ZZZZZZ			16:56	
ZZZZZZ			16:59	
ZZZZZZ			17:02	
ZZZZZZ			17:06	
CCVH 280-436608/92			17:09	
CCV 280-436608/93			17:13	
CCB 280-436608/94			17:16	
CCVL 280-436608/95			17:19	
ZZZZZZ			17:23	
ZZZZZZ			17:26	
ZZZZZZ			17:29	
ZZZZZZ			17:33	
ZZZZZZ			17:36	
ZZZZZZ			17:39	
ZZZZZZ			17:43	
ZZZZZZ			17:46	
CCVH 280-436608/104			17:50	
CCV 280-436608/105			17:53	
CCB 280-436608/106			17:56	
CCVL 280-436608/107			18:00	
ZZZZZZ			18:03	
ZZZZZZ			18:06	
ZZZZZZ			18:10	
ZZZZZZ			18:13	
ZZZZZZ			18:17	
ZZZZZZ			18:20	
ZZZZZZ			18:23	
ZZZZZZ			18:27	
CCVH 280-436608/116	1		18:30	X
CCV 280-436608/117	1		18:33	X
CCB 280-436608/118	1		18:37	X
CCVL 280-436608/119	1		18:40	X
MB 280-435537/1-A	1	T	18:44	X
LCS 280-435537/2-A	1	T	18:47	X
LCSD 280-435537/3-A	1	T	18:50	X
ZZZZZZ			18:54	
ZZZZZZ			18:57	
ZZZZZZ			19:00	
ZZZZZZ			19:04	

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 11/06/2018 10:47 End Date: 11/06/2018 20:15

Lab Sample Id	D/F	Type	Time	Analytes
				Na
ZZZZZZ			19:07	
ZZZZZZ			19:11	
ZZZZZZ			19:14	
CCVH 280-436608/130	1		19:17	X
CCV 280-436608/131	1		19:21	X
CCB 280-436608/132	1		19:24	X
CCVL 280-436608/133	1		19:27	X
ZZZZZZ			19:31	
ZZZZZZ			19:34	
ZZZZZZ			19:37	
ZZZZZZ			19:41	
280-116270-1	1	T	19:44	X
280-116270-8	1	T	19:48	X
280-116270-9	1	T	19:51	X
280-116270-12	1	T	19:54	X
280-116270-13	1	T	19:58	X
280-116270-14	1	T	20:01	X
CCVH 280-436608/144	1		20:04	X
CCV 280-436608/145	1		20:08	X
CCB 280-436608/146	1		20:11	X
CCVL 280-436608/147	1		20:15	X

Prep Types:
T = Total/NA

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 11/05/2018 13:41 End Date: 11/06/2018 04:30

Lab Sample Id	D/F	Type	Time	Analytes																								
				Al	Ca	Fe	K	Mg																				
ICIS 280-436427/1	1		13:41	X	X	X	X	X																				
IC 280-436427/2			13:45	X	X	X	X	X																				
IC 280-436427/3			13:49	X	X	X	X	X																				
IC 280-436427/4			13:52	X	X	X	X	X																				
ZZZZZZ			13:56																									
ZZZZZZ			14:00																									
ZZZZZZ			14:03																									
ICVH 280-436427/8	1		14:07	X	X	X	X	X																				
ICVH 280-436427/9	1		14:11	X	X	X	X	X																				
ICV 280-436427/10	1		14:14	X	X	X	X	X																				
ICV 280-436427/11	1		14:18	X	X	X	X	X																				
ICVL 280-436427/12	1		14:21	X	X	X	X	X																				
CCVH 280-436427/13			14:25																									
CCV 280-436427/14			14:40																									
ICB 280-436427/15	1		14:43	X	X	X	X	X																				
CRI 280-436427/16	1		14:47	X	X	X	X	X																				
ICSA 280-436427/17	1		14:55	X	X	X	X	X																				
ICSAB 280-436427/18	1		15:05	X	X	X	X	X																				
LRA 280-436427/19			15:09																									
CCVH 280-436427/20			15:13																									
CCV 280-436427/21			15:16																									
CCB 280-436427/22			15:20																									
CCVL 280-436427/23			15:23																									
CCVH 280-436427/24			21:12																									
CCV 280-436427/25			21:16																									
CCB 280-436427/26			21:20																									
CCVL 280-436427/27			21:23																									
ZZZZZZ			21:26																									
ZZZZZZ			21:29																									
ZZZZZZ			21:33																									
ZZZZZZ			21:36																									
ZZZZZZ			21:40																									
ZZZZZZ			21:43																									
ZZZZZZ			21:46																									
ZZZZZZ			21:50																									
CCVH 280-436427/36	1		21:53	X	X	X	X	X																				
CCV 280-436427/37	1		21:57	X	X	X	X	X																				
CCB 280-436427/38	1		22:00	X	X	X	X	X																				
CCVL 280-436427/39	1		22:04	X	X	X	X	X																				
MB 280-435537/1-A	1	T	22:07	X	X	X	X	X																				
LCS 280-435537/2-A	1	T	22:10	X	X	X	X	X																				
LCSD 280-435537/3-A	1	T	22:14	X	X	X	X	X																				

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 11/05/2018 13:41 End Date: 11/06/2018 04:30

Lab Sample Id	D/F	Type	Time	Analytes																									
				Al	Ca	Fe	K	Mg																					
ZZZZZZ			22:17																										
ZZZZZZ			22:20																										
ZZZZZZ			22:24																										
ZZZZZZ			22:27																										
ZZZZZZ			22:31																										
ZZZZZZ			22:34																										
ZZZZZZ			22:38																										
CCVH 280-436427/50	1		22:41	X	X	X	X	X																					
CCV 280-436427/51	1		22:45	X	X	X	X	X																					
CCB 280-436427/52	1		22:49	X	X	X	X	X																					
CCVL 280-436427/53	1		22:52	X	X	X	X	X																					
ZZZZZZ			22:55																										
ZZZZZZ			22:59																										
ZZZZZZ			23:02																										
ZZZZZZ			23:05																										
280-116270-1	1	T	23:09	X	X	X	X	X																					
280-116270-8	1	T	23:12	X	X	X	X	X																					
280-116270-9	1	T	23:16	X	X	X	X	X																					
280-116270-12	1	T	23:19	X	X	X	X	X																					
280-116270-13	1	T	23:23	X	X	X	X	X																					
280-116270-14	1	T	23:26	X	X	X	X	X																					
CCVH 280-436427/64	1		23:30	X	X	X	X	X																					
CCV 280-436427/65	1		23:33	X	X	X	X	X																					
CCB 280-436427/66	1		23:37	X	X	X	X	X																					
CCVL 280-436427/67	1		23:40	X	X	X	X	X																					
ZZZZZZ			23:43																										
ZZZZZZ			23:47																										
ZZZZZZ			23:50																										
ZZZZZZ			23:53																										
ZZZZZZ			23:57																										
ZZZZZZ			00:00																										
ZZZZZZ			00:04																										
ZZZZZZ			00:07																										
ZZZZZZ			00:11																										
ZZZZZZ			00:14																										
CCVH 280-436427/78			00:18																										
CCV 280-436427/79			00:21																										
CCB 280-436427/80			00:25																										
CCVL 280-436427/81			00:28																										
ZZZZZZ			00:31																										
ZZZZZZ			00:35																										
ZZZZZZ			00:38																										

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 11/05/2018 13:41 End Date: 11/06/2018 04:30

Lab Sample Id	D/F	Type	Time	Analytes																									
				Al	Ca	Fe	K	Mg																					
ZZZZZZ			00:42																										
ZZZZZZ			00:45																										
ZZZZZZ			00:48																										
ZZZZZZ			00:52																										
ZZZZZZ			00:55																										
ZZZZZZ			00:59																										
ZZZZZZ			01:02																										
CCVH 280-436427/92			01:05																										
CCV 280-436427/93			01:09																										
CCB 280-436427/94			01:12																										
CCVL 280-436427/95			01:15																										
ZZZZZZ			01:19																										
ZZZZZZ			01:22																										
ZZZZZZ			01:26																										
ZZZZZZ			01:29																										
ZZZZZZ			01:33																										
ZZZZZZ			01:36																										
ZZZZZZ			01:40																										
ZZZZZZ			01:43																										
ZZZZZZ			01:47																										
ZZZZZZ			01:50																										
CCVH 280-436427/106			01:54																										
CCV 280-436427/107			01:57																										
CCB 280-436427/108			02:01																										
CCVL 280-436427/109			02:04																										
ZZZZZZ			02:07																										
ZZZZZZ			02:11																										
ZZZZZZ			02:14																										
ZZZZZZ			02:17																										
ZZZZZZ			02:21																										
ZZZZZZ			02:24																										
ZZZZZZ			02:27																										
ZZZZZZ			02:31																										
ZZZZZZ			02:34																										
ZZZZZZ			02:37																										
CCVH 280-436427/120			02:41																										
CCV 280-436427/121			02:44																										
CCB 280-436427/122			02:48																										
CCVL 280-436427/123			02:51																										
ZZZZZZ			02:54																										
ZZZZZZ			02:57																										
ZZZZZZ			03:01																										

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 11/05/2018 13:41 End Date: 11/06/2018 04:30

Lab Sample Id	D/F	Type	Time	Analytes																									
				Al	Ca	Fe	K	Mg																					
ZZZZZZ			03:04																										
ZZZZZZ			03:08																										
ZZZZZZ			03:12																										
ZZZZZZ			03:15																										
ZZZZZZ			03:19																										
ZZZZZZ			03:23																										
ZZZZZZ			03:26																										
CCVH 280-436427/134			03:30																										
CCV 280-436427/135			03:33																										
CCB 280-436427/136			03:37																										
CCVL 280-436427/137			03:40																										
ZZZZZZ			03:44																										
ZZZZZZ			03:47																										
ZZZZZZ			03:51																										
ZZZZZZ			03:54																										
ZZZZZZ			03:58																										
ZZZZZZ			04:02																										
ZZZZZZ			04:05																										
ZZZZZZ			04:09																										
ZZZZZZ			04:13																										
ZZZZZZ			04:16																										
CCVH 280-436427/148			04:20																										
CCV 280-436427/149			04:23																										
CCB 280-436427/150			04:27																										
CCVL 280-436427/151			04:30																										

Prep Types:
T = Total/NA

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/12/2018 10:10 End Date: 11/13/2018 03:33

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn								
RINSE 280-437321/1			10:10																								
RINSE 280-437321/2			10:14																								
RINSE 280-437321/3			10:18																								
RINSE 280-437321/4			10:22																								
RINSE 280-437321/5			10:25																								
RINSE 280-437321/6			10:29																								
ICIS 280-437321/7			10:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
IC 280-437321/8			10:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICV 280-437321/9	1		10:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICB 280-437321/10	1		10:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICVL 280-437321/11	1		10:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CRI 280-437321/12	1		10:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ZZZZZZ			10:56																								
CRI 280-437321/14	1		11:01															X	X								
ICSA 280-437321/15	1		11:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSAB 280-437321/16	1		11:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
RINSE 280-437321/17			11:14																								
LRA 280-437321/18			11:18																								
RINSE 280-437321/19			11:21																								
CCV 280-437321/20			11:25																								
CCB 280-437321/21			11:29																								
CCVL 280-437321/22			11:33																								
RINSE 280-437321/23			15:16																								
RINSE 280-437321/24			15:20																								
RINSE 280-437321/25			15:24																								
RINSE 280-437321/26			15:28																								
RINSE 280-437321/27			15:31																								
ICIS 280-437321/28			15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
IC 280-437321/29	1		15:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 280-437321/30	1		15:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 280-437321/31	1		15:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCVL 280-437321/32	1		15:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			15:56																								
ICSA 280-437321/34	1		16:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSAB 280-437321/35	1		16:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
RINSE 280-437321/36			16:08																								
CCV 280-437321/37	1		16:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 280-437321/38	1		16:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCVL 280-437321/39	1		16:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			16:24																								
ZZZZZZ			16:27																								
ZZZZZZ			16:31																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/12/2018 10:10 End Date: 11/13/2018 03:33

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn								
280-116270-1	1	T	16:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
280-116270-8	1	T	16:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
280-116270-9	1	T	16:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
280-116270-12	1	T	16:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
280-116270-13	1	T	16:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
280-116270-14	1	T	16:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 280-437321/49	1		16:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 280-437321/50	1		17:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCVL 280-437321/51	1		17:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			17:09																								
ZZZZZZ			17:13																								
ZZZZZZ			17:17																								
ZZZZZZ			17:20																								
ZZZZZZ			17:24																								
ZZZZZZ			17:28																								
ZZZZZZ			17:32																								
ZZZZZZ			17:36																								
CCV 280-437321/60	1		17:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 280-437321/61	1		17:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCVL 280-437321/62	1		17:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			17:51																								
ZZZZZZ			17:54																								
ZZZZZZ			17:58																								
ZZZZZZ			18:02																								
ZZZZZZ			18:06																								
ZZZZZZ			18:10																								
ZZZZZZ			18:13																								
CCV 280-437321/70			18:17																								
CCB 280-437321/71			18:21																								
CCVL 280-437321/72			18:25																								
ZZZZZZ			18:29																								
ZZZZZZ			18:32																								
ZZZZZZ			18:36																								
ZZZZZZ			18:40																								
ZZZZZZ			18:44																								
CCV 280-437321/78			18:47																								
CCB 280-437321/79			18:51																								
CCVL 280-437321/80			18:55																								
ZZZZZZ			18:59																								
ZZZZZZ			19:03																								
ZZZZZZ			19:06																								
ZZZZZZ			19:10																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/12/2018 10:10 End Date: 11/13/2018 03:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn									
ZZZZZZ			19:14																									
ZZZZZZ			19:18																									
ZZZZZZ			19:22																									
ZZZZZZ			19:26																									
CCV 280-437321/89			19:29																									
CCB 280-437321/90			19:33																									
ZZZZZZ			19:37																									
ZZZZZZ			19:41																									
ZZZZZZ			19:45																									
ZZZZZZ			19:48																									
ZZZZZZ			19:52																									
ZZZZZZ			19:56																									
ZZZZZZ			20:00																									
ZZZZZZ			20:04																									
ZZZZZZ			20:08																									
CCV 280-437321/100			20:11																									
CCB 280-437321/101			20:15																									
RINSE 280-437321/102			20:19																									
RINSE 280-437321/103			20:23																									
RINSE 280-437321/104			20:27																									
RINSE 280-437321/105			20:31																									
RINSE 280-437321/106			20:34																									
ICIS 280-437321/107			20:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
IC 280-437321/108			20:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCV 280-437321/109			20:46																									
CCB 280-437321/110			20:49																									
CCVL 280-437321/111			20:53																									
ZZZZZZ			20:57																									
ICIS 280-437321/113			21:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
IC 280-437321/114			21:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCV 280-437321/115			21:08																									
ICIS 280-437321/116			21:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
IC 280-437321/117			21:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCV 280-437321/118			21:32																									
CCB 280-437321/119			21:36																									
CCVL 280-437321/120			21:40																									
ZZZZZZ			21:43																									
ZZZZZZ			21:47																									
ZZZZZZ			21:51																									
ZZZZZZ			21:55																									
ZZZZZZ			21:59																									
ZZZZZZ			22:03																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/12/2018 10:10 End Date: 11/13/2018 03:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn										
ZZZZZZ			22:06																										
ZZZZZZ			22:10																										
ZZZZZZ			22:14																										
CCV 280-437321/130			22:18																										
CCB 280-437321/131			22:22																										
CCVL 280-437321/132			22:26																										
ZZZZZZ			22:29																										
ZZZZZZ			22:33																										
ZZZZZZ			22:37																										
ZZZZZZ			22:41																										
ZZZZZZ			22:45																										
ZZZZZZ			22:48																										
ZZZZZZ			22:52																										
ZZZZZZ			22:56																										
ZZZZZZ			23:00																										
CCV 280-437321/142			23:04																										
CCB 280-437321/143			23:07																										
CCVL 280-437321/144			23:11																										
ZZZZZZ			23:15																										
ZZZZZZ			23:19																										
ZZZZZZ			23:23																										
ZZZZZZ			23:26																										
ZZZZZZ			23:30																										
ZZZZZZ			23:34																										
ZZZZZZ			23:38																										
ZZZZZZ			23:42																										
CCV 280-437321/153			23:46																										
CCB 280-437321/154			23:50																										
CCVL 280-437321/155			23:53																										
ZZZZZZ			23:57																										
ZZZZZZ			00:01																										
ZZZZZZ			00:05																										
ZZZZZZ			00:08																										
ZZZZZZ			00:12																										
ZZZZZZ			00:16																										
ZZZZZZ			00:20																										
ZZZZZZ			00:24																										
ZZZZZZ			00:27																										
ZZZZZZ			00:31																										
CCV 280-437321/166			00:35																										
CCB 280-437321/167			00:39																										
CCVL 280-437321/168			00:43																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/12/2018 10:10 End Date: 11/13/2018 03:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn									
ZZZZZZ			00:46																									
ZZZZZZ			00:50																									
ZZZZZZ			00:54																									
ZZZZZZ			00:58																									
ZZZZZZ			01:01																									
ZZZZZZ			01:05																									
ZZZZZZ			01:09																									
ZZZZZZ			01:13																									
CCV 280-437321/177			01:17																									
CCB 280-437321/178			01:20																									
CCVL 280-437321/179			01:24																									
RINSE 280-437321/180			01:28																									
RINSE 280-437321/181			01:32																									
RINSE 280-437321/182			01:36																									
RINSE 280-437321/183			01:39																									
ICIS 280-437321/184			01:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
IC 280-437321/185			01:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCV 280-437321/186			01:51																									
CCB 280-437321/187			01:54																									
CCVL 280-437321/188			01:58																									
ICSA 280-437321/189	1		02:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ICSAB 280-437321/190	1		02:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
RINSE 280-437321/191			02:10																									
CCV 280-437321/192			02:13																									
CCB 280-437321/193			02:17																									
ZZZZZZ			02:21																									
ZZZZZZ			02:25																									
ZZZZZZ			02:29																									
ZZZZZZ			02:32																									
ZZZZZZ			02:36																									
ZZZZZZ			02:40																									
ZZZZZZ			02:44																									
CCV 280-437321/201			02:47																									
CCB 280-437321/202			02:51																									
ZZZZZZ			02:55																									
ZZZZZZ			02:59																									
ZZZZZZ			03:03																									
ZZZZZZ			03:06																									
ZZZZZZ			03:10																									
ZZZZZZ			03:14																									
ZZZZZZ			03:18																									
ZZZZZZ			03:22																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/12/2018 10:10 End Date: 11/13/2018 03:33

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			03:25																											
CCV 280-437321/212			03:29																											
CCB 280-437321/213			03:33																											

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/12/2018 12:46 End Date: 11/12/2018 18:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 280-437200/1-A	1		12:46	X																								
IC 280-437200/2-A	1		12:48	X																								
IC 280-437200/3-A	1		12:50	X																								
IC 280-437200/4-A	1		12:53	X																								
IC 280-437200/5-A	1		12:55	X																								
IC 280-437200/6-A	1		12:57	X																								
IC 280-437200/7-A	1		12:59	X																								
IC 280-437200/8-A	1		13:02	X																								
ICV 280-437200/9-A	1		13:04	X																								
ICB 280-437200/10-A	1		13:07	X																								
CRA 280-437200/11-A			13:09																									
CCV 280-437200/12-A			13:11																									
CCB 280-437200/13-A			13:13																									
ZZZZZZ			13:15																									
ZZZZZZ			13:18																									
ZZZZZZ			13:20																									
ZZZZZZ			13:22																									
ZZZZZZ			13:24																									
ZZZZZZ			13:27																									
ZZZZZZ			13:29																									
ZZZZZZ			13:31																									
ZZZZZZ			13:33																									
ZZZZZZ			13:35																									
CCV 280-437200/12-A			13:38																									
CCB 280-437200/13-A			13:40																									
ZZZZZZ			13:42																									
ZZZZZZ			13:44																									
ZZZZZZ			13:47																									
ZZZZZZ			13:49																									
ZZZZZZ			13:51																									
ZZZZZZ			13:53																									
ZZZZZZ			13:55																									
ZZZZZZ			13:58																									
ZZZZZZ			14:00																									
ZZZZZZ			14:02																									
CCV 280-437200/12-A			14:04																									
CCB 280-437200/13-A			14:07																									
ZZZZZZ			14:09																									
ZZZZZZ			14:11																									
ZZZZZZ			14:13																									
ZZZZZZ			14:16																									
ZZZZZZ			14:18																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/12/2018 12:46 End Date: 11/12/2018 18:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			14:20																									
ZZZZZZ			14:22																									
ZZZZZZ			14:24																									
ZZZZZZ			14:27																									
ZZZZZZ			14:29																									
CCV 280-437200/12-A	1		14:31	X																								
CCB 280-437200/13-A	1		14:33	X																								
MB 280-437198/1-A	1	T	14:35	X																								
LCS 280-437198/2-A	1	T	14:38	X																								
LCSD 280-437198/3-A	1	T	14:40	X																								
ZZZZZZ			14:42																									
ZZZZZZ			14:44																									
ZZZZZZ			14:47																									
ZZZZZZ			14:49																									
ZZZZZZ			14:51																									
ZZZZZZ			14:53																									
ZZZZZZ			14:55																									
CCV 280-437200/12-A	1		14:58	X																								
CCB 280-437200/13-A	1		15:00	X																								
ZZZZZZ			15:02																									
280-116270-1	1	T	15:04	X																								
280-116270-8	1	T	15:07	X																								
280-116270-9	1	T	15:09	X																								
280-116270-9 SD	5	T	15:11	X																								
280-116270-9 MS	1	T	15:13	X																								
280-116270-9 MSD	1	T	15:15	X																								
280-116270-9 PDS	1	T	15:18	X																								
280-116270-12	1	T	15:20	X																								
280-116270-13	1	T	15:22	X																								
CCV 280-437200/12-A	1		15:24	X																								
CCB 280-437200/13-A	1		15:27	X																								
280-116270-14	1	T	15:29	X																								
ZZZZZZ			15:31																									
ZZZZZZ			15:33																									
ZZZZZZ			15:35																									
ZZZZZZ			15:38																									
ZZZZZZ			15:40																									
ZZZZZZ			15:42																									
ZZZZZZ			15:44																									
ZZZZZZ			15:47																									
ZZZZZZ			15:49																									
CCV 280-437200/12-A	1		15:51	X																								

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/12/2018 12:46 End Date: 11/12/2018 18:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
CCB 280-437200/13-A	1		15:53	X																								
ZZZZZZ			15:56																									
ZZZZZZ			15:58																									
ZZZZZZ			16:00																									
ZZZZZZ			16:02																									
ZZZZZZ			16:04																									
ZZZZZZ			16:07																									
ZZZZZZ			16:09																									
ZZZZZZ			16:11																									
ZZZZZZ			16:13																									
ZZZZZZ			16:16																									
CCV 280-437200/12-A			16:18																									
CCB 280-437200/13-A			16:20																									
ZZZZZZ			16:22																									
ZZZZZZ			16:24																									
ZZZZZZ			16:27																									
ZZZZZZ			16:29																									
ZZZZZZ			16:31																									
ZZZZZZ			16:33																									
ZZZZZZ			16:36																									
ZZZZZZ			16:38																									
ZZZZZZ			16:40																									
ZZZZZZ			16:42																									
CCV 280-437200/12-A			16:45																									
CCB 280-437200/13-A			16:47																									
ZZZZZZ			16:49																									
ZZZZZZ			16:51																									
ZZZZZZ			16:53																									
ZZZZZZ			16:56																									
ZZZZZZ			16:58																									
CCV 280-437200/12-A			17:00																									
CCB 280-437200/13-A			17:02																									
CCV 280-437200/12-A			18:15																									
CCB 280-437200/13-A			18:17																									
ZZZZZZ			18:20																									
ZZZZZZ			18:22																									
ZZZZZZ			18:24																									
CCV 280-437200/12-A			18:26																									
CCB 280-437200/13-A			18:29																									
ZZZZZZ			18:31																									
ZZZZZZ			18:33																									
ZZZZZZ			18:35																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 11/12/2018 12:46 End Date: 11/12/2018 18:44

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			18:38																									
ZZZZZZ			18:40																									
CCV 280-437200/12-A			18:42																									
CCB 280-437200/13-A			18:44																									

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICP Instrument ID: MT_051 Start Date: 11/06/2018 End Date: 11/06/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 242.219	Q	Element Y 377.433	Q	Element Y 488.368	Q	Element	Q	Element	Q
ICIS 280-436608/1	10:47										
ICVH 280-436608/6	11:04	103		103		104					
ICVH 280-436608/7	11:08	102		102		105					
ICV 280-436608/8	11:11	103		103		102					
ICV 280-436608/9	11:14	103		103		102					
ICVL 280-436608/10	11:18	104		104		103					
ICB 280-436608/13	11:28	104		104		105					
CRI 280-436608/14	11:31	104		104		107					
ICSA 280-436608/15	11:35	93		93		100					
ICSAB 280-436608/16	11:42	94		94		100					
CCVH 280-436608/116	18:30	105		104		110					
CCV 280-436608/117	18:33	106		106		109					
CCB 280-436608/118	18:37	107		107		111					
CCVL 280-436608/119	18:40	107		107		111					
MB 280-435537/1-A	18:44	107		107		111					
LCS 280-435537/2-A	18:47	104		105		110					
LCSD 280-435537/3-A	18:50	104		105		109					
CCVH 280-436608/130	19:17	106		105		111					
CCV 280-436608/131	19:21	107		107		110					
CCB 280-436608/132	19:24	107		107		109					
CCVL 280-436608/133	19:27	108		108		111					
280-116270-1	19:44	107		107		112					
280-116270-8	19:48	106		107		111					
280-116270-9	19:51	106		106		110					
280-116270-12	19:54	109		109		112					
280-116270-13	19:58	108		107		111					
280-116270-14	20:01	110		110		113					
CCVH 280-436608/144	20:04	112		109		113					
CCV 280-436608/145	20:08	113		111		113					
CCB 280-436608/146	20:11	112		111		113					
CCVL 280-436608/147	20:15	113		112		114					

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICP Instrument ID: MT_052 Start Date: 11/05/2018 End Date: 11/05/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 242.219	Q	Element Y 377.433	Q	Element Y 488.368	Q	Element	Q	Element	Q
ICIS 280-436427/1	13:41										
ICVH 280-436427/8	14:07	100		101		102					
ICVH 280-436427/9	14:11	100		100		102					
ICV 280-436427/10	14:14	102		102		102					
ICV 280-436427/11	14:18	103		102		103					
ICVL 280-436427/12	14:21	104		103		104					
ICB 280-436427/15	14:43	104		103		104					
CRI 280-436427/16	14:47	106		104		103					
ICSA 280-436427/17	14:55	92		92		97					
ICSAB 280-436427/18	15:05	90		92		99					
CCVH 280-436427/36	21:53	107		107		111					
CCV 280-436427/37	21:57	109		108		110					
CCB 280-436427/38	22:00	110		109		112					
CCVL 280-436427/39	22:04	112		111		113					
MB 280-435537/1-A	22:07	111		110		112					
LCS 280-435537/2-A	22:10	108		107		111					
LCSD 280-435537/3-A	22:14	107		107		110					
CCVH 280-436427/50	22:41	105		105		109					
CCV 280-436427/51	22:45	108		107		110					
CCB 280-436427/52	22:49	110		109		110					
CCVL 280-436427/53	22:52	111		109		113					
280-116270-1	23:09	107		106		109					
280-116270-8	23:12	107		107		108					
280-116270-9	23:16	107		106		108					
280-116270-12	23:19	110		109		109					
280-116270-13	23:23	106		106		109					
280-116270-14	23:26	106		105		109					
CCVH 280-436427/64	23:30	110		110		116					
CCV 280-436427/65	23:33	112		110		114					
CCB 280-436427/66	23:37	113		113		115					
CCVL 280-436427/67	23:40	114		113		116					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 11/12/2018 End Date: 11/13/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q
ICV 280-437321/9	10:41	96		99		100		101		97	
ICB 280-437321/10	10:45	101		102		99		107		101	
ICVL 280-437321/11	10:48	100		103		102		106		102	
CRI 280-437321/12	10:53	104		103		103		111		103	
CRI 280-437321/14	11:01	104		103		105		114		103	
ICSA 280-437321/15	11:05	91		96		93		95		91	
ICSAB 280-437321/16	11:09	84		92		91		95		90	
IC 280-437321/29	15:39	99		97		99		98		97	
CCV 280-437321/30	15:43	97		97		99		99		98	
CCB 280-437321/31	15:48	102		99		101		104		101	
CCVL 280-437321/32	15:52	101		99		101		102		101	
ICSA 280-437321/34	16:01	96		87		92		92		88	
ICSAB 280-437321/35	16:05	87		83		89		93		85	
CCV 280-437321/37	16:12	97		91		98		99		92	
CCB 280-437321/38	16:16	101		91		98		100		94	
CCVL 280-437321/39	16:20	102		92		99		100		95	
280-116270-1	16:35	96		90		95		97		92	
280-116270-8	16:39	95		89		94		96		93	
280-116270-9	16:42	94		87		94		97		93	
280-116270-12	16:46	97		91		96		98		93	
280-116270-13	16:50	91		86		91		94		90	
280-116270-14	16:54	93		87		92		95		92	
CCV 280-437321/49	16:58	98		89		95		96		93	
CCB 280-437321/50	17:01	100		93		96		98		94	
CCVL 280-437321/51	17:05	101		93		97		98		95	
CCV 280-437321/60	17:39	95		89		93		95		92	
CCB 280-437321/61	17:43	98		87		94		96		93	
CCVL 280-437321/62	17:47	97		88		94		95		93	
ICSA 280-437321/189	02:02	92		96		95		97		99	
ICSAB 280-437321/190	02:06	89		92		95		96		98	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 11/12/2018 End Date: 11/13/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/1	Q	Element Ge/2	Q	Element In	Q	Element Ho-165	Q	Element	Q
ICV 280-437321/9	10:41	100		100		100		99			
ICB 280-437321/10	10:45	100		103		103		102			
ICVL 280-437321/11	10:48	102		104		103		102			
CRI 280-437321/12	10:53	104		105		105		102			
CRI 280-437321/14	11:01	105		109		106		103			
ICSA 280-437321/15	11:05	92		94		93		97			
ICSAB 280-437321/16	11:09	90		94		93		96			
IC 280-437321/29	15:39	98		98		98		100			
CCV 280-437321/30	15:43	98		98		99		99			
CCB 280-437321/31	15:48	101		103		102		101			
CCVL 280-437321/32	15:52	101		102		101		101			
ICSA 280-437321/34	16:01	90		91		92		96			
ICSAB 280-437321/35	16:05	88		92		93		97			
CCV 280-437321/37	16:12	98		100		102		101			
CCB 280-437321/38	16:16	98		99		102		100			
CCVL 280-437321/39	16:20	98		101		103		101			
280-116270-1	16:35	95		98		99		99			
280-116270-8	16:39	94		97		100		98			
280-116270-9	16:42	93		97		98		99			
280-116270-12	16:46	96		99		100		100			
280-116270-13	16:50	90		95		97		98			
280-116270-14	16:54	92		95		97		98			
CCV 280-437321/49	16:58	94		97		98		99			
CCB 280-437321/50	17:01	96		98		101		100			
CCVL 280-437321/51	17:05	97		98		101		100			
CCV 280-437321/60	17:39	93		95		98		97			
CCB 280-437321/61	17:43	94		96		99		98			
CCVL 280-437321/62	17:47	93		95		99		97			
ICSA 280-437321/189	02:02	93		95		93		97			
ICSAB 280-437321/190	02:06	92		94		93		96			

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435537 Batch Start Date: 11/02/18 16:00 Batch Analyst: Lodl, Dagmara A

Batch Method: 3010A Batch End Date: 11/02/18 22:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ICP SPK 2B 00082	ICP SPK 3A 00154	
MB 280-435537/1		3010A, 6010C			50 mL	50 mL			
LCS 280-435537/2		3010A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	
LCSD 280-435537/3		3010A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	
280-116270-E-1	FWGmw-018-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			
280-116270-C-8	FWGmw-016-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			
280-116270-E-9	FWGmw-020-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			
280-116270-G-12	LL3mw-244-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			
280-116270-G-13	SCFmw-004-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			
280-116270-E-14	LL1mw-087-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			

Batch Notes	
Temperature - Corrected - End	93 Degrees C
Temperature - Corrected - Start	92 Degrees C
Digestion End Time	11/02/2018 22:30
Digestion Start Time	11/02/2018 16:00
Digestion Unit ID	11
Hydrochloric Acid ID	0000201226-03/23
Nitric Acid ID	0000200458-05/23
Pipette/Syringe/Dispenser ID	MET-109
Thermometer ID	QA-37
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	93 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 435538 Batch Start Date: 11/07/18 18:00 Batch Analyst: Lodl, Dagmara A

Batch Method: 3020A Batch End Date: 11/07/18 23:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount			
280-116270-E-1	FWGmw-018-181001-GW	3020A, 6020A	T	<2 SU	50 mL	50 mL			
280-116270-C-8	FWGmw-016-181001-GW	3020A, 6020A	T	<2 SU	50 mL	50 mL			
280-116270-E-9	FWGmw-020-181001-GW	3020A, 6020A	T	<2 SU	50 mL	50 mL			
280-116270-G-12	LL3mw-244-181001-GW	3020A, 6020A	T	<2 SU	50 mL	50 mL			
280-116270-G-13	SCFmw-004-181001-GW	3020A, 6020A	T	<2 SU	50 mL	50 mL			
280-116270-E-14	LL1mw-087-181001-GW	3020A, 6020A	T	<2 SU	50 mL	50 mL			

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	2315
Digestion Start Time	18:00
Digestion Unit ID	09
Lot # of Nitric Acid	0000200458-05/23
Pipette/Syringe/Dispenser ID	MET-88
Thermometer ID	QA-48
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	96 Degrees C
Temperature - Uncorrected - Start	91 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 437198 Batch Start Date: 11/12/18 09:34 Batch Analyst: Jones, Micaela R

Batch Method: 7470A Batch End Date: 11/12/18 11:34

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Daily Spk 02288		
MB 280-437198/1		7470A, 7470A		<2 SU	30 mL	50 mL			
LCS 280-437198/2		7470A, 7470A		<2 SU	30 mL	50 mL	1.5 mL		
LCSD 280-437198/3		7470A, 7470A		<2 SU	30 mL	50 mL	1.5 mL		
280-116270-E-1	FWGmw-018-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			
280-116270-C-8	FWGmw-016-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			
280-116270-E-9	FWGmw-020-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			
280-116270-E-9 MS	FWGmw-020-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL	1.5 mL		
280-116270-E-9 MSD	FWGmw-020-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL	1.5 mL		
280-116270-G-12	LL3mw-244-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			
280-116270-G-13	SCFmw-004-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			
280-116270-E-14	LL1mw-087-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 437198 Batch Start Date: 11/12/18 09:34 Batch Analyst: Jones, Micaela R

Batch Method: 7470A Batch End Date: 11/12/18 11:34

Batch Notes	
Batch Comment	DV-MT-0017
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	11/12/18 11:34
Digestion Start Time	11/12/18 09:34
Digestion Unit ID	14
Sulfuric Acid ID	184525-10/17/19
Nitric Acid ID	200458-10/22/19
Hydroxylamine ID	166725A-11/12/19
Potassium Persulfate ID	178262-11/03/19
Potassium Permanganate ID	207042-11/09/19
Pipette/Syringe/Dispenser ID	MET-114
Analyst ID - Spike Analyst	MJ
Sufficient Volume for Batch QC	Yes
Thermometer ID	QA-9
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	90 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 437200 Batch Start Date: 11/12/18 09:34 Batch Analyst: Jones, Micaela R

Batch Method: 245.1 Batch End Date: 11/12/18 11:34

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Biwk ICV 00261	Hg Daily Spk 02288	
STD0 280-437200/1 IC		245.1, 7470A		<2	30 mL	50 mL			
STD1 280-437200/2 IC		245.1, 7470A		<2	30 mL	50 mL		0.03 mL	
STD2 280-437200/3 IC		245.1, 7470A		<2	30 mL	50 mL		0.06 mL	
STD3 280-437200/4 IC		245.1, 7470A		<2	30 mL	50 mL		0.15 mL	
STD4 280-437200/5 IC		245.1, 7470A		<2	30 mL	50 mL		0.3 mL	
STD5 280-437200/6 IC		245.1, 7470A		<2	30 mL	50 mL		0.6 mL	
STD6 280-437200/7 IC		245.1, 7470A		<2	30 mL	50 mL		1.5 mL	
STD7 280-437200/8 IC		245.1, 7470A		<2	30 mL	50 mL		3 mL	
ICV 280-437200/9		245.1, 7470A		<2	30 mL	50 mL	0.3 mL		
ICB 280-437200/10		245.1, 7470A		<2	30 mL	50 mL			
CCV 280-437200/12		245.1, 7470A		<2	30 mL	50 mL		1.5 mL	
CCB 280-437200/13		245.1, 7470A		<2	30 mL	50 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 437200 Batch Start Date: 11/12/18 09:34 Batch Analyst: Jones, Micaela R

Batch Method: 245.1 Batch End Date: 11/12/18 11:34

Batch Notes	
Batch Comment	DV-MT-0015
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	91 Degrees C
Digestion End Time	11/12/2018 11:34
Digestion Start Time	11/12/2018 09:34
Digestion Unit ID	15
Sulfuric Acid Lot Number	184525-10/17/19
Nitric Acid ID	200458-10/22/19
Hydroxylamine ID	166725A-11/12/19
Potassium Persulfate ID	178262-11/03/19
Potassium Permanganate ID	207042-11/09/19
Pipette/Syringe/Dispenser ID	MET-114
Analyst ID - Spike Analyst	MJ
Sufficient Volume for Batch QC	Yes
Thermometer ID	QA-16
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	90 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Path: D:\My Results\51A110618.esws

Date created: 11/6/2018 10:38:07 AM

Instrument used: MY14490005

Software Version : 7.3.1.9507

Firmware Version : 3442

Notes:

Sample Name: icis

Date: 11/6/2018 10:47:51 AM
Rack:Tube: S1:5
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000000	ppm	N/A	N/A	-444.671000	Y 377.433
Al (167.019 nm)	0.000000	ppm	N/A	N/A	2.353910	Y_R 377.433
Al H (396.152 nm)	0.000000	ppm	N/A	N/A	21.391475	Y_R 377.433
As (188.980 nm)	0.000000	ppm	N/A	N/A	-1.737050	Y 242.219
B (249.678 nm)	0.000000	ppm	N/A	N/A	57.140300	Y 242.219
Ba (493.408 nm)	0.000000	ppm	N/A	N/A	599.466000	Y_R 488.368
Be (234.861 nm)	0.000000	ppm	N/A	N/A	-46.352900	Y_R 488.368
Bi (223.061 nm)	0.000000	ppm	N/A	N/A	12.742200	Y 377.433
Ca (315.887 nm)	0.000000	ppm	N/A	N/A	-61.589416	Y_R 377.433
Cd (214.439 nm)	0.000000	ppm	N/A	N/A	0.885291	Y 377.433
Co (228.615 nm)	0.000000	ppm	N/A	N/A	-36.431400	Y 242.219
Cr (205.560 nm)	0.000000	ppm	N/A	N/A	-3.958910	Y 377.433
Cu (324.754 nm)	0.000000	ppm	N/A	N/A	-292.962000	Y 377.433
Fe (238.204 nm)	0.000000	ppm	N/A	N/A	24.837762	Y_R 377.433
Fe H (259.940 nm)	0.000000	ppm	N/A	N/A	8.238230	Y_R 377.433
K (766.491 nm)	0.000000	ppm	N/A	N/A	-756.590000	Y_R2 488.368
Li (670.783 nm)	0.000000	ppm	N/A	N/A	-1353.700000	Y_R2 488.368
Mg (279.078 nm)	0.000000	ppm	N/A	N/A	39.430200	Y 377.433
Mn (257.610 nm)	0.000000	ppm	N/A	N/A	61.794300	Y 377.433
Mo (202.032 nm)	0.000000	ppm	N/A	N/A	-0.027897	Y 377.433
Na (589.592 nm)	0.000000	ppm	N/A	N/A	297.078000	Y_R2 488.368
Na H (589.593 nm)	0.000000	ppm	N/A	N/A	428.091946	Y_R 488.368
Ni (231.604 nm)	0.000000	ppm	N/A	N/A	-4.099520	Y 377.433
P (213.618 nm)	0.000000	ppm	N/A	N/A	24.557000	Y 242.219
Pb (220.353 nm)	0.000000	ppm	N/A	N/A	3.426440	Y 242.219
S (181.972 nm)	0.000000	ppm	N/A	N/A	14.172117	Y 377.433
Sb (206.834 nm)	0.000000	ppm	N/A	N/A	-23.223100	Y 377.433
Se (196.026 nm)	0.000000	ppm	N/A	N/A	12.990500	Y 242.219
Si (288.158 nm)	0.000000	ppm	N/A	N/A	929.654000	Y 377.433
Sn (189.925 nm)	0.000000	ppm	N/A	N/A	9.597680	Y 377.433
Sr (421.552 nm)	0.000000	ppm	N/A	N/A	156.017970	Y_R 488.368
Th (288.505 nm)	0.000000	ppm	N/A	N/A	72.942200	Y 377.433
Ti (336.122 nm)	0.000000	ppm	N/A	N/A	-228.169000	Y 377.433
Tl (190.794 nm)	0.000000	ppm	N/A	N/A	-5.345840	Y 377.433
U (409.013 nm)	0.000000	ppm	N/A	N/A	-207.604000	Y 377.433
V (292.401 nm)	0.000000	ppm	N/A	N/A	34.638900	Y 377.433
Zn (206.200 nm)	0.000000	ppm	N/A	N/A	27.739600	Y 377.433
Zr (343.823 nm)	0.000000	ppm	N/A	N/A	26.665500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000000	19080.212843	0.000000	0.00
Y 377.433	1.000000	1012187.627544	0.000000	0.00
Y_R 377.433	1.000000	75492.900000	0.000000	0.00
Y_R 488.368	1.000000	43780.600000	0.000000	0.00
Y_R2 488.368	1.000000	86781.564575	0.000000	0.00

Sample Name: ic1

Date: 11/6/2018 10:51:14 AM
Rack:Tube: 3:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.000000	ppm	N/A	N/A	45322.300000	Y 377.433
Al (167.019 nm)	1.000000	ppm	N/A	N/A	559.884000	Y_R 377.433
Al H (396.152 nm)	1.000000	ppm	N/A	N/A	2594.183164	Y_R 377.433
As (188.980 nm)	2.000000	ppm	N/A	N/A	2516.880000	Y 242.219
B (249.678 nm)	1.000000	ppm	N/A	N/A	25037.300000	Y 242.219
Ba (493.408 nm)	1.000000	ppm	N/A	N/A	116417.000000	Y_R 488.368
Be (234.861 nm)	1.000000	ppm	N/A	N/A	297967.000000	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	8.339580	Y 377.433
Ca (315.887 nm)	10.000000	ppm	N/A	N/A	7867.550712	Y_R 377.433
Cd (214.439 nm)	1.000000	ppm	N/A	N/A	59767.200000	Y 377.433
Co (228.615 nm)	1.000000	ppm	N/A	N/A	18075.600000	Y 242.219
Cr (205.560 nm)	1.000000	ppm	N/A	N/A	15218.600000	Y 377.433
Cu (324.754 nm)	1.000000	ppm	N/A	N/A	55427.300000	Y 377.433
Fe (238.204 nm)	5.000000	ppm	N/A	N/A	18517.512922	Y_R 377.433
Fe H (259.940 nm)	5.000000	ppm	N/A	N/A	9462.230000	Y_R 377.433
K (766.491 nm)	100.000000	ppm	N/A	N/A	114391.000000	Y_R2 488.368
Li (670.783 nm)	2.000000	ppm	N/A	N/A	65347.700000	Y_R2 488.368
Mg (279.078 nm)	40.000000	ppm	N/A	N/A	231101.000000	Y 377.433
Mn (257.610 nm)	1.000000	ppm	N/A	N/A	233927.000000	Y 377.433
Mo (202.032 nm)	1.000000	ppm	N/A	N/A	8611.910000	Y 377.433
Na (589.592 nm)	10.000000	ppm	N/A	N/A	66140.400000	Y_R2 488.368
Na H (589.593 nm)	10.000000	ppm	N/A	N/A	39030.126839	Y_R 488.368
Ni (231.604 nm)	1.000000	ppm	N/A	N/A	6817.460000	Y 377.433
P (213.618 nm)	2.000000	ppm	N/A	N/A	4370.550000	Y 242.219
Pb (220.353 nm)	2.000000	ppm	N/A	N/A	5740.300000	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	14.401364	Y 377.433
Sb (206.834 nm)	2.000000	ppm	N/A	N/A	5447.380000	Y 377.433
Se (196.026 nm)	2.000000	ppm	N/A	N/A	2003.350000	Y 242.219
Si (288.158 nm)	10.000000	ppm	N/A	N/A	86876.500000	Y 377.433
Sn (189.925 nm)	2.000000	ppm	N/A	N/A	3985.180000	Y 377.433
Sr (421.552 nm)	1.000000	ppm	N/A	N/A	209972.774517	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	118.206000	Y 377.433
Ti (336.122 nm)	1.000000	ppm	N/A	N/A	142185.000000	Y 377.433
Tl (190.794 nm)	2.000000	ppm	N/A	N/A	4389.800000	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	-305.762000	Y 377.433
V (292.401 nm)	1.000000	ppm	N/A	N/A	36326.100000	Y 377.433
Zn (206.200 nm)	1.000000	ppm	N/A	N/A	5250.410000	Y 377.433
Zr (343.823 nm)	1.000000	ppm	N/A	N/A	131510.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017467	19413.488044	0.003103	0.30
Y 377.433	1.015047	1027417.665676	0.005351	0.53
Y_R 377.433	1.037590	78330.500000	0.018402	1.77
Y_R 488.368	1.021750	44732.800000	0.020256	1.98
Y_R2 488.368	1.036170	89920.428592	0.000615	0.06

Sample Name: ic2

Date: 11/6/2018 10:54:37 AM
Rack:Tube: 3:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-1117.500000	Y 377.433
Al (167.019 nm)	100.000000	ppm	N/A	N/A	47437.700000	Y_R 377.433
Al H (396.152 nm)	100.000000	ppm	N/A	N/A	251593.594951	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	-0.677478	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	-113.820000	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	767.058000	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	2979.740000	Y_R 488.368
Bi (223.061 nm)	2.000000	ppm	N/A	N/A	5048.940000	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	-93.877043	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	56.196700	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	66.957400	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	-35.550100	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	-243.230000	Y 377.433
Fe (238.204 nm)	100.000000	ppm	N/A	N/A	371405.719154	Y_R 377.433
Fe H (259.940 nm)	100.000000	ppm	N/A	N/A	189183.000000	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	-571.478000	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-1232.880000	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	-952.415000	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	670.167000	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	1.008250	Y 377.433
Na (589.592 nm)	500.000000	ppm	N/A	N/A	3161940.000000	Y_R2 488.368
Na H (589.593 nm)	500.000000	ppm	N/A	N/A	1834192.984249	Y_R 488.368
Ni (231.604 nm)		ppm	N/A	N/A	56.158800	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	13.701800	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	17.301700	Y 242.219
S (181.972 nm)	10.000000	ppm	N/A	N/A	5135.659685	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	-127.509000	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	-8.217610	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	2115.550000	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	14.463300	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	264.689563	Y_R 488.368
Th (288.505 nm)	10.000000	ppm	N/A	N/A	25664.900000	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	80.325300	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	-24.246800	Y 377.433
U (409.013 nm)	20.000000	ppm	N/A	N/A	90263.600000	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-49.587600	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	19.387600	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-855.947000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996216	19008.005741	0.001244	0.12
Y 377.433	0.983228	995211.353120	0.000971	0.10
Y_R 377.433	1.037000	78286.500000	0.016065	1.55
Y_R 488.368	1.032740	45214.100000	0.009459	0.92
Y_R2 488.368	1.023589	88828.635084	0.001326	0.13

Sample Name: S1-5407545

Date: 11/6/2018 10:58:01 AM Rack:Tube: 3:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.995718	ppm	0.002001	0.20	45178.000000	Y 377.433
Al (167.019 nm)	0.998728	ppm	0.037231	3.73	562.510000	Y_R 377.433
Al H (396.152 nm)	1.005827	ppm	0.008968	0.89	2693.095482	Y_R 377.433
As (188.980 nm)	1.995550	ppm	0.010797	0.54	2511.240000	Y 242.219
B (249.678 nm)	0.999685	ppm	0.000997	0.10	25065.700000	Y 242.219
Ba (493.408 nm)	1.004160	ppm	0.012748	1.27	116925.000000	Y_R 488.368
Be (234.861 nm)	0.989583	ppm	0.016246	1.64	294950.000000	Y_R 488.368
Bi (223.061 nm)	-0.003006 u	ppm	0.002582	85.90	5.989630	Y 377.433
Ca (315.887 nm)	9.951125	ppm	0.163171	1.64	7829.357938	Y_R 377.433
Cd (214.439 nm)	0.995512	ppm	0.000265	0.03	59504.700000	Y 377.433
Co (228.615 nm)	0.999524	ppm	0.002072	0.21	18102.400000	Y 242.219
Cr (205.560 nm)	0.995397	ppm	0.004768	0.48	15136.600000	Y 377.433
Cu (324.754 nm)	0.996074	ppm	0.002468	0.25	55215.500000	Y 377.433
Fe (238.204 nm)	5.002231	ppm	0.053333	1.07	18525.764566	Y_R 377.433
Fe H (259.940 nm)	5.005730	ppm	0.042851	0.86	9473.080000	Y_R 377.433
K (766.491 nm)	100.563000	ppm	0.452256	0.45	115039.000000	Y_R2 488.368
Li (670.783 nm)	2.005470	ppm	0.011611	0.58	65530.100000	Y_R2 488.368
Mg (279.078 nm)	39.997900	ppm	0.084903	0.21	231080.000000	Y 377.433
Mn (257.610 nm)	0.999425	ppm	0.003210	0.32	233792.000000	Y 377.433
Mo (202.032 nm)	1.001120	ppm	0.002021	0.20	8621.530000	Y 377.433
Na (589.592 nm)	10.080200	ppm	0.039554	0.39	68694.400000	Y_R2 488.368
Na H (589.593 nm)	10.213776	ppm	0.063129	0.62	40757.086362	Y_R 488.368
Ni (231.604 nm)	0.997076	ppm	0.002133	0.21	6800.110000	Y 377.433
P (213.618 nm)	1.981850	ppm	0.002036	0.10	4331.120000	Y 242.219
Pb (220.353 nm)	1.994950	ppm	0.001993	0.10	5721.390000	Y 242.219
S (181.972 nm)	-0.002063 u	ppm	0.003171	> 100.00	15.539868	Y 377.433
Sb (206.834 nm)	1.996660	ppm	0.005333	0.27	5460.270000	Y 377.433
Se (196.026 nm)	1.988230	ppm	0.003326	0.17	1991.790000	Y 242.219
Si (288.158 nm)	9.894290	ppm	0.069831	0.71	85967.900000	Y 377.433
Sn (189.925 nm)	1.986820	ppm	0.003478	0.18	3958.980000	Y 377.433
Sr (421.552 nm)	1.005559	ppm	0.008844	0.88	211139.215028	Y_R 488.368
Th (288.505 nm)	0.004474	ppm	0.000364	8.14	116.322000	Y 377.433
Ti (336.122 nm)	1.003520	ppm	0.000855	0.09	142717.000000	Y 377.433
Tl (190.794 nm)	1.994810	ppm	0.005955	0.30	4375.360000	Y 377.433
U (409.013 nm)	-0.001710 u	ppm	0.005947	> 100.00	-289.877000	Y 377.433
V (292.401 nm)	0.999791	ppm	0.002721	0.27	36075.600000	Y 377.433
Zn (206.200 nm)	0.996108	ppm	0.005955	0.60	5230.080000	Y 377.433
Zr (343.823 nm)	1.000700	ppm	0.000633	0.06	131617.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016462	19394.313298	0.002518	0.25
Y 377.433	1.014444	1026807.490876	0.003762	0.37
Y_R 377.433	1.048480	79152.500000	0.014188	1.35
Y_R 488.368	1.030130	45099.800000	0.015502	1.50
Y_R2 488.368	1.019515	88475.085524	0.001484	0.15

Sample Name: S2-5408054

Date: 11/6/2018 11:01:24 AM Rack:Tube: 3:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.003750 u	ppm	0.000216	5.77	-1103.230000	Y 377.433
Al (167.019 nm)	84.375600 o	ppm	2.353830	2.79	47111.000000	Y_R 377.433
Al H (396.152 nm)	100.523557	ppm	1.104879	1.10	252910.445891	Y_R 377.433
As (188.980 nm)	0.000736	ppm	0.000547	74.34	-1.689300	Y 242.219
B (249.678 nm)	-0.000237 u	ppm	0.000878	> 100.00	-97.912700	Y 242.219
Ba (493.408 nm)	0.000520	ppm	0.000036	6.96	752.022000	Y_R 488.368
Be (234.861 nm)	-0.000101 u	ppm	0.000144	> 100.00	3021.260000	Y_R 488.368
Bi (223.061 nm)	1.998480	ppm	0.002554	0.13	5061.430000	Y 377.433
Ca (315.887 nm)	-0.039600 u	ppm	0.009397	23.73	-92.988023	Y_R 377.433
Cd (214.439 nm)	-0.000658 u	ppm	0.000028	4.30	56.847600	Y 377.433
Co (228.615 nm)	0.005371	ppm	0.000247	4.60	60.880300	Y 242.219
Cr (205.560 nm)	-0.000199 u	ppm	0.000036	18.22	-34.291000	Y 377.433
Cu (324.754 nm)	-0.011487 u	ppm	0.000253	2.20	-268.395000	Y 377.433
Fe (238.204 nm)	100.146958 o	ppm	1.257853	1.26	370421.871151	Y_R 377.433
Fe H (259.940 nm)	100.063000	ppm	0.896519	0.90	189303.000000	Y_R 377.433
K (766.491 nm)	0.159947	ppm	0.036720	22.96	-572.414000	Y_R2 488.368
Li (670.783 nm)	0.000974	ppm	0.000848	87.07	-1321.210000	Y_R2 488.368
Mg (279.078 nm)	-0.047711 u	ppm	0.001785	3.74	-944.800000	Y 377.433
Mn (257.610 nm)	0.002777	ppm	0.000028	1.02	711.301000	Y 377.433
Mo (202.032 nm)	-0.000320 u	ppm	0.000392	> 100.00	-2.787310	Y 377.433
Na (589.592 nm)	483.023000 o	ppm	0.892946	0.18	3180680.000000	Y_R2 488.368
Na H (589.593 nm)	502.784101	ppm	2.147969	0.43	1844391.943767	Y_R 488.368
Ni (231.604 nm)	0.007361	ppm	0.000422	5.74	50.193400	Y 377.433
P (213.618 nm)	-0.004952 u	ppm	0.000597	12.05	13.796300	Y 242.219
Pb (220.353 nm)	-0.005993 u	ppm	0.002264	37.78	19.588000	Y 242.219
S (181.972 nm)	9.960798	ppm	0.011257	0.11	5115.590405	Y 377.433
Sb (206.834 nm)	-0.007234 u	ppm	0.000202	2.79	-134.130000	Y 377.433
Se (196.026 nm)	-0.001491 u	ppm	0.000844	56.56	-6.330310	Y 242.219
Si (288.158 nm)	0.039896	ppm	0.002461	6.17	1272.550000	Y 377.433
Sn (189.925 nm)	0.002954	ppm	0.001806	61.13	15.469600	Y 377.433
Sr (421.552 nm)	0.000492	ppm	0.000055	11.18	259.310614	Y_R 488.368
Th (288.505 nm)	10.006100	ppm	0.014133	0.14	26076.800000	Y 377.433
Ti (336.122 nm)	0.002033	ppm	0.000015	0.73	61.677500	Y 377.433
Tl (190.794 nm)	-0.008141 u	ppm	0.000266	3.27	-25.847400	Y 377.433
U (409.013 nm)	20.021500	ppm	0.012380	0.06	90452.700000	Y 377.433
V (292.401 nm)	0.006406	ppm	0.000091	1.42	-59.789600	Y 377.433
Zn (206.200 nm)	-0.002363 u	ppm	0.000541	22.88	15.396500	Y 377.433
Zr (343.823 nm)	-0.008930 u	ppm	0.000031	0.35	-859.232000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993378	18953.869010	0.006026	0.61
Y 377.433	0.982372	994344.910361	0.005479	0.56
Y_R 377.433	1.030580	77801.300000	0.019284	1.87
Y_R 488.368	1.018700	44599.400000	0.012255	1.20
Y_R2 488.368	1.024137	88876.218777	0.004207	0.41

Sample Name: ICVH-5413452

Date: 11/6/2018 11:04:47 AM Rack:Tube: 3:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001357 u	ppm	0.000175	12.92	-629.671000	Y 377.433
Al (167.019 nm)	37.313600 o	ppm	0.365499	0.98	20858.900000	Y_R 377.433
Al H (396.152 nm)	40.508892	ppm	0.224861	0.56	101964.798553	Y_R 377.433
As (188.980 nm)	-0.001070 u	ppm	0.002756	> 100.00	-3.783970	Y 242.219
B (249.678 nm)	0.001677	ppm	0.000959	57.15	-19.920100	Y 242.219
Ba (493.408 nm)	0.000006 u	ppm	0.000011	> 100.00	673.660000	Y_R 488.368
Be (234.861 nm)	0.000357	ppm	0.000148	41.42	2522.010000	Y_R 488.368
Bi (223.061 nm)	0.472784	ppm	0.000045	0.01	1216.250000	Y 377.433
Ca (315.887 nm)	-0.015475 u	ppm	0.005131	33.16	-73.859511	Y_R 377.433
Cd (214.439 nm)	-0.000457 u	ppm	0.000144	31.44	49.453800	Y 377.433
Co (228.615 nm)	-0.000052 u	ppm	0.000109	> 100.00	-37.379800	Y 242.219
Cr (205.560 nm)	-0.000772 u	ppm	0.000182	23.51	-37.460600	Y 377.433
Cu (324.754 nm)	-0.002711 u	ppm	0.000120	4.43	-133.902000	Y 377.433
Fe (238.204 nm)	79.812802 o	ppm	0.273644	0.34	295215.280641	Y_R 377.433
Fe H (259.940 nm)	79.868600	ppm	0.214359	0.27	151099.000000	Y_R 377.433
K (766.491 nm)	0.093262	ppm	0.064310	68.96	-649.201000	Y_R2 488.368
Li (670.783 nm)	0.001358	ppm	0.000020	1.47	-1308.400000	Y_R2 488.368
Mg (279.078 nm)	-0.018043 u	ppm	0.000324	1.80	-334.396000	Y 377.433
Mn (257.610 nm)	0.001315	ppm	0.000019	1.45	369.420000	Y 377.433
Mo (202.032 nm)	-0.000045 u	ppm	0.000055	> 100.00	-0.418530	Y 377.433
Na (589.592 nm)	40.785900 o	ppm	0.182461	0.45	268844.000000	Y_R2 488.368
Na H (589.593 nm)	41.813997	ppm	0.232849	0.56	155583.483568	Y_R 488.368
Ni (231.604 nm)	0.001376	ppm	0.000162	11.79	8.536580	Y 377.433
P (213.618 nm)	-0.004738 u	ppm	0.000862	18.19	14.261300	Y 242.219
Pb (220.353 nm)	-0.001336 u	ppm	0.001067	79.88	7.730220	Y 242.219
S (181.972 nm)	3.942443	ppm	0.004793	0.12	2033.292496	Y 377.433
Sb (206.834 nm)	-0.003755 u	ppm	0.001174	31.26	-70.314600	Y 377.433
Se (196.026 nm)	-0.001482 u	ppm	0.001052	70.94	-3.281250	Y 242.219
Si (288.158 nm)	0.003529	ppm	0.000834	23.62	959.986000	Y 377.433
Sn (189.925 nm)	0.001003	ppm	0.000606	60.41	11.591000	Y 377.433
Sr (421.552 nm)	0.000213	ppm	0.000151	70.91	200.780883	Y_R 488.368
Th (288.505 nm)	3.027880	ppm	0.026134	0.86	7918.940000	Y 377.433
Ti (336.122 nm)	0.000553	ppm	0.000014	2.48	-149.411000	Y 377.433
Tl (190.794 nm)	-0.003384 u	ppm	0.000394	11.65	-14.874600	Y 377.433
U (409.013 nm)	5.133550	ppm	0.008959	0.17	23087.200000	Y 377.433
V (292.401 nm)	0.001633	ppm	0.000181	11.08	48.868500	Y 377.433
Zn (206.200 nm)	-0.004654 u	ppm	0.000102	2.20	3.435590	Y 377.433
Zr (343.823 nm)	-0.002397 u	ppm	0.000060	2.49	-58.916400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032730	19704.705987	0.003286	0.32
Y 377.433	1.025143	1037637.404339	0.002530	0.25
Y_R 377.433	1.043450	78773.100000	0.006060	0.58
Y_R 488.368	1.035670	45342.100000	0.007479	0.72
Y_R2 488.368	1.048999	91033.754860	0.009617	0.92

Sample Name: ICVH-5413452

Date: 11/6/2018 11:08:11 AM Rack:Tube: 3:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001754 u	ppm	0.000112	6.39	-649.507000	Y 377.433
Al (167.019 nm)	38.625700 o	ppm	0.154920	0.40	21591.600000	Y_R 377.433
Al H (396.152 nm)	40.003812	ppm	0.108893	0.27	100694.421639	Y_R 377.433
As (188.980 nm)	-0.001606 u	ppm	0.001740	> 100.00	-4.473350	Y 242.219
B (249.678 nm)	0.001385	ppm	0.000721	52.09	-29.678600	Y 242.219
Ba (493.408 nm)	0.000292	ppm	0.000067	23.03	708.325000	Y_R 488.368
Be (234.861 nm)	0.000077	ppm	0.000070	91.01	2489.340000	Y_R 488.368
Bi (223.061 nm)	0.479001	ppm	0.008479	1.77	1232.170000	Y 377.433
Ca (315.887 nm)	-0.017718 u	ppm	0.000405	2.29	-75.637562	Y_R 377.433
Cd (214.439 nm)	-0.000491 u	ppm	0.000026	5.37	49.007900	Y 377.433
Co (228.615 nm)	-0.000115 u	ppm	0.000185	> 100.00	-38.530300	Y 242.219
Cr (205.560 nm)	-0.000619 u	ppm	0.000076	12.25	-35.581300	Y 377.433
Cu (324.754 nm)	-0.002906 u	ppm	0.000127	4.36	-137.746000	Y 377.433
Fe (238.204 nm)	81.472850 o	ppm	0.298673	0.37	301355.026192	Y_R 377.433
Fe H (259.940 nm)	81.227700	ppm	0.317803	0.39	153670.000000	Y_R 377.433
K (766.491 nm)	0.061970	ppm	0.007904	12.76	-685.233000	Y_R2 488.368
Li (670.783 nm)	0.001230 u	ppm	0.002916	> 100.00	-1312.670000	Y_R2 488.368
Mg (279.078 nm)	-0.019081 u	ppm	0.000552	2.89	-345.081000	Y 377.433
Mn (257.610 nm)	0.001359	ppm	0.000042	3.09	379.722000	Y 377.433
Mo (202.032 nm)	-0.000157 u	ppm	0.000027	16.87	-1.383470	Y 377.433
Na (589.592 nm)	40.617800 o	ppm	0.092111	0.23	267739.000000	Y_R2 488.368
Na H (589.593 nm)	41.694873	ppm	0.003756	0.01	155147.515318	Y_R 488.368
Ni (231.604 nm)	0.000965	ppm	0.000016	1.66	5.795650	Y 377.433
P (213.618 nm)	-0.003472 u	ppm	0.001683	48.48	17.012700	Y 242.219
Pb (220.353 nm)	-0.002304 u	ppm	0.000206	8.96	5.472050	Y 242.219
S (181.972 nm)	4.022742	ppm	0.093927	2.33	2074.417614	Y 377.433
Sb (206.834 nm)	-0.001947 u	ppm	0.000991	50.90	-65.936500	Y 377.433
Se (196.026 nm)	-0.000913 u	ppm	0.000710	77.78	-3.041160	Y 242.219
Si (288.158 nm)	0.005025	ppm	0.004719	93.92	972.839000	Y 377.433
Sn (189.925 nm)	-0.000113 u	ppm	0.001084	> 100.00	9.373770	Y 377.433
Sr (421.552 nm)	0.000204	ppm	0.000001	0.30	198.769335	Y_R 488.368
Th (288.505 nm)	3.083750	ppm	0.071533	2.32	8063.260000	Y 377.433
Ti (336.122 nm)	0.000399	ppm	0.000016	3.89	-171.298000	Y 377.433
Tl (190.794 nm)	-0.004031 u	ppm	0.000016	0.40	-16.336700	Y 377.433
U (409.013 nm)	5.204630	ppm	0.129199	2.48	23410.300000	Y 377.433
V (292.401 nm)	0.001705	ppm	0.000142	8.33	51.972000	Y 377.433
Zn (206.200 nm)	-0.005714 u	ppm	0.000173	3.03	-2.102560	Y 377.433
Zr (343.823 nm)	-0.002463 u	ppm	0.000069	2.78	-62.838600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023336	19525.473809	0.022072	2.16
Y 377.433	1.015120	1027492.298545	0.022186	2.19
Y_R 377.433	1.069260	80721.900000	0.001001	0.09
Y_R 488.368	1.047390	45855.200000	0.000394	0.04
Y_R2 488.368	1.058792	91883.643638	0.007630	0.72

Sample Name: ICV-5413453

Date: 11/6/2018 11:11:34 AM
Rack:Tube: 3:6

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.248895	ppm	0.000394	0.16	10959.200000	Y 377.433
Al (167.019 nm)	0.249727	ppm	0.004194	1.68	141.756000	Y_R 377.433
Al H (396.152 nm)	0.241175 u	ppm	0.005835	2.42	706.429222	Y_R 377.433
As (188.980 nm)	0.246627	ppm	0.000686	0.28	308.840000	Y 242.219
B (249.678 nm)	0.249446	ppm	0.000674	0.27	6298.780000	Y 242.219
Ba (493.408 nm)	0.256847	ppm	0.000180	0.07	30353.600000	Y_R 488.368
Be (234.861 nm)	0.249613	ppm	0.000379	0.15	74332.900000	Y_R 488.368
Bi (223.061 nm)	-0.000964 u	ppm	0.000711	73.75	10.356300	Y 377.433
Ca (315.887 nm)	2.015268	ppm	0.015054	0.75	1536.486511	Y_R 377.433
Cd (214.439 nm)	0.251520	ppm	0.000320	0.13	15033.800000	Y 377.433
Co (228.615 nm)	0.248478	ppm	0.000035	0.01	4472.850000	Y 242.219
Cr (205.560 nm)	0.250920	ppm	0.000358	0.14	3812.960000	Y 377.433
Cu (324.754 nm)	0.245370	ppm	0.000638	0.26	13379.000000	Y 377.433
Fe (238.204 nm)	0.257995	ppm	0.000394	0.15	979.040968	Y_R 377.433
Fe H (259.940 nm)	0.258347 u	ppm	0.001309	0.51	491.973000	Y_R 377.433
K (766.491 nm)	20.357900	ppm	0.055961	0.27	22685.000000	Y_R2 488.368
Li (670.783 nm)	0.257398	ppm	0.001038	0.40	7230.700000	Y_R2 488.368
Mg (279.078 nm)	9.969230	ppm	0.012682	0.13	57626.400000	Y 377.433
Mn (257.610 nm)	0.261547	ppm	0.000022	0.01	61228.500000	Y 377.433
Mo (202.032 nm)	0.249790	ppm	0.000655	0.26	2151.150000	Y 377.433
Na (589.592 nm)	2.060030	ppm	0.004278	0.21	14380.000000	Y_R2 488.368
Na H (589.593 nm)	1.707992 u	ppm	0.014418	0.84	8893.370972	Y_R 488.368
Ni (231.604 nm)	0.251472	ppm	0.000764	0.30	1711.950000	Y 377.433
P (213.618 nm)	1.948990	ppm	0.002080	0.11	4259.700000	Y 242.219
Pb (220.353 nm)	0.255661	ppm	0.000243	0.09	735.590000	Y 242.219
S (181.972 nm)	-0.004546 u	ppm	0.004350	95.69	12.476608	Y 377.433
Sb (206.834 nm)	0.250382	ppm	0.001668	0.67	667.425000	Y 377.433
Se (196.026 nm)	0.491124	ppm	0.000099	0.02	501.986000	Y 242.219
Si (288.158 nm)	2.012820	ppm	0.007271	0.36	18229.200000	Y 377.433
Sn (189.925 nm)	0.494905	ppm	0.000768	0.16	993.364000	Y 377.433
Sr (421.552 nm)	0.257208	ppm	0.000377	0.15	54122.628651	Y_R 488.368
Th (288.505 nm)	0.000614 u	ppm	0.001641	> 100.00	82.744800	Y 377.433
Ti (336.122 nm)	0.252279	ppm	0.000064	0.03	35706.000000	Y 377.433
Tl (190.794 nm)	0.514559	ppm	0.003581	0.70	1124.700000	Y 377.433
U (409.013 nm)	-0.004758 u	ppm	0.002388	50.20	-248.517000	Y 377.433
V (292.401 nm)	0.249933	ppm	0.000282	0.11	9043.380000	Y 377.433
Zn (206.200 nm)	0.247511	ppm	0.000565	0.23	1320.410000	Y 377.433
Zr (343.823 nm)	0.251083	ppm	0.000009	0.00	33040.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032268	19695.898835	0.004087	0.40
Y 377.433	1.032428	1045011.250778	0.004748	0.46
Y_R 377.433	1.036550	78252.300000	0.004375	0.42
Y_R 488.368	1.022380	44760.500000	0.002250	0.22
Y_R2 488.368	1.051962	91290.916827	0.002572	0.24

Sample Name: ICV-5413453

Date: 11/6/2018 11:14:57 AM
Rack:Tube: 3:6

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.248038	ppm	0.000518	0.21	10920.000000	Y 377.433
Al (167.019 nm)	0.245066	ppm	0.010773	4.40	139.155000	Y_R 377.433
Al H (396.152 nm)	0.239429 u	ppm	0.001675	0.70	702.106945	Y_R 377.433
As (188.980 nm)	0.251346	ppm	0.000196	0.08	314.783000	Y 242.219
B (249.678 nm)	0.249396	ppm	0.000070	0.03	6297.520000	Y 242.219
Ba (493.408 nm)	0.257961	ppm	0.002215	0.86	30482.700000	Y_R 488.368
Be (234.861 nm)	0.248884	ppm	0.002444	0.98	74115.600000	Y_R 488.368
Bi (223.061 nm)	-0.002525 u	ppm	0.000541	21.41	6.424710	Y 377.433
Ca (315.887 nm)	2.010600	ppm	0.017767	0.88	1532.784037	Y_R 377.433
Cd (214.439 nm)	0.249719	ppm	0.001141	0.46	14926.200000	Y 377.433
Co (228.615 nm)	0.248289	ppm	0.000985	0.40	4469.430000	Y 242.219
Cr (205.560 nm)	0.250213	ppm	0.000793	0.32	3802.200000	Y 377.433
Cu (324.754 nm)	0.245255	ppm	0.000253	0.10	13373.200000	Y 377.433
Fe (238.204 nm)	0.254425	ppm	0.000948	0.37	965.836864	Y_R 377.433
Fe H (259.940 nm)	0.252339 u	ppm	0.000281	0.11	480.608000	Y_R 377.433
K (766.491 nm)	20.357200	ppm	0.043811	0.22	22684.300000	Y_R2 488.368
Li (670.783 nm)	0.255499	ppm	0.000460	0.18	7167.360000	Y_R2 488.368
Mg (279.078 nm)	9.934280	ppm	0.003229	0.03	57424.500000	Y 377.433
Mn (257.610 nm)	0.261260	ppm	0.000216	0.08	61161.400000	Y 377.433
Mo (202.032 nm)	0.250472	ppm	0.000177	0.07	2157.030000	Y 377.433
Na (589.592 nm)	2.058400	ppm	0.002342	0.11	14371.600000	Y_R2 488.368
Na H (589.593 nm)	1.690150 u	ppm	0.023066	1.36	8829.073852	Y_R 488.368
Ni (231.604 nm)	0.250924	ppm	0.001620	0.65	1708.220000	Y 377.433
P (213.618 nm)	1.944180	ppm	0.002581	0.13	4249.260000	Y 242.219
Pb (220.353 nm)	0.255842	ppm	0.000686	0.27	736.107000	Y 242.219
S (181.972 nm)	-0.010947 u	ppm	0.001706	15.58	9.198019	Y 377.433
Sb (206.834 nm)	0.249338	ppm	0.002312	0.93	664.541000	Y 377.433
Se (196.026 nm)	0.489367	ppm	0.002751	0.56	500.237000	Y 242.219
Si (288.158 nm)	2.005240	ppm	0.009452	0.47	18164.100000	Y 377.433
Sn (189.925 nm)	0.493486	ppm	0.002300	0.47	990.543000	Y 377.433
Sr (421.552 nm)	0.257712	ppm	0.002470	0.96	54228.391012	Y_R 488.368
Th (288.505 nm)	-0.000305 u	ppm	0.000732	> 100.00	80.400400	Y 377.433
Ti (336.122 nm)	0.252101	ppm	0.000057	0.02	35680.600000	Y 377.433
Tl (190.794 nm)	0.516370	ppm	0.001801	0.35	1128.670000	Y 377.433
U (409.013 nm)	-0.004927 u	ppm	0.006394	> 100.00	-249.274000	Y 377.433
V (292.401 nm)	0.249775	ppm	0.000317	0.13	9038.100000	Y 377.433
Zn (206.200 nm)	0.245563	ppm	0.001410	0.57	1310.230000	Y 377.433
Zr (343.823 nm)	0.251081	ppm	0.000234	0.09	33040.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032693	19703.999723	0.003541	0.34
Y 377.433	1.033368	1045962.583900	0.002982	0.29
Y_R 377.433	1.043870	78805.100000	0.004409	0.42
Y_R 488.368	1.024510	44853.800000	0.007850	0.77
Y_R2 488.368	1.047055	90865.102054	0.003994	0.38

Sample Name: ICVL-5413446

Date: 11/6/2018 11:18:20 AM Rack:Tube: 3:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009740	ppm	0.000114	1.17	1.743290	Y 377.433
Al (167.019 nm)	0.098178	ppm	0.000092	0.09	57.159000	Y_R 377.433
Al H (396.152 nm)	0.083188 u	ppm	0.002731	3.28	289.891156	Y_R 377.433
As (188.980 nm)	0.015689	ppm	0.000633	4.03	18.018700	Y 242.219
B (249.678 nm)	0.100778	ppm	0.000099	0.10	2574.870000	Y 242.219
Ba (493.408 nm)	0.009929	ppm	0.000271	2.73	1749.560000	Y_R 488.368
Be (234.861 nm)	0.000999	ppm	0.000019	1.93	253.678000	Y_R 488.368
Bi (223.061 nm)	0.100063	ppm	0.001765	1.76	264.728000	Y 377.433
Ca (315.887 nm)	0.211556	ppm	0.006099	2.88	106.159275	Y_R 377.433
Cd (214.439 nm)	0.005197	ppm	0.000052	1.00	311.595000	Y 377.433
Co (228.615 nm)	0.010709	ppm	0.000148	1.38	157.862000	Y 242.219
Cr (205.560 nm)	0.010369	ppm	0.000113	1.09	153.811000	Y 377.433
Cu (324.754 nm)	0.015717	ppm	0.000033	0.21	582.222000	Y 377.433
Fe (238.204 nm)	0.101733	ppm	0.000510	0.50	401.099866	Y_R 377.433
Fe H (259.940 nm)	0.101527 u	ppm	0.005770	5.68	195.302000	Y_R 377.433
K (766.491 nm)	3.210350	ppm	0.042841	1.33	2940.060000	Y_R2 488.368
Li (670.783 nm)	0.023732	ppm	0.000306	1.29	-562.213000	Y_R2 488.368
Mg (279.078 nm)	0.200416	ppm	0.000806	0.40	1195.920000	Y 377.433
Mn (257.610 nm)	0.010428	ppm	0.000027	0.26	2500.460000	Y 377.433
Mo (202.032 nm)	0.018994	ppm	0.000075	0.40	163.549000	Y 377.433
Na (589.592 nm)	1.054680	ppm	0.004332	0.41	7261.680000	Y_R2 488.368
Na H (589.593 nm)	0.626251 u	ppm	0.018169	2.90	4697.918867	Y_R 488.368
Ni (231.604 nm)	0.042029	ppm	0.000569	1.35	282.621000	Y 377.433
P (213.618 nm)	2.811880 o	ppm	0.005752	0.20	6134.770000	Y 242.219
Pb (220.353 nm)	0.010387	ppm	0.000343	3.31	33.216000	Y 242.219
S (181.972 nm)	0.086914	ppm	0.003303	3.80	58.710071	Y 377.433
Sb (206.834 nm)	0.022578	ppm	0.001833	8.12	38.625000	Y 377.433
Se (196.026 nm)	0.018338	ppm	0.003991	21.76	31.233200	Y 242.219
Si (288.158 nm)	0.492204	ppm	0.004720	0.96	5159.990000	Y 377.433
Sn (189.925 nm)	0.097868	ppm	0.000998	1.02	204.139000	Y 377.433
Sr (421.552 nm)	0.010365	ppm	0.000179	1.73	2330.758326	Y_R 488.368
Th (288.505 nm)	0.015686	ppm	0.000004	0.03	114.411000	Y 377.433
Ti (336.122 nm)	0.010076	ppm	0.000129	1.28	1207.370000	Y 377.433
Tl (190.794 nm)	0.014787	ppm	0.000030	0.20	27.096300	Y 377.433
U (409.013 nm)	0.061817	ppm	0.000607	0.98	70.931000	Y 377.433
V (292.401 nm)	0.009784	ppm	0.000312	3.19	385.594000	Y 377.433
Zn (206.200 nm)	0.016405	ppm	0.000189	1.15	113.419000	Y 377.433
Zr (343.823 nm)	0.015309	ppm	0.000054	0.35	2039.840000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037052	19787.181526	0.004096	0.39
Y 377.433	1.038841	1051502.239527	0.005549	0.53
Y_R 377.433	1.056260	79740.000000	0.001663	0.16
Y_R 488.368	1.032420	45199.900000	0.004862	0.47
Y_R2 488.368	1.054432	91505.295482	0.007984	0.76

Sample Name: CCVH-5408055

Date: 11/6/2018 11:21:43 AM
Rack:Tube: S1:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002276 u	ppm	0.000068	2.98	-792.138000	Y 377.433
Al (167.019 nm)	46.566000 o	ppm	0.294186	0.63	25997.700000	Y_R 377.433
Al H (396.152 nm)	49.627078	ppm	0.081186	0.16	124898.381375	Y_R 377.433
As (188.980 nm)	0.000489 u	ppm	0.001375	> 100.00	-1.561600	Y 242.219
B (249.678 nm)	0.000186	ppm	0.000237	> 100.00	-12.994200	Y 242.219
Ba (493.408 nm)	0.000258	ppm	0.000323	> 100.00	675.690000	Y_R 488.368
Be (234.861 nm)	-0.000022 u	ppm	0.000011	48.42	1499.960000	Y_R 488.368
Bi (223.061 nm)	0.991487	ppm	0.002261	0.23	2517.580000	Y 377.433
Ca (315.887 nm)	-0.015746 u	ppm	0.006669	42.36	-74.073844	Y_R 377.433
Cd (214.439 nm)	-0.000330 u	ppm	0.000005	1.52	28.948400	Y 377.433
Co (228.615 nm)	0.002852	ppm	0.000128	4.50	15.233200	Y 242.219
Cr (205.560 nm)	0.000109	ppm	0.000013	12.26	-15.989800	Y 377.433
Cu (324.754 nm)	-0.005716 u	ppm	0.000218	3.82	-286.566000	Y 377.433
Fe (238.204 nm)	50.308061 o	ppm	0.137907	0.27	186090.964663	Y_R 377.433
Fe H (259.940 nm)	50.068800	ppm	0.093923	0.19	94723.300000	Y_R 377.433
K (766.491 nm)	0.069161	ppm	0.013022	18.83	-676.953000	Y_R2 488.368
Li (670.783 nm)	0.002803	ppm	0.002906	> 100.00	-1260.230000	Y_R2 488.368
Mg (279.078 nm)	-0.023251 u	ppm	0.001784	7.67	-449.042000	Y 377.433
Mn (257.610 nm)	0.001351	ppm	0.000015	1.12	377.640000	Y 377.433
Mo (202.032 nm)	0.000037 u	ppm	0.000101	> 100.00	0.287447	Y 377.433
Na (589.592 nm)	247.339000 o	ppm	1.328280	0.54	1628860.000000	Y_R2 488.368
Na H (589.593 nm)	253.854304	ppm	2.590100	1.02	932413.360390	Y_R 488.368
Ni (231.604 nm)	0.003645	ppm	0.000093	2.54	22.808700	Y 377.433
P (213.618 nm)	-0.005460 u	ppm	0.001129	20.68	12.693100	Y 242.219
Pb (220.353 nm)	-0.002873 u	ppm	0.002920	> 100.00	12.055400	Y 242.219
S (181.972 nm)	4.926430	ppm	0.012222	0.25	2537.241020	Y 377.433
Sb (206.834 nm)	-0.003392 u	ppm	0.000060	1.78	-78.002100	Y 377.433
Se (196.026 nm)	-0.001957 u	ppm	0.000423	21.62	2.088110	Y 242.219
Si (288.158 nm)	0.014922	ppm	0.000165	1.10	1057.900000	Y 377.433
Sn (189.925 nm)	0.000370	ppm	0.000259	70.00	10.334100	Y 377.433
Sr (421.552 nm)	0.000305	ppm	0.000050	16.33	220.063541	Y_R 488.368
Th (288.505 nm)	4.970440	ppm	0.006888	0.14	12991.200000	Y 377.433
Ti (336.122 nm)	0.001143	ppm	0.000008	0.67	-65.216400	Y 377.433
Tl (190.794 nm)	-0.003802 u	ppm	0.000891	23.44	-15.009600	Y 377.433
U (409.013 nm)	10.107900	ppm	0.003889	0.04	45562.100000	Y 377.433
V (292.401 nm)	0.003115	ppm	0.000036	1.15	-18.416000	Y 377.433
Zn (206.200 nm)	-0.003902 u	ppm	0.000112	2.88	7.361520	Y 377.433
Zr (343.823 nm)	-0.004738 u	ppm	0.000002	0.04	-451.814000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023830	19534.894805	0.000507	0.05
Y 377.433	1.015024	1027395.078175	0.000895	0.09
Y_R 377.433	1.066610	80521.600000	0.006583	0.62
Y_R 488.368	1.057790	46310.600000	0.000238	0.02
Y_R2 488.368	1.058798	91884.165264	0.000267	0.03

Sample Name: CCV-5407546

Date: 11/6/2018 11:25:05 AM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.490091	ppm	0.000742	0.15	22011.000000	Y 377.433
Al (167.019 nm)	0.515152	ppm	0.001085	0.21	291.262000	Y_R 377.433
Al H (396.152 nm)	0.487653 u	ppm	0.001844	0.38	1347.795854	Y_R 377.433
As (188.980 nm)	0.989921	ppm	0.000121	0.01	1244.860000	Y 242.219
B (249.678 nm)	0.490468	ppm	0.001472	0.30	12327.100000	Y 242.219
Ba (493.408 nm)	0.493278	ppm	0.002813	0.57	57742.100000	Y_R 488.368
Be (234.861 nm)	0.478295	ppm	0.000535	0.11	142537.000000	Y_R 488.368
Bi (223.061 nm)	-0.002852 u	ppm	0.000521	18.28	5.975670	Y 377.433
Ca (315.887 nm)	5.091645	ppm	0.010177	0.20	3975.927161	Y_R 377.433
Cd (214.439 nm)	0.497204	ppm	0.000782	0.16	29719.800000	Y 377.433
Co (228.615 nm)	0.499474	ppm	0.000348	0.07	9027.580000	Y 242.219
Cr (205.560 nm)	0.494908	ppm	0.000152	0.03	7523.990000	Y 377.433
Cu (324.754 nm)	0.491131	ppm	0.002646	0.54	27076.600000	Y 377.433
Fe (238.204 nm)	2.546123	ppm	0.008655	0.34	9441.764722	Y_R 377.433
Fe H (259.940 nm)	2.547940 u	ppm	0.000584	0.02	4823.420000	Y_R 377.433
K (766.491 nm)	50.009600	ppm	0.174444	0.35	56828.400000	Y_R2 488.368
Li (670.783 nm)	0.994286	ppm	0.006545	0.66	31806.500000	Y_R2 488.368
Mg (279.078 nm)	19.692600	ppm	0.039528	0.20	113790.000000	Y 377.433
Mn (257.610 nm)	0.499907	ppm	0.000657	0.13	116972.000000	Y 377.433
Mo (202.032 nm)	0.501712	ppm	0.001595	0.32	4320.690000	Y 377.433
Na (589.592 nm)	5.009420	ppm	0.011177	0.22	34276.800000	Y_R2 488.368
Na H (589.593 nm)	4.910221 u	ppm	0.017262	0.35	20847.315216	Y_R 488.368
Ni (231.604 nm)	0.502121	ppm	0.001394	0.28	3422.460000	Y 377.433
P (213.618 nm)	0.976574	ppm	0.003375	0.35	2146.650000	Y 242.219
Pb (220.353 nm)	1.008260	ppm	0.001825	0.18	2893.350000	Y 242.219
S (181.972 nm)	-0.001311 u	ppm	0.002630	> 100.00	14.711365	Y 377.433
Sb (206.834 nm)	1.005420	ppm	0.000238	0.02	2737.770000	Y 377.433
Se (196.026 nm)	0.980492	ppm	0.002528	0.26	988.821000	Y 242.219
Si (288.158 nm)	4.927900	ppm	0.008781	0.18	43283.300000	Y 377.433
Sn (189.925 nm)	0.992688	ppm	0.000815	0.08	1982.850000	Y 377.433
Sr (421.552 nm)	0.495577	ppm	0.003007	0.61	104136.477497	Y_R 488.368
Th (288.505 nm)	0.005353	ppm	0.000258	4.82	102.880000	Y 377.433
Ti (336.122 nm)	0.498187	ppm	0.001455	0.29	70736.300000	Y 377.433
Tl (190.794 nm)	1.011510	ppm	0.003562	0.35	2216.010000	Y 377.433
U (409.013 nm)	-0.000378 u	ppm	0.000797	> 100.00	-246.246000	Y 377.433
V (292.401 nm)	0.495745	ppm	0.001483	0.30	17905.300000	Y 377.433
Zn (206.200 nm)	0.495988	ppm	0.000127	0.03	2618.120000	Y 377.433
Zr (343.823 nm)	0.497700	ppm	0.000976	0.20	65473.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.029786	19648.540449	0.005142	0.50
Y 377.433	1.028061	1040590.269561	0.004870	0.47
Y_R 377.433	1.074650	81128.700000	0.005659	0.53
Y_R 488.368	1.060540	46431.200000	0.009359	0.88
Y_R2 488.368	1.053219	91399.969714	0.005756	0.55

Sample Name: ICB

Date: 11/6/2018 11:28:26 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000119 u	ppm	0.000290	> 100.00	-450.146000	Y 377.433
Al (167.019 nm)	-0.000955 u	ppm	0.000720	75.42	1.821390	Y_R 377.433
Al H (396.152 nm)	-0.013067 u	ppm	0.003516	26.91	46.185650	Y_R 377.433
As (188.980 nm)	-0.000955 u	ppm	0.002979	> 100.00	-2.940080	Y 242.219
B (249.678 nm)	0.001057	ppm	0.000203	19.20	83.539500	Y 242.219
Ba (493.408 nm)	-0.000177 u	ppm	0.000023	12.80	578.982000	Y_R 488.368
Be (234.861 nm)	0.000049	ppm	0.000007	13.45	-31.678500	Y_R 488.368
Bi (223.061 nm)	-0.000308 u	ppm	0.000881	> 100.00	11.965900	Y 377.433
Ca (315.887 nm)	-0.008707 u	ppm	0.004840	55.58	-68.493647	Y_R 377.433
Cd (214.439 nm)	0.000010 u	ppm	0.000058	> 100.00	1.477620	Y 377.433
Co (228.615 nm)	0.000056 u	ppm	0.000386	> 100.00	-35.428200	Y 242.219
Cr (205.560 nm)	0.000198	ppm	0.000126	63.45	-0.943357	Y 377.433
Cu (324.754 nm)	0.000012 u	ppm	0.000116	> 100.00	-291.441000	Y 377.433
Fe (238.204 nm)	-0.000945 u	ppm	0.000588	62.20	21.343485	Y_R 377.433
Fe H (259.940 nm)	0.001690 u	ppm	0.001618	95.73	6.431160	Y_R 377.433
K (766.491 nm)	0.043494	ppm	0.032334	74.34	-706.508000	Y_R2 488.368
Li (670.783 nm)	0.001098 u	ppm	0.001585	> 100.00	-1317.090000	Y_R2 488.368
Mg (279.078 nm)	0.000374	ppm	0.000060	15.97	41.593100	Y 377.433
Mn (257.610 nm)	0.000009 u	ppm	0.000038	> 100.00	63.829700	Y 377.433
Mo (202.032 nm)	0.000042 u	ppm	0.000395	> 100.00	0.332209	Y 377.433
Na (589.592 nm)	0.005033	ppm	0.001966	39.05	331.231000	Y_R2 488.368
Na H (589.593 nm)	-0.435756 u	ppm	0.013518	3.10	798.186854	Y_R 488.368
Ni (231.604 nm)	0.000135 u	ppm	0.000498	> 100.00	-3.180750	Y 377.433
P (213.618 nm)	-0.002327 u	ppm	0.001116	47.95	19.500600	Y 242.219
Pb (220.353 nm)	0.000835	ppm	0.000638	76.48	5.816360	Y 242.219
S (181.972 nm)	-0.007220 u	ppm	0.003066	42.46	10.474538	Y 377.433
Sb (206.834 nm)	-0.000244 u	ppm	0.001856	> 100.00	-23.887500	Y 377.433
Se (196.026 nm)	-0.002289 u	ppm	0.000882	38.54	10.712900	Y 242.219
Si (288.158 nm)	-0.003606 u	ppm	0.000880	24.40	898.665000	Y 377.433
Sn (189.925 nm)	-0.000983 u	ppm	0.000225	22.93	7.643700	Y 377.433
Sr (421.552 nm)	-0.000130 u	ppm	0.000169	> 100.00	128.713985	Y_R 488.368
Th (288.505 nm)	0.002493 u	ppm	0.004274	> 100.00	79.326400	Y 377.433
Ti (336.122 nm)	0.000049	ppm	0.000044	88.45	-221.150000	Y 377.433
Tl (190.794 nm)	-0.000003 u	ppm	0.000959	> 100.00	-5.352870	Y 377.433
U (409.013 nm)	0.001127	ppm	0.000749	66.45	-202.499000	Y 377.433
V (292.401 nm)	-0.000195 u	ppm	0.000016	8.32	27.864600	Y 377.433
Zn (206.200 nm)	-0.005134 u	ppm	0.000255	4.97	0.927990	Y 377.433
Zr (343.823 nm)	0.000058	ppm	0.000061	> 100.00	34.331800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037268	19791.295885	0.003014	0.29
Y 377.433	1.036909	1049546.374724	0.000822	0.08
Y_R 377.433	1.049840	79255.700000	0.016726	1.59
Y_R 488.368	1.047660	45867.200000	0.026855	2.56
Y_R2 488.368	1.059391	91935.641214	0.002580	0.24

Sample Name: CRI-5413446

Date: 11/6/2018 11:31:48 AM Rack:Tube: 3:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009868	ppm	0.000358	3.62	7.644670	Y 377.433
Al (167.019 nm)	0.099260	ppm	0.002991	3.01	57.770500	Y_R 377.433
Al H (396.152 nm)	0.081060 u	ppm	0.002436	3.00	284.558525	Y_R 377.433
As (188.980 nm)	0.013631	ppm	0.001885	13.83	15.427200	Y 242.219
B (249.678 nm)	0.101174	ppm	0.000609	0.60	2584.720000	Y 242.219
Ba (493.408 nm)	0.010558	ppm	0.000189	1.79	1822.360000	Y_R 488.368
Be (234.861 nm)	0.000986	ppm	0.000039	4.00	250.182000	Y_R 488.368
Bi (223.061 nm)	0.100377	ppm	0.004301	4.29	265.521000	Y 377.433
Ca (315.887 nm)	0.216957	ppm	0.012785	5.89	110.442091	Y_R 377.433
Cd (214.439 nm)	0.005222	ppm	0.000076	1.46	313.086000	Y 377.433
Co (228.615 nm)	0.010422	ppm	0.000259	2.48	152.669000	Y 242.219
Cr (205.560 nm)	0.010195	ppm	0.000346	3.39	151.162000	Y 377.433
Cu (324.754 nm)	0.015701	ppm	0.000300	1.91	580.508000	Y 377.433
Fe (238.204 nm)	0.114042	ppm	0.002192	1.92	446.627516	Y_R 377.433
Fe H (259.940 nm)	0.115380 u	ppm	0.000127	0.11	221.509000	Y_R 377.433
K (766.491 nm)	3.152540	ppm	0.140439	4.45	2873.490000	Y_R2 488.368
Li (670.783 nm)	0.023579	ppm	0.000962	4.08	-567.344000	Y_R2 488.368
Mg (279.078 nm)	0.198889	ppm	0.000687	0.35	1187.110000	Y 377.433
Mn (257.610 nm)	0.010643	ppm	0.000019	0.18	2550.820000	Y 377.433
Mo (202.032 nm)	0.019250	ppm	0.000258	1.34	165.748000	Y 377.433
Na (589.592 nm)	1.062820	ppm	0.007362	0.69	7317.000000	Y_R2 488.368
Na H (589.593 nm)	0.650737 u	ppm	0.016571	2.55	4788.430094	Y_R 488.368
Ni (231.604 nm)	0.041546	ppm	0.000361	0.87	279.331000	Y 377.433
P (213.618 nm)	2.795110 o	ppm	0.038596	1.38	6098.330000	Y 242.219
Pb (220.353 nm)	0.011753 Q	ppm	0.000043	0.37	37.132300 Q	Y 242.219
S (181.972 nm)	0.089075	ppm	0.000242	0.27	59.817019	Y 377.433
Sb (206.834 nm)	0.022343	ppm	0.001261	5.64	37.977400	Y 377.433
Se (196.026 nm)	0.017662	ppm	0.001113	6.30	30.558100	Y 242.219
Si (288.158 nm)	0.492767	ppm	0.003526	0.72	5164.830000	Y 377.433
Sn (189.925 nm)	0.099382	ppm	0.001760	1.77	207.148000	Y 377.433
Sr (421.552 nm)	0.010081	ppm	0.000031	0.31	2271.111693	Y_R 488.368
Th (288.505 nm)	0.017069	ppm	0.000741	4.34	117.923000	Y 377.433
Ti (336.122 nm)	0.010013	ppm	0.000094	0.94	1198.490000	Y 377.433
Tl (190.794 nm)	0.016039	ppm	0.001268	7.91	29.844200	Y 377.433
U (409.013 nm)	0.063490	ppm	0.002359	3.72	78.512100	Y 377.433
V (292.401 nm)	0.009618	ppm	0.000072	0.75	379.273000	Y 377.433
Zn (206.200 nm)	0.016056	ppm	0.000281	1.75	111.592000	Y 377.433
Zr (343.823 nm)	0.015196	ppm	0.000076	0.50	2024.960000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043122	19902.989084	0.002779	0.27
Y 377.433	1.044857	1057591.793987	0.004502	0.43
Y_R 377.433	1.079870	81522.900000	0.009169	0.85
Y_R 488.368	1.068150	46764.100000	0.007515	0.70
Y_R2 488.368	1.063900	92326.884307	0.004807	0.45

Sample Name: ICSA-5374484

Date: 11/6/2018 11:35:11 AM
Rack:Tube: 3:9

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000396	ppm	0.000038	9.70	-427.605000	Y 377.433
Al (167.019 nm)	205.060000 o	ppm	0.342837	0.17	114456.000000	Y_R 377.433
Al H (396.152 nm)	517.212323 o	ppm	2.015943	0.39	1301160.757485	Y_R 377.433
As (188.980 nm)	0.005092	ppm	0.000154	3.03	3.004250	Y 242.219
B (249.678 nm)	0.004129	ppm	0.000371	9.00	-123.911000	Y 242.219
Ba (493.408 nm)	-0.001078 u	ppm	0.000261	24.20	766.039000	Y_R 488.368
Be (234.861 nm)	-0.000647 Ku	ppm	0.000105	16.20	5637.590000 K	Y_R 488.368
Bi (223.061 nm)	-0.012283 u	ppm	0.001712	13.94	12.846900	Y 377.433
Ca (315.887 nm)	499.451677 o	ppm	0.772454	0.15	395960.645341	Y_R 377.433
Cd (214.439 nm)	-0.000955 u	ppm	0.000229	23.98	125.106000	Y 377.433
Co (228.615 nm)	-0.003097 u	ppm	0.000086	2.79	-92.527100	Y 242.219
Cr (205.560 nm)	-0.000436 u	ppm	0.000786	> 100.00	-62.558700	Y 377.433
Cu (324.754 nm)	-0.005967 u	ppm	0.000095	1.60	-557.180000	Y 377.433
Fe (238.204 nm)	190.808574 o	ppm	1.059638	0.56	705737.031784	Y_R 377.433
Fe H (259.940 nm)	194.329000	ppm	0.815336	0.42	367634.000000	Y_R 377.433
K (766.491 nm)	0.053446	ppm	0.008781	16.43	-695.048000	Y_R2 488.368
Li (670.783 nm)	0.005546	ppm	0.000682	12.30	-1168.740000	Y_R2 488.368
Mg (279.078 nm)	510.501000 o	ppm	0.482234	0.09	2948640.000000	Y 377.433
Mn (257.610 nm)	0.000388	ppm	0.000001	0.35	152.428000	Y 377.433
Mo (202.032 nm)	-0.000429 u	ppm	0.000005	1.27	-3.726120	Y 377.433
Na (589.592 nm)	0.029661	ppm	0.001086	3.66	496.037000	Y_R2 488.368
Na H (589.593 nm)	0.169723 u	ppm	0.056372	33.21	3017.654975	Y_R 488.368
Ni (231.604 nm)	-0.000753 u	ppm	0.000299	39.77	-1.469710	Y 377.433
P (213.618 nm)	0.002948 u	ppm	0.004684	> 100.00	30.963700	Y 242.219
Pb (220.353 nm)	-0.004105 u	ppm	0.002691	65.56	-159.484000	Y 242.219
S (181.972 nm)	0.031451	ppm	0.004226	13.44	30.280644	Y 377.433
Sb (206.834 nm)	-0.006100 u	ppm	0.002299	37.68	-122.176000	Y 377.433
Se (196.026 nm)	0.006123	ppm	0.001312	21.42	-9.996430	Y 242.219
Si (288.158 nm)	0.026835	ppm	0.000957	3.57	1160.290000	Y 377.433
Sn (189.925 nm)	0.005355	ppm	0.003752	70.07	20.243200	Y 377.433
Sr (421.552 nm)	0.004716 K	ppm	0.000055	1.17	1145.611576 K	Y_R 488.368
Th (288.505 nm)	0.000090 u	ppm	0.000828	> 100.00	64.196200	Y 377.433
Ti (336.122 nm)	-0.000903 u	ppm	0.000003	0.28	1208.990000	Y 377.433
Tl (190.794 nm)	0.002065 u	ppm	0.004651	> 100.00	-5.805830	Y 377.433
U (409.013 nm)	0.001005 u	ppm	0.006248	> 100.00	-124.047000	Y 377.433
V (292.401 nm)	0.001014	ppm	0.000310	30.57	72.129900	Y 377.433
Zn (206.200 nm)	-0.007059 u	ppm	0.000218	3.09	-9.129090	Y 377.433
Zr (343.823 nm)	-0.001286 u	ppm	0.000137	10.66	406.013000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.933659	17814.419209	0.001867	0.20
Y 377.433	0.934529	945919.117050	0.001969	0.21
Y_R 377.433	1.019610	76973.400000	0.005694	0.56
Y_R 488.368	0.997021	43650.200000	0.002983	0.30
Y_R2 488.368	0.997443	86559.660479	0.001177	0.12

Sample Name: ICSAB-5408059

Date: 11/6/2018 11:42:29 AM
Rack:Tube: 3:10

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.133930 o	ppm	0.002343	0.21	51579.100000	Y 377.433
Al (167.019 nm)	207.349000 o	ppm	2.353180	1.13	115733.000000	Y_R 377.433
Al H (396.152 nm)	519.326164 o	ppm	3.299766	0.64	1306556.567214	Y_R 377.433
As (188.980 nm)	2.126540	ppm	0.011989	0.56	2674.560000	Y 242.219
B (249.678 nm)	2.177340 o	ppm	0.003187	0.15	54183.800000	Y 242.219
Ba (493.408 nm)	0.506863	ppm	0.002795	0.55	59597.000000	Y_R 488.368
Be (234.861 nm)	0.509383	ppm	0.004009	0.79	157569.000000	Y_R 488.368
Bi (223.061 nm)	0.995427	ppm	0.007606	0.76	2550.360000	Y 377.433
Ca (315.887 nm)	497.045840 o	ppm	2.992621	0.60	394053.575926	Y_R 377.433
Cd (214.439 nm)	0.978145	ppm	0.005597	0.57	58642.700000	Y 377.433
Co (228.615 nm)	0.468421	ppm	0.000782	0.17	8483.720000	Y 242.219
Cr (205.560 nm)	0.493098	ppm	0.003951	0.80	7444.210000	Y 377.433
Cu (324.754 nm)	0.526607	ppm	0.001787	0.34	29504.200000	Y 377.433
Fe (238.204 nm)	190.749878 o	ppm	0.409132	0.21	705519.943786	Y_R 377.433
Fe H (259.940 nm)	193.581000	ppm	1.321940	0.68	366219.000000	Y_R 377.433
K (766.491 nm)	55.949300	ppm	0.255293	0.46	63667.700000	Y_R2 488.368
Li (670.783 nm)	1.101910	ppm	0.006637	0.60	35395.800000	Y_R2 488.368
Mg (279.078 nm)	520.340000 o	ppm	1.213790	0.23	3005480.000000	Y 377.433
Mn (257.610 nm)	0.500358	ppm	0.000708	0.14	117078.000000	Y 377.433
Mo (202.032 nm)	1.007760	ppm	0.002055	0.20	8678.740000	Y 377.433
Na (589.592 nm)	54.378300 o	ppm	0.281691	0.52	359366.000000	Y_R2 488.368
Na H (589.593 nm)	57.043544	ppm	0.002780	0.00	211855.731367	Y_R 488.368
Ni (231.604 nm)	0.938202	ppm	0.002682	0.29	6415.530000	Y 377.433
P (213.618 nm)	2.071670	ppm	0.011067	0.53	4526.280000	Y 242.219
Pb (220.353 nm)	0.994765	ppm	0.001321	0.13	2700.470000	Y 242.219
S (181.972 nm)	1.087890	ppm	0.025572	2.35	572.533782	Y 377.433
Sb (206.834 nm)	1.067430	ppm	0.006581	0.62	2828.720000	Y 377.433
Se (196.026 nm)	5.215840 o	ppm	0.016828	0.32	5175.350000	Y 242.219
Si (288.158 nm)	10.694200	ppm	0.048376	0.45	92842.600000	Y 377.433
Sn (189.925 nm)	9.718580 o	ppm	0.014380	0.15	19328.100000	Y 377.433
Sr (421.552 nm)	1.032736	ppm	0.005155	0.50	216841.305906	Y_R 488.368
Th (288.505 nm)	2.002520	ppm	0.001267	0.06	5205.820000	Y 377.433
Ti (336.122 nm)	1.031640	ppm	0.001654	0.16	148250.000000	Y 377.433
Tl (190.794 nm)	9.842370 o	ppm	0.029207	0.30	21613.900000	Y 377.433
U (409.013 nm)	-0.003691 u	ppm	0.002252	61.02	-221.239000	Y 377.433
V (292.401 nm)	0.516373	ppm	0.002212	0.43	18815.400000	Y 377.433
Zn (206.200 nm)	0.966580	ppm	0.003707	0.38	5075.870000	Y 377.433
Zr (343.823 nm)	0.987800	ppm	0.002005	0.20	130455.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944308	18017.590515	0.001361	0.14
Y 377.433	0.937796	949225.714052	0.005187	0.55
Y_R 377.433	1.011540	76364.400000	0.008393	0.83
Y_R 488.368	0.996964	43647.700000	0.011464	1.15
Y_R2 488.368	0.997000	86521.224894	0.001061	0.11

Sample Name: LRA-5413489

Date: 11/6/2018 11:45:51 AM
Rack:Tube: 3:11

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002129 u	ppm	0.000188	8.81	-2171.180000	Y 377.433
Al (167.019 nm)	0.050061	ppm	0.007483	14.95	353.912000	Y_R 377.433
Al H (396.152 nm)	0.012680 u	ppm	0.006842	53.96	501.682827	Y_R 377.433
As (188.980 nm)	9.944920 o	ppm	0.046230	0.46	12517.700000	Y 242.219
B (249.678 nm)	10.075700 o	ppm	0.006230	0.06	251246.000000	Y 242.219
Ba (493.408 nm)	12.178200 o	ppm	0.096928	0.80	1411440.000000	Y_R 488.368
Be (234.861 nm)	-0.001768 u	ppm	0.000008	0.43	14094.900000	Y_R 488.368
Bi (223.061 nm)	-0.029187 u	ppm	0.004383	15.02	18.424900	Y 377.433
Ca (315.887 nm)	0.032446	ppm	0.000577	1.78	-34.756771	Y_R 377.433
Cd (214.439 nm)	1.956030 o	ppm	0.003286	0.17	117373.000000	Y 377.433
Co (228.615 nm)	5.045410 o	ppm	0.001028	0.02	91691.500000	Y 242.219
Cr (205.560 nm)	9.837190 o	ppm	0.001342	0.01	149601.000000	Y 377.433
Cu (324.754 nm)	10.379800 o	ppm	0.067836	0.65	578470.000000	Y 377.433
Fe (238.204 nm)	487.751123 o	ppm	5.053676	1.04	1803989.453868	Y_R 377.433
Fe H (259.940 nm)	488.119000	ppm	3.888940	0.80	923427.000000	Y_R 377.433
K (766.491 nm)	-0.024365 u	ppm	0.031177	> 100.00	-784.645000	Y_R2 488.368
Li (670.783 nm)	0.003972	ppm	0.000677	17.05	-1221.250000	Y_R2 488.368
Mg (279.078 nm)	0.007947	ppm	0.004010	50.46	-730.445000	Y 377.433
Mn (257.610 nm)	9.697660 o	ppm	0.013748	0.14	2268010.000000	Y 377.433
Mo (202.032 nm)	4.914970 o	ppm	0.006055	0.12	42327.400000	Y 377.433
Na (589.592 nm)	-0.079427 u	ppm	0.004297	5.41	24294.300000	Y_R2 488.368
Na H (589.593 nm)	0.038677 u	ppm	0.012458	32.21	13960.184973	Y_R 488.368
Ni (231.604 nm)	9.988770 o	ppm	0.013780	0.14	68160.800000	Y 377.433
P (213.618 nm)	0.267063	ppm	0.000828	0.31	604.884000	Y 242.219
Pb (220.353 nm)	10.329100 o	ppm	0.001453	0.01	29651.500000	Y 242.219
S (181.972 nm)	0.007129	ppm	0.009863	> 100.00	41.273010	Y 377.433
Sb (206.834 nm)	-0.008658 u	ppm	0.002147	24.80	118.057000	Y 377.433
Se (196.026 nm)	4.962000 o	ppm	0.010022	0.20	4867.840000	Y 242.219
Si (288.158 nm)	47.709000 o	ppm	0.176658	0.37	410973.000000	Y 377.433
Sn (189.925 nm)	0.000592	ppm	0.000751	> 100.00	10.773900	Y 377.433
Sr (421.552 nm)	10.185174 o	ppm	0.007851	0.08	2137176.257937	Y_R 488.368
Th (288.505 nm)	0.004885	ppm	0.002035	41.66	627.548000	Y 377.433
Ti (336.122 nm)	9.792530 o	ppm	0.025366	0.26	1394360.000000	Y 377.433
Tl (190.794 nm)	5.100140 o	ppm	0.012123	0.24	11154.800000	Y 377.433
U (409.013 nm)	-0.035189 u	ppm	0.001632	4.64	77.192900	Y 377.433
V (292.401 nm)	9.944330 o	ppm	0.007304	0.07	358639.000000	Y 377.433
Zn (206.200 nm)	9.650790 o	ppm	0.015014	0.16	50430.600000	Y 377.433
Zr (343.823 nm)	-0.003638 u	ppm	0.000101	2.79	947.589000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.020276	19467.087926	0.000419	0.04
Y 377.433	1.030043	1042596.531337	0.001645	0.16
Y_R 377.433	1.081830	81670.400000	0.012277	1.13
Y_R 488.368	1.066540	46693.600000	0.008861	0.83
Y_R2 488.368	1.064938	92416.962105	0.000174	0.02

Sample Name: CCVH-5408055

Date: 11/6/2018 11:49:14 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002215 u	ppm	0.000177	7.98	-786.818000	Y 377.433
Al (167.019 nm)	46.814800 o	ppm	0.241017	0.51	26136.400000	Y_R 377.433
Al H (396.152 nm)	49.697286	ppm	0.141391	0.28	125074.972667	Y_R 377.433
As (188.980 nm)	0.004233	ppm	0.000428	10.11	3.153570	Y 242.219
B (249.678 nm)	0.007273	ppm	0.000446	6.13	164.116000	Y 242.219
Ba (493.408 nm)	0.000655	ppm	0.000164	25.08	721.601000	Y_R 488.368
Be (234.861 nm)	0.000201	ppm	0.000040	19.93	1564.480000	Y_R 488.368
Bi (223.061 nm)	0.983131	ppm	0.005108	0.52	2496.530000	Y 377.433
Ca (315.887 nm)	-0.007384 u	ppm	0.003785	51.26	-67.443680	Y_R 377.433
Cd (214.439 nm)	-0.000196 u	ppm	0.000005	2.80	36.905500	Y 377.433
Co (228.615 nm)	0.003068	ppm	0.000165	5.39	19.176200	Y 242.219
Cr (205.560 nm)	0.000412	ppm	0.000087	21.22	-11.366800	Y 377.433
Cu (324.754 nm)	-0.005142 u	ppm	0.000068	1.32	-246.004000	Y 377.433
Fe (238.204 nm)	50.337010 o	ppm	0.164039	0.33	186198.033920	Y_R 377.433
Fe H (259.940 nm)	50.101400	ppm	0.085387	0.17	94785.100000	Y_R 377.433
K (766.491 nm)	0.016400	ppm	0.001070	6.53	-737.706000	Y_R2 488.368
Li (670.783 nm)	0.001223	ppm	0.000422	34.48	-1312.910000	Y_R2 488.368
Mg (279.078 nm)	-0.015628 u	ppm	0.001622	10.38	-401.963000	Y 377.433
Mn (257.610 nm)	0.002049	ppm	0.000128	6.25	541.035000	Y 377.433
Mo (202.032 nm)	0.000022 u	ppm	0.000193	> 100.00	0.157669	Y 377.433
Na (589.592 nm)	245.332000 o	ppm	0.252583	0.10	1615650.000000	Y_R2 488.368
Na H (589.593 nm)	253.130934	ppm	0.656502	0.26	929763.856766	Y_R 488.368
Ni (231.604 nm)	0.004328	ppm	0.000262	6.05	27.471200	Y 377.433
P (213.618 nm)	-0.005563 u	ppm	0.000457	8.22	12.468100	Y 242.219
Pb (220.353 nm)	0.001402	ppm	0.000403	28.73	23.992600	Y 242.219
S (181.972 nm)	4.974498	ppm	0.021740	0.44	2561.860426	Y 377.433
Sb (206.834 nm)	-0.003519 u	ppm	0.000379	10.77	-77.999400	Y 377.433
Se (196.026 nm)	-0.001329 u	ppm	0.001160	87.29	2.726610	Y 242.219
Si (288.158 nm)	0.022771	ppm	0.000645	2.83	1125.360000	Y 377.433
Sn (189.925 nm)	0.000506 u	ppm	0.000724	> 100.00	10.602900	Y 377.433
Sr (421.552 nm)	0.000648	ppm	0.000179	27.67	292.069102	Y_R 488.368
Th (288.505 nm)	4.975590	ppm	0.008767	0.18	13002.200000	Y 377.433
Ti (336.122 nm)	0.002139	ppm	0.000075	3.52	76.588700	Y 377.433
Tl (190.794 nm)	0.000312 u	ppm	0.001190	> 100.00	-5.971640	Y 377.433
U (409.013 nm)	10.020900	ppm	0.024680	0.25	45168.700000	Y 377.433
V (292.401 nm)	0.003751	ppm	0.000179	4.77	11.233000	Y 377.433
Zn (206.200 nm)	-0.003411 u	ppm	0.000001	0.04	9.927230	Y 377.433
Zr (343.823 nm)	-0.004677 u	ppm	0.000076	1.63	-443.890000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050950	20052.352374	0.001958	0.19
Y 377.433	1.033355	1045948.902916	0.001139	0.11
Y_R 377.433	1.066350	80501.900000	0.007530	0.71
Y_R 488.368	1.054580	46170.200000	0.009668	0.92
Y_R2 488.368	1.040905	90331.392486	0.005244	0.50

Sample Name: CCV-5407546

Date: 11/6/2018 11:52:37 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.488893	ppm	0.000641	0.13	21955.900000	Y 377.433
Al (167.019 nm)	0.501561	ppm	0.006571	1.31	283.643000	Y_R 377.433
Al H (396.152 nm)	0.501941 u	ppm	0.007584	1.51	1383.243916	Y_R 377.433
As (188.980 nm)	0.991173	ppm	0.001701	0.17	1246.430000	Y 242.219
B (249.678 nm)	0.495948	ppm	0.000842	0.17	12464.000000	Y 242.219
Ba (493.408 nm)	0.501304	ppm	0.001301	0.26	58671.900000	Y_R 488.368
Be (234.861 nm)	0.489421	ppm	0.001382	0.28	145851.000000	Y_R 488.368
Bi (223.061 nm)	-0.004010 u	ppm	0.001599	39.88	3.048300	Y 377.433
Ca (315.887 nm)	4.941096	ppm	0.018719	0.38	3856.552798	Y_R 377.433
Cd (214.439 nm)	0.495231	ppm	0.000895	0.18	29601.900000	Y 377.433
Co (228.615 nm)	0.499136	ppm	0.000236	0.05	9021.420000	Y 242.219
Cr (205.560 nm)	0.493416	ppm	0.000654	0.13	7501.220000	Y 377.433
Cu (324.754 nm)	0.490832	ppm	0.000746	0.15	27059.400000	Y 377.433
Fe (238.204 nm)	2.494901	ppm	0.002286	0.09	9252.316965	Y_R 377.433
Fe H (259.940 nm)	2.499940 u	ppm	0.001848	0.07	4732.620000	Y_R 377.433
K (766.491 nm)	50.072300	ppm	0.146603	0.29	56900.500000	Y_R2 488.368
Li (670.783 nm)	0.990959	ppm	0.000453	0.05	31695.500000	Y_R2 488.368
Mg (279.078 nm)	19.563700	ppm	0.000124	0.00	113046.000000	Y 377.433
Mn (257.610 nm)	0.498848	ppm	0.000699	0.14	116725.000000	Y 377.433
Mo (202.032 nm)	0.498001	ppm	0.000032	0.01	4288.730000	Y 377.433
Na (589.592 nm)	4.984650	ppm	0.016585	0.33	34128.000000	Y_R2 488.368
Na H (589.593 nm)	4.921605 u	ppm	0.024381	0.50	20895.660788	Y_R 488.368
Ni (231.604 nm)	0.499272	ppm	0.001416	0.28	3403.000000	Y 377.433
P (213.618 nm)	0.918169	ppm	0.002318	0.25	2019.740000	Y 242.219
Pb (220.353 nm)	1.010010	ppm	0.000472	0.05	2898.390000	Y 242.219
S (181.972 nm)	-0.003295 u	ppm	0.001714	52.01	13.689401	Y 377.433
Sb (206.834 nm)	1.001160	ppm	0.000703	0.07	2726.080000	Y 377.433
Se (196.026 nm)	0.973548	ppm	0.007807	0.80	981.920000	Y 242.219
Si (288.158 nm)	4.919510	ppm	0.021031	0.43	43211.300000	Y 377.433
Sn (189.925 nm)	0.983586	ppm	0.003075	0.31	1964.760000	Y 377.433
Sr (421.552 nm)	0.499424	ppm	0.000902	0.18	104943.465606	Y_R 488.368
Th (288.505 nm)	0.003403	ppm	0.000764	22.44	97.506600	Y 377.433
Ti (336.122 nm)	0.498719	ppm	0.000741	0.15	70811.500000	Y 377.433
Tl (190.794 nm)	1.006680	ppm	0.003813	0.38	2205.420000	Y 377.433
U (409.013 nm)	0.001698 u	ppm	0.003627	> 100.00	-236.725000	Y 377.433
V (292.401 nm)	0.495598	ppm	0.000206	0.04	17900.700000	Y 377.433
Zn (206.200 nm)	0.492249	ppm	0.000176	0.04	2598.590000	Y 377.433
Zr (343.823 nm)	0.496858	ppm	0.000364	0.07	65362.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030189	19656.231396	0.003620	0.35
Y 377.433	1.033714	1046312.770540	0.004474	0.43
Y_R 377.433	1.051880	79409.400000	0.006269	0.60
Y_R 488.368	1.038560	45468.900000	0.007415	0.71
Y_R2 488.368	1.054257	91490.100426	0.004809	0.46

Sample Name: CCB

Date: 11/6/2018 11:55:59 AM
Rack:Tube: S1:4

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000303	ppm	0.000246	81.08	-430.904000	Y 377.433
Al (167.019 nm)	-0.000755 u	ppm	0.000898	> 100.00	1.933840	Y_R 377.433
Al H (396.152 nm)	-0.021599 u	ppm	0.000461	2.13	24.739216	Y_R 377.433
As (188.980 nm)	-0.000097 u	ppm	0.001205	> 100.00	-1.858920	Y 242.219
B (249.678 nm)	0.004038	ppm	0.000494	12.23	158.028000	Y 242.219
Ba (493.408 nm)	-0.000362 u	ppm	0.000126	34.90	557.529000	Y_R 488.368
Be (234.861 nm)	0.000051	ppm	0.000005	9.81	-31.014800	Y_R 488.368
Bi (223.061 nm)	0.001222	ppm	0.000699	57.16	15.820300	Y 377.433
Ca (315.887 nm)	-0.007504 u	ppm	0.001146	15.27	-67.539678	Y_R 377.433
Cd (214.439 nm)	0.000117	ppm	0.000003	2.31	7.869090	Y 377.433
Co (228.615 nm)	0.000195	ppm	0.000001	0.59	-32.912600	Y 242.219
Cr (205.560 nm)	0.000480	ppm	0.000005	1.05	3.352140	Y 377.433
Cu (324.754 nm)	0.000089	ppm	0.000006	7.29	-287.116000	Y 377.433
Fe (238.204 nm)	0.001061	ppm	0.000430	40.48	28.763082	Y_R 377.433
Fe H (259.940 nm)	0.005276 u	ppm	0.001737	32.93	13.213800	Y_R 377.433
K (766.491 nm)	0.076745	ppm	0.038135	49.69	-668.220000	Y_R2 488.368
Li (670.783 nm)	0.002355	ppm	0.000090	3.84	-1275.170000	Y_R2 488.368
Mg (279.078 nm)	0.002466	ppm	0.001122	45.50	53.633400	Y 377.433
Mn (257.610 nm)	0.000043	ppm	0.000008	17.42	71.938400	Y 377.433
Mo (202.032 nm)	0.000279	ppm	0.000025	9.01	2.376480	Y 377.433
Na (589.592 nm)	0.006244	ppm	0.002836	45.42	338.140000	Y_R2 488.368
Na H (589.593 nm)	-0.390861 u	ppm	0.023439	6.00	962.167750	Y_R 488.368
Ni (231.604 nm)	0.000491	ppm	0.000177	36.08	-0.746162	Y 377.433
P (213.618 nm)	-0.000181 u	ppm	0.001002	> 100.00	24.163700	Y 242.219
Pb (220.353 nm)	0.000664	ppm	0.000825	> 100.00	5.333230	Y 242.219
S (181.972 nm)	-0.007984 u	ppm	0.002961	37.09	10.083234	Y 377.433
Sb (206.834 nm)	0.002637	ppm	0.000309	11.72	-16.010400	Y 377.433
Se (196.026 nm)	-0.001220 u	ppm	0.002554	> 100.00	11.776400	Y 242.219
Si (288.158 nm)	-0.003450 u	ppm	0.001021	29.58	899.998000	Y 377.433
Sn (189.925 nm)	-0.001103 u	ppm	0.000144	13.04	7.404500	Y 377.433
Sr (421.552 nm)	-0.000015 u	ppm	0.000053	> 100.00	152.886581	Y_R 488.368
Th (288.505 nm)	0.001531	ppm	0.001160	75.77	76.902100	Y 377.433
Ti (336.122 nm)	0.000168	ppm	0.000062	36.71	-204.201000	Y 377.433
Tl (190.794 nm)	0.002038	ppm	0.000196	9.62	-0.867383	Y 377.433
U (409.013 nm)	0.001142 u	ppm	0.005152	> 100.00	-202.434000	Y 377.433
V (292.401 nm)	0.000023 u	ppm	0.000374	> 100.00	35.748600	Y 377.433
Zn (206.200 nm)	-0.005011 u	ppm	0.000438	8.74	1.569140	Y 377.433
Zr (343.823 nm)	-0.000060 u	ppm	0.000005	9.15	18.778700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.035031	19748.609256	0.002126	0.21
Y 377.433	1.039119	1051783.675599	0.001359	0.13
Y_R 377.433	1.078650	81430.800000	0.010623	0.98
Y_R 488.368	1.072100	46937.000000	0.006045	0.56
Y_R2 488.368	1.067263	92618.750501	0.005413	0.51

Sample Name: CCVL-5413446

Date: 11/6/2018 11:59:22 AM
Rack:Tube: S1:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009682	ppm	0.000043	0.44	-0.797670	Y 377.433
Al (167.019 nm)	0.104229	ppm	0.000727	0.70	60.533900	Y_R 377.433
Al H (396.152 nm)	0.080975 u	ppm	0.006481	8.00	284.345739	Y_R 377.433
As (188.980 nm)	0.014531	ppm	0.000453	3.11	16.560600	Y 242.219
B (249.678 nm)	0.103857	ppm	0.000150	0.14	2651.770000	Y 242.219
Ba (493.408 nm)	0.010036	ppm	0.000141	1.41	1761.950000	Y_R 488.368
Be (234.861 nm)	0.000949	ppm	0.000032	3.32	238.820000	Y_R 488.368
Bi (223.061 nm)	0.097171	ppm	0.000573	0.59	257.446000	Y 377.433
Ca (315.887 nm)	0.208230	ppm	0.000628	0.30	103.522291	Y_R 377.433
Cd (214.439 nm)	0.005136	ppm	0.000121	2.36	307.933000	Y 377.433
Co (228.615 nm)	0.010854	ppm	0.000081	0.75	160.489000	Y 242.219
Cr (205.560 nm)	0.010278	ppm	0.000089	0.87	152.426000	Y 377.433
Cu (324.754 nm)	0.015603	ppm	0.000233	1.50	575.125000	Y 377.433
Fe (238.204 nm)	0.104466	ppm	0.002843	2.72	411.210037	Y_R 377.433
Fe H (259.940 nm)	0.102847 u	ppm	0.000159	0.15	197.800000	Y_R 377.433
K (766.491 nm)	3.204570	ppm	0.034398	1.07	2933.390000	Y_R2 488.368
Li (670.783 nm)	0.022305	ppm	0.000317	1.42	-609.815000	Y_R2 488.368
Mg (279.078 nm)	0.201910	ppm	0.000680	0.34	1204.640000	Y 377.433
Mn (257.610 nm)	0.010460	ppm	0.000025	0.24	2508.070000	Y 377.433
Mo (202.032 nm)	0.019516	ppm	0.000309	1.58	168.045000	Y 377.433
Na (589.592 nm)	1.051200	ppm	0.008546	0.81	7239.130000	Y_R2 488.368
Na H (589.593 nm)	0.687424 u	ppm	0.004463	0.65	4922.182893	Y_R 488.368
Ni (231.604 nm)	0.040948	ppm	0.000105	0.26	275.249000	Y 377.433
P (213.618 nm)	2.794110 o	ppm	0.020479	0.73	6096.140000	Y 242.219
Pb (220.353 nm)	0.010946	ppm	0.000066	0.60	34.809500	Y 242.219
S (181.972 nm)	0.086367	ppm	0.002437	2.82	58.429680	Y 377.433
Sb (206.834 nm)	0.021179	ppm	0.001272	6.01	34.805400	Y 377.433
Se (196.026 nm)	0.019717	ppm	0.001766	8.96	32.604800	Y 242.219
Si (288.158 nm)	0.495122	ppm	0.005921	1.20	5185.070000	Y 377.433
Sn (189.925 nm)	0.098959	ppm	0.000705	0.71	206.307000	Y 377.433
Sr (421.552 nm)	0.010039	ppm	0.000088	0.87	2262.472851	Y_R 488.368
Th (288.505 nm)	0.015312	ppm	0.000022	0.14	113.378000	Y 377.433
Ti (336.122 nm)	0.010142	ppm	0.000091	0.90	1216.740000	Y 377.433
Tl (190.794 nm)	0.015474	ppm	0.000829	5.36	28.604300	Y 377.433
U (409.013 nm)	0.058708	ppm	0.000347	0.59	56.881700	Y 377.433
V (292.401 nm)	0.009760	ppm	0.000075	0.77	384.528000	Y 377.433
Zn (206.200 nm)	0.015381	ppm	0.000057	0.37	108.071000	Y 377.433
Zr (343.823 nm)	0.015213	ppm	0.000007	0.05	2027.230000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037181	19789.635828	0.000116	0.01
Y 377.433	1.040733	1053417.115433	0.000834	0.08
Y_R 377.433	1.091510	82401.300000	0.000543	0.05
Y_R 488.368	1.082900	47410.100000	0.000895	0.08
Y_R2 488.368	1.076461	93416.958481	0.002896	0.27

Sample Name: 280-115842-B-13-A

Date: 11/6/2018 1:13:28 PM Rack:Tube: 1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000755	ppm	0.000151	20.05	-410.977000	Y 377.433
Al (167.019 nm)	0.005572	ppm	0.004560	81.84	5.471210	Y_R 377.433
Al H (396.152 nm)	0.021483 u	ppm	0.001591	7.40	201.444512	Y_R 377.433
As (188.980 nm)	0.000739 u	ppm	0.001100	> 100.00	-0.806823	Y 242.219
B (249.678 nm)	0.226858	ppm	0.000256	0.11	5724.070000	Y 242.219
Ba (493.408 nm)	0.098800	ppm	0.000956	0.97	12078.600000	Y_R 488.368
Be (234.861 nm)	0.000039	ppm	0.000015	39.08	-34.183700	Y_R 488.368
Bi (223.061 nm)	-0.003065 u	ppm	0.000497	16.23	5.027860	Y 377.433
Ca (315.887 nm)	156.790550 o	ppm	0.048309	0.03	124259.835044	Y_R 377.433
Cd (214.439 nm)	0.000017 u	ppm	0.000028	> 100.00	1.931820	Y 377.433
Co (228.615 nm)	-0.000252 u	ppm	0.000107	42.57	-41.016800	Y 242.219
Cr (205.560 nm)	0.000242	ppm	0.000159	65.95	-0.287625	Y 377.433
Cu (324.754 nm)	-0.000008 u	ppm	0.000196	> 100.00	-387.832000	Y 377.433
Fe (238.204 nm)	0.015443	ppm	0.000507	3.28	81.953998	Y_R 377.433
Fe H (259.940 nm)	0.016413 u	ppm	0.001787	10.89	34.283900	Y_R 377.433
K (766.491 nm)	1.323410	ppm	0.055101	4.16	767.281000	Y_R2 488.368
Li (670.783 nm)	0.042008	ppm	0.002681	6.38	47.303000	Y_R2 488.368
Mg (279.078 nm)	13.291200	ppm	0.014306	0.11	76815.900000	Y 377.433
Mn (257.610 nm)	0.000863	ppm	0.000019	2.16	263.515000	Y 377.433
Mo (202.032 nm)	0.000922	ppm	0.000229	24.84	7.908120	Y 377.433
Na (589.592 nm)	55.604000 o	ppm	0.019323	0.03	366614.000000	Y_R2 488.368
Na H (589.593 nm)	57.687330	ppm	0.536934	0.93	213831.090547	Y_R 488.368
Ni (231.604 nm)	-0.000227 u	ppm	0.000450	> 100.00	-5.646610	Y 377.433
P (213.618 nm)	0.009470	ppm	0.000883	9.33	45.135600	Y 242.219
Pb (220.353 nm)	0.001531	ppm	0.000665	43.46	7.809450	Y 242.219
S (181.972 nm)	42.586379 o	ppm	0.100241	0.24	21824.735455	Y 377.433
Sb (206.834 nm)	-0.001182 u	ppm	0.000093	7.83	-26.495000	Y 377.433
Se (196.026 nm)	0.000572 u	ppm	0.001283	> 100.00	13.558200	Y 242.219
Si (288.158 nm)	12.569700 o	ppm	0.160496	1.28	108962.000000	Y 377.433
Sn (189.925 nm)	-0.000078 u	ppm	0.001653	> 100.00	9.443440	Y 377.433
Sr (421.552 nm)	1.205839 o	ppm	0.011751	0.97	253161.336332	Y_R 488.368
Th (288.505 nm)	0.002334	ppm	0.000767	32.88	79.250400	Y 377.433
Ti (336.122 nm)	-0.000597 u	ppm	0.000012	2.01	178.598000	Y 377.433
Tl (190.794 nm)	0.001303	ppm	0.000760	58.30	-2.482410	Y 377.433
U (409.013 nm)	0.003388	ppm	0.003264	96.36	-222.070000	Y 377.433
V (292.401 nm)	0.003091	ppm	0.000361	11.68	147.193000	Y 377.433
Zn (206.200 nm)	-0.001219 u	ppm	0.000093	7.63	21.371600	Y 377.433
Zr (343.823 nm)	-0.000080 u	ppm	0.000032	40.58	16.189300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002551	19128.884092	0.000197	0.02
Y 377.433	1.013413	1025764.527539	0.000945	0.09
Y_R 377.433	1.083920	81828.500000	0.001792	0.17
Y_R 488.368	1.068450	46777.600000	0.011039	1.03
Y_R2 488.368	1.059463	91941.875914	0.003304	0.31

Sample Name: Bottle 115842-B-13-A

Date: 11/6/2018 1:16:50 PM Rack:Tube: 1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000858	ppm	0.000128	14.98	-406.159000	Y 377.433
Al (167.019 nm)	-0.001976 u	ppm	0.001168	59.09	1.251590	Y_R 377.433
Al H (396.152 nm)	0.006167 u	ppm	0.001120	18.17	156.903855	Y_R 377.433
As (188.980 nm)	0.002967	ppm	0.003010	> 100.00	1.999330	Y 242.219
B (249.678 nm)	0.215003	ppm	0.000109	0.05	5427.960000	Y 242.219
Ba (493.408 nm)	0.089738	ppm	0.001332	1.48	11025.800000	Y_R 488.368
Be (234.861 nm)	0.000135	ppm	0.000002	1.80	-6.113210	Y_R 488.368
Bi (223.061 nm)	0.001048	ppm	0.001067	> 100.00	15.381200	Y 377.433
Ca (315.887 nm)	142.951818 o	ppm	0.915470	0.64	113286.910470	Y_R 377.433
Cd (214.439 nm)	0.000065	ppm	0.000010	14.62	4.786140	Y 377.433
Co (228.615 nm)	0.000290	ppm	0.000289	99.60	-31.193200	Y 242.219
Cr (205.560 nm)	0.000110	ppm	0.000070	63.80	-2.293250	Y 377.433
Cu (324.754 nm)	-0.000040 u	ppm	0.000151	> 100.00	-381.448000	Y 377.433
Fe (238.204 nm)	-0.001135 u	ppm	0.000747	65.80	20.638413	Y_R 377.433
Fe H (259.940 nm)	0.003064 u	ppm	0.000536	17.49	9.030540	Y_R 377.433
K (766.491 nm)	1.255970	ppm	0.021635	1.72	689.628000	Y_R2 488.368
Li (670.783 nm)	0.037996	ppm	0.000658	1.73	-86.506100	Y_R2 488.368
Mg (279.078 nm)	12.300100	ppm	0.040526	0.33	71091.300000	Y 377.433
Mn (257.610 nm)	0.000478	ppm	0.000022	4.61	173.506000	Y 377.433
Mo (202.032 nm)	0.000951	ppm	0.000141	14.77	8.165930	Y 377.433
Na (589.592 nm)	51.343700 o	ppm	0.216809	0.42	338543.000000	Y_R2 488.368
Na H (589.593 nm)	52.984147	ppm	0.688822	1.30	196591.749345	Y_R 488.368
Ni (231.604 nm)	-0.000234 u	ppm	0.001239	> 100.00	-5.698530	Y 377.433
P (213.618 nm)	0.007398	ppm	0.001198	16.19	40.632000	Y 242.219
Pb (220.353 nm)	0.000756	ppm	0.000259	34.23	5.587270	Y 242.219
S (181.972 nm)	41.260140 o	ppm	0.025890	0.06	21145.502687	Y 377.433
Sb (206.834 nm)	-0.002385 u	ppm	0.000517	21.69	-29.778400	Y 377.433
Se (196.026 nm)	0.005995	ppm	0.003366	56.15	18.957700	Y 242.219
Si (288.158 nm)	11.939200 o	ppm	0.049054	0.41	103544.000000	Y 377.433
Sn (189.925 nm)	0.000324	ppm	0.000374	> 100.00	10.242600	Y 377.433
Sr (421.552 nm)	1.102752 o	ppm	0.014914	1.35	231531.798613	Y_R 488.368
Th (288.505 nm)	-0.001723 u	ppm	0.003761	> 100.00	68.787000	Y 377.433
Ti (336.122 nm)	0.000430	ppm	0.000051	11.94	281.589000	Y 377.433
Tl (190.794 nm)	-0.000370 u	ppm	0.000424	> 100.00	-6.160100	Y 377.433
U (409.013 nm)	0.002786	ppm	0.002308	82.82	-222.184000	Y 377.433
V (292.401 nm)	0.002705	ppm	0.000026	0.98	133.296000	Y 377.433
Zn (206.200 nm)	-0.003629 u	ppm	0.000252	6.94	8.787350	Y 377.433
Zr (343.823 nm)	-0.000146 u	ppm	0.000042	29.17	7.514210	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032352	19697.486759	0.002061	0.20
Y 377.433	1.047928	1060700.185436	0.001033	0.10
Y_R 377.433	1.119920	84546.000000	0.004327	0.39
Y_R 488.368	1.102390	48263.300000	0.012310	1.12
Y_R2 488.368	1.090696	94652.318413	0.006605	0.61

Sample Name: 280-115842-B-6-A

Date: 11/6/2018 1:20:12 PM Rack:Tube: 1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000781	ppm	0.000277	35.51	-410.215000	Y 377.433
Al (167.019 nm)	0.006378	ppm	0.001425	22.34	5.929220	Y_R 377.433
Al H (396.152 nm)	0.051347 u	ppm	0.002089	4.07	348.208738	Y_R 377.433
As (188.980 nm)	0.000372 u	ppm	0.002371	> 100.00	-1.268480	Y 242.219
B (249.678 nm)	1.602670 o	ppm	0.002260	0.14	40092.000000	Y 242.219
Ba (493.408 nm)	0.032773	ppm	0.000131	0.40	4469.510000	Y_R 488.368
Be (234.861 nm)	0.000103	ppm	0.000015	14.35	-15.225500	Y_R 488.368
Bi (223.061 nm)	-0.001219 u	ppm	0.000940	77.06	9.676370	Y 377.433
Ca (315.887 nm)	320.623468 o	ppm	0.993042	0.31	254165.250966	Y_R 377.433
Cd (214.439 nm)	0.000022 u	ppm	0.000052	> 100.00	2.237810	Y 377.433
Co (228.615 nm)	-0.000888 u	ppm	0.000261	29.35	-52.516400	Y 242.219
Cr (205.560 nm)	0.000424	ppm	0.000266	62.85	2.472500	Y 377.433
Cu (324.754 nm)	-0.001134 u	ppm	0.000183	16.18	-547.121000	Y 377.433
Fe (238.204 nm)	0.029554	ppm	0.001414	4.78	134.144269	Y_R 377.433
Fe H (259.940 nm)	0.027471 u	ppm	0.003588	13.06	55.202900	Y_R 377.433
K (766.491 nm)	3.558420	ppm	0.029415	0.83	3340.850000	Y_R2 488.368
Li (670.783 nm)	0.216309	ppm	0.002362	1.09	5860.370000	Y_R2 488.368
Mg (279.078 nm)	107.725000 o	ppm	0.566374	0.53	622313.000000	Y 377.433
Mn (257.610 nm)	0.006802	ppm	0.000041	0.60	1652.520000	Y 377.433
Mo (202.032 nm)	0.004724	ppm	0.000088	1.87	40.656000	Y 377.433
Na (589.592 nm)	598.968000 o	ppm	0.770568	0.13	3944170.000000	Y_R2 488.368
Na H (589.593 nm)	639.042683	ppm	0.718028	0.11	2343620.961848	Y_R 488.368
Ni (231.604 nm)	0.001796	ppm	0.000501	27.90	8.157720	Y 377.433
P (213.618 nm)	0.029630	ppm	0.001503	5.07	88.942100	Y 242.219
Pb (220.353 nm)	0.001620	ppm	0.002185	> 100.00	8.047330	Y 242.219
S (181.972 nm)	394.151283 bo	ppm	1.429593	0.36	201878.278263	Y 377.433
Sb (206.834 nm)	-0.002631 u	ppm	0.001449	55.09	-30.499000	Y 377.433
Se (196.026 nm)	-0.000537 u	ppm	0.005060	> 100.00	12.458100	Y 242.219
Si (288.158 nm)	11.455900 o	ppm	0.073281	0.64	99389.600000	Y 377.433
Sn (189.925 nm)	0.000192	ppm	0.000147	76.46	9.978910	Y 377.433
Sr (421.552 nm)	8.942103 o	ppm	0.042103	0.47	1876359.005682	Y_R 488.368
Th (288.505 nm)	0.006553	ppm	0.005616	85.70	90.361600	Y 377.433
Ti (336.122 nm)	-0.000718 u	ppm	0.000037	5.11	675.133000	Y 377.433
Tl (190.794 nm)	0.001764	ppm	0.000590	33.46	-1.481970	Y 377.433
U (409.013 nm)	0.005094	ppm	0.005927	> 100.00	-245.503000	Y 377.433
V (292.401 nm)	0.004188	ppm	0.000067	1.61	188.342000	Y 377.433
Zn (206.200 nm)	-0.001643 u	ppm	0.000264	16.05	19.156400	Y 377.433
Zr (343.823 nm)	-0.000028 u	ppm	0.000008	29.90	23.128700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.956769	18255.356906	0.000398	0.04
Y 377.433	0.960352	972056.046111	0.003965	0.41
Y_R 377.433	1.013920	76544.000000	0.000577	0.06
Y_R 488.368	0.998483	43714.200000	0.001429	0.14
Y_R2 488.368	1.000915	86860.939253	0.001952	0.20

Sample Name: Bottle 115842-B-6-A

Date: 11/6/2018 1:23:33 PM Rack:Tube: 1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001115	ppm	0.000229	20.53	-394.818000	Y 377.433
Al (167.019 nm)	-0.001416 u	ppm	0.005481	> 100.00	1.566410	Y_R 377.433
Al H (396.152 nm)	0.032193 u	ppm	0.005638	17.51	294.813969	Y_R 377.433
As (188.980 nm)	0.007406	ppm	0.004254	57.44	7.589580	Y 242.219
B (249.678 nm)	1.603820 o	ppm	0.003854	0.24	40121.000000	Y 242.219
Ba (493.408 nm)	0.030783	ppm	0.000327	1.06	4236.190000	Y_R 488.368
Be (234.861 nm)	0.000194	ppm	0.000011	5.73	11.428100	Y_R 488.368
Bi (223.061 nm)	-0.001250 u	ppm	0.001097	87.71	9.593960	Y 377.433
Ca (315.887 nm)	308.766414 o	ppm	0.136998	0.04	244763.626814	Y_R 377.433
Cd (214.439 nm)	0.000070	ppm	0.000003	4.59	5.052910	Y 377.433
Co (228.615 nm)	-0.000448 u	ppm	0.000100	22.26	-44.547300	Y 242.219
Cr (205.560 nm)	0.000199	ppm	0.000179	89.90	-0.944549	Y 377.433
Cu (324.754 nm)	-0.000878 u	ppm	0.000268	30.58	-526.826000	Y 377.433
Fe (238.204 nm)	0.002941	ppm	0.000203	6.91	35.716657	Y_R 377.433
Fe H (259.940 nm)	0.001443 u	ppm	0.001160	80.40	5.962980	Y_R 377.433
K (766.491 nm)	3.595620	ppm	0.004951	0.14	3383.690000	Y_R2 488.368
Li (670.783 nm)	0.208794	ppm	0.000456	0.22	5609.720000	Y_R2 488.368
Mg (279.078 nm)	102.632000 o	ppm	0.148293	0.14	592898.000000	Y 377.433
Mn (257.610 nm)	0.006242	ppm	0.000083	1.34	1521.550000	Y 377.433
Mo (202.032 nm)	0.003957	ppm	0.000066	1.67	34.052300	Y 377.433
Na (589.592 nm)	577.276000 o	ppm	1.739650	0.30	3801340.000000	Y_R2 488.368
Na H (589.593 nm)	607.678966	ppm	2.832400	0.47	2228715.073664	Y_R 488.368
Ni (231.604 nm)	0.002221	ppm	0.000068	3.06	11.052600	Y 377.433
P (213.618 nm)	0.027449	ppm	0.000272	0.99	84.203000	Y 242.219
Pb (220.353 nm)	0.001441	ppm	0.000002	0.12	7.524150	Y 242.219
S (181.972 nm)	392.806818 bo	ppm	0.087645	0.02	201189.710842	Y 377.433
Sb (206.834 nm)	-0.001703 u	ppm	0.000565	33.19	-27.949000	Y 377.433
Se (196.026 nm)	0.005793	ppm	0.003379	58.33	18.762200	Y 242.219
Si (288.158 nm)	11.428300 o	ppm	0.103379	0.90	99151.900000	Y 377.433
Sn (189.925 nm)	0.003233	ppm	0.001826	56.48	16.025000	Y 377.433
Sr (421.552 nm)	8.552576 o	ppm	0.058907	0.69	1794629.811326	Y_R 488.368
Th (288.505 nm)	0.007213	ppm	0.000007	0.10	91.939200	Y 377.433
Ti (336.122 nm)	0.000094	ppm	0.000092	97.61	753.592000	Y 377.433
Tl (190.794 nm)	0.001250	ppm	0.001437	> 100.00	-2.608230	Y 377.433
U (409.013 nm)	0.004582	ppm	0.001705	37.22	-245.582000	Y 377.433
V (292.401 nm)	0.004083	ppm	0.000180	4.40	184.268000	Y 377.433
Zn (206.200 nm)	-0.003280 u	ppm	0.000114	3.49	10.607100	Y 377.433
Zr (343.823 nm)	-0.000108 u	ppm	0.000166	> 100.00	12.484500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.964274	18398.545123	0.001147	0.12
Y 377.433	0.982468	994441.900814	0.000570	0.06
Y_R 377.433	1.072140	80938.800000	0.004807	0.45
Y_R 488.368	1.063780	46572.700000	0.003039	0.29
Y_R2 488.368	1.040596	90304.550154	0.000169	0.02

Sample Name: MB 280-434895/1-A

Date: 11/6/2018 1:26:56 PM Rack:Tube: 1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000113	ppm	0.000058	51.63	-439.567000	Y 377.433
Al (167.019 nm)	0.002626	ppm	0.001067	40.64	3.832140	Y_R 377.433
Al H (396.152 nm)	-0.014981 u	ppm	0.000688	4.60	41.466962	Y_R 377.433
As (188.980 nm)	0.001967	ppm	0.000494	25.12	0.740277	Y 242.219
B (249.678 nm)	0.002358	ppm	0.000000	0.00	116.002000	Y 242.219
Ba (493.408 nm)	0.000476	ppm	0.000124	25.95	654.678000	Y_R 488.368
Be (234.861 nm)	0.000014	ppm	0.000006	42.29	-41.422500	Y_R 488.368
Bi (223.061 nm)	0.000372 u	ppm	0.001269	> 100.00	13.683300	Y 377.433
Ca (315.887 nm)	0.227232	ppm	0.001493	0.66	118.585988	Y_R 377.433
Cd (214.439 nm)	0.000085	ppm	0.000043	50.01	5.992560	Y 377.433
Co (228.615 nm)	-0.000060 u	ppm	0.000321	> 100.00	-37.519500	Y 242.219
Cr (205.560 nm)	0.000415	ppm	0.000084	20.17	2.348410	Y 377.433
Cu (324.754 nm)	0.000709	ppm	0.000035	4.93	-252.139000	Y 377.433
Fe (238.204 nm)	0.020774	ppm	0.001667	8.03	101.671122	Y_R 377.433
Fe H (259.940 nm)	0.020475 u	ppm	0.000647	3.16	41.968200	Y_R 377.433
K (766.491 nm)	0.120887	ppm	0.001428	1.18	-617.391000	Y_R2 488.368
Li (670.783 nm)	0.003228	ppm	0.001647	51.01	-1246.060000	Y_R2 488.368
Mg (279.078 nm)	0.063133	ppm	0.003830	6.07	404.073000	Y 377.433
Mn (257.610 nm)	0.000692	ppm	0.000001	0.12	223.597000	Y 377.433
Mo (202.032 nm)	0.000188	ppm	0.000154	82.02	1.590700	Y 377.433
Na (589.592 nm)	0.267737	ppm	0.003118	1.16	2061.750000	Y_R2 488.368
Na H (589.593 nm)	1.246067 u	ppm	0.023109	1.85	6960.079387	Y_R 488.368
Ni (231.604 nm)	0.000758	ppm	0.000346	45.57	1.072160	Y 377.433
P (213.618 nm)	0.008513	ppm	0.001191	13.99	43.056500	Y 242.219
Pb (220.353 nm)	0.000732	ppm	0.000055	7.51	5.527420	Y 242.219
S (181.972 nm)	0.102430	ppm	0.017280	16.87	66.632950	Y 377.433
Sb (206.834 nm)	0.000978	ppm	0.000052	5.34	-20.544300	Y 377.433
Se (196.026 nm)	0.000751	ppm	0.000474	63.12	13.734500	Y 242.219
Si (288.158 nm)	0.053113	ppm	0.000676	1.27	1386.150000	Y 377.433
Sn (189.925 nm)	0.005181	ppm	0.000516	9.97	19.896500	Y 377.433
Sr (421.552 nm)	0.001095	ppm	0.000046	4.20	385.694402	Y_R 488.368
Th (288.505 nm)	0.003726	ppm	0.002517	67.54	82.497500	Y 377.433
Ti (336.122 nm)	0.000308	ppm	0.000009	3.02	-183.695000	Y 377.433
Tl (190.794 nm)	-0.001467 u	ppm	0.000739	50.34	-8.572540	Y 377.433
U (409.013 nm)	0.001612 u	ppm	0.003048	> 100.00	-200.317000	Y 377.433
V (292.401 nm)	-0.000365 u	ppm	0.000099	27.01	21.934900	Y 377.433
Zn (206.200 nm)	-0.002312 u	ppm	0.000377	16.31	15.667400	Y 377.433
Zr (343.823 nm)	-0.000041 u	ppm	0.000133	> 100.00	21.323500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028389	19621.873111	0.002428	0.24
Y 377.433	1.035298	1047915.911815	0.003432	0.33
Y_R 377.433	1.093080	82519.800000	0.011561	1.06
Y_R 488.368	1.082340	47385.400000	0.007359	0.68
Y_R2 488.368	1.080988	93809.806645	0.010461	0.97

Sample Name: LCS 280-434895/2-A

Date: 11/6/2018 1:30:18 PM Rack:Tube: 1:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050061	ppm	0.000285	0.57	1821.480000	Y 377.433
Al (167.019 nm)	2.044070	ppm	0.014253	0.70	1142.680000	Y_R 377.433
Al H (396.152 nm)	1.985974	ppm	0.001478	0.07	5173.589268	Y_R 377.433
As (188.980 nm)	0.980700	ppm	0.004508	0.46	1233.260000	Y 242.219
B (249.678 nm)	0.967908	ppm	0.002530	0.26	24255.200000	Y 242.219
Ba (493.408 nm)	1.967160 o	ppm	0.001881	0.10	228440.000000	Y_R 488.368
Be (234.861 nm)	0.048088	ppm	0.000474	0.99	14260.300000	Y_R 488.368
Bi (223.061 nm)	1.915310	ppm	0.003436	0.18	4835.850000	Y 377.433
Ca (315.887 nm)	50.258664 o	ppm	0.063893	0.13	39789.264073	Y_R 377.433
Cd (214.439 nm)	0.097235	ppm	0.000073	0.08	5813.700000	Y 377.433
Co (228.615 nm)	0.482535	ppm	0.001301	0.27	8737.510000	Y 242.219
Cr (205.560 nm)	0.196130	ppm	0.000216	0.11	2979.110000	Y 377.433
Cu (324.754 nm)	0.243529	ppm	0.000295	0.12	13300.600000	Y 377.433
Fe (238.204 nm)	1.035673	ppm	0.003768	0.36	3855.310819	Y_R 377.433
Fe H (259.940 nm)	1.021920 u	ppm	0.008625	0.84	1936.510000	Y_R 377.433
K (766.491 nm)	50.454200	ppm	0.009256	0.02	57340.200000	Y_R2 488.368
Li (670.783 nm)	0.992762	ppm	0.000369	0.04	31755.600000	Y_R2 488.368
Mg (279.078 nm)	48.252600 o	ppm	0.066483	0.14	278718.000000	Y 377.433
Mn (257.610 nm)	0.489894	ppm	0.000326	0.07	114631.000000	Y 377.433
Mo (202.032 nm)	0.974160	ppm	0.000689	0.07	8389.380000	Y 377.433
Na (589.592 nm)	50.097800 o	ppm	0.058848	0.12	334123.000000	Y_R2 488.368
Na H (589.593 nm)	52.624722	ppm	0.055021	0.10	197037.226958	Y_R 488.368
Ni (231.604 nm)	0.475385	ppm	0.001354	0.28	3241.200000	Y 377.433
P (213.618 nm)	10.007700 o	ppm	0.020975	0.21	21771.400000	Y 242.219
Pb (220.353 nm)	0.495064	ppm	0.002039	0.41	1424.070000	Y 242.219
S (181.972 nm)	1.954295	ppm	0.000756	0.04	1016.248747	Y 377.433
Sb (206.834 nm)	0.492699	ppm	0.000367	0.07	1318.680000	Y 377.433
Se (196.026 nm)	1.988430	ppm	0.009606	0.48	1992.340000	Y 242.219
Si (288.158 nm)	1.323270	ppm	0.002363	0.18	12302.800000	Y 377.433
Sn (189.925 nm)	1.898500	ppm	0.004131	0.22	3783.420000	Y 377.433
Sr (421.552 nm)	0.987329	ppm	0.001018	0.10	207314.180386	Y_R 488.368
Th (288.505 nm)	0.984397	ppm	0.000368	0.04	2658.210000	Y 377.433
Ti (336.122 nm)	0.972311	ppm	0.000524	0.05	138399.000000	Y 377.433
Tl (190.794 nm)	1.992420	ppm	0.004726	0.24	4368.370000	Y 377.433
U (409.013 nm)	2.027300	ppm	0.009147	0.45	8917.310000	Y 377.433
V (292.401 nm)	0.498236	ppm	0.000450	0.09	18035.800000	Y 377.433
Zn (206.200 nm)	0.479197	ppm	0.003641	0.76	2530.430000	Y 377.433
Zr (343.823 nm)	0.482024	ppm	0.000959	0.20	63407.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003422	19145.505258	0.004267	0.43
Y 377.433	1.011822	1024153.694223	0.005436	0.54
Y_R 377.433	1.067860	80615.500000	0.003042	0.28
Y_R 488.368	1.050540	45993.200000	0.003644	0.35
Y_R2 488.368	1.050069	91126.619589	0.008753	0.83

Sample Name: 280-116011-D-10-C

Date: 11/6/2018 1:33:40 PM Rack:Tube: 1:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000095 u	ppm	0.000249	> 100.00	-660.952000	Y 377.433
Al (167.019 nm)	30.308600 o	ppm	0.268349	0.89	16930.500000	Y_R 377.433
Al H (396.152 nm)	30.739357	ppm	0.164923	0.54	77406.671881	Y_R 377.433
As (188.980 nm)	0.018523	ppm	0.000209	1.13	21.190700	Y 242.219
B (249.678 nm)	0.022580	ppm	0.000301	1.33	554.207000	Y 242.219
Ba (493.408 nm)	0.428296	ppm	0.002057	0.48	50252.400000	Y_R 488.368
Be (234.861 nm)	0.001461	ppm	0.000114	7.81	1787.220000	Y_R 488.368
Bi (223.061 nm)	-0.008985 u	ppm	0.000907	10.09	-2.499170	Y 377.433
Ca (315.887 nm)	31.068485 o	ppm	0.243421	0.78	24573.048059	Y_R 377.433
Cd (214.439 nm)	0.000285	ppm	0.000043	14.95	61.062000	Y 377.433
Co (228.615 nm)	0.013326	ppm	0.000262	1.97	252.163000	Y 242.219
Cr (205.560 nm)	0.044803	ppm	0.000048	0.11	665.682000	Y 377.433
Cu (324.754 nm)	0.038013	ppm	0.000205	0.54	1839.200000	Y 377.433
Fe (238.204 nm)	45.309498 o	ppm	0.333244	0.74	167603.604474	Y_R 377.433
Fe H (259.940 nm)	45.121300	ppm	0.388018	0.86	85363.800000	Y_R 377.433
K (766.491 nm)	8.509120	ppm	0.040945	0.48	9041.460000	Y_R2 488.368
Li (670.783 nm)	0.030780	ppm	0.001872	6.08	-327.155000	Y_R2 488.368
Mg (279.078 nm)	7.953700	ppm	0.013993	0.18	45908.200000	Y 377.433
Mn (257.610 nm)	0.397111	ppm	0.000135	0.03	92932.100000	Y 377.433
Mo (202.032 nm)	0.001731	ppm	0.000171	9.88	14.879800	Y 377.433
Na (589.592 nm)	0.843569	ppm	0.010044	1.19	6716.280000	Y_R2 488.368
Na H (589.593 nm)	1.189855 u	ppm	0.027000	2.27	7156.250662	Y_R 488.368
Ni (231.604 nm)	0.031689	ppm	0.000330	1.04	213.919000	Y 377.433
P (213.618 nm)	1.983000	ppm	0.015061	0.76	4333.610000	Y 242.219
Pb (220.353 nm)	0.041868	ppm	0.001790	4.27	117.442000	Y 242.219
S (181.972 nm)	0.689437	ppm	0.004424	0.64	368.228042	Y 377.433
Sb (206.834 nm)	-0.000077 u	ppm	0.000030	39.55	-35.100300	Y 377.433
Se (196.026 nm)	-0.001400 u	ppm	0.002765	> 100.00	4.004860	Y 242.219
Si (288.158 nm)	1.826490	ppm	0.000535	0.03	16627.700000	Y 377.433
Sn (189.925 nm)	0.012860	ppm	0.000899	6.99	35.160500	Y 377.433
Sr (421.552 nm)	0.160503	ppm	0.001075	0.67	33832.241225	Y_R 488.368
Th (288.505 nm)	0.048879	ppm	0.000227	0.46	256.370000	Y 377.433
Ti (336.122 nm)	1.340240 o	ppm	0.001844	0.14	190737.000000	Y 377.433
Tl (190.794 nm)	0.001080	ppm	0.000637	58.96	-9.988610	Y 377.433
U (409.013 nm)	-0.047203 u	ppm	0.004244	8.99	-389.173000	Y 377.433
V (292.401 nm)	1.394900 o	ppm	0.002575	0.18	50681.400000	Y 377.433
Zn (206.200 nm)	0.156772	ppm	0.000078	0.05	846.510000	Y 377.433
Zr (343.823 nm)	0.046138	ppm	0.000267	0.58	6223.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062932	20280.972736	0.001665	0.16
Y 377.433	1.063697	1076661.063530	0.003184	0.30
Y_R 377.433	1.122670	84753.900000	0.010098	0.90
Y_R 488.368	1.104710	48365.000000	0.008447	0.76
Y_R2 488.368	1.109003	96241.000032	0.006088	0.55

Sample Name: 280-116011-B-11-B

Date: 11/6/2018 1:37:02 PM Rack:Tube: 1:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000306 u	ppm	0.000141	45.96	-575.064000	Y 377.433
Al (167.019 nm)	29.154400 o	ppm	0.101415	0.35	16286.800000	Y_R 377.433
Al H (396.152 nm)	29.509545	ppm	0.103160	0.35	74310.648857	Y_R 377.433
As (188.980 nm)	0.018814	ppm	0.003752	19.94	21.559700	Y 242.219
B (249.678 nm)	0.020666	ppm	0.000080	0.39	506.727000	Y 242.219
Ba (493.408 nm)	0.498196	ppm	0.001784	0.36	58346.400000	Y_R 488.368
Be (234.861 nm)	0.001694	ppm	0.000033	1.92	1849.890000	Y_R 488.368
Bi (223.061 nm)	-0.008945 u	ppm	0.000430	4.81	-2.434420	Y 377.433
Ca (315.887 nm)	24.741165 o	ppm	0.089270	0.36	19556.027860	Y_R 377.433
Cd (214.439 nm)	0.000286	ppm	0.000102	35.77	60.956700	Y 377.433
Co (228.615 nm)	0.013275	ppm	0.000205	1.54	250.924000	Y 242.219
Cr (205.560 nm)	0.043340	ppm	0.000161	0.37	643.481000	Y 377.433
Cu (324.754 nm)	0.031034	ppm	0.000136	0.44	1454.390000	Y 377.433
Fe (238.204 nm)	45.064462 o	ppm	0.254977	0.57	166697.329623	Y_R 377.433
Fe H (259.940 nm)	44.954500	ppm	0.319401	0.71	85048.000000	Y_R 377.433
K (766.491 nm)	7.979820	ppm	0.023264	0.29	8431.990000	Y_R2 488.368
Li (670.783 nm)	0.029836	ppm	0.003521	11.80	-358.643000	Y_R2 488.368
Mg (279.078 nm)	7.440450	ppm	0.002420	0.03	42943.700000	Y 377.433
Mn (257.610 nm)	0.433454	ppm	0.000182	0.04	101432.000000	Y 377.433
Mo (202.032 nm)	0.000395	ppm	0.000083	20.94	3.375920	Y 377.433
Na (589.592 nm)	0.602398	ppm	0.006962	1.16	5269.320000	Y_R2 488.368
Na H (589.593 nm)	0.691829 u	ppm	0.025926	3.75	5397.374114	Y_R 488.368
Ni (231.604 nm)	0.030552	ppm	0.000188	0.62	206.152000	Y 377.433
P (213.618 nm)	2.106430	ppm	0.007152	0.34	4601.820000	Y 242.219
Pb (220.353 nm)	0.046007	ppm	0.001312	2.85	129.701000	Y 242.219
S (181.972 nm)	0.695500	ppm	0.006326	0.91	371.421688	Y 377.433
Sb (206.834 nm)	0.000119 u	ppm	0.000508	> 100.00	-34.472800	Y 377.433
Se (196.026 nm)	-0.000321 u	ppm	0.001658	> 100.00	5.129700	Y 242.219
Si (288.158 nm)	1.787720	ppm	0.002334	0.13	16294.600000	Y 377.433
Sn (189.925 nm)	0.009854	ppm	0.002432	24.68	29.186000	Y 377.433
Sr (421.552 nm)	0.155113	ppm	0.000957	0.62	32701.403533	Y_R 488.368
Th (288.505 nm)	0.057744	ppm	0.002786	4.82	256.045000	Y 377.433
Ti (336.122 nm)	1.330760 o	ppm	0.000436	0.03	189368.000000	Y 377.433
Tl (190.794 nm)	0.000060 u	ppm	0.000887	> 100.00	-12.184300	Y 377.433
U (409.013 nm)	-0.056953 u	ppm	0.001273	2.24	-432.355000	Y 377.433
V (292.401 nm)	0.764273	ppm	0.000238	0.03	27795.600000	Y 377.433
Zn (206.200 nm)	0.126331	ppm	0.000422	0.33	687.526000	Y 377.433
Zr (343.823 nm)	0.046999	ppm	0.000114	0.24	6336.140000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.073643	20485.345309	0.002333	0.22
Y 377.433	1.074094	1087185.042571	0.003508	0.33
Y_R 377.433	1.124700	84906.600000	0.008231	0.73
Y_R 488.368	1.106350	48436.500000	0.009732	0.88
Y_R2 488.368	1.107140	96079.312517	0.004563	0.41

Sample Name: 280-116011-C-12-B

Date: 11/6/2018 1:40:24 PM Rack:Tube: 1:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000228 u	ppm	0.000039	16.93	-555.931000	Y 377.433
Al (167.019 nm)	55.595000 o	ppm	0.215604	0.39	31043.400000	Y_R 377.433
Al H (396.152 nm)	59.944287	ppm	0.182552	0.30	150857.404576	Y_R 377.433
As (188.980 nm)	0.016619	ppm	0.001316	7.92	18.597400	Y 242.219
B (249.678 nm)	0.051101	ppm	0.000413	0.81	1233.670000	Y 242.219
Ba (493.408 nm)	0.641594	ppm	0.001140	0.18	74974.700000	Y_R 488.368
Be (234.861 nm)	0.002311	ppm	0.000041	1.78	2731.410000	Y_R 488.368
Bi (223.061 nm)	-0.009652 u	ppm	0.000109	1.13	-0.530253	Y 377.433
Ca (315.887 nm)	22.370171 o	ppm	0.055113	0.25	17676.034027	Y_R 377.433
Cd (214.439 nm)	0.000985	ppm	0.000017	1.77	124.206000	Y 377.433
Co (228.615 nm)	0.020752	ppm	0.000378	1.82	418.771000	Y 242.219
Cr (205.560 nm)	0.077633	ppm	0.000288	0.37	1159.350000	Y 377.433
Cu (324.754 nm)	0.046346	ppm	0.000130	0.28	2326.640000	Y 377.433
Fe (238.204 nm)	67.698630 o	ppm	0.254143	0.38	250410.591734	Y_R 377.433
Fe H (259.940 nm)	67.602600	ppm	0.454120	0.67	127894.000000	Y_R 377.433
K (766.491 nm)	18.737200	ppm	0.063190	0.34	20818.800000	Y_R2 488.368
Li (670.783 nm)	0.056419	ppm	0.001256	2.23	527.919000	Y_R2 488.368
Mg (279.078 nm)	15.101100	ppm	0.008798	0.06	87158.000000	Y 377.433
Mn (257.610 nm)	0.528696	ppm	0.000052	0.01	123705.000000	Y 377.433
Mo (202.032 nm)	0.000264	ppm	0.000040	15.15	2.246590	Y 377.433
Na (589.592 nm)	1.146710	ppm	0.003150	0.27	9142.430000	Y_R2 488.368
Na H (589.593 nm)	1.178403 u	ppm	0.043793	3.72	7314.708817	Y_R 488.368
Ni (231.604 nm)	0.043425	ppm	0.000077	0.18	294.883000	Y 377.433
P (213.618 nm)	2.341750 o	ppm	0.003389	0.14	5113.180000	Y 242.219
Pb (220.353 nm)	0.082808	ppm	0.001348	1.63	227.337000	Y 242.219
S (181.972 nm)	0.186180	ppm	0.007052	3.79	110.803967	Y 377.433
Sb (206.834 nm)	-0.001723 u	ppm	0.001505	87.38	-46.132400	Y 377.433
Se (196.026 nm)	0.000620	ppm	0.000331	53.44	2.492500	Y 242.219
Si (288.158 nm)	1.884600	ppm	0.000460	0.02	17127.200000	Y 377.433
Sn (189.925 nm)	0.012941	ppm	0.001694	13.09	35.321200	Y 377.433
Sr (421.552 nm)	0.199562	ppm	0.000047	0.02	42027.417794	Y_R 488.368
Th (288.505 nm)	0.068828	ppm	0.001141	1.66	283.902000	Y 377.433
Ti (336.122 nm)	2.248690 o	ppm	0.001442	0.06	320085.000000	Y 377.433
Tl (190.794 nm)	0.000932	ppm	0.000880	94.44	-14.860400	Y 377.433
U (409.013 nm)	-0.060987 u	ppm	0.001776	2.91	-433.093000	Y 377.433
V (292.401 nm)	0.730667	ppm	0.000057	0.01	26591.100000	Y 377.433
Zn (206.200 nm)	0.308189	ppm	0.000039	0.01	1637.310000	Y 377.433
Zr (343.823 nm)	0.093292	ppm	0.000083	0.09	12488.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061752	20258.452610	0.002531	0.24
Y 377.433	1.060971	1073902.023811	0.001139	0.11
Y_R 377.433	1.113710	84076.900000	0.002964	0.27
Y_R 488.368	1.094800	47930.900000	0.007049	0.64
Y_R2 488.368	1.092171	94780.277633	0.012884	1.18

Sample Name: 280-116011-B-13-F

Date: 11/6/2018 1:43:46 PM Rack:Tube: 1:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000233 u	ppm	0.000044	18.77	-548.012000	Y 377.433
Al (167.019 nm)	53.571800 o	ppm	0.072447	0.14	29912.800000	Y_R 377.433
Al H (396.152 nm)	57.715359	ppm	0.076052	0.13	145250.642702	Y_R 377.433
As (188.980 nm)	0.015527	ppm	0.001979	12.74	17.256300	Y 242.219
B (249.678 nm)	0.040715	ppm	0.000268	0.66	979.963000	Y 242.219
Ba (493.408 nm)	0.749875	ppm	0.003061	0.41	87511.600000	Y_R 488.368
Be (234.861 nm)	0.002685	ppm	0.000027	1.02	2724.220000	Y_R 488.368
Bi (223.061 nm)	-0.010389 u	ppm	0.000416	4.00	-3.012330	Y 377.433
Ca (315.887 nm)	20.901492 o	ppm	0.013199	0.06	16511.497536	Y_R 377.433
Cd (214.439 nm)	0.000365	ppm	0.000032	8.74	83.532800	Y 377.433
Co (228.615 nm)	0.021362	ppm	0.000313	1.46	424.067000	Y 242.219
Cr (205.560 nm)	0.067412	ppm	0.000203	0.30	1004.800000	Y 377.433
Cu (324.754 nm)	0.030945	ppm	0.000026	0.08	1468.160000	Y 377.433
Fe (238.204 nm)	63.883553 o	ppm	0.042033	0.07	236300.395950	Y_R 377.433
Fe H (259.940 nm)	63.782800	ppm	0.119764	0.19	120668.000000	Y_R 377.433
K (766.491 nm)	21.847500	ppm	0.035110	0.16	24400.300000	Y_R2 488.368
Li (670.783 nm)	0.052722	ppm	0.001187	2.25	404.625000	Y_R2 488.368
Mg (279.078 nm)	14.679100	ppm	0.000704	0.00	84726.800000	Y 377.433
Mn (257.610 nm)	0.524971	ppm	0.000709	0.14	122834.000000	Y 377.433
Mo (202.032 nm)	0.000343	ppm	0.000434	> 100.00	2.927080	Y 377.433
Na (589.592 nm)	1.156200	ppm	0.002478	0.21	9422.480000	Y_R2 488.368
Na H (589.593 nm)	1.084179 u	ppm	0.029849	2.75	7070.873015	Y_R 488.368
Ni (231.604 nm)	0.042042	ppm	0.000845	2.01	285.297000	Y 377.433
P (213.618 nm)	2.442550 o	ppm	0.004988	0.20	5332.200000	Y 242.219
Pb (220.353 nm)	0.049020	ppm	0.000051	0.10	130.820000	Y 242.219
S (181.972 nm)	0.200683	ppm	0.003055	1.52	118.222653	Y 377.433
Sb (206.834 nm)	-0.002299 u	ppm	0.000861	37.44	-46.958200	Y 377.433
Se (196.026 nm)	0.000666	ppm	0.000555	83.31	3.197700	Y 242.219
Si (288.158 nm)	1.777760	ppm	0.000049	0.00	16209.000000	Y 377.433
Sn (189.925 nm)	0.011746	ppm	0.000729	6.21	32.945700	Y 377.433
Sr (421.552 nm)	0.199005	ppm	0.001094	0.55	41910.650534	Y_R 488.368
Th (288.505 nm)	0.063853	ppm	0.003230	5.06	269.357000	Y 377.433
Ti (336.122 nm)	2.085440 o	ppm	0.000284	0.01	296832.000000	Y 377.433
Tl (190.794 nm)	0.000596	ppm	0.000288	48.37	-14.781100	Y 377.433
U (409.013 nm)	-0.060046 u	ppm	0.000629	1.05	-431.935000	Y 377.433
V (292.401 nm)	0.679232	ppm	0.000338	0.05	24723.000000	Y 377.433
Zn (206.200 nm)	0.186754	ppm	0.000156	0.08	1003.100000	Y 377.433
Zr (343.823 nm)	0.091826	ppm	0.000043	0.05	12284.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064233	20305.794861	0.001257	0.12
Y 377.433	1.062621	1075571.496068	0.002473	0.23
Y_R 377.433	1.126480	85041.300000	0.002691	0.24
Y_R 488.368	1.107670	48494.300000	0.000593	0.05
Y_R2 488.368	1.106179	95995.908548	0.006944	0.63

Sample Name: CCVH-5408055

Date: 11/6/2018 1:47:08 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001663 u	ppm	0.000120	7.20	-764.501000	Y 377.433
Al (167.019 nm)	47.392300 o	ppm	0.036372	0.08	26458.300000	Y_R 377.433
Al H (396.152 nm)	49.594574	ppm	0.252559	0.51	124816.623120	Y_R 377.433
As (188.980 nm)	0.000389 u	ppm	0.005695	> 100.00	-1.686510	Y 242.219
B (249.678 nm)	-0.000296 u	ppm	0.000350	> 100.00	-24.774500	Y 242.219
Ba (493.408 nm)	0.000338	ppm	0.000041	12.17	684.789000	Y_R 488.368
Be (234.861 nm)	-0.000086 u	ppm	0.000134	> 100.00	1475.400000	Y_R 488.368
Bi (223.061 nm)	0.986432	ppm	0.004108	0.42	2504.830000	Y 377.433
Ca (315.887 nm)	-0.016606 u	ppm	0.003564	21.46	-74.756520	Y_R 377.433
Cd (214.439 nm)	-0.000365 u	ppm	0.000015	4.13	26.667100	Y 377.433
Co (228.615 nm)	0.002843	ppm	0.000042	1.49	15.089100	Y 242.219
Cr (205.560 nm)	-0.000072 u	ppm	0.000311	> 100.00	-18.704000	Y 377.433
Cu (324.754 nm)	-0.005119 u	ppm	0.000278	5.43	-254.021000	Y 377.433
Fe (238.204 nm)	50.001569 o	ppm	0.307980	0.62	184957.390655	Y_R 377.433
Fe H (259.940 nm)	49.860300	ppm	0.268169	0.54	94328.900000	Y_R 377.433
K (766.491 nm)	0.047868	ppm	0.045962	96.02	-701.471000	Y_R2 488.368
Li (670.783 nm)	0.001865	ppm	0.000429	22.98	-1291.520000	Y_R2 488.368
Mg (279.078 nm)	-0.020133 u	ppm	0.000795	3.95	-431.217000	Y 377.433
Mn (257.610 nm)	0.001483	ppm	0.000050	3.36	408.581000	Y 377.433
Mo (202.032 nm)	-0.000011 u	ppm	0.000110	> 100.00	-0.118326	Y 377.433
Na (589.592 nm)	245.882000 o	ppm	0.986666	0.40	1619260.000000	Y_R2 488.368
Na H (589.593 nm)	253.405579	ppm	2.664202	1.05	930769.674506	Y_R 488.368
Ni (231.604 nm)	0.004638	ppm	0.001016	21.92	29.574600	Y 377.433
P (213.618 nm)	-0.004676 u	ppm	0.001117	23.88	14.396300	Y 242.219
Pb (220.353 nm)	-0.001650 u	ppm	0.001105	66.95	15.584600	Y 242.219
S (181.972 nm)	4.949222	ppm	0.009199	0.19	2548.913934	Y 377.433
Sb (206.834 nm)	-0.004271 u	ppm	0.000153	3.59	-80.430900	Y 377.433
Se (196.026 nm)	0.000524	ppm	0.000152	29.02	4.592690	Y 242.219
Si (288.158 nm)	0.015716	ppm	0.000457	2.91	1064.730000	Y 377.433
Sn (189.925 nm)	-0.000784 u	ppm	0.000134	17.04	8.039220	Y 377.433
Sr (421.552 nm)	0.000304	ppm	0.000101	33.02	219.888458	Y_R 488.368
Th (288.505 nm)	4.960150	ppm	0.050533	1.02	12965.200000	Y 377.433
Ti (336.122 nm)	0.001553	ppm	0.000186	11.97	-6.952020	Y 377.433
Tl (190.794 nm)	-0.002627 u	ppm	0.000064	2.42	-12.424900	Y 377.433
U (409.013 nm)	10.106500	ppm	0.027643	0.27	45555.800000	Y 377.433
V (292.401 nm)	0.003449	ppm	0.000115	3.33	-6.970990	Y 377.433
Zn (206.200 nm)	-0.004392 u	ppm	0.000297	6.75	4.803790	Y 377.433
Zr (343.823 nm)	-0.004306 u	ppm	0.000102	2.36	-395.476000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003402	19145.124942	0.002759	0.27
Y 377.433	0.999598	1011780.714222	0.002724	0.27
Y_R 377.433	1.056260	79739.900000	0.005039	0.48
Y_R 488.368	1.046730	45826.200000	0.019664	1.88
Y_R2 488.368	1.036175	89920.915769	0.011055	1.07

Sample Name: CCV-5407546

Date: 11/6/2018 1:50:32 PM
Rack:Tube: S1:2
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.492899	ppm	0.000817	0.17	22139.600000	Y 377.433
Al (167.019 nm)	0.531160	ppm	0.000335	0.06	300.187000	Y_R 377.433
Al H (396.152 nm)	0.498395 u	ppm	0.010211	2.05	1374.721393	Y_R 377.433
As (188.980 nm)	1.000200	ppm	0.002866	0.29	1257.800000	Y 242.219
B (249.678 nm)	0.493895	ppm	0.001610	0.33	12412.700000	Y 242.219
Ba (493.408 nm)	0.494643	ppm	0.002918	0.59	57900.300000	Y_R 488.368
Be (234.861 nm)	0.482208	ppm	0.001677	0.35	143703.000000	Y_R 488.368
Bi (223.061 nm)	-0.000928 u	ppm	0.002720	> 100.00	10.820100	Y 377.433
Ca (315.887 nm)	5.097212	ppm	0.016064	0.32	3980.341195	Y_R 377.433
Cd (214.439 nm)	0.497200	ppm	0.002994	0.60	29719.600000	Y 377.433
Co (228.615 nm)	0.498000	ppm	0.001036	0.21	9001.040000	Y 242.219
Cr (205.560 nm)	0.493729	ppm	0.000850	0.17	7506.010000	Y 377.433
Cu (324.754 nm)	0.494033	ppm	0.000987	0.20	27237.700000	Y 377.433
Fe (238.204 nm)	2.545860	ppm	0.017224	0.68	9440.788623	Y_R 377.433
Fe H (259.940 nm)	2.548150 u	ppm	0.025451	1.00	4823.830000	Y_R 377.433
K (766.491 nm)	50.010100	ppm	0.041304	0.08	56828.900000	Y_R2 488.368
Li (670.783 nm)	0.996775	ppm	0.003463	0.35	31889.500000	Y_R2 488.368
Mg (279.078 nm)	19.655800	ppm	0.037189	0.19	113577.000000	Y 377.433
Mn (257.610 nm)	0.499825	ppm	0.001260	0.25	116953.000000	Y 377.433
Mo (202.032 nm)	0.500374	ppm	0.002346	0.47	4309.170000	Y 377.433
Na (589.592 nm)	5.043850	ppm	0.021126	0.42	34505.200000	Y_R2 488.368
Na H (589.593 nm)	5.513174 u	ppm	0.056569	1.03	23057.038400	Y_R 488.368
Ni (231.604 nm)	0.499755	ppm	0.000884	0.18	3406.320000	Y 377.433
P (213.618 nm)	0.984155	ppm	0.002954	0.30	2163.120000	Y 242.219
Pb (220.353 nm)	1.008390	ppm	0.001020	0.10	2893.710000	Y 242.219
S (181.972 nm)	0.014348	ppm	0.004336	30.22	22.732602	Y 377.433
Sb (206.834 nm)	1.006370	ppm	0.003119	0.31	2740.350000	Y 377.433
Se (196.026 nm)	0.985656	ppm	0.002171	0.22	993.961000	Y 242.219
Si (288.158 nm)	4.977760	ppm	0.030178	0.61	43711.900000	Y 377.433
Sn (189.925 nm)	0.993750	ppm	0.004905	0.49	1984.960000	Y 377.433
Sr (421.552 nm)	0.497844	ppm	0.001844	0.37	104612.123086	Y_R 488.368
Th (288.505 nm)	0.005744	ppm	0.000660	11.49	103.822000	Y 377.433
Ti (336.122 nm)	0.502294	ppm	0.000753	0.15	71321.200000	Y 377.433
Tl (190.794 nm)	1.009270	ppm	0.006307	0.62	2211.080000	Y 377.433
U (409.013 nm)	-0.000962 u	ppm	0.005509	> 100.00	-248.983000	Y 377.433
V (292.401 nm)	0.495744	ppm	0.001765	0.36	17905.500000	Y 377.433
Zn (206.200 nm)	0.494304	ppm	0.002277	0.46	2609.330000	Y 377.433
Zr (343.823 nm)	0.498710	ppm	0.001340	0.27	65606.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015411	19374.263804	0.002401	0.24
Y 377.433	1.017334	1029732.638946	0.003353	0.33
Y_R 377.433	1.060480	80058.700000	0.004756	0.45
Y_R 488.368	1.044900	45746.400000	0.003201	0.31
Y_R2 488.368	1.054152	91480.991840	0.007882	0.75

Sample Name: CCB

Date: 11/6/2018 1:53:54 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000049 u	ppm	0.000321	> 100.00	-442.504000	Y 377.433
Al (167.019 nm)	0.000284 u	ppm	0.002188	> 100.00	2.511200	Y_R 377.433
Al H (396.152 nm)	-0.019525 u	ppm	0.002310	11.83	29.924280	Y_R 377.433
As (188.980 nm)	-0.001639 u	ppm	0.000573	34.98	-3.800980	Y 242.219
B (249.678 nm)	0.001086	ppm	0.000264	24.35	84.256300	Y 242.219
Ba (493.408 nm)	-0.000112 u	ppm	0.000075	66.81	586.543000	Y_R 488.368
Be (234.861 nm)	0.000059	ppm	0.000022	37.40	-28.642100	Y_R 488.368
Bi (223.061 nm)	0.002881	ppm	0.000540	18.73	19.996000	Y 377.433
Ca (315.887 nm)	-0.009869 u	ppm	0.014196	> 100.00	-69.414464	Y_R 377.433
Cd (214.439 nm)	0.000013 u	ppm	0.000117	> 100.00	1.664500	Y 377.433
Co (228.615 nm)	-0.000184 u	ppm	0.000238	> 100.00	-39.775700	Y 242.219
Cr (205.560 nm)	0.000236	ppm	0.000026	11.01	-0.361118	Y 377.433
Cu (324.754 nm)	0.000205	ppm	0.000141	68.68	-280.924000	Y 377.433
Fe (238.204 nm)	-0.001481 u	ppm	0.000433	29.24	19.361668	Y_R 377.433
Fe H (259.940 nm)	0.003135 u	ppm	0.001355	43.23	9.164250	Y_R 377.433
K (766.491 nm)	0.064798	ppm	0.000083	0.13	-681.977000	Y_R2 488.368
Li (670.783 nm)	0.003847	ppm	0.001041	27.06	-1225.420000	Y_R2 488.368
Mg (279.078 nm)	0.002993	ppm	0.000645	21.56	56.658600	Y 377.433
Mn (257.610 nm)	0.000007 u	ppm	0.000027	> 100.00	63.317400	Y 377.433
Mo (202.032 nm)	-0.000081 u	ppm	0.000166	> 100.00	-0.722294	Y 377.433
Na (589.592 nm)	0.032222	ppm	0.008134	25.24	509.690000	Y_R2 488.368
Na H (589.593 nm)	-0.116137 u	ppm	0.061397	52.87	1968.879609	Y_R 488.368
Ni (231.604 nm)	0.000822	ppm	0.000498	60.63	1.505530	Y 377.433
P (213.618 nm)	0.001239	ppm	0.000929	74.97	27.248300	Y 242.219
Pb (220.353 nm)	0.001376	ppm	0.000966	70.22	7.376290	Y 242.219
S (181.972 nm)	0.011292	ppm	0.000656	5.81	19.955392	Y 377.433
Sb (206.834 nm)	-0.000788 u	ppm	0.000473	60.06	-25.381100	Y 377.433
Se (196.026 nm)	-0.001143 u	ppm	0.000209	18.25	11.853400	Y 242.219
Si (288.158 nm)	-0.002045 u	ppm	0.000752	36.79	912.076000	Y 377.433
Sn (189.925 nm)	-0.001618 u	ppm	0.001613	99.69	6.382010	Y 377.433
Sr (421.552 nm)	0.000011 u	ppm	0.000107	> 100.00	158.268418	Y_R 488.368
Th (288.505 nm)	0.002570	ppm	0.000827	32.19	79.568500	Y 377.433
Ti (336.122 nm)	0.000022 u	ppm	0.000095	> 100.00	-225.072000	Y 377.433
Tl (190.794 nm)	0.001330	ppm	0.000445	33.47	-2.423630	Y 377.433
U (409.013 nm)	0.000002 u	ppm	0.000346	> 100.00	-207.596000	Y 377.433
V (292.401 nm)	-0.000153 u	ppm	0.000098	63.71	29.239000	Y 377.433
Zn (206.200 nm)	-0.005343 u	ppm	0.000157	2.95	-0.164795	Y 377.433
Zr (343.823 nm)	0.000012	ppm	0.000009	70.53	28.259300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019124	19445.112184	0.002487	0.24
Y 377.433	1.022762	1035226.851054	0.001530	0.15
Y_R 377.433	1.064490	80361.500000	0.007065	0.66
Y_R 488.368	1.058540	46343.600000	0.005877	0.56
Y_R2 488.368	1.049357	91064.857818	0.004795	0.46

Sample Name: CCVL-5413446

Date: 11/6/2018 1:57:16 PM
Rack:Tube: S1:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009874	ppm	0.000001	0.01	7.964130	Y 377.433
Al (167.019 nm)	0.105984	ppm	0.001297	1.22	61.512200	Y_R 377.433
Al H (396.152 nm)	0.087283 u	ppm	0.002378	2.72	300.237367	Y_R 377.433
As (188.980 nm)	0.016340	ppm	0.000131	0.80	18.839600	Y 242.219
B (249.678 nm)	0.102795	ppm	0.000259	0.25	2625.230000	Y 242.219
Ba (493.408 nm)	0.010074	ppm	0.000028	0.28	1766.280000	Y_R 488.368
Be (234.861 nm)	0.000979	ppm	0.000018	1.80	247.680000	Y_R 488.368
Bi (223.061 nm)	0.099752	ppm	0.001978	1.98	263.945000	Y 377.433
Ca (315.887 nm)	0.211415	ppm	0.005766	2.73	106.047585	Y_R 377.433
Cd (214.439 nm)	0.005200	ppm	0.000145	2.80	311.750000	Y 377.433
Co (228.615 nm)	0.010395	ppm	0.000009	0.09	152.182000	Y 242.219
Cr (205.560 nm)	0.010214	ppm	0.000234	2.29	151.449000	Y 377.433
Cu (324.754 nm)	0.015833	ppm	0.000108	0.68	588.248000	Y 377.433
Fe (238.204 nm)	0.103165	ppm	0.000525	0.51	406.398604	Y_R 377.433
Fe H (259.940 nm)	0.106132 u	ppm	0.001326	1.25	204.013000	Y_R 377.433
K (766.491 nm)	3.229270	ppm	0.044031	1.36	2961.830000	Y_R2 488.368
Li (670.783 nm)	0.022979	ppm	0.001578	6.87	-587.330000	Y_R2 488.368
Mg (279.078 nm)	0.201485	ppm	0.001149	0.57	1202.130000	Y 377.433
Mn (257.610 nm)	0.010434	ppm	0.000014	0.13	2501.980000	Y 377.433
Mo (202.032 nm)	0.019633	ppm	0.000207	1.05	169.053000	Y 377.433
Na (589.592 nm)	1.089970	ppm	0.003229	0.30	7495.440000	Y_R2 488.368
Na H (589.593 nm)	0.982871 u	ppm	0.009161	0.93	6005.062292	Y_R 488.368
Ni (231.604 nm)	0.041955	ppm	0.000885	2.11	282.118000	Y 377.433
P (213.618 nm)	2.831950 o	ppm	0.003687	0.13	6178.370000	Y 242.219
Pb (220.353 nm)	0.009878	ppm	0.000059	0.60	31.745100	Y 242.219
S (181.972 nm)	0.100652	ppm	0.005217	5.18	65.746084	Y 377.433
Sb (206.834 nm)	0.021756	ppm	0.000187	0.86	36.377100	Y 377.433
Se (196.026 nm)	0.018577	ppm	0.000506	2.72	31.470800	Y 242.219
Si (288.158 nm)	0.500408	ppm	0.003978	0.79	5230.500000	Y 377.433
Sn (189.925 nm)	0.100568	ppm	0.000315	0.31	209.507000	Y 377.433
Sr (421.552 nm)	0.009987	ppm	0.000138	1.39	2251.529471	Y_R 488.368
Th (288.505 nm)	0.018895	ppm	0.001635	8.65	122.597000	Y 377.433
Ti (336.122 nm)	0.010000	ppm	0.000010	0.10	1196.570000	Y 377.433
Tl (190.794 nm)	0.014721	ppm	0.001315	8.94	26.948700	Y 377.433
U (409.013 nm)	0.063478	ppm	0.003471	5.47	78.432000	Y 377.433
V (292.401 nm)	0.009663	ppm	0.000001	0.01	381.045000	Y 377.433
Zn (206.200 nm)	0.015653	ppm	0.000418	2.67	109.491000	Y 377.433
Zr (343.823 nm)	0.015335	ppm	0.000115	0.75	2043.260000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023628	19531.033646	0.000748	0.07
Y 377.433	1.026561	1039071.949942	0.002114	0.21
Y_R 377.433	1.066450	80509.200000	0.007433	0.70
Y_R 488.368	1.056210	46241.600000	0.016466	1.56
Y_R2 488.368	1.048676	91005.706442	0.002098	0.20

Sample Name: 280-116011-B-13-Fsd@5

Date: 11/6/2018 2:00:38 PM
Rack:Tube: 1:11

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000393	ppm	0.000074	18.81	-445.832000	Y 377.433
Al (167.019 nm)	12.156500 o	ppm	0.040994	0.34	6788.770000	Y_R 377.433
Al H (396.152 nm)	11.977561	ppm	0.067186	0.56	30206.244889	Y_R 377.433
As (188.980 nm)	0.004823	ppm	0.000707	14.67	4.220840	Y 242.219
B (249.678 nm)	0.008992	ppm	0.000021	0.24	262.232000	Y 242.219
Ba (493.408 nm)	0.155176	ppm	0.000738	0.48	18584.700000	Y_R 488.368
Be (234.861 nm)	0.000599	ppm	0.000024	4.08	539.858000	Y_R 488.368
Bi (223.061 nm)	-0.004887 u	ppm	0.001450	29.66	2.589090	Y 377.433
Ca (315.887 nm)	4.332283	ppm	0.004687	0.11	3373.538536	Y_R 377.433
Cd (214.439 nm)	0.000041	ppm	0.000052	> 100.00	15.899500	Y 377.433
Co (228.615 nm)	0.004629	ppm	0.000407	8.79	62.477100	Y 242.219
Cr (205.560 nm)	0.014248	ppm	0.000238	1.67	209.332000	Y 377.433
Cu (324.754 nm)	0.006648	ppm	0.000052	0.79	83.695400	Y 377.433
Fe (238.204 nm)	13.212378 o	ppm	0.003881	0.03	48891.281660	Y_R 377.433
Fe H (259.940 nm)	13.228600	ppm	0.010904	0.08	25029.000000	Y_R 377.433
K (766.491 nm)	4.674240	ppm	0.011498	0.25	4625.690000	Y_R2 488.368
Li (670.783 nm)	0.012616	ppm	0.000294	2.33	-932.950000	Y_R2 488.368
Mg (279.078 nm)	3.040100	ppm	0.003639	0.12	17578.400000	Y 377.433
Mn (257.610 nm)	0.109875	ppm	0.000015	0.01	25757.800000	Y 377.433
Mo (202.032 nm)	0.000161	ppm	0.000094	58.19	1.359250	Y 377.433
Na (589.592 nm)	0.245984	ppm	0.003160	1.28	2230.730000	Y_R2 488.368
Na H (589.593 nm)	0.005835 u	ppm	0.028251	> 100.00	2561.833454	Y_R 488.368
Ni (231.604 nm)	0.008832	ppm	0.000216	2.45	56.687400	Y 377.433
P (213.618 nm)	0.494719	ppm	0.002847	0.58	1099.580000	Y 242.219
Pb (220.353 nm)	0.010236	ppm	0.001269	12.40	30.038400	Y 242.219
S (181.972 nm)	0.043345	ppm	0.006285	14.50	36.636779	Y 377.433
Sb (206.834 nm)	0.000897	ppm	0.000037	4.17	-24.388100	Y 377.433
Se (196.026 nm)	-0.001102 u	ppm	0.000174	15.83	9.731110	Y 242.219
Si (288.158 nm)	0.357472	ppm	0.000242	0.07	4002.010000	Y 377.433
Sn (189.925 nm)	0.001499	ppm	0.000177	11.84	12.576800	Y 377.433
Sr (421.552 nm)	0.041103	ppm	0.000134	0.33	8780.058137	Y_R 488.368
Th (288.505 nm)	0.014699	ppm	0.000566	3.85	117.389000	Y 377.433
Ti (336.122 nm)	0.428031	ppm	0.000185	0.04	60742.800000	Y 377.433
Tl (190.794 nm)	-0.000735 u	ppm	0.000514	69.89	-9.167260	Y 377.433
U (409.013 nm)	-0.007315 u	ppm	0.005796	79.23	-230.814000	Y 377.433
V (292.401 nm)	0.138611	ppm	0.000094	0.07	5072.070000	Y 377.433
Zn (206.200 nm)	0.034798	ppm	0.000075	0.21	209.477000	Y 377.433
Zr (343.823 nm)	0.018164	ppm	0.000011	0.06	2452.990000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040380	19850.666976	0.000309	0.03
Y 377.433	1.041072	1053760.408534	0.001441	0.14
Y_R 377.433	1.088050	82140.400000	0.007151	0.66
Y_R 488.368	1.071420	46907.200000	0.003960	0.37
Y_R2 488.368	1.078950	93632.949320	0.014176	1.31

Sample Name: 280-116011-B-13-G MS

Date: 11/6/2018 2:04:00 PM
Rack:Tube: 1:12

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048215	ppm	0.000651	1.35	1631.950000	Y 377.433
Al (167.019 nm)	82.467100 o	ppm	2.149120	2.61	46030.900000	Y_R 377.433
Al H (396.152 nm)	102.683280	ppm	0.997179	0.97	258447.097604	Y_R 377.433
As (188.980 nm)	0.926140	ppm	0.001200	0.13	1163.890000	Y 242.219
B (249.678 nm)	1.011670	ppm	0.000716	0.07	25236.900000	Y 242.219
Ba (493.408 nm)	2.895530 o	ppm	0.035635	1.23	336035.000000	Y_R 488.368
Be (234.861 nm)	0.049725	ppm	0.001360	2.73	17063.800000	Y_R 488.368
Bi (223.061 nm)	1.823610	ppm	0.003142	0.17	4617.140000	Y 377.433
Ca (315.887 nm)	71.653940 o	ppm	1.009547	1.41	56753.876576	Y_R 377.433
Cd (214.439 nm)	0.092104	ppm	0.000028	0.03	5578.370000	Y 377.433
Co (228.615 nm)	0.481680	ppm	0.000066	0.01	8833.490000	Y 242.219
Cr (205.560 nm)	0.293099	ppm	0.000260	0.09	4434.910000	Y 377.433
Cu (324.754 nm)	0.270077	ppm	0.000181	0.07	14824.800000	Y 377.433
Fe (238.204 nm)	75.915494 o	ppm	0.875716	1.15	280800.953114	Y_R 377.433
Fe H (259.940 nm)	76.156500	ppm	0.694684	0.91	144076.000000	Y_R 377.433
K (766.491 nm)	79.927400	ppm	0.301063	0.38	91278.000000	Y_R2 488.368
Li (670.783 nm)	1.022380	ppm	0.003395	0.33	32743.300000	Y_R2 488.368
Mg (279.078 nm)	66.684700 o	ppm	0.025837	0.04	385069.000000	Y 377.433
Mn (257.610 nm)	1.087780	ppm	0.002443	0.22	254456.000000	Y 377.433
Mo (202.032 nm)	0.922063	ppm	0.000211	0.02	7940.720000	Y 377.433
Na (589.592 nm)	50.312800 o	ppm	0.071890	0.14	337411.000000	Y_R2 488.368
Na H (589.593 nm)	52.192758	ppm	0.512674	0.98	196327.123578	Y_R 488.368
Ni (231.604 nm)	0.506553	ppm	0.001526	0.30	3456.680000	Y 377.433
P (213.618 nm)	11.858000 o	ppm	0.021153	0.18	25792.000000	Y 242.219
Pb (220.353 nm)	0.518828	ppm	0.002544	0.49	1465.880000	Y 242.219
S (181.972 nm)	2.044249	ppm	0.008874	0.43	1063.766125	Y 377.433
Sb (206.834 nm)	0.301353	ppm	0.002206	0.73	773.537000	Y 377.433
Se (196.026 nm)	1.852490	ppm	0.000858	0.05	1845.460000	Y 242.219
Si (288.158 nm)	3.762980	ppm	0.004228	0.11	33271.300000	Y 377.433
Sn (189.925 nm)	1.793230	ppm	0.002121	0.12	3574.170000	Y 377.433
Sr (421.552 nm)	1.245908 o	ppm	0.010708	0.86	261568.379224	Y_R 488.368
Th (288.505 nm)	1.005470	ppm	0.004104	0.41	2748.240000	Y 377.433
Ti (336.122 nm)	4.120670 o	ppm	0.003058	0.07	586834.000000	Y 377.433
Tl (190.794 nm)	1.855950	ppm	0.003590	0.19	4052.760000	Y 377.433
U (409.013 nm)	1.861440	ppm	0.005920	0.32	8222.470000	Y 377.433
V (292.401 nm)	1.305630 o	ppm	0.001986	0.15	47400.200000	Y 377.433
Zn (206.200 nm)	0.663366	ppm	0.001539	0.23	3492.280000	Y 377.433
Zr (343.823 nm)	0.596501	ppm	0.000077	0.01	78675.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.039746	19838.571669	0.004103	0.39
Y 377.433	1.039899	1052573.322195	0.003147	0.30
Y_R 377.433	1.085280	81931.100000	0.018626	1.72
Y_R 488.368	1.068060	46760.100000	0.021030	1.97
Y_R2 488.368	1.073480	93158.240540	0.003199	0.30

Sample Name: 280-116011-B-13-H MSD

Date: 11/6/2018 2:07:22 PM
Rack:Tube: 1:13

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048258	ppm	0.000167	0.35	1638.290000	Y 377.433
Al (167.019 nm)	76.895000 o	ppm	0.146287	0.19	42922.300000	Y_R 377.433
Al H (396.152 nm)	97.003551	ppm	0.673531	0.69	244167.314017	Y_R 377.433
As (188.980 nm)	0.931781	ppm	0.003989	0.43	1171.020000	Y 242.219
B (249.678 nm)	1.014490	ppm	0.001772	0.17	25311.400000	Y 242.219
Ba (493.408 nm)	2.844110 o	ppm	0.007268	0.26	330079.000000	Y_R 488.368
Be (234.861 nm)	0.049241	ppm	0.000096	0.19	16827.700000	Y_R 488.368
Bi (223.061 nm)	1.825970	ppm	0.001882	0.10	4622.600000	Y 377.433
Ca (315.887 nm)	83.433056 o	ppm	0.290872	0.35	66093.702800	Y_R 377.433
Cd (214.439 nm)	0.092056	ppm	0.000016	0.02	5572.690000	Y 377.433
Co (228.615 nm)	0.475073	ppm	0.003305	0.70	8711.090000	Y 242.219
Cr (205.560 nm)	0.291489	ppm	0.000323	0.11	4411.210000	Y 377.433
Cu (324.754 nm)	0.271086	ppm	0.000224	0.08	14871.400000	Y 377.433
Fe (238.204 nm)	72.992660 o	ppm	0.225611	0.31	269990.747823	Y_R 377.433
Fe H (259.940 nm)	73.193500	ppm	0.237622	0.32	138471.000000	Y_R 377.433
K (766.491 nm)	77.973700	ppm	0.014572	0.02	89028.300000	Y_R2 488.368
Li (670.783 nm)	1.017780	ppm	0.000774	0.08	32590.000000	Y_R2 488.368
Mg (279.078 nm)	66.208700 o	ppm	0.052666	0.08	382325.000000	Y 377.433
Mn (257.610 nm)	1.129090 o	ppm	0.000983	0.09	264116.000000	Y 377.433
Mo (202.032 nm)	0.927341	ppm	0.002531	0.27	7986.180000	Y 377.433
Na (589.592 nm)	50.061200 o	ppm	0.068792	0.14	335650.000000	Y_R2 488.368
Na H (589.593 nm)	52.483246	ppm	0.027729	0.05	197342.727269	Y_R 488.368
Ni (231.604 nm)	0.503488	ppm	0.001468	0.29	3435.650000	Y 377.433
P (213.618 nm)	11.805100 o	ppm	0.043513	0.37	25677.000000	Y 242.219
Pb (220.353 nm)	0.520588	ppm	0.003134	0.60	1472.450000	Y 242.219
S (181.972 nm)	2.182941	ppm	0.000017	0.00	1134.897851	Y 377.433
Sb (206.834 nm)	0.305359	ppm	0.002046	0.67	785.602000	Y 377.433
Se (196.026 nm)	1.861790	ppm	0.001281	0.07	1855.220000	Y 242.219
Si (288.158 nm)	3.565470	ppm	0.004147	0.12	31573.800000	Y 377.433
Sn (189.925 nm)	1.814870	ppm	0.004614	0.25	3617.180000	Y 377.433
Sr (421.552 nm)	1.263340 o	ppm	0.004339	0.34	265225.839949	Y_R 488.368
Th (288.505 nm)	1.004430	ppm	0.006871	0.68	2745.110000	Y 377.433
Ti (336.122 nm)	4.045080 o	ppm	0.005879	0.15	576107.000000	Y 377.433
Tl (190.794 nm)	1.856690	ppm	0.001681	0.09	4054.780000	Y 377.433
U (409.013 nm)	1.851620	ppm	0.009464	0.51	8173.510000	Y 377.433
V (292.401 nm)	1.272870 o	ppm	0.001165	0.09	46210.500000	Y 377.433
Zn (206.200 nm)	0.711917	ppm	0.001115	0.16	3745.840000	Y 377.433
Zr (343.823 nm)	0.591010	ppm	0.001126	0.19	77945.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025879	19573.991515	0.000444	0.04
Y 377.433	1.025629	1038129.306992	0.002074	0.20
Y_R 377.433	1.079410	81487.500000	0.000483	0.04
Y_R 488.368	1.058780	46354.000000	0.000870	0.08
Y_R2 488.368	1.082887	93974.610753	0.000464	0.04

Sample Name: 280-116011-B-13-Fpds

Date: 11/6/2018 2:10:45 PM
Rack:Tube: 1:14

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011254	ppm	0.000060	0.54	-28.888400	Y 377.433
Al (167.019 nm)	53.364500 o	ppm	0.258607	0.48	29797.000000	Y_R 377.433
Al H (396.152 nm)	57.728365	ppm	0.124452	0.22	145295.436323	Y_R 377.433
As (188.980 nm)	0.203701	ppm	0.001381	0.68	254.227000	Y 242.219
B (249.678 nm)	0.136046	ppm	0.000337	0.25	3363.710000	Y 242.219
Ba (493.408 nm)	0.828698	ppm	0.004218	0.51	96645.200000	Y_R 488.368
Be (234.861 nm)	0.048707	ppm	0.000015	0.03	16429.200000	Y_R 488.368
Bi (223.061 nm)	-0.008519 u	ppm	0.001571	18.44	1.657840	Y 377.433
Ca (315.887 nm)	40.002820 o	ppm	0.150765	0.38	31657.234199	Y_R 377.433
Cd (214.439 nm)	0.047185	ppm	0.000151	0.32	2881.590000	Y 377.433
Co (228.615 nm)	0.067934	ppm	0.000063	0.09	1268.260000	Y 242.219
Cr (205.560 nm)	0.113061	ppm	0.000836	0.74	1699.310000	Y 377.433
Cu (324.754 nm)	0.077974	ppm	0.000383	0.49	4081.580000	Y 377.433
Fe (238.204 nm)	63.556143 o	ppm	0.202705	0.32	235089.458888	Y_R 377.433
Fe H (259.940 nm)	63.532800	ppm	0.167550	0.26	120194.000000	Y_R 377.433
K (766.491 nm)	40.653800	ppm	0.073731	0.18	46055.400000	Y_R2 488.368
Li (670.783 nm)	0.149421	ppm	0.000818	0.55	3629.610000	Y_R2 488.368
Mg (279.078 nm)	33.294300	ppm	0.022309	0.07	192246.000000	Y 377.433
Mn (257.610 nm)	0.560900	ppm	0.000567	0.10	131237.000000	Y 377.433
Mo (202.032 nm)	0.046772	ppm	0.000466	1.00	402.773000	Y 377.433
Na (589.592 nm)	20.377600 o	ppm	0.064389	0.32	136141.000000	Y_R2 488.368
Na H (589.593 nm)	21.132795	ppm	0.037219	0.18	80594.909415	Y_R 488.368
Ni (231.604 nm)	0.087631	ppm	0.000992	1.13	596.494000	Y 377.433
P (213.618 nm)	4.247040 o	ppm	0.018181	0.43	9253.350000	Y 242.219
Pb (220.353 nm)	0.143043	ppm	0.001793	1.25	401.495000	Y 242.219
S (181.972 nm)	0.195760	ppm	0.003351	1.71	115.789198	Y 377.433
Sb (206.834 nm)	0.093307	ppm	0.000332	0.36	214.370000	Y 377.433
Se (196.026 nm)	0.192615	ppm	0.000345	0.18	194.303000	Y 242.219
Si (288.158 nm)	6.481260	ppm	0.014852	0.23	56634.000000	Y 377.433
Sn (189.925 nm)	0.104536	ppm	0.000246	0.24	217.394000	Y 377.433
Sr (421.552 nm)	0.244319	ppm	0.000999	0.41	51418.227837	Y_R 488.368
Th (288.505 nm)	0.257853	ppm	0.002255	0.87	775.540000	Y 377.433
Ti (336.122 nm)	2.103230 o	ppm	0.001014	0.05	299425.000000	Y 377.433
Tl (190.794 nm)	0.192447	ppm	0.001488	0.77	406.815000	Y 377.433
U (409.013 nm)	0.433269	ppm	0.003265	0.75	1792.110000	Y 377.433
V (292.401 nm)	0.718313	ppm	0.000690	0.10	26119.300000	Y 377.433
Zn (206.200 nm)	0.372444	ppm	0.000580	0.16	1972.890000	Y 377.433
Zr (343.823 nm)	0.138685	ppm	0.000152	0.11	18444.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057103	20169.741201	0.002432	0.23
Y 377.433	1.057113	1069996.414632	0.003735	0.35
Y_R 377.433	1.114700	84151.900000	0.000700	0.06
Y_R 488.368	1.095400	47957.100000	0.002966	0.27
Y_R2 488.368	1.099311	95399.918478	0.002261	0.21

Sample Name: 280-116011-B-14-B

Date: 11/6/2018 2:14:08 PM Rack:Tube: 1:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000151	ppm	0.000016	10.71	-461.153000	Y 377.433
Al (167.019 nm)	45.502100 o	ppm	0.087624	0.19	25409.700000	Y_R 377.433
Al H (396.152 nm)	47.836712	ppm	0.305208	0.64	120402.767901	Y_R 377.433
As (188.980 nm)	0.015994	ppm	0.000418	2.61	17.896700	Y 242.219
B (249.678 nm)	0.041315	ppm	0.000185	0.45	1003.840000	Y 242.219
Ba (493.408 nm)	0.635368	ppm	0.001790	0.28	74243.300000	Y_R 488.368
Be (234.861 nm)	0.002354	ppm	0.000034	1.43	2439.120000	Y_R 488.368
Bi (223.061 nm)	-0.009770 u	ppm	0.000356	3.65	-2.438350	Y 377.433
Ca (315.887 nm)	17.078054 o	ppm	0.057939	0.34	13479.840826	Y_R 377.433
Cd (214.439 nm)	0.002184	ppm	0.000005	0.24	186.461000	Y 377.433
Co (228.615 nm)	0.018325	ppm	0.000058	0.32	367.077000	Y 242.219
Cr (205.560 nm)	0.064164	ppm	0.000109	0.17	957.006000	Y 377.433
Cu (324.754 nm)	0.028471	ppm	0.000083	0.29	1324.560000	Y 377.433
Fe (238.204 nm)	57.698969 o	ppm	0.050593	0.09	213426.494429	Y_R 377.433
Fe H (259.940 nm)	57.671100	ppm	0.136144	0.24	109105.000000	Y_R 377.433
K (766.491 nm)	18.919100	ppm	0.056296	0.30	21028.400000	Y_R2 488.368
Li (670.783 nm)	0.046057	ppm	0.000497	1.08	182.331000	Y_R2 488.368
Mg (279.078 nm)	13.468500	ppm	0.028334	0.21	77743.700000	Y 377.433
Mn (257.610 nm)	0.704216	ppm	0.001431	0.20	164753.000000	Y 377.433
Mo (202.032 nm)	0.000116 u	ppm	0.000265	> 100.00	0.968935	Y 377.433
Na (589.592 nm)	2.942310	ppm	0.009747	0.33	20953.100000	Y_R2 488.368
Na H (589.593 nm)	2.894733 u	ppm	0.039119	1.35	13597.021438	Y_R 488.368
Ni (231.604 nm)	0.043782	ppm	0.000749	1.71	296.921000	Y 377.433
P (213.618 nm)	2.191780	ppm	0.001265	0.06	4787.280000	Y 242.219
Pb (220.353 nm)	0.070728	ppm	0.001453	2.05	195.751000	Y 242.219
S (181.972 nm)	0.184748	ppm	0.003994	2.16	110.497935	Y 377.433
Sb (206.834 nm)	0.002936	ppm	0.002084	71.01	-30.546200	Y 377.433
Se (196.026 nm)	-0.000292 u	ppm	0.000254	87.09	3.395330	Y 242.219
Si (288.158 nm)	1.894060	ppm	0.004482	0.24	17208.500000	Y 377.433
Sn (189.925 nm)	0.011008	ppm	0.000111	1.00	31.479800	Y 377.433
Sr (421.552 nm)	0.165026	ppm	0.000293	0.18	34781.200237	Y_R 488.368
Th (288.505 nm)	0.061368	ppm	0.002962	4.83	250.385000	Y 377.433
Ti (336.122 nm)	2.027680 o	ppm	0.005729	0.28	288595.000000	Y 377.433
Tl (190.794 nm)	0.001122	ppm	0.001426	> 100.00	-13.230900	Y 377.433
U (409.013 nm)	-0.055468 u	ppm	0.004142	7.47	-414.903000	Y 377.433
V (292.401 nm)	0.239147	ppm	0.000292	0.12	8751.010000	Y 377.433
Zn (206.200 nm)	0.284587	ppm	0.001074	0.38	1514.050000	Y 377.433
Zr (343.823 nm)	0.077066	ppm	0.000241	0.31	10326.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067748	20372.853172	0.000495	0.05
Y 377.433	1.067337	1080345.396267	0.000518	0.05
Y_R 377.433	1.106300	83517.500000	0.003766	0.34
Y_R 488.368	1.087810	47625.100000	0.002535	0.23
Y_R2 488.368	1.086208	94262.821757	0.003260	0.30

Sample Name: 280-116011-B-15-D

Date: 11/6/2018 2:17:30 PM Rack:Tube: 1:16

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000180 u	ppm	0.000185	> 100.00	-504.361000	Y 377.433
Al (167.019 nm)	57.404100 o	ppm	0.110804	0.19	32052.700000	Y_R 377.433
Al H (396.152 nm)	62.479480	ppm	0.259411	0.42	157231.963462	Y_R 377.433
As (188.980 nm)	0.021913	ppm	0.001188	5.42	25.253700	Y 242.219
B (249.678 nm)	0.046129	ppm	0.000122	0.26	1108.090000	Y 242.219
Ba (493.408 nm)	0.832635	ppm	0.006236	0.75	97100.600000	Y_R 488.368
Be (234.861 nm)	0.002920	ppm	0.000040	1.37	2947.450000	Y_R 488.368
Bi (223.061 nm)	-0.007752 u	ppm	0.001319	17.01	4.436860	Y 377.433
Ca (315.887 nm)	18.316333 o	ppm	0.028103	0.15	14461.689447	Y_R 377.433
Cd (214.439 nm)	0.001370	ppm	0.000029	2.09	148.319000	Y 377.433
Co (228.615 nm)	0.027482	ppm	0.000070	0.25	544.502000	Y 242.219
Cr (205.560 nm)	0.073940	ppm	0.000946	1.28	1102.820000	Y 377.433
Cu (324.754 nm)	0.055352	ppm	0.000027	0.05	2833.040000	Y 377.433
Fe (238.204 nm)	68.713481 o	ppm	0.180595	0.26	254164.055916	Y_R 377.433
Fe H (259.940 nm)	68.715700	ppm	0.269725	0.39	130000.000000	Y_R 377.433
K (766.491 nm)	25.331900	ppm	0.008350	0.03	28412.500000	Y_R2 488.368
Li (670.783 nm)	0.056467	ppm	0.000759	1.34	529.506000	Y_R2 488.368
Mg (279.078 nm)	15.747800	ppm	0.019046	0.12	90891.400000	Y 377.433
Mn (257.610 nm)	0.954531	ppm	0.000765	0.08	223293.000000	Y 377.433
Mo (202.032 nm)	-0.000106 u	ppm	0.000100	94.34	-0.943883	Y 377.433
Na (589.592 nm)	2.558170	ppm	0.003196	0.12	18821.200000	Y_R2 488.368
Na H (589.593 nm)	2.443253 u	ppm	0.018315	0.75	12128.131565	Y_R 488.368
Ni (231.604 nm)	0.053246	ppm	0.000025	0.05	361.924000	Y 377.433
P (213.618 nm)	2.664590 o	ppm	0.022440	0.84	5814.700000	Y 242.219
Pb (220.353 nm)	0.050296	ppm	0.001342	2.67	133.344000	Y 242.219
S (181.972 nm)	0.155262	ppm	0.007826	5.04	96.004163	Y 377.433
Sb (206.834 nm)	-0.001371 u	ppm	0.001273	92.90	-45.760600	Y 377.433
Se (196.026 nm)	-0.002821 u	ppm	0.000276	9.77	-0.733405	Y 242.219
Si (288.158 nm)	2.176480	ppm	0.003788	0.17	19635.800000	Y 377.433
Sn (189.925 nm)	0.012349	ppm	0.001488	12.05	34.145200	Y 377.433
Sr (421.552 nm)	0.200168	ppm	0.001116	0.56	42154.580287	Y_R 488.368
Th (288.505 nm)	0.074584	ppm	0.003809	5.11	296.143000	Y 377.433
Ti (336.122 nm)	2.354180 o	ppm	0.004149	0.18	335096.000000	Y 377.433
Tl (190.794 nm)	0.001134	ppm	0.000206	18.20	-14.896700	Y 377.433
U (409.013 nm)	-0.063714 u	ppm	0.001346	2.11	-444.071000	Y 377.433
V (292.401 nm)	0.437694	ppm	0.000844	0.19	15963.100000	Y 377.433
Zn (206.200 nm)	0.190402	ppm	0.000628	0.33	1022.150000	Y 377.433
Zr (343.823 nm)	0.099148	ppm	0.000110	0.11	13261.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.066061	20340.668917	0.000187	0.02
Y 377.433	1.064086	1077055.182711	0.001494	0.14
Y_R 377.433	1.109680	83773.200000	0.006155	0.55
Y_R 488.368	1.091210	47773.700000	0.009629	0.88
Y_R2 488.368	1.096077	95119.305772	0.002232	0.20

Sample Name: 280-116011-B-15-E MS

Date: 11/6/2018 2:20:52 PM
Rack:Tube: 1:17

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.047978	ppm	0.000281	0.58	1695.630000	Y 377.433
Al (167.019 nm)	71.228600 o	ppm	0.431814	0.61	39755.500000	Y_R 377.433
Al H (396.152 nm)	81.339266	ppm	0.387174	0.48	204762.421460	Y_R 377.433
As (188.980 nm)	0.922877	ppm	0.000364	0.04	1159.910000	Y 242.219
B (249.678 nm)	1.004950	ppm	0.002673	0.27	25090.200000	Y 242.219
Ba (493.408 nm)	2.662930 o	ppm	0.013819	0.52	309081.000000	Y_R 488.368
Be (234.861 nm)	0.047640	ppm	0.000002	0.00	15998.500000	Y_R 488.368
Bi (223.061 nm)	1.825410	ppm	0.003669	0.20	4619.340000	Y 377.433
Ca (315.887 nm)	67.086647 o	ppm	0.399075	0.59	53132.406422	Y_R 377.433
Cd (214.439 nm)	0.093454	ppm	0.000209	0.22	5645.370000	Y 377.433
Co (228.615 nm)	0.478725	ppm	0.001286	0.27	8761.530000	Y 242.219
Cr (205.560 nm)	0.278323	ppm	0.001343	0.48	4213.890000	Y 377.433
Cu (324.754 nm)	0.275880	ppm	0.001033	0.37	15138.300000	Y 377.433
Fe (238.204 nm)	61.617249 o	ppm	0.354777	0.58	227918.392030	Y_R 377.433
Fe H (259.940 nm)	61.514400	ppm	0.297827	0.48	116376.000000	Y_R 377.433
K (766.491 nm)	74.697600	ppm	0.060669	0.08	85256.000000	Y_R2 488.368
Li (670.783 nm)	1.004380	ppm	0.001510	0.15	32143.100000	Y_R2 488.368
Mg (279.078 nm)	62.663200 o	ppm	0.109971	0.18	361863.000000	Y 377.433
Mn (257.610 nm)	1.320910 o	ppm	0.003522	0.27	308976.000000	Y 377.433
Mo (202.032 nm)	0.929748	ppm	0.002609	0.28	8006.910000	Y 377.433
Na (589.592 nm)	50.749500 o	ppm	0.064475	0.13	339817.000000	Y_R2 488.368
Na H (589.593 nm)	52.427115	ppm	0.203541	0.39	196966.878076	Y_R 488.368
Ni (231.604 nm)	0.502579	ppm	0.000894	0.18	3429.010000	Y 377.433
P (213.618 nm)	11.364400 o	ppm	0.020865	0.18	24719.400000	Y 242.219
Pb (220.353 nm)	0.513480	ppm	0.001097	0.21	1456.210000	Y 242.219
S (181.972 nm)	2.013291	ppm	0.009827	0.49	1048.475585	Y 377.433
Sb (206.834 nm)	0.303380	ppm	0.001952	0.64	783.604000	Y 377.433
Se (196.026 nm)	1.852320	ppm	0.000977	0.05	1847.790000	Y 242.219
Si (288.158 nm)	3.733040	ppm	0.020286	0.54	33013.900000	Y 377.433
Sn (189.925 nm)	1.824200	ppm	0.009184	0.50	3635.720000	Y 377.433
Sr (421.552 nm)	1.169807 o	ppm	0.003700	0.32	245601.146340	Y_R 488.368
Th (288.505 nm)	0.997640	ppm	0.006167	0.62	2715.620000	Y 377.433
Ti (336.122 nm)	3.601290 o	ppm	0.011480	0.32	512854.000000	Y 377.433
Tl (190.794 nm)	1.867950	ppm	0.008046	0.43	4081.790000	Y 377.433
U (409.013 nm)	1.870370	ppm	0.011795	0.63	8252.150000	Y 377.433
V (292.401 nm)	0.826260	ppm	0.000088	0.01	29993.500000	Y 377.433
Zn (206.200 nm)	0.644216	ppm	0.003242	0.50	3392.270000	Y 377.433
Zr (343.823 nm)	0.576694	ppm	0.001965	0.34	76030.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030268	19657.734173	0.000672	0.07
Y 377.433	1.028546	1041081.250723	0.000209	0.02
Y_R 377.433	1.096040	82742.900000	0.003338	0.30
Y_R 488.368	1.079150	47245.600000	0.002924	0.27
Y_R2 488.368	1.076297	93402.774996	0.004697	0.44

Sample Name: 280-116011-B-15-F MSD

Date: 11/6/2018 2:24:15 PM
Rack:Tube: 1:18
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048301	ppm	0.000216	0.45	1704.050000	Y 377.433
Al (167.019 nm)	79.942100 o	ppm	2.059880	2.58	44620.800000	Y_R 377.433
Al H (396.152 nm)	96.480047	ppm	0.906687	0.94	242844.377035	Y_R 377.433
As (188.980 nm)	0.932097	ppm	0.007535	0.81	1171.430000	Y 242.219
B (249.678 nm)	1.019330	ppm	0.000677	0.07	25433.400000	Y 242.219
Ba (493.408 nm)	2.855650 o	ppm	0.033584	1.18	331412.000000	Y_R 488.368
Be (234.861 nm)	0.049332	ppm	0.000620	1.26	16836.800000	Y_R 488.368
Bi (223.061 nm)	1.824640	ppm	0.003403	0.19	4619.170000	Y 377.433
Ca (315.887 nm)	68.907357 o	ppm	0.910957	1.32	54576.072815	Y_R 377.433
Cd (214.439 nm)	0.093412	ppm	0.000006	0.01	5653.180000	Y 377.433
Co (228.615 nm)	0.482882	ppm	0.002560	0.53	8850.040000	Y 242.219
Cr (205.560 nm)	0.290178	ppm	0.000749	0.26	4391.410000	Y 377.433
Cu (324.754 nm)	0.287351	ppm	0.000006	0.00	15786.000000	Y 377.433
Fe (238.204 nm)	72.426075 o	ppm	0.598115	0.83	267895.212130	Y_R 377.433
Fe H (259.940 nm)	72.465700	ppm	0.385782	0.53	137094.000000	Y_R 377.433
K (766.491 nm)	79.834600	ppm	0.277839	0.35	91171.100000	Y_R2 488.368
Li (670.783 nm)	1.017100	ppm	0.004236	0.42	32567.300000	Y_R2 488.368
Mg (279.078 nm)	65.717600 o	ppm	0.039370	0.06	379488.000000	Y 377.433
Mn (257.610 nm)	1.439790 o	ppm	0.001377	0.10	336778.000000	Y 377.433
Mo (202.032 nm)	0.928753	ppm	0.000670	0.07	7998.330000	Y 377.433
Na (589.592 nm)	51.216100 o	ppm	0.085594	0.17	343277.000000	Y_R2 488.368
Na H (589.593 nm)	53.569290	ppm	0.358462	0.67	201332.239375	Y_R 488.368
Ni (231.604 nm)	0.512225	ppm	0.000625	0.12	3495.240000	Y 377.433
P (213.618 nm)	11.797500 o	ppm	0.013277	0.11	25660.400000	Y 242.219
Pb (220.353 nm)	0.520919	ppm	0.001882	0.36	1473.590000	Y 242.219
S (181.972 nm)	2.019781	ppm	0.001416	0.07	1052.085550	Y 377.433
Sb (206.834 nm)	0.291388	ppm	0.000194	0.07	747.442000	Y 377.433
Se (196.026 nm)	1.851000	ppm	0.000417	0.02	1844.820000	Y 242.219
Si (288.158 nm)	3.959450	ppm	0.004980	0.13	34959.900000	Y 377.433
Sn (189.925 nm)	1.809710	ppm	0.005248	0.29	3606.910000	Y 377.433
Sr (421.552 nm)	1.215365 o	ppm	0.005573	0.46	255160.004291	Y_R 488.368
Th (288.505 nm)	1.006780	ppm	0.003978	0.40	2743.210000	Y 377.433
Ti (336.122 nm)	3.978010 o	ppm	0.010095	0.25	566510.000000	Y 377.433
Tl (190.794 nm)	1.865590	ppm	0.000906	0.05	4074.700000	Y 377.433
U (409.013 nm)	1.872550	ppm	0.001229	0.07	8270.200000	Y 377.433
V (292.401 nm)	0.886289	ppm	0.001105	0.12	32178.600000	Y 377.433
Zn (206.200 nm)	0.664232	ppm	0.000051	0.01	3496.800000	Y 377.433
Zr (343.823 nm)	0.593938	ppm	0.000069	0.01	78328.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.039136	19826.932454	0.003613	0.35
Y 377.433	1.039344	1052010.938303	0.001106	0.11
Y_R 377.433	1.085910	81978.500000	0.019654	1.81
Y_R 488.368	1.068310	46771.100000	0.014548	1.36
Y_R2 488.368	1.052620	91347.994293	0.002586	0.25

Sample Name: 280-116011-B-23-C

Date: 11/6/2018 2:27:37 PM
Rack:Tube: 1:19

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000067 u	ppm	0.000176	> 100.00	-549.403000	Y 377.433
Al (167.019 nm)	20.290400 o	ppm	0.019688	0.10	11338.800000	Y_R 377.433
Al H (396.152 nm)	20.235343	ppm	0.057170	0.28	50987.453631	Y_R 377.433
As (188.980 nm)	0.015567	ppm	0.001769	11.36	17.550700	Y 242.219
B (249.678 nm)	0.018589	ppm	0.000152	0.82	468.329000	Y 242.219
Ba (493.408 nm)	0.316669	ppm	0.002394	0.76	37315.500000	Y_R 488.368
Be (234.861 nm)	0.001301	ppm	0.000036	2.75	1451.900000	Y_R 488.368
Bi (223.061 nm)	-0.008467 u	ppm	0.001087	12.84	-2.713260	Y 377.433
Ca (315.887 nm)	31.115741 o	ppm	0.043870	0.14	24610.518522	Y_R 377.433
Cd (214.439 nm)	0.000261	ppm	0.000127	48.66	50.779800	Y 377.433
Co (228.615 nm)	0.011304	ppm	0.000071	0.63	200.074000	Y 242.219
Cr (205.560 nm)	0.032115	ppm	0.000021	0.06	475.096000	Y 377.433
Cu (324.754 nm)	0.032309	ppm	0.000108	0.33	1512.780000	Y 377.433
Fe (238.204 nm)	35.991539 o	ppm	0.043468	0.12	133140.803986	Y_R 377.433
Fe H (259.940 nm)	36.209500	ppm	0.030122	0.08	68504.300000	Y_R 377.433
K (766.491 nm)	5.626200	ppm	0.051422	0.91	5721.850000	Y_R2 488.368
Li (670.783 nm)	0.021041	ppm	0.000112	0.53	-651.974000	Y_R2 488.368
Mg (279.078 nm)	5.296460	ppm	0.008120	0.15	30574.100000	Y 377.433
Mn (257.610 nm)	0.286812	ppm	0.001306	0.46	67137.100000	Y 377.433
Mo (202.032 nm)	0.000424	ppm	0.000162	38.23	3.620760	Y 377.433
Na (589.592 nm)	0.826748	ppm	0.004767	0.58	6381.080000	Y_R2 488.368
Na H (589.593 nm)	0.778626 u	ppm	0.005376	0.69	5545.103454	Y_R 488.368
Ni (231.604 nm)	0.022969	ppm	0.000460	2.00	154.052000	Y 377.433
P (213.618 nm)	1.621490	ppm	0.006879	0.42	3548.040000	Y 242.219
Pb (220.353 nm)	0.041967	ppm	0.000053	0.13	120.341000	Y 242.219
S (181.972 nm)	0.166866	ppm	0.002166	1.30	100.326748	Y 377.433
Sb (206.834 nm)	0.000398 u	ppm	0.001917	> 100.00	-31.201800	Y 377.433
Se (196.026 nm)	0.000934	ppm	0.000349	37.38	7.757800	Y 242.219
Si (288.158 nm)	1.606000	ppm	0.003494	0.22	14732.700000	Y 377.433
Sn (189.925 nm)	0.010916	ppm	0.001552	14.22	31.297200	Y 377.433
Sr (421.552 nm)	0.155133	ppm	0.001265	0.82	32705.474157	Y_R 488.368
Th (288.505 nm)	0.047055	ppm	0.001004	2.13	222.348000	Y 377.433
Ti (336.122 nm)	0.901159	ppm	0.001908	0.21	128206.000000	Y 377.433
Tl (190.794 nm)	0.002475	ppm	0.001101	44.47	-4.760330	Y 377.433
U (409.013 nm)	-0.045185 u	ppm	0.001318	2.92	-387.827000	Y 377.433
V (292.401 nm)	0.661671	ppm	0.001310	0.20	24062.100000	Y 377.433
Zn (206.200 nm)	0.092970	ppm	0.000039	0.04	513.290000	Y 377.433
Zr (343.823 nm)	0.036480	ppm	0.000104	0.29	4926.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065299	20326.134640	0.002720	0.26
Y 377.433	1.066186	1079180.355344	0.003113	0.29
Y_R 377.433	1.121070	84632.700000	0.001377	0.12
Y_R 488.368	1.101050	48204.500000	0.003585	0.33
Y_R2 488.368	1.093158	94865.976833	0.001660	0.15

Sample Name: 280-116011-B-24-C

Date: 11/6/2018 2:31:00 PM
Rack:Tube: 1:20

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000190 u	ppm	0.000174	91.38	-557.058000	Y 377.433
Al (167.019 nm)	14.031000 o	ppm	0.064666	0.46	7841.870000	Y_R 377.433
Al H (396.152 nm)	13.751864	ppm	0.037084	0.27	34670.079185	Y_R 377.433
As (188.980 nm)	0.011318	ppm	0.001580	13.96	12.293800	Y 242.219
B (249.678 nm)	0.010671	ppm	0.000014	0.14	286.422000	Y 242.219
Ba (493.408 nm)	0.202806	ppm	0.000368	0.18	24112.800000	Y_R 488.368
Be (234.861 nm)	0.001000	ppm	0.000034	3.41	1031.110000	Y_R 488.368
Bi (223.061 nm)	-0.006739 u	ppm	0.000659	9.78	-0.111804	Y 377.433
Ca (315.887 nm)	7.113636	ppm	0.035912	0.50	5578.912271	Y_R 377.433
Cd (214.439 nm)	0.000188	ppm	0.000071	37.94	36.151900	Y 377.433
Co (228.615 nm)	0.009577	ppm	0.000126	1.32	159.901000	Y 242.219
Cr (205.560 nm)	0.020468	ppm	0.000028	0.14	300.727000	Y 377.433
Cu (324.754 nm)	0.021267	ppm	0.000003	0.01	905.863000	Y 377.433
Fe (238.204 nm)	25.281093 o	ppm	0.050521	0.20	93527.846913	Y_R 377.433
Fe H (259.940 nm)	25.385100	ppm	0.108427	0.43	48026.700000	Y_R 377.433
K (766.491 nm)	3.875210	ppm	0.012751	0.33	3705.630000	Y_R2 488.368
Li (670.783 nm)	0.016014	ppm	0.001293	8.08	-819.611000	Y_R2 488.368
Mg (279.078 nm)	3.343580	ppm	0.001721	0.05	19311.300000	Y 377.433
Mn (257.610 nm)	0.171536	ppm	0.000008	0.00	40178.000000	Y 377.433
Mo (202.032 nm)	-0.000057 u	ppm	0.000155	> 100.00	-0.515095	Y 377.433
Na (589.592 nm)	0.536151	ppm	0.002552	0.48	4237.950000	Y_R2 488.368
Na H (589.593 nm)	0.340120 u	ppm	0.014509	4.27	3831.551138	Y_R 488.368
Ni (231.604 nm)	0.016962	ppm	0.001020	6.01	112.637000	Y 377.433
P (213.618 nm)	1.202640	ppm	0.000840	0.07	2637.900000	Y 242.219
Pb (220.353 nm)	0.030760	ppm	0.000755	2.45	89.376500	Y 242.219
S (181.972 nm)	0.122215	ppm	0.002425	1.98	77.179153	Y 377.433
Sb (206.834 nm)	0.000694 u	ppm	0.001179	> 100.00	-27.730400	Y 377.433
Se (196.026 nm)	-0.002680 u	ppm	0.005535	> 100.00	5.972120	Y 242.219
Si (288.158 nm)	1.510950	ppm	0.004334	0.29	13915.800000	Y 377.433
Sn (189.925 nm)	0.009409	ppm	0.001094	11.63	28.299900	Y 377.433
Sr (421.552 nm)	0.052542	ppm	0.000166	0.32	11180.296387	Y_R 488.368
Th (288.505 nm)	0.038745	ppm	0.001441	3.72	199.204000	Y 377.433
Ti (336.122 nm)	0.649968	ppm	0.000422	0.06	92358.200000	Y 377.433
Tl (190.794 nm)	0.000269 u	ppm	0.001255	> 100.00	-8.229460	Y 377.433
U (409.013 nm)	-0.036290 u	ppm	0.003365	9.27	-351.940000	Y 377.433
V (292.401 nm)	0.659481	ppm	0.000289	0.04	23979.900000	Y 377.433
Zn (206.200 nm)	0.066929	ppm	0.000542	0.81	377.285000	Y 377.433
Zr (343.823 nm)	0.025102	ppm	0.000006	0.02	3399.890000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064535	20311.556053	0.000429	0.04
Y 377.433	1.067078	1080083.475385	0.001874	0.18
Y_R 377.433	1.116150	84261.200000	0.005036	0.45
Y_R 488.368	1.098860	48108.800000	0.006166	0.56
Y_R2 488.368	1.105807	95963.676051	0.001434	0.13

Sample Name: CCVH-5408055

Date: 11/6/2018 2:34:24 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001780 u	ppm	0.000144	8.11	-769.988000	Y 377.433
Al (167.019 nm)	47.207900 o	ppm	0.037684	0.08	26355.300000	Y_R 377.433
Al H (396.152 nm)	49.686930	ppm	0.250652	0.50	125048.916883	Y_R 377.433
As (188.980 nm)	-0.000739 u	ppm	0.000151	20.47	-3.104000	Y 242.219
B (249.678 nm)	-0.000171 u	ppm	0.000048	28.15	-21.275100	Y 242.219
Ba (493.408 nm)	0.000231	ppm	0.000267	> 100.00	672.109000	Y_R 488.368
Be (234.861 nm)	-0.000046 u	ppm	0.000001	2.71	1479.640000	Y_R 488.368
Bi (223.061 nm)	0.984096	ppm	0.001578	0.16	2498.900000	Y 377.433
Ca (315.887 nm)	-0.011243 u	ppm	0.004594	40.86	-70.503799	Y_R 377.433
Cd (214.439 nm)	-0.000355 u	ppm	0.000039	10.99	27.012500	Y 377.433
Co (228.615 nm)	0.002897	ppm	0.000092	3.18	16.042700	Y 242.219
Cr (205.560 nm)	0.000046 u	ppm	0.000073	> 100.00	-16.836900	Y 377.433
Cu (324.754 nm)	-0.005200 u	ppm	0.000209	4.01	-259.749000	Y 377.433
Fe (238.204 nm)	49.768251 o	ppm	0.015170	0.03	184094.456080	Y_R 377.433
Fe H (259.940 nm)	49.707800	ppm	0.101707	0.20	94040.500000	Y_R 377.433
K (766.491 nm)	0.127038	ppm	0.035112	27.64	-610.308000	Y_R2 488.368
Li (670.783 nm)	0.003811	ppm	0.000312	8.19	-1226.600000	Y_R2 488.368
Mg (279.078 nm)	-0.022691 u	ppm	0.001301	5.73	-445.745000	Y 377.433
Mn (257.610 nm)	0.001410	ppm	0.000008	0.56	391.551000	Y 377.433
Mo (202.032 nm)	-0.000290 u	ppm	0.000107	36.75	-2.528540	Y 377.433
Na (589.592 nm)	245.605000 o	ppm	1.936980	0.79	1617440.000000	Y_R2 488.368
Na H (589.593 nm)	254.244488	ppm	1.192375	0.47	933842.896912	Y_R 488.368
Ni (231.604 nm)	0.004195	ppm	0.000154	3.68	26.544300	Y 377.433
P (213.618 nm)	-0.002120 u	ppm	0.003858	> 100.00	19.950300	Y 242.219
Pb (220.353 nm)	-0.003688 u	ppm	0.002107	57.11	9.712300	Y 242.219
S (181.972 nm)	4.948409	ppm	0.009237	0.19	2548.497630	Y 377.433
Sb (206.834 nm)	-0.005067 u	ppm	0.001908	37.66	-82.570600	Y 377.433
Se (196.026 nm)	-0.001404 u	ppm	0.000608	43.32	2.722770	Y 242.219
Si (288.158 nm)	0.015844	ppm	0.000716	4.52	1065.830000	Y 377.433
Sn (189.925 nm)	0.000155 u	ppm	0.000396	> 100.00	9.905520	Y 377.433
Sr (421.552 nm)	0.000324	ppm	0.000014	4.20	224.079458	Y_R 488.368
Th (288.505 nm)	4.956200	ppm	0.022278	0.45	12955.200000	Y 377.433
Ti (336.122 nm)	0.001187	ppm	0.000104	8.77	-58.945000	Y 377.433
Tl (190.794 nm)	-0.004224 u	ppm	0.000004	0.11	-15.926800	Y 377.433
U (409.013 nm)	10.112800	ppm	0.006413	0.06	45583.800000	Y 377.433
V (292.401 nm)	0.003327	ppm	0.000044	1.32	-11.994400	Y 377.433
Zn (206.200 nm)	-0.004520 u	ppm	0.000191	4.22	4.133140	Y 377.433
Zr (343.823 nm)	-0.004535 u	ppm	0.000054	1.19	-426.256000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004989	19175.411464	0.005445	0.54
Y 377.433	1.000066	1012254.511049	0.005067	0.51
Y_R 377.433	1.059220	79963.400000	0.009996	0.94
Y_R 488.368	1.046980	45837.400000	0.008021	0.77
Y_R2 488.368	1.055568	91603.828078	0.007536	0.71

Sample Name: CCV-5407546

Date: 11/6/2018 2:37:47 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.492732	ppm	0.000617	0.13	22131.900000	Y 377.433
Al (167.019 nm)	0.542569	ppm	0.000365	0.07	306.547000	Y_R 377.433
Al H (396.152 nm)	0.499605 u	ppm	0.003266	0.65	1377.754496	Y_R 377.433
As (188.980 nm)	0.995099	ppm	0.003691	0.37	1251.380000	Y 242.219
B (249.678 nm)	0.494401	ppm	0.000392	0.08	12425.400000	Y 242.219
Ba (493.408 nm)	0.494459	ppm	0.001427	0.29	57879.000000	Y_R 488.368
Be (234.861 nm)	0.483964	ppm	0.002188	0.45	144226.000000	Y_R 488.368
Bi (223.061 nm)	-0.002080 u	ppm	0.000837	40.23	7.919910	Y 377.433
Ca (315.887 nm)	5.099604	ppm	0.022020	0.43	3982.237469	Y_R 377.433
Cd (214.439 nm)	0.495841	ppm	0.001995	0.40	29638.300000	Y 377.433
Co (228.615 nm)	0.498790	ppm	0.001404	0.28	9015.180000	Y 242.219
Cr (205.560 nm)	0.494092	ppm	0.002946	0.60	7511.520000	Y 377.433
Cu (324.754 nm)	0.494080	ppm	0.000959	0.19	27241.300000	Y 377.433
Fe (238.204 nm)	2.540194	ppm	0.002624	0.10	9419.833690	Y_R 377.433
Fe H (259.940 nm)	2.542090 u	ppm	0.006195	0.24	4812.350000	Y_R 377.433
K (766.491 nm)	49.724900	ppm	0.323415	0.65	56500.500000	Y_R2 488.368
Li (670.783 nm)	0.991027	ppm	0.002542	0.26	31697.800000	Y_R2 488.368
Mg (279.078 nm)	19.622600	ppm	0.002447	0.01	113385.000000	Y 377.433
Mn (257.610 nm)	0.499643	ppm	0.000114	0.02	116911.000000	Y 377.433
Mo (202.032 nm)	0.500066	ppm	0.000557	0.11	4306.510000	Y 377.433
Na (589.592 nm)	5.021250	ppm	0.012164	0.24	34356.900000	Y_R2 488.368
Na H (589.593 nm)	5.527079 u	ppm	0.013288	0.24	23108.241285	Y_R 488.368
Ni (231.604 nm)	0.499516	ppm	0.000433	0.09	3404.690000	Y 377.433
P (213.618 nm)	0.980750	ppm	0.002878	0.29	2155.720000	Y 242.219
Pb (220.353 nm)	1.009690	ppm	0.004432	0.44	2897.460000	Y 242.219
S (181.972 nm)	0.004374 u	ppm	0.006787	> 100.00	17.623941	Y 377.433
Sb (206.834 nm)	1.006260	ppm	0.000368	0.04	2740.060000	Y 377.433
Se (196.026 nm)	0.980168	ppm	0.000823	0.08	988.498000	Y 242.219
Si (288.158 nm)	4.943530	ppm	0.026246	0.53	43417.700000	Y 377.433
Sn (189.925 nm)	0.992099	ppm	0.001013	0.10	1981.680000	Y 377.433
Sr (421.552 nm)	0.497975	ppm	0.001211	0.24	104639.592588	Y_R 488.368
Th (288.505 nm)	0.009599	ppm	0.001378	14.36	113.668000	Y 377.433
Ti (336.122 nm)	0.497762	ppm	0.000216	0.04	70675.700000	Y 377.433
Tl (190.794 nm)	1.006130	ppm	0.000950	0.09	2204.200000	Y 377.433
U (409.013 nm)	0.002252 u	ppm	0.003878	> 100.00	-234.424000	Y 377.433
V (292.401 nm)	0.495572	ppm	0.000040	0.01	17899.400000	Y 377.433
Zn (206.200 nm)	0.492164	ppm	0.000351	0.07	2598.150000	Y 377.433
Zr (343.823 nm)	0.498755	ppm	0.000296	0.06	65612.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.020870	19478.419808	0.000297	0.03
Y 377.433	1.023982	1036462.211018	0.000298	0.03
Y_R 377.433	1.063820	80311.100000	0.007727	0.73
Y_R 488.368	1.046420	45812.900000	0.006617	0.63
Y_R2 488.368	1.049449	91072.818130	0.005724	0.55

Sample Name: CCB

Date: 11/6/2018 2:41:08 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000072 u	ppm	0.000266	> 100.00	-441.419000	Y 377.433
Al (167.019 nm)	-0.000164 u	ppm	0.002107	> 100.00	2.262720	Y_R 377.433
Al H (396.152 nm)	-0.018904 u	ppm	0.002674	14.15	31.480507	Y_R 377.433
As (188.980 nm)	-0.003271 u	ppm	0.001273	38.91	-5.856770	Y 242.219
B (249.678 nm)	0.001013	ppm	0.000208	20.58	82.434500	Y 242.219
Ba (493.408 nm)	-0.000272 u	ppm	0.000127	46.72	567.973000	Y_R 488.368
Be (234.861 nm)	0.000055	ppm	0.000004	7.93	-30.074100	Y_R 488.368
Bi (223.061 nm)	0.000406 u	ppm	0.001862	> 100.00	13.764000	Y 377.433
Ca (315.887 nm)	0.003756 u	ppm	0.008105	> 100.00	-58.610930	Y_R 377.433
Cd (214.439 nm)	0.000084	ppm	0.000013	15.29	5.904580	Y 377.433
Co (228.615 nm)	-0.000123 u	ppm	0.000281	> 100.00	-38.674800	Y 242.219
Cr (205.560 nm)	0.000272	ppm	0.000167	61.67	0.175295	Y 377.433
Cu (324.754 nm)	0.000123 u	ppm	0.000247	> 100.00	-284.419000	Y 377.433
Fe (238.204 nm)	-0.000462 u	ppm	0.000351	76.05	23.130826	Y_R 377.433
Fe H (259.940 nm)	0.005082 u	ppm	0.000336	6.61	12.846500	Y_R 377.433
K (766.491 nm)	0.072009	ppm	0.022709	31.54	-673.673000	Y_R2 488.368
Li (670.783 nm)	0.002154	ppm	0.002356	> 100.00	-1281.850000	Y_R2 488.368
Mg (279.078 nm)	0.001942	ppm	0.001714	88.26	50.666000	Y 377.433
Mn (257.610 nm)	0.000035	ppm	0.000001	3.57	70.011500	Y 377.433
Mo (202.032 nm)	-0.000167 u	ppm	0.000037	21.92	-1.465560	Y 377.433
Na (589.592 nm)	0.003549	ppm	0.000982	27.66	321.684000	Y_R2 488.368
Na H (589.593 nm)	-0.235297 u	ppm	0.010866	4.62	1532.696535	Y_R 488.368
Ni (231.604 nm)	0.000248 u	ppm	0.000423	> 100.00	-2.405550	Y 377.433
P (213.618 nm)	-0.000420 u	ppm	0.002901	> 100.00	23.645000	Y 242.219
Pb (220.353 nm)	-0.000029 u	ppm	0.001872	> 100.00	3.341310	Y 242.219
S (181.972 nm)	-0.002403 u	ppm	0.003763	> 100.00	12.941475	Y 377.433
Sb (206.834 nm)	-0.000852 u	ppm	0.000259	30.37	-25.556000	Y 377.433
Se (196.026 nm)	-0.000699 u	ppm	0.004843	> 100.00	12.294600	Y 242.219
Si (288.158 nm)	-0.002254 u	ppm	0.001413	62.68	910.283000	Y 377.433
Sn (189.925 nm)	-0.001173 u	ppm	0.001231	> 100.00	7.266610	Y 377.433
Sr (421.552 nm)	0.000078	ppm	0.000051	65.29	172.278793	Y_R 488.368
Th (288.505 nm)	0.002939	ppm	0.000989	33.65	80.457500	Y 377.433
Ti (336.122 nm)	-0.000072 u	ppm	0.000064	88.79	-238.482000	Y 377.433
Tl (190.794 nm)	0.001497	ppm	0.000808	53.94	-2.054370	Y 377.433
U (409.013 nm)	-0.000633 u	ppm	0.005417	> 100.00	-210.464000	Y 377.433
V (292.401 nm)	-0.000122 u	ppm	0.000265	> 100.00	30.960600	Y 377.433
Zn (206.200 nm)	-0.005683 u	ppm	0.000109	1.91	-1.938410	Y 377.433
Zr (343.823 nm)	-0.000027 u	ppm	0.000034	> 100.00	23.129500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019485	19451.983415	0.002398	0.24
Y 377.433	1.022026	1034481.771888	0.002562	0.25
Y_R 377.433	1.038170	78374.900000	0.000085	0.01
Y_R 488.368	1.014070	44396.700000	0.001645	0.16
Y_R2 488.368	1.030025	89387.217905	0.005817	0.56

Sample Name: CCVL-5413446

Date: 11/6/2018 2:44:31 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009777	ppm	0.000054	0.55	3.630940	Y 377.433
Al (167.019 nm)	0.102535	ppm	0.000324	0.32	59.588400	Y_R 377.433
Al H (396.152 nm)	0.081226 u	ppm	0.008742	10.76	284.973447	Y_R 377.433
As (188.980 nm)	0.015715	ppm	0.000465	2.96	18.052700	Y 242.219
B (249.678 nm)	0.102169	ppm	0.000018	0.02	2609.590000	Y 242.219
Ba (493.408 nm)	0.010097	ppm	0.000616	6.10	1768.950000	Y_R 488.368
Be (234.861 nm)	0.000985	ppm	0.000027	2.72	249.415000	Y_R 488.368
Bi (223.061 nm)	0.101078	ppm	0.002336	2.31	267.284000	Y 377.433
Ca (315.887 nm)	0.204376	ppm	0.007498	3.67	100.465811	Y_R 377.433
Cd (214.439 nm)	0.005232	ppm	0.000019	0.37	313.709000	Y 377.433
Co (228.615 nm)	0.010466	ppm	0.000475	4.54	153.462000	Y 242.219
Cr (205.560 nm)	0.010452	ppm	0.000163	1.56	155.076000	Y 377.433
Cu (324.754 nm)	0.015871	ppm	0.000080	0.51	591.139000	Y 377.433
Fe (238.204 nm)	0.101820	ppm	0.000578	0.57	401.424135	Y_R 377.433
Fe H (259.940 nm)	0.103815 u	ppm	0.000159	0.15	199.630000	Y_R 377.433
K (766.491 nm)	3.270820	ppm	0.061483	1.88	3009.690000	Y_R2 488.368
Li (670.783 nm)	0.023925	ppm	0.000839	3.51	-555.796000	Y_R2 488.368
Mg (279.078 nm)	0.200534	ppm	0.000311	0.16	1196.760000	Y 377.433
Mn (257.610 nm)	0.010483	ppm	0.000003	0.03	2513.480000	Y 377.433
Mo (202.032 nm)	0.019399	ppm	0.000391	2.01	167.033000	Y 377.433
Na (589.592 nm)	1.071470	ppm	0.004877	0.46	7372.990000	Y_R2 488.368
Na H (589.593 nm)	0.949448 u	ppm	0.058052	6.11	5882.314056	Y_R 488.368
Ni (231.604 nm)	0.041467	ppm	0.000012	0.03	278.787000	Y 377.433
P (213.618 nm)	2.836870 o	ppm	0.032474	1.14	6189.080000	Y 242.219
Pb (220.353 nm)	0.010557	ppm	0.000070	0.66	33.686300	Y 242.219
S (181.972 nm)	0.089904	ppm	0.003991	4.44	60.241541	Y 377.433
Sb (206.834 nm)	0.021538	ppm	0.000216	1.00	35.795100	Y 377.433
Se (196.026 nm)	0.019623	ppm	0.000312	1.59	32.512000	Y 242.219
Si (288.158 nm)	0.502517	ppm	0.001906	0.38	5248.630000	Y 377.433
Sn (189.925 nm)	0.100515	ppm	0.002361	2.35	209.399000	Y 377.433
Sr (421.552 nm)	0.010223	ppm	0.000034	0.33	2300.976629	Y_R 488.368
Th (288.505 nm)	0.016065	ppm	0.000019	0.12	115.271000	Y 377.433
Ti (336.122 nm)	0.009979	ppm	0.000029	0.30	1193.640000	Y 377.433
Tl (190.794 nm)	0.014274	ppm	0.001644	11.51	25.968100	Y 377.433
U (409.013 nm)	0.060407	ppm	0.002490	4.12	64.536600	Y 377.433
V (292.401 nm)	0.009638	ppm	0.000170	1.77	380.586000	Y 377.433
Zn (206.200 nm)	0.016139	ppm	0.000039	0.24	112.029000	Y 377.433
Zr (343.823 nm)	0.015395	ppm	0.000129	0.84	2051.150000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027630	19607.402570	0.001768	0.17
Y 377.433	1.030700	1043261.616964	0.000695	0.07
Y_R 377.433	1.067750	80607.600000	0.004406	0.41
Y_R 488.368	1.041630	45603.300000	0.018620	1.79
Y_R2 488.368	1.056669	91699.377383	0.004958	0.47

Sample Name: 280-116011-B-25-C

Date: 11/6/2018 2:47:53 PM Rack:Tube: 1:21

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000259 u	ppm	0.000105	40.65	-462.376000	Y 377.433
Al (167.019 nm)	29.247900 o	ppm	0.004961	0.02	16339.500000	Y_R 377.433
Al H (396.152 nm)	29.427944	ppm	0.224731	0.76	74106.609552	Y_R 377.433
As (188.980 nm)	0.019633	ppm	0.001337	6.81	22.584900	Y 242.219
B (249.678 nm)	0.018474	ppm	0.000289	1.56	450.936000	Y 242.219
Ba (493.408 nm)	0.379222	ppm	0.000754	0.20	44568.500000	Y_R 488.368
Be (234.861 nm)	0.001655	ppm	0.000005	0.28	1862.080000	Y_R 488.368
Bi (223.061 nm)	-0.008420 u	ppm	0.000492	5.84	-0.985553	Y 377.433
Ca (315.887 nm)	27.525776 o	ppm	0.175886	0.64	21763.987047	Y_R 377.433
Cd (214.439 nm)	0.004633	ppm	0.000068	1.47	321.481000	Y 377.433
Co (228.615 nm)	0.015817	ppm	0.000283	1.79	295.464000	Y 242.219
Cr (205.560 nm)	0.040848	ppm	0.000169	0.41	605.331000	Y 377.433
Cu (324.754 nm)	0.035426	ppm	0.000171	0.48	1699.410000	Y 377.433
Fe (238.204 nm)	45.784082 o	ppm	0.369894	0.81	169358.869017	Y_R 377.433
Fe H (259.940 nm)	45.812100	ppm	0.329001	0.72	86670.600000	Y_R 377.433
K (766.491 nm)	7.157290	ppm	0.071657	1.00	7484.860000	Y_R2 488.368
Li (670.783 nm)	0.029919	ppm	0.002376	7.94	-355.901000	Y_R2 488.368
Mg (279.078 nm)	7.215470	ppm	0.002317	0.03	41642.900000	Y 377.433
Mn (257.610 nm)	0.366538	ppm	0.000337	0.09	85782.100000	Y 377.433
Mo (202.032 nm)	0.000464	ppm	0.000010	2.11	3.971510	Y 377.433
Na (589.592 nm)	0.674871	ppm	0.003594	0.53	5506.560000	Y_R2 488.368
Na H (589.593 nm)	0.429327 u	ppm	0.033630	7.83	4323.878350	Y_R 488.368
Ni (231.604 nm)	0.033594	ppm	0.000666	1.98	226.931000	Y 377.433
P (213.618 nm)	2.013370	ppm	0.003954	0.20	4399.610000	Y 242.219
Pb (220.353 nm)	0.097075	ppm	0.000087	0.09	276.270000	Y 242.219
S (181.972 nm)	0.382898	ppm	0.001876	0.49	211.160925	Y 377.433
Sb (206.834 nm)	0.000315 u	ppm	0.001834	> 100.00	-34.183000	Y 377.433
Se (196.026 nm)	0.000576 u	ppm	0.001901	> 100.00	5.807210	Y 242.219
Si (288.158 nm)	1.920770	ppm	0.006670	0.35	17438.100000	Y 377.433
Sn (189.925 nm)	0.011499	ppm	0.000832	7.23	32.455200	Y 377.433
Sr (421.552 nm)	0.136650	ppm	0.000202	0.15	28827.391027	Y_R 488.368
Th (288.505 nm)	0.049370	ppm	0.001279	2.59	207.985000	Y 377.433
Ti (336.122 nm)	1.286200 o	ppm	0.001389	0.11	183031.000000	Y 377.433
Tl (190.794 nm)	-0.000396 u	ppm	0.000658	> 100.00	-13.008700	Y 377.433
U (409.013 nm)	-0.048001 u	ppm	0.000556	1.16	-391.645000	Y 377.433
V (292.401 nm)	0.093046	ppm	0.000423	0.45	3435.610000	Y 377.433
Zn (206.200 nm)	0.316085	ppm	0.000294	0.09	1678.550000	Y 377.433
Zr (343.823 nm)	0.046549	ppm	0.000065	0.14	6279.230000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064493	20310.758368	0.001345	0.13
Y 377.433	1.064776	1077753.020742	0.000947	0.09
Y_R 377.433	1.121270	84647.800000	0.006660	0.59
Y_R 488.368	1.100170	48166.200000	0.000926	0.08
Y_R2 488.368	1.089284	94529.741450	0.004724	0.43

Sample Name: 280-116011-C-26-C

Date: 11/6/2018 2:51:15 PM Rack:Tube: 1:22

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000163 u	ppm	0.000064	39.37	-456.390000	Y 377.433
Al (167.019 nm)	19.326900 o	ppm	0.571225	2.96	10798.700000	Y_R 377.433
Al H (396.152 nm)	19.742865	ppm	0.281915	1.43	49739.770389	Y_R 377.433
As (188.980 nm)	0.012315	ppm	0.001590	12.91	13.494300	Y 242.219
B (249.678 nm)	0.014633	ppm	0.000085	0.58	376.144000	Y 242.219
Ba (493.408 nm)	0.293916	ppm	0.004229	1.44	34671.500000	Y_R 488.368
Be (234.861 nm)	0.001360	ppm	0.000136	9.97	1333.740000	Y_R 488.368
Bi (223.061 nm)	-0.007332 u	ppm	0.000985	13.44	-0.573155	Y 377.433
Ca (315.887 nm)	10.401727	ppm	0.153087	1.47	8186.087385	Y_R 377.433
Cd (214.439 nm)	0.002802	ppm	0.000144	5.15	198.416000	Y 377.433
Co (228.615 nm)	0.013315	ppm	0.000172	1.29	236.619000	Y 242.219
Cr (205.560 nm)	0.027370	ppm	0.000313	1.14	404.053000	Y 377.433
Cu (324.754 nm)	0.019860	ppm	0.000223	1.12	832.943000	Y 377.433
Fe (238.204 nm)	31.526736 o	ppm	0.368309	1.17	116627.573810	Y_R 377.433
Fe H (259.940 nm)	31.821300	ppm	0.275670	0.87	60202.800000	Y_R 377.433
K (766.491 nm)	4.877990	ppm	0.059570	1.22	4860.310000	Y_R2 488.368
Li (670.783 nm)	0.020581	ppm	0.000789	3.84	-667.322000	Y_R2 488.368
Mg (279.078 nm)	4.763380	ppm	0.002928	0.06	27502.100000	Y 377.433
Mn (257.610 nm)	0.296102	ppm	0.000297	0.10	69309.700000	Y 377.433
Mo (202.032 nm)	0.000247	ppm	0.000029	11.74	2.102680	Y 377.433
Na (589.592 nm)	0.448004	ppm	0.005699	1.27	3840.550000	Y_R2 488.368
Na H (589.593 nm)	0.123572 u	ppm	0.029190	23.62	3123.464947	Y_R 488.368
Ni (231.604 nm)	0.022637	ppm	0.000230	1.02	151.609000	Y 377.433
P (213.618 nm)	1.373530	ppm	0.007639	0.56	3009.240000	Y 242.219
Pb (220.353 nm)	0.042308	ppm	0.001160	2.74	121.101000	Y 242.219
S (181.972 nm)	0.270142	ppm	0.000344	0.13	153.243040	Y 377.433
Sb (206.834 nm)	-0.001803 u	ppm	0.003186	> 100.00	-36.306400	Y 377.433
Se (196.026 nm)	0.001096 u	ppm	0.003024	> 100.00	8.770790	Y 242.219
Si (288.158 nm)	1.614960	ppm	0.004200	0.26	14809.700000	Y 377.433
Sn (189.925 nm)	0.010158	ppm	0.000090	0.89	29.789300	Y 377.433
Sr (421.552 nm)	0.088239	ppm	0.000838	0.95	18669.974939	Y_R 488.368
Th (288.505 nm)	0.046703	ppm	0.001546	3.31	199.523000	Y 377.433
Ti (336.122 nm)	0.903388	ppm	0.001019	0.11	128459.000000	Y 377.433
Tl (190.794 nm)	-0.001116 u	ppm	0.000457	40.96	-12.541600	Y 377.433
U (409.013 nm)	-0.032773 u	ppm	0.001217	3.71	-331.545000	Y 377.433
V (292.401 nm)	0.067115	ppm	0.000104	0.16	2488.290000	Y 377.433
Zn (206.200 nm)	0.194409	ppm	0.001379	0.71	1043.070000	Y 377.433
Zr (343.823 nm)	0.033816	ppm	0.000079	0.23	4563.840000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064085	20302.971728	0.002380	0.22
Y 377.433	1.067672	1080684.255589	0.001833	0.17
Y_R 377.433	1.100870	83108.100000	0.024296	2.21
Y_R 488.368	1.075590	47090.000000	0.022341	2.08
Y_R2 488.368	1.087579	94381.843289	0.001731	0.16

Sample Name: 280-116011-A-27-A

Date: 11/6/2018 2:54:38 PM
Rack:Tube: 1:23

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000219	ppm	0.000139	63.60	-438.633000	Y 377.433
Al (167.019 nm)	31.668700 o	ppm	0.166094	0.52	17687.000000	Y_R 377.433
Al H (396.152 nm)	34.247529	ppm	0.155357	0.45	86233.406767	Y_R 377.433
As (188.980 nm)	0.022413	ppm	0.000929	4.14	26.113400	Y 242.219
B (249.678 nm)	0.021197	ppm	0.000093	0.44	523.846000	Y 242.219
Ba (493.408 nm)	0.538144	ppm	0.001128	0.21	62974.000000	Y_R 488.368
Be (234.861 nm)	0.002040	ppm	0.000070	3.45	1877.160000	Y_R 488.368
Bi (223.061 nm)	-0.007835 u	ppm	0.000142	1.81	-0.039788	Y 377.433
Ca (315.887 nm)	38.666801 o	ppm	0.126125	0.33	30597.860674	Y_R 377.433
Cd (214.439 nm)	0.001851	ppm	0.000044	2.37	152.130000	Y 377.433
Co (228.615 nm)	0.017455	ppm	0.000167	0.96	328.021000	Y 242.219
Cr (205.560 nm)	0.046303	ppm	0.000431	0.93	689.249000	Y 377.433
Cu (324.754 nm)	0.029586	ppm	0.000137	0.46	1364.680000	Y 377.433
Fe (238.204 nm)	42.516370 o	ppm	0.073823	0.17	157273.121481	Y_R 377.433
Fe H (259.940 nm)	42.745400	ppm	0.114374	0.27	80869.000000	Y_R 377.433
K (766.491 nm)	9.024400	ppm	0.050490	0.56	9634.800000	Y_R2 488.368
Li (670.783 nm)	0.032493	ppm	0.002362	7.27	-270.039000	Y_R2 488.368
Mg (279.078 nm)	8.674700	ppm	0.009021	0.10	50077.500000	Y 377.433
Mn (257.610 nm)	0.790616	ppm	0.000376	0.05	184959.000000	Y 377.433
Mo (202.032 nm)	0.000320	ppm	0.000366	> 100.00	2.725550	Y 377.433
Na (589.592 nm)	0.895794	ppm	0.000286	0.03	7282.250000	Y_R2 488.368
Na H (589.593 nm)	0.586831 u	ppm	0.015584	2.66	5050.494711	Y_R 488.368
Ni (231.604 nm)	0.033591	ppm	0.000004	0.01	226.780000	Y 377.433
P (213.618 nm)	2.307290 o	ppm	0.006770	0.29	5038.290000	Y 242.219
Pb (220.353 nm)	0.059867	ppm	0.000213	0.36	167.699000	Y 242.219
S (181.972 nm)	0.327407	ppm	0.001659	0.51	183.772933	Y 377.433
Sb (206.834 nm)	-0.001274 u	ppm	0.000213	16.75	-38.000600	Y 377.433
Se (196.026 nm)	-0.001114 u	ppm	0.000696	62.51	5.189120	Y 242.219
Si (288.158 nm)	2.009740	ppm	0.012085	0.60	18202.700000	Y 377.433
Sn (189.925 nm)	0.012679	ppm	0.000788	6.22	34.799900	Y 377.433
Sr (421.552 nm)	0.224517	ppm	0.001202	0.54	47263.480832	Y_R 488.368
Th (288.505 nm)	0.052863	ppm	0.000993	1.88	225.642000	Y 377.433
Ti (336.122 nm)	1.367590 o	ppm	0.000308	0.02	194656.000000	Y 377.433
Tl (190.794 nm)	-0.000780 u	ppm	0.002274	> 100.00	-14.121000	Y 377.433
U (409.013 nm)	-0.048939 u	ppm	0.000278	0.57	-401.627000	Y 377.433
V (292.401 nm)	0.092506	ppm	0.000073	0.08	3416.580000	Y 377.433
Zn (206.200 nm)	0.177185	ppm	0.000638	0.36	953.116000	Y 377.433
Zr (343.823 nm)	0.055355	ppm	0.000078	0.14	7427.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057037	20168.489955	0.005508	0.52
Y 377.433	1.057009	1069891.039024	0.004590	0.43
Y_R 377.433	1.076480	81266.300000	0.008924	0.83
Y_R 488.368	1.054840	46181.600000	0.008948	0.85
Y_R2 488.368	1.085588	94209.000995	0.000425	0.04

Sample Name: 280-116011-A-28-A

Date: 11/6/2018 2:58:00 PM Rack:Tube: 1:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000116 u	ppm	0.000117	> 100.00	-454.464000	Y 377.433
Al (167.019 nm)	26.455900 o	ppm	0.073258	0.28	14779.100000	Y_R 377.433
Al H (396.152 nm)	26.708180	ppm	0.003344	0.01	67272.105664	Y_R 377.433
As (188.980 nm)	0.020033	ppm	0.000959	4.79	23.137800	Y 242.219
B (249.678 nm)	0.017804	ppm	0.000137	0.77	442.654000	Y 242.219
Ba (493.408 nm)	0.454303	ppm	0.001666	0.37	53262.200000	Y_R 488.368
Be (234.861 nm)	0.001646	ppm	0.000068	4.12	1684.480000	Y_R 488.368
Bi (223.061 nm)	-0.007856 u	ppm	0.000441	5.61	-0.491192	Y 377.433
Ca (315.887 nm)	41.487377 o	ppm	0.048695	0.12	32834.334345	Y_R 377.433
Cd (214.439 nm)	0.000767	ppm	0.000119	15.50	85.019800	Y 377.433
Co (228.615 nm)	0.015945	ppm	0.000022	0.14	292.594000	Y 242.219
Cr (205.560 nm)	0.036219	ppm	0.000247	0.68	536.421000	Y 377.433
Cu (324.754 nm)	0.027988	ppm	0.000123	0.44	1272.930000	Y 377.433
Fe (238.204 nm)	40.083523 o	ppm	0.068913	0.17	148275.152866	Y_R 377.433
Fe H (259.940 nm)	40.101300	ppm	0.021637	0.05	75866.800000	Y_R 377.433
K (766.491 nm)	7.149790	ppm	0.039219	0.55	7476.220000	Y_R2 488.368
Li (670.783 nm)	0.028210	ppm	0.000567	2.01	-412.872000	Y_R2 488.368
Mg (279.078 nm)	6.905240	ppm	0.006024	0.09	39860.300000	Y 377.433
Mn (257.610 nm)	0.596406	ppm	0.000074	0.01	139540.000000	Y 377.433
Mo (202.032 nm)	0.000684	ppm	0.000132	19.25	5.863530	Y 377.433
Na (589.592 nm)	0.865655	ppm	0.004620	0.53	6914.450000	Y_R2 488.368
Na H (589.593 nm)	0.601251 u	ppm	0.032057	5.33	5024.419430	Y_R 488.368
Ni (231.604 nm)	0.030383	ppm	0.000593	1.95	204.795000	Y 377.433
P (213.618 nm)	2.262430 o	ppm	0.004166	0.18	4940.800000	Y 242.219
Pb (220.353 nm)	0.042643	ppm	0.001089	2.55	120.524000	Y 242.219
S (181.972 nm)	0.427594	ppm	0.005264	1.23	234.611867	Y 377.433
Sb (206.834 nm)	-0.000756 u	ppm	0.000129	17.01	-35.742300	Y 377.433
Se (196.026 nm)	-0.002472 u	ppm	0.003669	> 100.00	3.974450	Y 242.219
Si (288.158 nm)	1.757440	ppm	0.002373	0.14	16034.300000	Y 377.433
Sn (189.925 nm)	0.010602	ppm	0.000102	0.96	30.672300	Y 377.433
Sr (421.552 nm)	0.206608	ppm	0.000121	0.06	43505.901708	Y_R 488.368
Th (288.505 nm)	0.049942	ppm	0.000710	1.42	214.103000	Y 377.433
Ti (336.122 nm)	1.138530 o	ppm	0.001128	0.10	162044.000000	Y 377.433
Tl (190.794 nm)	0.000047 u	ppm	0.000649	> 100.00	-11.241400	Y 377.433
U (409.013 nm)	-0.048742 u	ppm	0.000549	1.13	-402.906000	Y 377.433
V (292.401 nm)	0.086274	ppm	0.000281	0.33	3187.320000	Y 377.433
Zn (206.200 nm)	0.117111	ppm	0.000012	0.01	639.371000	Y 377.433
Zr (343.823 nm)	0.047581	ppm	0.000002	0.00	6398.490000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.066432	20347.752765	0.003959	0.37
Y 377.433	1.065310	1078293.824794	0.006759	0.63
Y_R 377.433	1.109420	83753.700000	0.005956	0.54
Y_R 488.368	1.091070	47767.600000	0.004676	0.43
Y_R2 488.368	1.095692	95085.863018	0.009124	0.83

Sample Name: MB 280-434897/1-A

Date: 11/6/2018 3:01:23 PM Rack:Tube: 1:25

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000108 u	ppm	0.000268	> 100.00	-440.007000	Y 377.433
Al (167.019 nm)	0.010309	ppm	0.001988	19.28	8.129560	Y_R 377.433
Al H (396.152 nm)	-0.005039 u	ppm	0.000164	3.26	66.447240	Y_R 377.433
As (188.980 nm)	-0.002141 u	ppm	0.000051	2.40	-4.433470	Y 242.219
B (249.678 nm)	0.000789	ppm	0.000147	18.58	76.789000	Y 242.219
Ba (493.408 nm)	0.000323	ppm	0.000228	70.68	636.965000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000007	> 100.00	-46.646900	Y_R 488.368
Bi (223.061 nm)	0.000034 u	ppm	0.001009	> 100.00	12.835700	Y 377.433
Ca (315.887 nm)	0.232698	ppm	0.006894	2.96	122.920187	Y_R 377.433
Cd (214.439 nm)	0.000072	ppm	0.000040	55.36	5.249850	Y 377.433
Co (228.615 nm)	0.000126 u	ppm	0.000409	> 100.00	-34.128600	Y 242.219
Cr (205.560 nm)	0.000827	ppm	0.000076	9.16	8.614850	Y 377.433
Cu (324.754 nm)	0.001652	ppm	0.000082	4.97	-201.054000	Y 377.433
Fe (238.204 nm)	0.041902	ppm	0.000993	2.37	179.813985	Y_R 377.433
Fe H (259.940 nm)	0.045421 u	ppm	0.002896	6.38	89.160400	Y_R 377.433
K (766.491 nm)	0.085803	ppm	0.002338	2.72	-657.790000	Y_R2 488.368
Li (670.783 nm)	0.003692	ppm	0.000627	16.99	-1230.570000	Y_R2 488.368
Mg (279.078 nm)	0.052784	ppm	0.001682	3.19	344.212000	Y 377.433
Mn (257.610 nm)	0.000906	ppm	0.000009	0.96	273.689000	Y 377.433
Mo (202.032 nm)	-0.000178 u	ppm	0.000211	> 100.00	-1.557260	Y 377.433
Na (589.592 nm)	0.059604	ppm	0.002084	3.50	692.005000	Y_R2 488.368
Na H (589.593 nm)	-0.280124 u	ppm	0.016164	5.77	1369.041670	Y_R 488.368
Ni (231.604 nm)	0.000385	ppm	0.000524	> 100.00	-1.471530	Y 377.433
P (213.618 nm)	0.010542	ppm	0.003595	34.10	47.465300	Y 242.219
Pb (220.353 nm)	-0.000524 u	ppm	0.001518	> 100.00	1.927150	Y 242.219
S (181.972 nm)	-0.006159 u	ppm	0.005141	83.47	11.019772	Y 377.433
Sb (206.834 nm)	0.000611	ppm	0.000137	22.36	-21.541900	Y 377.433
Se (196.026 nm)	-0.000603 u	ppm	0.003749	> 100.00	12.383600	Y 242.219
Si (288.158 nm)	0.042986	ppm	0.000877	2.04	1299.110000	Y 377.433
Sn (189.925 nm)	0.006834	ppm	0.001203	17.60	23.182600	Y 377.433
Sr (421.552 nm)	0.000719	ppm	0.000017	2.36	306.905688	Y_R 488.368
Th (288.505 nm)	0.002228	ppm	0.002213	99.30	78.751100	Y 377.433
Ti (336.122 nm)	0.000611	ppm	0.000045	7.35	-140.478000	Y 377.433
Tl (190.794 nm)	-0.000100 u	ppm	0.001270	> 100.00	-5.566410	Y 377.433
U (409.013 nm)	0.001254	ppm	0.001552	> 100.00	-201.926000	Y 377.433
V (292.401 nm)	0.001241	ppm	0.000081	6.55	79.481600	Y 377.433
Zn (206.200 nm)	-0.002362 u	ppm	0.000299	12.65	15.404400	Y 377.433
Zr (343.823 nm)	0.000045	ppm	0.000041	91.82	32.723200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032660	19703.366875	0.002230	0.22
Y 377.433	1.035935	1048560.705725	0.001019	0.10
Y_R 377.433	1.092270	82458.300000	0.008180	0.75
Y_R 488.368	1.066500	46692.100000	0.015475	1.45
Y_R2 488.368	1.066492	92551.846986	0.000180	0.02

Sample Name: LCS 280-434897/2-A

Date: 11/6/2018 3:04:45 PM
Rack:Tube: 1:26

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049316	ppm	0.000155	0.31	1789.910000	Y 377.433
Al (167.019 nm)	1.962650	ppm	0.016621	0.85	1097.250000	Y_R 377.433
Al H (396.152 nm)	1.932112	ppm	0.006230	0.32	5037.559024	Y_R 377.433
As (188.980 nm)	0.959401	ppm	0.003295	0.34	1206.440000	Y 242.219
B (249.678 nm)	0.963892	ppm	0.001736	0.18	24154.500000	Y 242.219
Ba (493.408 nm)	1.911550 o	ppm	0.011589	0.61	221999.000000	Y_R 488.368
Be (234.861 nm)	0.047507	ppm	0.000641	1.35	14085.600000	Y_R 488.368
Bi (223.061 nm)	1.862050	ppm	0.000567	0.03	4701.740000	Y 377.433
Ca (315.887 nm)	48.306240 o	ppm	0.325283	0.67	38241.158862	Y_R 377.433
Cd (214.439 nm)	0.094936	ppm	0.000289	0.30	5676.280000	Y 377.433
Co (228.615 nm)	0.469566	ppm	0.001050	0.22	8502.500000	Y 242.219
Cr (205.560 nm)	0.191563	ppm	0.000338	0.18	2909.590000	Y 377.433
Cu (324.754 nm)	0.236896	ppm	0.001048	0.44	12930.100000	Y 377.433
Fe (238.204 nm)	0.994445	ppm	0.004073	0.41	3702.826524	Y_R 377.433
Fe H (259.940 nm)	0.985574 u	ppm	0.008169	0.83	1867.740000	Y_R 377.433
K (766.491 nm)	48.868200	ppm	0.030774	0.06	55514.100000	Y_R2 488.368
Li (670.783 nm)	0.954730	ppm	0.001961	0.21	30487.200000	Y_R2 488.368
Mg (279.078 nm)	47.037300 o	ppm	0.051473	0.11	271699.000000	Y 377.433
Mn (257.610 nm)	0.478015	ppm	0.000590	0.12	111853.000000	Y 377.433
Mo (202.032 nm)	0.975648	ppm	0.000024	0.00	8402.190000	Y 377.433
Na (589.592 nm)	48.454800 o	ppm	0.179380	0.37	323193.000000	Y_R2 488.368
Na H (589.593 nm)	50.146153	ppm	0.152287	0.30	187904.569303	Y_R 488.368
Ni (231.604 nm)	0.466107	ppm	0.000401	0.09	3177.860000	Y 377.433
P (213.618 nm)	9.754850 o	ppm	0.008819	0.09	21221.800000	Y 242.219
Pb (220.353 nm)	0.485154	ppm	0.001679	0.35	1395.520000	Y 242.219
S (181.972 nm)	1.894520	ppm	0.000467	0.02	985.608879	Y 377.433
Sb (206.834 nm)	0.490850	ppm	0.000891	0.18	1313.620000	Y 377.433
Se (196.026 nm)	1.941130	ppm	0.004287	0.22	1945.270000	Y 242.219
Si (288.158 nm)	1.210840	ppm	0.003548	0.29	11336.400000	Y 377.433
Sn (189.925 nm)	1.912460	ppm	0.006267	0.33	3811.160000	Y 377.433
Sr (421.552 nm)	0.960507	ppm	0.006648	0.69	201686.454942	Y_R 488.368
Th (288.505 nm)	0.957790	ppm	0.000552	0.06	2588.620000	Y 377.433
Ti (336.122 nm)	0.966823	ppm	0.001503	0.16	137612.000000	Y 377.433
Tl (190.794 nm)	1.946750	ppm	0.001734	0.09	4267.960000	Y 377.433
U (409.013 nm)	1.973580	ppm	0.000412	0.02	8674.740000	Y 377.433
V (292.401 nm)	0.486777	ppm	0.000106	0.02	17621.300000	Y 377.433
Zn (206.200 nm)	0.467991	ppm	0.001207	0.26	2471.900000	Y 377.433
Zr (343.823 nm)	0.479731	ppm	0.000026	0.01	63106.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009301	19257.673146	0.001884	0.19
Y 377.433	1.016551	1028940.333790	0.000442	0.04
Y_R 377.433	1.063810	80310.000000	0.012100	1.14
Y_R 488.368	1.043240	45673.900000	0.012323	1.18
Y_R2 488.368	1.043832	90585.348400	0.006749	0.65

Sample Name: 280-116012-D-1-A

Date: 11/6/2018 3:08:07 PM
Rack:Tube: 1:27

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001267 u	ppm	0.000515	40.68	-1418.570000	Y 377.433
Al (167.019 nm)	9.866650 o	ppm	0.105262	1.07	5576.720000	Y_R 377.433
Al H (396.152 nm)	10.852378	ppm	0.071184	0.66	28230.636799	Y_R 377.433
As (188.980 nm)	0.020498	ppm	0.000733	3.58	23.108300	Y 242.219
B (249.678 nm)	0.051257	ppm	0.000417	0.81	1173.890000	Y 242.219
Ba (493.408 nm)	0.451784	ppm	0.003955	0.88	53477.900000	Y_R 488.368
Be (234.861 nm)	0.000185	ppm	0.000233	> 100.00	3404.210000	Y_R 488.368
Bi (223.061 nm)	-0.008455 u	ppm	0.000842	9.96	9.410300	Y 377.433
Ca (315.887 nm)	1951.585682 o	ppm	18.085144	0.93	1547378.048098	Y_R 377.433
Cd (214.439 nm)	0.002952	ppm	0.000065	2.20	282.249000	Y 377.433
Co (228.615 nm)	0.017925	ppm	0.000419	2.34	299.195000	Y 242.219
Cr (205.560 nm)	0.144665	ppm	0.000135	0.09	2167.990000	Y 377.433
Cu (324.754 nm)	0.151542	ppm	0.000468	0.31	7056.010000	Y 377.433
Fe (238.204 nm)	109.780297 o	ppm	0.586208	0.53	406051.113103	Y_R 377.433
Fe H (259.940 nm)	110.781000	ppm	0.736824	0.67	209579.000000	Y_R 377.433
K (766.491 nm)	2.448500	ppm	0.117859	4.81	2062.800000	Y_R2 488.368
Li (670.783 nm)	0.019194	ppm	0.000099	0.52	-713.570000	Y_R2 488.368
Mg (279.078 nm)	23.662800	ppm	0.017118	0.07	136544.000000	Y 377.433
Mn (257.610 nm)	2.093340 o	ppm	0.001729	0.08	489622.000000	Y 377.433
Mo (202.032 nm)	0.079846	ppm	0.000017	0.02	687.598000	Y 377.433
Na (589.592 nm)	1.212720	ppm	0.002240	0.18	9202.060000	Y_R2 488.368
Na H (589.593 nm)	1.890118 u	ppm	0.027246	1.44	9747.442794	Y_R 488.368
Ni (231.604 nm)	0.131828	ppm	0.000119	0.09	899.681000	Y 377.433
P (213.618 nm)	3.338830 o	ppm	0.003420	0.10	7279.820000	Y 242.219
Pb (220.353 nm)	0.102780	ppm	0.001143	1.11	303.610000	Y 242.219
S (181.972 nm)	7.125292	ppm	0.016889	0.24	3668.455979	Y 377.433
Sb (206.834 nm)	-0.002020 u	ppm	0.001675	82.92	-51.375500	Y 377.433
Se (196.026 nm)	0.004826	ppm	0.000988	20.48	-1.543090	Y 242.219
Si (288.158 nm)	1.908250	ppm	0.003463	0.18	17330.400000	Y 377.433
Sn (189.925 nm)	0.020879	ppm	0.001297	6.21	51.100600	Y 377.433
Sr (421.552 nm)	6.278437 o	ppm	0.049711	0.79	1317477.302766	Y_R 488.368
Th (288.505 nm)	-0.001795 u	ppm	0.004209	> 100.00	313.953000	Y 377.433
Ti (336.122 nm)	0.320675	ppm	0.000309	0.10	51560.000000	Y 377.433
Tl (190.794 nm)	0.007867	ppm	0.000654	8.31	7.558710	Y 377.433
U (409.013 nm)	-0.031619 u	ppm	0.005099	16.13	-621.485000	Y 377.433
V (292.401 nm)	5.567560 o	ppm	0.005558	0.10	202061.000000	Y 377.433
Zn (206.200 nm)	2.055100 o	ppm	0.003413	0.17	10760.800000	Y 377.433
Zr (343.823 nm)	0.004987	ppm	0.000113	2.26	999.768000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.926473	17677.299902	0.000230	0.02
Y 377.433	0.938553	949991.491016	0.000429	0.05
Y_R 377.433	1.014290	76571.600000	0.006120	0.60
Y_R 488.368	0.991893	43425.600000	0.007715	0.78
Y_R2 488.368	0.997102	86530.099569	0.008967	0.90

Sample Name: 280-116012-C-2-B@10

Date: 11/6/2018 3:11:29 PM
Rack:Tube: 1:28

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001194 u	ppm	0.000178	14.89	-1606.790000	Y 377.433
Al (167.019 nm)	2.970530	ppm	0.001763	0.06	1673.640000	Y_R 377.433
Al H (396.152 nm)	2.938079	ppm	0.013978	0.48	7532.074018	Y_R 377.433
As (188.980 nm)	0.008342	ppm	0.001092	13.09	8.568980	Y 242.219
B (249.678 nm)	0.018250	ppm	0.000482	2.64	479.289000	Y 242.219
Ba (493.408 nm)	0.148354	ppm	0.000717	0.48	17835.200000	Y_R 488.368
Be (234.861 nm)	0.000122	ppm	0.000023	18.62	689.259000	Y_R 488.368
Bi (223.061 nm)	-0.004465 u	ppm	0.000386	8.65	5.199320	Y 377.433
Ca (315.887 nm)	142.043792 o	ppm	0.395728	0.28	112566.924603	Y_R 377.433
Cd (214.439 nm)	0.001002	ppm	0.000024	2.41	82.369000	Y 377.433
Co (228.615 nm)	0.003543	ppm	0.000186	5.26	30.347300	Y 242.219
Cr (205.560 nm)	0.049516	ppm	0.000625	1.26	743.564000	Y 377.433
Cu (324.754 nm)	0.201991	ppm	0.000225	0.11	10897.900000	Y 377.433
Fe (238.204 nm)	22.609001 o	ppm	0.104307	0.46	83645.020684	Y_R 377.433
Fe H (259.940 nm)	22.853300	ppm	0.054557	0.24	43237.000000	Y_R 377.433
K (766.491 nm)	0.828111	ppm	0.086271	10.42	196.960000	Y_R2 488.368
Li (670.783 nm)	0.006510	ppm	0.002478	38.07	-1136.580000	Y_R2 488.368
Mg (279.078 nm)	5.027450	ppm	0.002815	0.06	29042.400000	Y 377.433
Mn (257.610 nm)	0.331321	ppm	0.000002	0.00	77546.200000	Y 377.433
Mo (202.032 nm)	0.020536	ppm	0.000528	2.57	176.831000	Y 377.433
Na (589.592 nm)	0.322067	ppm	0.007739	2.40	2719.010000	Y_R2 488.368
Na H (589.593 nm)	0.319014 u	ppm	0.054695	17.14	3703.284958	Y_R 488.368
Ni (231.604 nm)	0.038860	ppm	0.000479	1.23	261.930000	Y 377.433
P (213.618 nm)	2.227550 o	ppm	0.002712	0.12	4865.020000	Y 242.219
Pb (220.353 nm)	0.043552	ppm	0.001420	3.26	129.247000	Y 242.219
S (181.972 nm)	2.528499	ppm	0.003422	0.14	1309.945133	Y 377.433
Sb (206.834 nm)	0.001719	ppm	0.000574	33.38	-22.663800	Y 377.433
Se (196.026 nm)	-0.001562 u	ppm	0.000314	20.13	7.384210	Y 242.219
Si (288.158 nm)	0.375687	ppm	0.000788	0.21	4158.570000	Y 377.433
Sn (189.925 nm)	0.004208	ppm	0.000084	2.01	17.961600	Y 377.433
Sr (421.552 nm)	0.473480	ppm	0.002644	0.56	99500.157729	Y_R 488.368
Th (288.505 nm)	-0.006850 u	ppm	0.003924	57.28	313.771000	Y 377.433
Ti (336.122 nm)	0.077222	ppm	0.000048	0.06	11213.500000	Y 377.433
Tl (190.794 nm)	0.005460	ppm	0.002089	38.26	5.692300	Y 377.433
U (409.013 nm)	-0.016533 u	ppm	0.004545	27.49	-288.588000	Y 377.433
V (292.401 nm)	6.694880 o	ppm	0.002880	0.04	242992.000000	Y 377.433
Zn (206.200 nm)	0.626222	ppm	0.001484	0.24	3298.290000	Y 377.433
Zr (343.823 nm)	0.000473	ppm	0.000056	11.89	154.281000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010927	19288.693604	0.002503	0.25
Y 377.433	1.016595	1028985.195027	0.001472	0.14
Y_R 377.433	1.081880	81674.300000	0.009217	0.85
Y_R 488.368	1.055850	46225.900000	0.009097	0.86
Y_R2 488.368	1.039266	90189.087527	0.009964	0.96

Sample Name: 280-116012-B-3-A@10

Date: 11/6/2018 3:14:52 PM
Rack:Tube: 1:29
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000403 u	ppm	0.000132	32.75	-1112.420000	Y 377.433
Al (167.019 nm)	2.486000	ppm	0.038779	1.56	1403.300000	Y_R 377.433
Al H (396.152 nm)	2.563347	ppm	0.021576	0.84	6584.571274	Y_R 377.433
As (188.980 nm)	0.005773	ppm	0.000070	1.21	5.336210	Y 242.219
B (249.678 nm)	0.013179	ppm	0.000175	1.33	353.095000	Y 242.219
Ba (493.408 nm)	0.106729	ppm	0.001960	1.84	13011.400000	Y_R 488.368
Be (234.861 nm)	0.000176	ppm	0.000034	19.08	696.379000	Y_R 488.368
Bi (223.061 nm)	-0.005570 u	ppm	0.000728	13.06	2.369320	Y 377.433
Ca (315.887 nm)	131.513770 o	ppm	0.426293	0.32	104217.522637	Y_R 377.433
Cd (214.439 nm)	0.001285	ppm	0.000150	11.70	99.027500	Y 377.433
Co (228.615 nm)	0.004601	ppm	0.000091	1.98	48.955200	Y 242.219
Cr (205.560 nm)	0.074805	ppm	0.000301	0.40	1128.610000	Y 377.433
Cu (324.754 nm)	0.041365	ppm	0.000155	0.37	1951.270000	Y 377.433
Fe (238.204 nm)	22.295509 o	ppm	0.067667	0.30	82485.557078	Y_R 377.433
Fe H (259.940 nm)	22.635800	ppm	0.043871	0.19	42825.700000	Y_R 377.433
K (766.491 nm)	0.564796	ppm	0.094589	16.75	-106.240000	Y_R2 488.368
Li (670.783 nm)	0.007237	ppm	0.000134	1.86	-1112.330000	Y_R2 488.368
Mg (279.078 nm)	3.859350	ppm	0.004666	0.12	22295.400000	Y 377.433
Mn (257.610 nm)	0.335346	ppm	0.000565	0.17	78487.500000	Y 377.433
Mo (202.032 nm)	0.019194	ppm	0.000427	2.23	165.272000	Y 377.433
Na (589.592 nm)	0.295757	ppm	0.007677	2.60	2461.740000	Y_R2 488.368
Na H (589.593 nm)	0.091813 u	ppm	0.013132	14.30	2831.759217	Y_R 488.368
Ni (231.604 nm)	0.077690	ppm	0.000651	0.84	526.788000	Y 377.433
P (213.618 nm)	1.089040	ppm	0.001687	0.15	2391.050000	Y 242.219
Pb (220.353 nm)	0.029151	ppm	0.001743	5.98	88.037800	Y 242.219
S (181.972 nm)	1.492854	ppm	0.001098	0.07	779.550780	Y 377.433
Sb (206.834 nm)	-0.001234 u	ppm	0.000017	1.42	-29.842800	Y 377.433
Se (196.026 nm)	0.000706 u	ppm	0.003546	> 100.00	9.692050	Y 242.219
Si (288.158 nm)	0.606980	ppm	0.002367	0.39	6146.460000	Y 377.433
Sn (189.925 nm)	0.004897	ppm	0.000764	15.60	19.332700	Y 377.433
Sr (421.552 nm)	0.431454	ppm	0.005822	1.35	90682.325011	Y_R 488.368
Th (288.505 nm)	-0.001640 u	ppm	0.000325	19.81	222.610000	Y 377.433
Ti (336.122 nm)	0.060535	ppm	0.000168	0.28	8801.790000	Y 377.433
Tl (190.794 nm)	0.003203	ppm	0.000878	27.42	0.818653	Y 377.433
U (409.013 nm)	-0.010773 u	ppm	0.000851	7.90	-260.662000	Y 377.433
V (292.401 nm)	3.923760 o	ppm	0.007452	0.19	142416.000000	Y 377.433
Zn (206.200 nm)	0.646374	ppm	0.001277	0.20	3403.540000	Y 377.433
Zr (343.823 nm)	0.000381	ppm	0.000046	12.13	141.252000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.007754	19228.164205	0.001221	0.12
Y 377.433	1.010712	1023030.642092	0.001300	0.13
Y_R 377.433	1.049530	79232.500000	0.012906	1.23
Y_R 488.368	1.024760	44864.700000	0.018118	1.77
Y_R2 488.368	1.047664	90917.951013	0.001643	0.16

Sample Name: 280-116012-B-4-A@5

Date: 11/6/2018 3:18:15 PM Rack:Tube: 1:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000389 u	ppm	0.000048	12.27	-1094.680000	Y 377.433
Al (167.019 nm)	4.241710 o	ppm	0.000862	0.02	2402.930000	Y_R 377.433
Al H (396.152 nm)	4.496048	ppm	0.000075	0.00	11482.793892	Y_R 377.433
As (188.980 nm)	0.015715	ppm	0.000448	2.85	17.583100	Y 242.219
B (249.678 nm)	0.058129	ppm	0.000530	0.91	1429.730000	Y 242.219
Ba (493.408 nm)	0.269479	ppm	0.000180	0.07	31907.600000	Y_R 488.368
Be (234.861 nm)	0.000300	ppm	0.000140	46.60	1693.190000	Y_R 488.368
Bi (223.061 nm)	-0.008357 u	ppm	0.000630	7.53	0.432622	Y 377.433
Ca (315.887 nm)	209.093558 o	ppm	0.328632	0.16	165731.623888	Y_R 377.433
Cd (214.439 nm)	0.001577	ppm	0.000002	0.10	146.167000	Y 377.433
Co (228.615 nm)	0.011694	ppm	0.000140	1.20	179.757000	Y 242.219
Cr (205.560 nm)	0.124411	ppm	0.002114	1.70	1875.170000	Y 377.433
Cu (324.754 nm)	0.076392	ppm	0.000893	1.17	3882.630000	Y 377.433
Fe (238.204 nm)	53.335719 o	ppm	0.093874	0.18	197288.861866	Y_R 377.433
Fe H (259.940 nm)	53.801500	ppm	0.044778	0.08	101785.000000	Y_R 377.433
K (766.491 nm)	2.330080	ppm	0.063386	2.72	1926.450000	Y_R2 488.368
Li (670.783 nm)	0.006178	ppm	0.001685	27.27	-1147.660000	Y_R2 488.368
Mg (279.078 nm)	7.219580	ppm	0.098827	1.37	41653.700000	Y 377.433
Mn (257.610 nm)	0.599278	ppm	0.007955	1.33	140212.000000	Y 377.433
Mo (202.032 nm)	0.056420	ppm	0.000385	0.68	485.854000	Y 377.433
Na (589.592 nm)	0.746528	ppm	0.000724	0.10	5758.590000	Y_R2 488.368
Na H (589.593 nm)	0.523634 u	ppm	0.011030	2.11	4566.980571	Y_R 488.368
Ni (231.604 nm)	0.110364	ppm	0.002812	2.55	750.947000	Y 377.433
P (213.618 nm)	9.397230 o	ppm	0.163306	1.74	20444.700000	Y 242.219
Pb (220.353 nm)	0.071310	ppm	0.000543	0.76	210.829000	Y 242.219
S (181.972 nm)	1.816709	ppm	0.043080	2.37	946.053708	Y 377.433
Sb (206.834 nm)	0.003325	ppm	0.001620	48.73	-23.492100	Y 377.433
Se (196.026 nm)	0.000383 u	ppm	0.002463	> 100.00	3.608050	Y 242.219
Si (288.158 nm)	0.991151	ppm	0.016585	1.67	9448.280000	Y 377.433
Sn (189.925 nm)	0.009326	ppm	0.000516	5.54	28.135200	Y 377.433
Sr (421.552 nm)	0.705196	ppm	0.000421	0.06	148117.900443	Y_R 488.368
Th (288.505 nm)	-0.002244 u	ppm	0.003267	> 100.00	220.882000	Y 377.433
Ti (336.122 nm)	0.128185	ppm	0.001747	1.36	18682.600000	Y 377.433
Tl (190.794 nm)	0.001844	ppm	0.001231	66.76	-3.339850	Y 377.433
U (409.013 nm)	-0.015707 u	ppm	0.000471	3.00	-269.489000	Y 377.433
V (292.401 nm)	3.823700 o	ppm	0.053810	1.41	138773.000000	Y 377.433
Zn (206.200 nm)	1.630420 o	ppm	0.014346	0.88	8542.880000	Y 377.433
Zr (343.823 nm)	0.000979	ppm	0.000059	6.03	309.792000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.999090	19062.856857	0.000235	0.02
Y 377.433	1.004915	1017162.281777	0.001340	0.13
Y_R 377.433	1.028950	77678.600000	0.003545	0.34
Y_R 488.368	1.015080	44441.000000	0.003637	0.36
Y_R2 488.368	1.019265	88453.376566	0.006449	0.63

Sample Name: CCVH-5408055

Date: 11/6/2018 3:21:38 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001717 u	ppm	0.000083	4.86	-768.462000	Y 377.433
Al (167.019 nm)	47.836000 o	ppm	0.258378	0.54	26705.700000	Y_R 377.433
Al H (396.152 nm)	49.609080	ppm	0.212231	0.43	124853.121044	Y_R 377.433
As (188.980 nm)	0.001215	ppm	0.000071	5.82	-0.646078	Y 242.219
B (249.678 nm)	-0.000838 u	ppm	0.000307	36.68	-38.395700	Y 242.219
Ba (493.408 nm)	0.000453	ppm	0.000073	16.21	698.107000	Y_R 488.368
Be (234.861 nm)	-0.000107 u	ppm	0.000003	2.65	1470.990000	Y_R 488.368
Bi (223.061 nm)	0.988000	ppm	0.002815	0.28	2508.780000	Y 377.433
Ca (315.887 nm)	-0.004181 u	ppm	0.001554	37.18	-64.904041	Y_R 377.433
Cd (214.439 nm)	-0.000383 u	ppm	0.000050	12.95	25.636800	Y 377.433
Co (228.615 nm)	0.002833	ppm	0.000056	1.97	14.888000	Y 242.219
Cr (205.560 nm)	0.000134 u	ppm	0.000545	> 100.00	-15.583500	Y 377.433
Cu (324.754 nm)	-0.004644 u	ppm	0.000125	2.68	-223.453000	Y 377.433
Fe (238.204 nm)	49.838124 o	ppm	0.268714	0.54	184352.885415	Y_R 377.433
Fe H (259.940 nm)	49.940700	ppm	0.420433	0.84	94481.100000	Y_R 377.433
K (766.491 nm)	0.032618 u	ppm	0.075138	> 100.00	-719.032000	Y_R2 488.368
Li (670.783 nm)	0.001970	ppm	0.000834	42.35	-1288.000000	Y_R2 488.368
Mg (279.078 nm)	-0.022032 u	ppm	0.000804	3.65	-443.934000	Y 377.433
Mn (257.610 nm)	0.001449	ppm	0.000009	0.61	400.701000	Y 377.433
Mo (202.032 nm)	-0.000201 u	ppm	0.000145	72.45	-1.755000	Y 377.433
Na (589.592 nm)	247.210000 o	ppm	0.841408	0.34	1628010.000000	Y_R2 488.368
Na H (589.593 nm)	255.909748	ppm	2.347393	0.92	939944.166620	Y_R 488.368
Ni (231.604 nm)	0.004257	ppm	0.000671	15.77	26.977000	Y 377.433
P (213.618 nm)	-0.005089 u	ppm	0.005779	> 100.00	13.499500	Y 242.219
Pb (220.353 nm)	-0.001339 u	ppm	0.001469	> 100.00	16.629600	Y 242.219
S (181.972 nm)	4.924662	ppm	0.001549	0.03	2536.335726	Y 377.433
Sb (206.834 nm)	-0.002600 u	ppm	0.000351	13.48	-76.055100	Y 377.433
Se (196.026 nm)	0.000561 u	ppm	0.001171	> 100.00	4.619700	Y 242.219
Si (288.158 nm)	0.021393	ppm	0.000230	1.07	1113.520000	Y 377.433
Sn (189.925 nm)	0.001235	ppm	0.000120	9.75	12.053100	Y 377.433
Sr (421.552 nm)	0.000376	ppm	0.000108	28.64	234.938554	Y_R 488.368
Th (288.505 nm)	4.982540	ppm	0.023336	0.47	13023.700000	Y 377.433
Ti (336.122 nm)	0.000898	ppm	0.000017	1.94	-100.126000	Y 377.433
Tl (190.794 nm)	-0.003042 u	ppm	0.000790	25.98	-13.336700	Y 377.433
U (409.013 nm)	10.122100	ppm	0.013313	0.13	45626.300000	Y 377.433
V (292.401 nm)	0.003805	ppm	0.000160	4.19	5.881400	Y 377.433
Zn (206.200 nm)	-0.004520 u	ppm	0.000360	7.97	4.135020	Y 377.433
Zr (343.823 nm)	-0.004602 u	ppm	0.000012	0.26	-434.244000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.999415	19069.052465	0.000797	0.08
Y 377.433	0.991993	1004083.320343	0.000506	0.05
Y_R 377.433	1.048190	79130.600000	0.004263	0.41
Y_R 488.368	1.034120	45274.300000	0.000418	0.04
Y_R2 488.368	1.019504	88474.194646	0.000008	0.00

Sample Name: CCV-5407546

Date: 11/6/2018 3:25:01 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.495638	ppm	0.000382	0.08	22265.000000	Y 377.433
Al (167.019 nm)	0.528445	ppm	0.006059	1.15	298.667000	Y_R 377.433
Al H (396.152 nm)	0.493445 u	ppm	0.010146	2.06	1362.554627	Y_R 377.433
As (188.980 nm)	0.995966	ppm	0.002040	0.20	1252.470000	Y 242.219
B (249.678 nm)	0.493610	ppm	0.000433	0.09	12405.700000	Y 242.219
Ba (493.408 nm)	0.494056	ppm	0.002399	0.49	57832.500000	Y_R 488.368
Be (234.861 nm)	0.489179	ppm	0.000332	0.07	145780.000000	Y_R 488.368
Bi (223.061 nm)	-0.003006 u	ppm	0.001344	44.71	5.586280	Y 377.433
Ca (315.887 nm)	5.108280	ppm	0.022292	0.44	3989.118944	Y_R 377.433
Cd (214.439 nm)	0.499659	ppm	0.000318	0.06	29866.500000	Y 377.433
Co (228.615 nm)	0.498467	ppm	0.000972	0.19	9009.580000	Y 242.219
Cr (205.560 nm)	0.495808	ppm	0.001364	0.28	7537.600000	Y 377.433
Cu (324.754 nm)	0.494910	ppm	0.001710	0.35	27286.000000	Y 377.433
Fe (238.204 nm)	2.520213	ppm	0.014002	0.56	9345.932454	Y_R 377.433
Fe H (259.940 nm)	2.538500 u	ppm	0.011650	0.46	4805.560000	Y_R 377.433
K (766.491 nm)	50.098100	ppm	0.092372	0.18	56930.200000	Y_R2 488.368
Li (670.783 nm)	0.994715	ppm	0.005819	0.58	31820.800000	Y_R2 488.368
Mg (279.078 nm)	19.718000	ppm	0.010032	0.05	113937.000000	Y 377.433
Mn (257.610 nm)	0.501371	ppm	0.000543	0.11	117315.000000	Y 377.433
Mo (202.032 nm)	0.502676	ppm	0.000663	0.13	4328.990000	Y 377.433
Na (589.592 nm)	5.048480	ppm	0.002636	0.05	34536.700000	Y_R2 488.368
Na H (589.593 nm)	5.530379 u	ppm	0.006922	0.13	23120.532892	Y_R 488.368
Ni (231.604 nm)	0.504691	ppm	0.000293	0.06	3440.000000	Y 377.433
P (213.618 nm)	0.968581	ppm	0.001135	0.12	2129.280000	Y 242.219
Pb (220.353 nm)	1.007820	ppm	0.001527	0.15	2892.080000	Y 242.219
S (181.972 nm)	0.000513	ppm	0.000038	7.46	15.654300	Y 377.433
Sb (206.834 nm)	1.008150	ppm	0.001906	0.19	2745.300000	Y 377.433
Se (196.026 nm)	0.984743	ppm	0.005649	0.57	993.058000	Y 242.219
Si (288.158 nm)	4.994530	ppm	0.042145	0.84	43856.000000	Y 377.433
Sn (189.925 nm)	1.000320	ppm	0.000909	0.09	1998.030000	Y 377.433
Sr (421.552 nm)	0.498584	ppm	0.002493	0.50	104767.365763	Y_R 488.368
Th (288.505 nm)	0.003729	ppm	0.000992	26.60	98.652600	Y 377.433
Ti (336.122 nm)	0.502764	ppm	0.000236	0.05	71388.200000	Y 377.433
Tl (190.794 nm)	1.010670	ppm	0.002511	0.25	2214.140000	Y 377.433
U (409.013 nm)	0.000577 u	ppm	0.007278	> 100.00	-242.166000	Y 377.433
V (292.401 nm)	0.497064	ppm	0.000518	0.10	17952.300000	Y 377.433
Zn (206.200 nm)	0.495668	ppm	0.000690	0.14	2616.450000	Y 377.433
Zr (343.823 nm)	0.499526	ppm	0.000011	0.00	65713.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.011056	19291.169523	0.001057	0.10
Y 377.433	1.009908	1022216.118342	0.000577	0.06
Y_R 377.433	1.046160	78977.300000	0.001882	0.18
Y_R 488.368	1.026070	44922.000000	0.000379	0.04
Y_R2 488.368	1.020066	88522.895062	0.010567	1.04

Sample Name: CCB

Date: 11/6/2018 3:28:23 PM
Rack:Tube: S1:4

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000404	ppm	0.000206	50.83	-426.191000	Y 377.433
Al (167.019 nm)	-0.004946 u	ppm	0.002670	53.98	-0.403758	Y_R 377.433
Al H (396.152 nm)	-0.025809 u	ppm	0.000698	2.71	14.112958	Y_R 377.433
As (188.980 nm)	-0.000512 u	ppm	0.002487	> 100.00	-2.382440	Y 242.219
B (249.678 nm)	0.000514	ppm	0.000391	76.00	69.993900	Y 242.219
Ba (493.408 nm)	-0.000198 u	ppm	0.000045	22.58	576.499000	Y_R 488.368
Be (234.861 nm)	0.000055	ppm	0.000013	24.29	-29.903100	Y_R 488.368
Bi (223.061 nm)	0.000374	ppm	0.000206	55.24	13.682800	Y 377.433
Ca (315.887 nm)	0.007052	ppm	0.003566	50.57	-55.998048	Y_R 377.433
Cd (214.439 nm)	0.000098	ppm	0.000028	28.22	6.751680	Y 377.433
Co (228.615 nm)	0.000242	ppm	0.000052	21.49	-32.056400	Y 242.219
Cr (205.560 nm)	0.000223	ppm	0.000051	22.92	-0.571302	Y 377.433
Cu (324.754 nm)	0.000433	ppm	0.000339	78.37	-267.277000	Y 377.433
Fe (238.204 nm)	-0.000346 u	ppm	0.000101	29.16	23.558808	Y_R 377.433
Fe H (259.940 nm)	0.004735 u	ppm	0.001823	38.49	12.191300	Y_R 377.433
K (766.491 nm)	0.094183	ppm	0.027875	29.60	-648.140000	Y_R2 488.368
Li (670.783 nm)	0.001106	ppm	0.000432	39.09	-1316.820000	Y_R2 488.368
Mg (279.078 nm)	0.002201	ppm	0.001124	51.08	52.095300	Y 377.433
Mn (257.610 nm)	0.000074	ppm	0.000002	2.26	79.153000	Y 377.433
Mo (202.032 nm)	-0.000125 u	ppm	0.000071	56.66	-1.101570	Y 377.433
Na (589.592 nm)	0.023699	ppm	0.006879	29.03	453.789000	Y_R2 488.368
Na H (589.593 nm)	-0.188740 u	ppm	0.019163	10.15	1702.995037	Y_R 488.368
Ni (231.604 nm)	0.000092	ppm	0.000118	> 100.00	-3.472750	Y 377.433
P (213.618 nm)	-0.002689 u	ppm	0.000991	36.86	18.714300	Y 242.219
Pb (220.353 nm)	0.000968	ppm	0.000850	87.82	6.207990	Y 242.219
S (181.972 nm)	-0.005616 u	ppm	0.000890	15.85	11.295941	Y 377.433
Sb (206.834 nm)	0.001149	ppm	0.000359	31.27	-20.084600	Y 377.433
Se (196.026 nm)	0.001485	ppm	0.002064	> 100.00	14.468700	Y 242.219
Si (288.158 nm)	0.004800	ppm	0.000350	7.30	970.905000	Y 377.433
Sn (189.925 nm)	-0.001191 u	ppm	0.000062	5.19	7.230310	Y 377.433
Sr (421.552 nm)	0.000005 u	ppm	0.000031	> 100.00	157.019670	Y_R 488.368
Th (288.505 nm)	0.003675	ppm	0.000858	23.36	82.383000	Y 377.433
Ti (336.122 nm)	-0.000056 u	ppm	0.000014	24.79	-236.138000	Y 377.433
Tl (190.794 nm)	-0.000555 u	ppm	0.000053	9.48	-6.563520	Y 377.433
U (409.013 nm)	0.001641	ppm	0.001631	99.35	-200.188000	Y 377.433
V (292.401 nm)	-0.000200 u	ppm	0.000060	29.97	27.981700	Y 377.433
Zn (206.200 nm)	-0.005590 u	ppm	0.000025	0.45	-1.453370	Y 377.433
Zr (343.823 nm)	-0.000039 u	ppm	0.000067	> 100.00	21.555400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.013099	19330.150306	0.002763	0.27
Y 377.433	1.013543	1025895.403599	0.002628	0.26
Y_R 377.433	1.027870	77596.800000	0.000737	0.07
Y_R 488.368	1.012030	44307.300000	0.005937	0.59
Y_R2 488.368	1.026854	89112.022932	0.002342	0.23

Sample Name: CCVL-5413446

Date: 11/6/2018 3:31:46 PM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010078	ppm	0.000031	0.31	17.204400	Y 377.433
Al (167.019 nm)	0.099193	ppm	0.006349	6.40	57.724200	Y_R 377.433
Al H (396.152 nm)	0.084612 u	ppm	0.003003	3.55	293.510694	Y_R 377.433
As (188.980 nm)	0.015915	ppm	0.000984	6.19	18.304200	Y 242.219
B (249.678 nm)	0.101746	ppm	0.000042	0.04	2599.070000	Y 242.219
Ba (493.408 nm)	0.010123	ppm	0.000407	4.02	1771.960000	Y_R 488.368
Be (234.861 nm)	0.001007	ppm	0.000029	2.90	255.999000	Y_R 488.368
Bi (223.061 nm)	0.100427	ppm	0.000063	0.06	265.645000	Y 377.433
Ca (315.887 nm)	0.216341	ppm	0.008357	3.86	109.952940	Y_R 377.433
Cd (214.439 nm)	0.005266	ppm	0.000017	0.32	315.735000	Y 377.433
Co (228.615 nm)	0.010822	ppm	0.000570	5.27	159.928000	Y 242.219
Cr (205.560 nm)	0.010167	ppm	0.000130	1.28	150.734000	Y 377.433
Cu (324.754 nm)	0.015976	ppm	0.000296	1.86	596.859000	Y 377.433
Fe (238.204 nm)	0.100011	ppm	0.000553	0.55	394.733339	Y_R 377.433
Fe H (259.940 nm)	0.102222 u	ppm	0.002514	2.46	196.616000	Y_R 377.433
K (766.491 nm)	3.205680	ppm	0.007245	0.23	2934.680000	Y_R2 488.368
Li (670.783 nm)	0.024801	ppm	0.002082	8.40	-526.565000	Y_R2 488.368
Mg (279.078 nm)	0.200473	ppm	0.002182	1.09	1196.190000	Y 377.433
Mn (257.610 nm)	0.010461	ppm	0.000003	0.03	2508.320000	Y 377.433
Mo (202.032 nm)	0.019554	ppm	0.000234	1.20	168.369000	Y 377.433
Na (589.592 nm)	1.099400	ppm	0.002769	0.25	7556.720000	Y_R2 488.368
Na H (589.593 nm)	0.882325 u	ppm	0.010295	1.17	5636.345470	Y_R 488.368
Ni (231.604 nm)	0.041704	ppm	0.000034	0.08	280.404000	Y 377.433
P (213.618 nm)	2.843650 o	ppm	0.010978	0.39	6203.800000	Y 242.219
Pb (220.353 nm)	0.010762	ppm	0.000720	6.69	34.295600	Y 242.219
S (181.972 nm)	0.089023	ppm	0.000887	1.00	59.790317	Y 377.433
Sb (206.834 nm)	0.020272	ppm	0.001705	8.41	32.304700	Y 377.433
Se (196.026 nm)	0.015318	ppm	0.001534	10.01	28.227700	Y 242.219
Si (288.158 nm)	0.505826	ppm	0.001801	0.36	5277.070000	Y 377.433
Sn (189.925 nm)	0.100517	ppm	0.000145	0.14	209.404000	Y 377.433
Sr (421.552 nm)	0.010307	ppm	0.000252	2.45	2318.681073	Y_R 488.368
Th (288.505 nm)	0.015455	ppm	0.000957	6.19	113.871000	Y 377.433
Ti (336.122 nm)	0.010005	ppm	0.000060	0.60	1197.270000	Y 377.433
Tl (190.794 nm)	0.015517	ppm	0.002136	13.77	28.699900	Y 377.433
U (409.013 nm)	0.064576	ppm	0.003673	5.69	83.389800	Y 377.433
V (292.401 nm)	0.009584	ppm	0.000038	0.39	378.361000	Y 377.433
Zn (206.200 nm)	0.016171	ppm	0.000064	0.40	112.193000	Y 377.433
Zr (343.823 nm)	0.015404	ppm	0.000089	0.58	2052.340000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018416	19431.603044	0.001782	0.17
Y 377.433	1.019263	1031685.643453	0.002195	0.22
Y_R 377.433	1.042910	78732.600000	0.000386	0.04
Y_R 488.368	1.023260	44799.100000	0.019272	1.88
Y_R2 488.368	1.028238	89232.127337	0.004489	0.44

Sample Name: 280-116012-B-5-A@2

Date: 11/6/2018 3:35:09 PM
Rack:Tube: 1:31

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001318 u	ppm	0.000136	10.30	-1692.960000	Y 377.433
Al (167.019 nm)	12.973600 o	ppm	0.166768	1.29	7353.130000	Y_R 377.433
Al H (396.152 nm)	13.847696	ppm	0.131467	0.95	35230.640951	Y_R 377.433
As (188.980 nm)	0.024960	ppm	0.001365	5.47	28.145900	Y 242.219
B (249.678 nm)	0.210906	ppm	0.000821	0.39	5066.100000	Y 242.219
Ba (493.408 nm)	0.687916	ppm	0.008375	1.22	80603.800000	Y_R 488.368
Be (234.861 nm)	0.000604	ppm	0.000214	35.38	5576.370000	Y_R 488.368
Bi (223.061 nm)	-0.008533 u	ppm	0.001654	19.39	20.022400	Y 377.433
Ca (315.887 nm)	734.701182 o	ppm	6.673100	0.91	582493.277177	Y_R 377.433
Cd (214.439 nm)	0.004224	ppm	0.000070	1.66	421.492000	Y 377.433
Co (228.615 nm)	0.089137	ppm	0.000360	0.40	1592.910000	Y 242.219
Cr (205.560 nm)	0.535531	ppm	0.003469	0.65	8099.900000	Y 377.433
Cu (324.754 nm)	0.386889	ppm	0.002577	0.67	20977.900000	Y 377.433
Fe (238.204 nm)	175.806063 o	ppm	2.818021	1.60	650249.719659	Y_R 377.433
Fe H (259.940 nm)	179.450000	ppm	1.777380	0.99	339487.000000	Y_R 377.433
K (766.491 nm)	9.010480	ppm	0.009338	0.10	9618.770000	Y_R2 488.368
Li (670.783 nm)	0.019978	ppm	0.001139	5.70	-687.433000	Y_R2 488.368
Mg (279.078 nm)	22.457000	ppm	0.167654	0.75	129467.000000	Y 377.433
Mn (257.610 nm)	1.851710 o	ppm	0.014681	0.79	433112.000000	Y 377.433
Mo (202.032 nm)	0.064604	ppm	0.000794	1.23	556.334000	Y 377.433
Na (589.592 nm)	1.226380	ppm	0.013166	1.07	9763.450000	Y_R2 488.368
Na H (589.593 nm)	1.283772 u	ppm	0.037775	2.94	7745.675965	Y_R 488.368
Ni (231.604 nm)	0.296731	ppm	0.001846	0.62	2027.280000	Y 377.433
P (213.618 nm)	14.155300 o	ppm	0.109966	0.78	30784.100000	Y 242.219
Pb (220.353 nm)	0.519244	ppm	0.007498	1.44	1503.120000	Y 242.219
S (181.972 nm)	3.045785	ppm	0.039823	1.31	1578.560697	Y 377.433
Sb (206.834 nm)	0.010343	ppm	0.000979	9.47	-21.082300	Y 377.433
Se (196.026 nm)	-0.003840 u	ppm	0.001113	28.99	-23.102500	Y 242.219
Si (288.158 nm)	1.281060	ppm	0.012156	0.95	11940.000000	Y 377.433
Sn (189.925 nm)	0.029317	ppm	0.000742	2.53	67.873000	Y 377.433
Sr (421.552 nm)	2.053253 o	ppm	0.018771	0.91	430962.997851	Y_R 488.368
Th (288.505 nm)	0.004062	ppm	0.000893	22.00	383.409000	Y 377.433
Ti (336.122 nm)	0.433518	ppm	0.002860	0.66	63796.500000	Y 377.433
Tl (190.794 nm)	0.007576	ppm	0.000629	8.30	5.008490	Y 377.433
U (409.013 nm)	-0.016443 u	ppm	0.007945	48.32	-260.356000	Y 377.433
V (292.401 nm)	7.208960 o	ppm	0.056159	0.78	261537.000000	Y 377.433
Zn (206.200 nm)	5.392120 o	ppm	0.041801	0.78	28189.000000	Y 377.433
Zr (343.823 nm)	0.011473	ppm	0.000079	0.69	2043.530000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960512	18326.764421	0.000430	0.04
Y 377.433	0.969555	981371.818848	0.001064	0.11
Y_R 377.433	1.042790	78723.300000	0.003548	0.34
Y_R 488.368	1.017080	44528.200000	0.003291	0.32
Y_R2 488.368	1.021910	88682.935985	0.009084	0.89

Sample Name: 280-116012-C-6-A@10

Date: 11/6/2018 3:38:32 PM Rack:Tube: 1:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000575 u	ppm	0.000127	22.11	-1152.130000	Y 377.433
Al (167.019 nm)	1.703520	ppm	0.019440	1.14	977.859000	Y_R 377.433
Al H (396.152 nm)	1.676679	ppm	0.009930	0.59	4346.661075	Y_R 377.433
As (188.980 nm)	0.004392	ppm	0.000157	3.57	3.454500	Y 242.219
B (249.678 nm)	0.046725	ppm	0.000114	0.24	1168.250000	Y 242.219
Ba (493.408 nm)	0.165185	ppm	0.003007	1.82	19792.300000	Y_R 488.368
Be (234.861 nm)	0.000073	ppm	0.000052	71.76	1166.460000	Y_R 488.368
Bi (223.061 nm)	-0.006026 u	ppm	0.000113	1.87	3.865040	Y 377.433
Ca (315.887 nm)	111.930558 o	ppm	0.791841	0.71	88689.719285	Y_R 377.433
Cd (214.439 nm)	0.000643	ppm	0.000005	0.72	76.143000	Y 377.433
Co (228.615 nm)	0.037006	ppm	0.000277	0.75	635.889000	Y 242.219
Cr (205.560 nm)	0.194470	ppm	0.000418	0.21	2945.780000	Y 377.433
Cu (324.754 nm)	0.058944	ppm	0.000199	0.34	2957.520000	Y 377.433
Fe (238.204 nm)	38.520101 o	ppm	0.206661	0.54	142492.780944	Y_R 377.433
Fe H (259.940 nm)	38.808400	ppm	0.132540	0.34	73421.000000	Y_R 377.433
K (766.491 nm)	1.086810	ppm	0.052746	4.85	494.842000	Y_R2 488.368
Li (670.783 nm)	0.004500	ppm	0.001499	33.32	-1203.630000	Y_R2 488.368
Mg (279.078 nm)	5.783630	ppm	0.001768	0.03	33384.000000	Y 377.433
Mn (257.610 nm)	0.352761	ppm	0.000161	0.05	82560.100000	Y 377.433
Mo (202.032 nm)	0.022420	ppm	0.000538	2.40	193.048000	Y 377.433
Na (589.592 nm)	0.372237	ppm	0.009653	2.59	3082.410000	Y_R2 488.368
Na H (589.593 nm)	0.150205 u	ppm	0.057261	38.12	3100.242402	Y_R 488.368
Ni (231.604 nm)	0.082600	ppm	0.001304	1.58	560.948000	Y 377.433
P (213.618 nm)	1.694340	ppm	0.013238	0.78	3706.360000	Y 242.219
Pb (220.353 nm)	1.072650	ppm	0.001873	0.17	3082.920000	Y 242.219
S (181.972 nm)	0.896048	ppm	0.015338	1.71	473.938819	Y 377.433
Sb (206.834 nm)	0.000725	ppm	0.001024	> 100.00	-24.506200	Y 377.433
Se (196.026 nm)	-0.000755 u	ppm	0.001233	> 100.00	5.102020	Y 242.219
Si (288.158 nm)	1.393780	ppm	0.003791	0.27	12908.800000	Y 377.433
Sn (189.925 nm)	0.005613	ppm	0.001265	22.55	20.754300	Y 377.433
Sr (421.552 nm)	0.401847	ppm	0.005885	1.46	84470.287933	Y_R 488.368
Th (288.505 nm)	0.000424	ppm	0.000459	> 100.00	234.676000	Y 377.433
Ti (336.122 nm)	0.061321	ppm	0.000026	0.04	8855.760000	Y 377.433
Tl (190.794 nm)	0.002910	ppm	0.000390	13.41	-0.137166	Y 377.433
U (409.013 nm)	-0.010847 u	ppm	0.002063	19.02	-242.719000	Y 377.433
V (292.401 nm)	4.119190 o	ppm	0.001035	0.03	149479.000000	Y 377.433
Zn (206.200 nm)	0.899997	ppm	0.001204	0.13	4728.120000	Y 377.433
Zr (343.823 nm)	0.001415	ppm	0.000009	0.66	323.973000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005367	19182.622927	0.001394	0.14
Y 377.433	1.007723	1020004.578559	0.001475	0.15
Y_R 377.433	1.063060	80253.300000	0.008554	0.80
Y_R 488.368	1.044760	45740.300000	0.017332	1.66
Y_R2 488.368	1.040632	90307.671103	0.007986	0.77

Sample Name: 280-116012-D-7-B@5

Date: 11/6/2018 3:41:53 PM
Rack:Tube: 1:33

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000843 u	ppm	0.000218	25.84	-1435.410000	Y 377.433
Al (167.019 nm)	4.476220 o	ppm	0.017375	0.39	2577.060000	Y_R 377.433
Al H (396.152 nm)	4.809224	ppm	0.024599	0.51	12282.749326	Y_R 377.433
As (188.980 nm)	0.017125	ppm	0.001727	10.08	18.787000	Y 242.219
B (249.678 nm)	0.089800	ppm	0.000637	0.71	2140.410000	Y 242.219
Ba (493.408 nm)	0.438601	ppm	0.001578	0.36	51562.300000	Y_R 488.368
Be (234.861 nm)	0.000605	ppm	0.000339	56.09	3794.720000	Y_R 488.368
Bi (223.061 nm)	-0.009651 u	ppm	0.000069	0.71	7.785520	Y 377.433
Ca (315.887 nm)	242.621041 o	ppm	0.772811	0.32	192316.036391	Y_R 377.433
Cd (214.439 nm)	0.001806	ppm	0.000038	2.09	222.235000	Y 377.433
Co (228.615 nm)	0.393568	ppm	0.001669	0.42	7096.990000	Y 242.219
Cr (205.560 nm)	0.376485	ppm	0.000310	0.08	5694.640000	Y 377.433
Cu (324.754 nm)	0.264008	ppm	0.000428	0.16	14378.800000	Y 377.433
Fe (238.204 nm)	118.384971 o	ppm	0.591827	0.50	437875.801790	Y_R 377.433
Fe H (259.940 nm)	119.211000	ppm	0.446019	0.37	225526.000000	Y_R 377.433
K (766.491 nm)	2.273150	ppm	0.012357	0.54	1860.890000	Y_R2 488.368
Li (670.783 nm)	0.007737	ppm	0.001810	23.39	-1095.670000	Y_R2 488.368
Mg (279.078 nm)	14.236800	ppm	0.013240	0.09	82079.400000	Y 377.433
Mn (257.610 nm)	1.041080	ppm	0.000724	0.07	243534.000000	Y 377.433
Mo (202.032 nm)	0.037915	ppm	0.000552	1.46	326.496000	Y 377.433
Na (589.592 nm)	1.276290	ppm	0.008649	0.68	9587.020000	Y_R2 488.368
Na H (589.593 nm)	1.063542 u	ppm	0.011501	1.08	6703.552128	Y_R 488.368
Ni (231.604 nm)	0.165948	ppm	0.000180	0.11	1132.780000	Y 377.433
P (213.618 nm)	5.005900 o	ppm	0.003670	0.07	10902.400000	Y 242.219
Pb (220.353 nm)	0.250571	ppm	0.000632	0.25	730.618000	Y 242.219
S (181.972 nm)	2.265880	ppm	0.004612	0.20	1177.165110	Y 377.433
Sb (206.834 nm)	0.002603	ppm	0.000759	29.15	-32.831800	Y 377.433
Se (196.026 nm)	-0.002865 u	ppm	0.000532	18.55	-11.839500	Y 242.219
Si (288.158 nm)	1.810900	ppm	0.001038	0.06	16493.700000	Y 377.433
Sn (189.925 nm)	0.014084	ppm	0.000245	1.74	37.593800	Y 377.433
Sr (421.552 nm)	0.887737	ppm	0.004764	0.54	186418.162054	Y_R 488.368
Th (288.505 nm)	0.004139	ppm	0.001900	45.89	316.021000	Y 377.433
Ti (336.122 nm)	0.149511	ppm	0.000108	0.07	21818.700000	Y 377.433
Tl (190.794 nm)	0.003971	ppm	0.000592	14.90	1.096680	Y 377.433
U (409.013 nm)	-0.013107 u	ppm	0.001625	12.40	-204.400000	Y 377.433
V (292.401 nm)	5.766960 o	ppm	0.003213	0.06	209237.000000	Y 377.433
Zn (206.200 nm)	2.524750 o	ppm	0.001438	0.06	13213.700000	Y 377.433
Zr (343.823 nm)	0.002153	ppm	0.000127	5.92	651.689000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.988144	18853.999402	0.004360	0.44
Y 377.433	0.995193	1007322.095022	0.003202	0.32
Y_R 377.433	1.027670	77581.700000	0.004925	0.48
Y_R 488.368	1.005980	44042.600000	0.004324	0.43
Y_R2 488.368	1.013834	87982.074128	0.008354	0.82

Sample Name: 280-116012-D-7-Bsd@25

Date: 11/6/2018 3:45:15 PM Rack:Tube: 1:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000437	ppm	0.000038	8.64	-617.036000	Y 377.433
Al (167.019 nm)	0.932956	ppm	0.005461	0.59	538.677000	Y_R 377.433
Al H (396.152 nm)	0.947929	ppm	0.002578	0.27	2485.426416	Y_R 377.433
As (188.980 nm)	0.003645	ppm	0.003533	96.93	2.640000	Y 242.219
B (249.678 nm)	0.018108	ppm	0.000213	1.18	476.750000	Y 242.219
Ba (493.408 nm)	0.089825	ppm	0.001367	1.52	11036.700000	Y_R 488.368
Be (234.861 nm)	0.000210	ppm	0.000038	18.19	764.845000	Y_R 488.368
Bi (223.061 nm)	-0.005075 u	ppm	0.000436	8.58	3.919490	Y 377.433
Ca (315.887 nm)	49.726129 o	ppm	0.061532	0.12	39366.955526	Y_R 377.433
Cd (214.439 nm)	0.000356	ppm	0.000088	24.74	45.370800	Y 377.433
Co (228.615 nm)	0.081489	ppm	0.000167	0.21	1440.500000	Y 242.219
Cr (205.560 nm)	0.077009	ppm	0.000082	0.11	1161.680000	Y 377.433
Cu (324.754 nm)	0.052554	ppm	0.000404	0.77	2623.550000	Y 377.433
Fe (238.204 nm)	24.214927 o	ppm	0.075706	0.31	89584.592378	Y_R 377.433
Fe H (259.940 nm)	24.494000	ppm	0.082095	0.34	46341.000000	Y_R 377.433
K (766.491 nm)	0.552396	ppm	0.092086	16.67	-120.519000	Y_R2 488.368
Li (670.783 nm)	0.004599	ppm	0.000652	14.17	-1200.310000	Y_R2 488.368
Mg (279.078 nm)	2.929340	ppm	0.001839	0.06	16920.100000	Y 377.433
Mn (257.610 nm)	0.214322	ppm	0.000027	0.01	50184.300000	Y 377.433
Mo (202.032 nm)	0.007125	ppm	0.000304	4.26	61.336100	Y 377.433
Na (589.592 nm)	0.270289	ppm	0.001303	0.48	2258.870000	Y_R2 488.368
Na H (589.593 nm)	-0.052427 u	ppm	0.007421	14.16	2286.926291	Y_R 488.368
Ni (231.604 nm)	0.033085	ppm	0.000180	0.54	222.586000	Y 377.433
P (213.618 nm)	0.982946	ppm	0.007908	0.80	2160.500000	Y 242.219
Pb (220.353 nm)	0.052442	ppm	0.000613	1.17	155.586000	Y 242.219
S (181.972 nm)	0.443670	ppm	0.003481	0.78	241.916862	Y 377.433
Sb (206.834 nm)	-0.000638 u	ppm	0.002271	> 100.00	-28.383900	Y 377.433
Se (196.026 nm)	-0.002335 u	ppm	0.003481	> 100.00	6.172500	Y 242.219
Si (288.158 nm)	0.370516	ppm	0.000142	0.04	4114.120000	Y 377.433
Sn (189.925 nm)	0.002555	ppm	0.001352	52.94	14.675500	Y 377.433
Sr (421.552 nm)	0.180678	ppm	0.002649	1.47	38065.250905	Y_R 488.368
Th (288.505 nm)	0.000420 u	ppm	0.000603	> 100.00	121.010000	Y 377.433
Ti (336.122 nm)	0.029821	ppm	0.000025	0.08	4174.490000	Y 377.433
Tl (190.794 nm)	0.000358	ppm	0.000204	57.02	-5.023700	Y 377.433
U (409.013 nm)	-0.006467 u	ppm	0.001315	20.33	-224.133000	Y 377.433
V (292.401 nm)	1.163070 o	ppm	0.000243	0.02	42224.600000	Y 377.433
Zn (206.200 nm)	0.523975	ppm	0.000407	0.08	2764.290000	Y 377.433
Zr (343.823 nm)	0.000367	ppm	0.000143	38.93	144.888000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014107	19349.384474	0.001002	0.10
Y 377.433	1.015107	1027478.785156	0.000936	0.09
Y_R 377.433	1.040710	78566.300000	0.003025	0.29
Y_R 488.368	1.018130	44574.100000	0.019468	1.91
Y_R2 488.368	1.044806	90669.927381	0.008800	0.84

Sample Name: 280-116012-D-7-C MS@5

Date: 11/6/2018 3:48:36 PM
Rack:Tube: 1:35
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008490	ppm	0.000162	1.91	-690.156000	Y 377.433
Al (167.019 nm)	6.217660 o	ppm	0.010549	0.17	3585.650000	Y_R 377.433
Al H (396.152 nm)	6.269118	ppm	0.032898	0.52	15962.549026	Y_R 377.433
As (188.980 nm)	0.198939	ppm	0.000241	0.12	247.250000	Y 242.219
B (249.678 nm)	0.235490	ppm	0.007617	3.23	5692.120000	Y 242.219
Ba (493.408 nm)	0.706140	ppm	0.007537	1.07	82595.400000	Y_R 488.368
Be (234.861 nm)	0.008402	ppm	0.000382	4.54	7852.800000	Y_R 488.368
Bi (223.061 nm)	0.344823	ppm	0.004614	1.34	909.606000	Y 377.433
Ca (315.887 nm)	223.944658 o	ppm	2.405985	1.07	177507.280326	Y_R 377.433
Cd (214.439 nm)	0.018357	ppm	0.000435	2.37	1265.220000	Y 377.433
Co (228.615 nm)	0.319617	ppm	0.001634	0.51	5765.860000	Y 242.219
Cr (205.560 nm)	0.391492	ppm	0.006416	1.64	5907.270000	Y 377.433
Cu (324.754 nm)	0.361034	ppm	0.007115	1.97	19852.900000	Y 377.433
Fe (238.204 nm)	174.830393 o	ppm	0.550823	0.32	646641.170158	Y_R 377.433
Fe H (259.940 nm)	176.985000	ppm	1.050330	0.59	334823.000000	Y_R 377.433
K (766.491 nm)	13.157300	ppm	0.174003	1.32	14393.800000	Y_R2 488.368
Li (670.783 nm)	0.222633	ppm	0.001687	0.76	6071.250000	Y_R2 488.368
Mg (279.078 nm)	16.829700	ppm	0.302406	1.80	96953.600000	Y 377.433
Mn (257.610 nm)	1.142430 o	ppm	0.019736	1.73	267236.000000	Y 377.433
Mo (202.032 nm)	0.228276	ppm	0.003216	1.41	1965.870000	Y 377.433
Na (589.592 nm)	11.693300 o	ppm	0.150758	1.29	78714.400000	Y_R2 488.368
Na H (589.593 nm)	11.011069	ppm	0.234952	2.13	43398.184987	Y_R 488.368
Ni (231.604 nm)	0.303809	ppm	0.003271	1.08	2075.930000	Y 377.433
P (213.618 nm)	5.432690 o	ppm	0.112828	2.08	11829.800000	Y 242.219
Pb (220.353 nm)	0.291838	ppm	0.006531	2.24	853.516000	Y 242.219
S (181.972 nm)	1.786244	ppm	0.048816	2.73	931.764084	Y 377.433
Sb (206.834 nm)	0.083481	ppm	0.000505	0.61	173.403000	Y 377.433
Se (196.026 nm)	0.346475	ppm	0.008389	2.42	325.059000	Y 242.219
Si (288.158 nm)	0.630615	ppm	0.016089	2.55	6349.590000	Y 377.433
Sn (189.925 nm)	0.388553	ppm	0.002226	0.57	781.960000	Y 377.433
Sr (421.552 nm)	0.877458	ppm	0.007444	0.85	184261.350384	Y_R 488.368
Th (288.505 nm)	0.189520	ppm	0.002866	1.51	725.542000	Y 377.433
Ti (336.122 nm)	0.383158	ppm	0.005558	1.45	55041.100000	Y 377.433
Tl (190.794 nm)	0.361657	ppm	0.010344	2.86	783.859000	Y 377.433
U (409.013 nm)	0.374109	ppm	0.000934	0.25	1596.590000	Y 377.433
V (292.401 nm)	3.885300 o	ppm	0.057023	1.47	140940.000000	Y 377.433
Zn (206.200 nm)	2.251910 o	ppm	0.042136	1.87	11788.700000	Y 377.433
Zr (343.823 nm)	0.071335	ppm	0.000858	1.20	9910.930000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.987543	18842.524314	0.000633	0.06
Y 377.433	0.992649	1004747.338844	0.002278	0.23
Y_R 377.433	1.049510	79230.800000	0.005716	0.54
Y_R 488.368	1.027410	44980.600000	0.005551	0.54
Y_R2 488.368	1.020819	88588.304748	0.007569	0.74

Sample Name: 280-116012-D-7-D MSD@5

Date: 11/6/2018 3:51:58 PM
Rack:Tube: 1:36

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011036	ppm	0.000284	2.57	-791.275000	Y 377.433
Al (167.019 nm)	6.308160 o	ppm	0.152538	2.42	3578.910000	Y_R 377.433
Al H (396.152 nm)	6.774055	ppm	0.144716	2.14	17239.244484	Y_R 377.433
As (188.980 nm)	0.236041	ppm	0.010096	4.28	294.727000	Y 242.219
B (249.678 nm)	0.295711	ppm	0.012079	4.08	7331.150000	Y 242.219
Ba (493.408 nm)	0.768048	ppm	0.017321	2.26	89687.900000	Y_R 488.368
Be (234.861 nm)	0.012925	ppm	0.001177	9.10	6549.040000	Y_R 488.368
Bi (223.061 nm)	0.436865	ppm	0.020217	4.63	1127.390000	Y 377.433
Ca (315.887 nm)	233.426553 o	ppm	5.341130	2.29	185025.610048	Y_R 377.433
Cd (214.439 nm)	0.024108	ppm	0.001201	4.98	1527.340000	Y 377.433
Co (228.615 nm)	0.470081	ppm	0.019574	4.16	8493.610000	Y 242.219
Cr (205.560 nm)	0.398143	ppm	0.018498	4.65	6031.820000	Y 377.433
Cu (324.754 nm)	0.338728	ppm	0.014827	4.38	18532.700000	Y 377.433
Fe (238.204 nm)	89.161354 o	ppm	1.950027	2.19	329791.228351	Y_R 377.433
Fe H (259.940 nm)	89.885700	ppm	2.021210	2.25	170049.000000	Y_R 377.433
K (766.491 nm)	12.385600	ppm	0.173000	1.40	13505.100000	Y_R2 488.368
Li (670.783 nm)	0.208478	ppm	0.003544	1.70	5599.200000	Y_R2 488.368
Mg (279.078 nm)	21.375900	ppm	0.970501	4.54	123357.000000	Y 377.433
Mn (257.610 nm)	0.909999	ppm	0.039831	4.38	212879.000000	Y 377.433
Mo (202.032 nm)	0.271142	ppm	0.012427	4.58	2335.030000	Y 377.433
Na (589.592 nm)	10.864600	ppm	0.129416	1.19	73383.600000	Y_R2 488.368
Na H (589.593 nm)	12.155433	ppm	0.315985	2.60	47649.117774	Y_R 488.368
Ni (231.604 nm)	0.272517	ppm	0.012229	4.49	1859.090000	Y 377.433
P (213.618 nm)	6.576460 o	ppm	0.252668	3.84	14315.200000	Y 242.219
Pb (220.353 nm)	0.279073	ppm	0.013879	4.97	809.350000	Y 242.219
S (181.972 nm)	2.456092	ppm	0.108231	4.41	1274.263850	Y 377.433
Sb (206.834 nm)	0.103922	ppm	0.005181	4.99	249.191000	Y 377.433
Se (196.026 nm)	0.453524	ppm	0.017757	3.92	448.021000	Y 242.219
Si (288.158 nm)	1.417110	ppm	0.060305	4.26	13109.300000	Y 377.433
Sn (189.925 nm)	0.451946	ppm	0.017957	3.97	907.972000	Y 377.433
Sr (421.552 nm)	0.993633	ppm	0.024149	2.43	208636.968163	Y_R 488.368
Th (288.505 nm)	0.224710	ppm	0.012983	5.78	866.793000	Y 377.433
Ti (336.122 nm)	0.456884	ppm	0.020917	4.58	65564.200000	Y 377.433
Tl (190.794 nm)	0.459823	ppm	0.018463	4.02	1002.020000	Y 377.433
U (409.013 nm)	0.458458	ppm	0.022441	4.89	1896.630000	Y 377.433
V (292.401 nm)	5.221440 o	ppm	0.235550	4.51	189429.000000	Y 377.433
Zn (206.200 nm)	2.499430 o	ppm	0.118670	4.75	13081.500000	Y 377.433
Zr (343.823 nm)	0.094191	ppm	0.004332	4.60	12668.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.979292	18685.099018	0.003240	0.33
Y 377.433	0.986495	998517.831363	0.005010	0.51
Y_R 377.433	1.019540	76968.300000	0.006450	0.63
Y_R 488.368	0.996442	43624.800000	0.008572	0.86
Y_R2 488.368	1.027714	89186.623631	0.003237	0.31

Sample Name: 280-116012-D-7-Bpds@5

Date: 11/6/2018 3:55:20 PM
Rack:Tube: 1:37

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011127	ppm	0.000438	3.94	-882.929000	Y 377.433
Al (167.019 nm)	5.340250 o	ppm	0.073396	1.37	3058.030000	Y_R 377.433
Al H (396.152 nm)	5.762165	ppm	0.041429	0.72	14690.429410	Y_R 377.433
As (188.980 nm)	0.217619	ppm	0.001569	0.72	271.280000	Y 242.219
B (249.678 nm)	0.191482	ppm	0.000317	0.17	4683.840000	Y 242.219
Ba (493.408 nm)	0.530244	ppm	0.004056	0.76	62178.900000	Y_R 488.368
Be (234.861 nm)	0.050530	ppm	0.000278	0.55	18635.000000	Y_R 488.368
Bi (223.061 nm)	-0.007672 u	ppm	0.001480	19.29	12.584900	Y 377.433
Ca (315.887 nm)	256.774874 o	ppm	1.420780	0.55	203538.835663	Y_R 377.433
Cd (214.439 nm)	0.049808	ppm	0.000090	0.18	3090.090000	Y 377.433
Co (228.615 nm)	0.432537	ppm	0.003552	0.82	7804.420000	Y 242.219
Cr (205.560 nm)	0.420669	ppm	0.000007	0.00	6367.110000	Y 377.433
Cu (324.754 nm)	0.308666	ppm	0.000104	0.03	16857.800000	Y 377.433
Fe (238.204 nm)	117.262814 o	ppm	0.684558	0.58	433725.462441	Y_R 377.433
Fe H (259.940 nm)	118.106000	ppm	0.664258	0.56	223436.000000	Y_R 377.433
K (766.491 nm)	23.186400	ppm	0.018929	0.08	25942.000000	Y_R2 488.368
Li (670.783 nm)	0.114022	ppm	0.001391	1.22	2449.000000	Y_R2 488.368
Mg (279.078 nm)	33.329600	ppm	0.060408	0.18	192359.000000	Y 377.433
Mn (257.610 nm)	1.069280	ppm	0.003258	0.30	250129.000000	Y 377.433
Mo (202.032 nm)	0.086706	ppm	0.000476	0.55	746.674000	Y 377.433
Na (589.592 nm)	21.897800 o	ppm	0.036530	0.17	145550.000000	Y_R2 488.368
Na H (589.593 nm)	22.712446	ppm	0.166130	0.73	86102.440060	Y_R 488.368
Ni (231.604 nm)	0.211878	ppm	0.000228	0.11	1446.280000	Y 377.433
P (213.618 nm)	6.960060 o	ppm	0.008365	0.12	15148.700000	Y 242.219
Pb (220.353 nm)	0.344515	ppm	0.000736	0.21	1000.790000	Y 242.219
S (181.972 nm)	2.254036	ppm	0.000927	0.04	1171.167653	Y 377.433
Sb (206.834 nm)	0.101162	ppm	0.000382	0.38	236.538000	Y 377.433
Se (196.026 nm)	0.205393	ppm	0.002219	1.08	195.684000	Y 242.219
Si (288.158 nm)	12.193500 o	ppm	0.137481	1.13	105729.000000	Y 377.433
Sn (189.925 nm)	0.110325	ppm	0.001577	1.43	228.901000	Y 377.433
Sr (421.552 nm)	0.920874	ppm	0.006396	0.69	193370.746523	Y_R 488.368
Th (288.505 nm)	0.197414	ppm	0.002409	1.22	818.431000	Y 377.433
Ti (336.122 nm)	0.196198	ppm	0.000245	0.12	28518.000000	Y 377.433
Tl (190.794 nm)	0.207791	ppm	0.001049	0.51	448.868000	Y 377.433
U (409.013 nm)	0.504044	ppm	0.000041	0.01	2127.000000	Y 377.433
V (292.401 nm)	5.738210 o	ppm	0.019040	0.33	208171.000000	Y 377.433
Zn (206.200 nm)	2.675780 o	ppm	0.015051	0.56	14002.500000	Y 377.433
Zr (343.823 nm)	0.052025	ppm	0.000079	0.15	7205.690000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980367	18705.611924	0.005030	0.51
Y 377.433	0.985785	997799.392686	0.004253	0.43
Y_R 377.433	1.020450	77036.900000	0.002387	0.23
Y_R 488.368	0.998680	43722.800000	0.002949	0.30
Y_R2 488.368	1.020392	88551.243552	0.008382	0.82

Sample Name: 280-116012-B-8-A@10

Date: 11/6/2018 3:58:42 PM
Rack:Tube: 1:38

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002097 u	ppm	0.000628	29.93	-2075.020000	Y 377.433
Al (167.019 nm)	1.690420	ppm	0.015773	0.93	1036.900000	Y_R 377.433
Al H (396.152 nm)	1.744854	ppm	0.009364	0.54	4503.439531	Y_R 377.433
As (188.980 nm)	0.016277	ppm	0.004278	26.28	17.547300	Y 242.219
B (249.678 nm)	0.047309	ppm	0.001255	2.65	1033.290000	Y 242.219
Ba (493.408 nm)	0.181415	ppm	0.002772	1.53	21756.000000	Y_R 488.368
Be (234.861 nm)	0.001240	ppm	0.000134	10.82	4587.360000	Y_R 488.368
Bi (223.061 nm)	-0.006949 u	ppm	0.000902	12.98	17.771700	Y 377.433
Ca (315.887 nm)	78.223490 o	ppm	0.192817	0.25	61962.913577	Y_R 377.433
Cd (214.439 nm)	0.000907	ppm	0.000143	15.74	186.742000	Y 377.433
Co (228.615 nm)	0.014208	ppm	0.000480	3.38	223.332000	Y 242.219
Cr (205.560 nm)	0.175191	ppm	0.003838	2.19	2625.130000	Y 377.433
Cu (324.754 nm)	0.207956	ppm	0.004893	2.35	11373.400000	Y 377.433
Fe (238.204 nm)	137.817680 o	ppm	0.435938	0.32	509748.354779	Y_R 377.433
Fe H (259.940 nm)	139.681000	ppm	1.022390	0.73	264251.000000	Y_R 377.433
K (766.491 nm)	0.373890	ppm	0.011538	3.09	-326.064000	Y_R2 488.368
Li (670.783 nm)	0.005187	ppm	0.002144	41.33	-1180.720000	Y_R2 488.368
Mg (279.078 nm)	5.327010	ppm	0.109683	2.06	30579.200000	Y 377.433
Mn (257.610 nm)	0.759686	ppm	0.015860	2.09	177726.000000	Y 377.433
Mo (202.032 nm)	0.022530	ppm	0.000776	3.45	194.000000	Y 377.433
Na (589.592 nm)	0.317131	ppm	0.002107	0.66	2752.810000	Y_R2 488.368
Na H (589.593 nm)	-0.012186 u	ppm	0.010377	85.15	2520.794844	Y_R 488.368
Ni (231.604 nm)	0.116955	ppm	0.003053	2.61	799.376000	Y 377.433
P (213.618 nm)	4.277750 o	ppm	0.086222	2.02	9320.080000	Y 242.219
Pb (220.353 nm)	0.035599	ppm	0.000016	0.05	116.751000	Y 242.219
S (181.972 nm)	1.901298	ppm	0.039318	2.07	989.762308	Y 377.433
Sb (206.834 nm)	0.004832	ppm	0.002112	43.71	-37.291100	Y 377.433
Se (196.026 nm)	0.000948	ppm	0.000875	92.23	-12.111500	Y 242.219
Si (288.158 nm)	1.959950	ppm	0.056010	2.86	17774.800000	Y 377.433
Sn (189.925 nm)	0.009650	ppm	0.000732	7.58	28.778800	Y 377.433
Sr (421.552 nm)	0.279036	ppm	0.003864	1.38	58702.390875	Y_R 488.368
Th (288.505 nm)	-0.003650 u	ppm	0.005014	> 100.00	422.406000	Y 377.433
Ti (336.122 nm)	0.071716	ppm	0.001603	2.24	10230.300000	Y 377.433
Tl (190.794 nm)	0.005874	ppm	0.001718	29.24	3.633350	Y 377.433
U (409.013 nm)	-0.010224 u	ppm	0.001808	17.69	-142.645000	Y 377.433
V (292.401 nm)	9.279650 o	ppm	0.195531	2.11	336767.000000	Y 377.433
Zn (206.200 nm)	0.639565	ppm	0.015146	2.37	3367.980000	Y 377.433
Zr (343.823 nm)	0.001794	ppm	0.000172	9.57	660.717000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.006071	19196.055732	0.001386	0.14
Y 377.433	1.006537	1018804.255291	0.003044	0.30
Y_R 377.433	1.040880	78579.200000	0.002891	0.28
Y_R 488.368	1.021080	44703.300000	0.001225	0.12
Y_R2 488.368	1.040468	90293.414861	0.005324	0.51

Sample Name: 280-116012-D-9-B@10

Date: 11/6/2018 4:02:05 PM Rack:Tube: 1:39

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001381 u	ppm	0.000231	16.72	-1545.170000	Y 377.433
Al (167.019 nm)	1.819780	ppm	0.011175	0.61	1033.060000	Y_R 377.433
Al H (396.152 nm)	1.805063	ppm	0.006670	0.37	4680.712108	Y_R 377.433
As (188.980 nm)	0.005610	ppm	0.002448	43.64	5.115410	Y 242.219
B (249.678 nm)	0.019081	ppm	0.000224	1.18	498.508000	Y 242.219
Ba (493.408 nm)	0.100252	ppm	0.000371	0.37	12265.000000	Y_R 488.368
Be (234.861 nm)	0.000067	ppm	0.000029	43.59	719.609000	Y_R 488.368
Bi (223.061 nm)	-0.005551 u	ppm	0.000323	5.83	2.707460	Y 377.433
Ca (315.887 nm)	139.440556 o	ppm	0.099811	0.07	110502.781773	Y_R 377.433
Cd (214.439 nm)	0.000690	ppm	0.000038	5.55	65.186700	Y 377.433
Co (228.615 nm)	0.019863	ppm	0.000012	0.06	325.160000	Y 242.219
Cr (205.560 nm)	0.197605	ppm	0.001379	0.70	2997.460000	Y 377.433
Cu (324.754 nm)	0.052986	ppm	0.000133	0.25	2598.860000	Y 377.433
Fe (238.204 nm)	24.117352 o	ppm	0.034937	0.14	89223.709443	Y_R 377.433
Fe H (259.940 nm)	24.388600	ppm	0.013329	0.05	46141.600000	Y_R 377.433
K (766.491 nm)	0.635688	ppm	0.046663	7.34	-24.609600	Y_R2 488.368
Li (670.783 nm)	0.004926	ppm	0.000381	7.74	-1189.430000	Y_R2 488.368
Mg (279.078 nm)	2.951140	ppm	0.011825	0.40	17046.000000	Y 377.433
Mn (257.610 nm)	0.252702	ppm	0.000747	0.30	59159.900000	Y 377.433
Mo (202.032 nm)	0.011790	ppm	0.000250	2.12	101.510000	Y 377.433
Na (589.592 nm)	0.269350	ppm	0.004693	1.74	2274.720000	Y_R2 488.368
Na H (589.593 nm)	-0.019686 u	ppm	0.026631	> 100.00	2417.146101	Y_R 488.368
Ni (231.604 nm)	0.082953	ppm	0.001171	1.41	562.773000	Y 377.433
P (213.618 nm)	2.814860 o	ppm	0.002422	0.09	6141.230000	Y 242.219
Pb (220.353 nm)	0.014824	ppm	0.000362	2.44	47.379200	Y 242.219
S (181.972 nm)	0.787519	ppm	0.006074	0.77	418.112805	Y 377.433
Sb (206.834 nm)	0.007950	ppm	0.002404	30.24	-1.234170	Y 377.433
Se (196.026 nm)	-0.000268 u	ppm	0.000586	> 100.00	8.296100	Y 242.219
Si (288.158 nm)	1.661220	ppm	0.004576	0.28	15207.300000	Y 377.433
Sn (189.925 nm)	0.001459	ppm	0.000817	55.96	12.498000	Y 377.433
Sr (421.552 nm)	0.543061	ppm	0.001571	0.29	114099.330925	Y_R 488.368
Th (288.505 nm)	0.001842 u	ppm	0.003377	> 100.00	318.430000	Y 377.433
Ti (336.122 nm)	0.054699	ppm	0.000029	0.05	7999.080000	Y 377.433
Tl (190.794 nm)	0.005046	ppm	0.000034	0.67	4.926490	Y 377.433
U (409.013 nm)	-0.016238 u	ppm	0.001394	8.58	-285.595000	Y 377.433
V (292.401 nm)	6.273160 o	ppm	0.010843	0.17	227651.000000	Y 377.433
Zn (206.200 nm)	0.295539	ppm	0.001163	0.39	1571.240000	Y 377.433
Zr (343.823 nm)	0.002074	ppm	0.000114	5.48	369.052000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002940	19136.309974	0.004519	0.45
Y 377.433	1.006352	1018616.766109	0.005477	0.54
Y_R 377.433	1.066440	80509.000000	0.005997	0.56
Y_R 488.368	1.048790	45916.500000	0.005434	0.52
Y_R2 488.368	1.040177	90268.183374	0.002252	0.22

Sample Name: CCVH-5408055

Date: 11/6/2018 4:05:28 PM
Rack:Tube: S1:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001465 u	ppm	0.000240	16.37	-756.609000	Y 377.433
Al (167.019 nm)	45.359300 o	ppm	0.133233	0.29	25324.000000	Y_R 377.433
Al H (396.152 nm)	50.140866	ppm	0.103095	0.21	126190.648088	Y_R 377.433
As (188.980 nm)	0.001220	ppm	0.000278	22.74	-0.627759	Y 242.219
B (249.678 nm)	-0.000939 u	ppm	0.000546	58.09	-38.917300	Y 242.219
Ba (493.408 nm)	-0.000021 u	ppm	0.000081	> 100.00	642.012000	Y_R 488.368
Be (234.861 nm)	0.000167	ppm	0.000017	10.29	1511.260000	Y_R 488.368
Bi (223.061 nm)	0.987684	ppm	0.000186	0.02	2507.770000	Y 377.433
Ca (315.887 nm)	0.003173 u	ppm	0.004917	> 100.00	-59.073028	Y_R 377.433
Cd (214.439 nm)	-0.000396 u	ppm	0.000065	16.40	23.577700	Y 377.433
Co (228.615 nm)	0.003078	ppm	0.000518	16.82	19.324200	Y 242.219
Cr (205.560 nm)	-0.000066 u	ppm	0.000145	> 100.00	-18.254400	Y 377.433
Cu (324.754 nm)	-0.004828 u	ppm	0.000398	8.25	-239.514000	Y 377.433
Fe (238.204 nm)	48.535417 o	ppm	0.220397	0.45	179534.777586	Y_R 377.433
Fe H (259.940 nm)	48.825500	ppm	0.269458	0.55	92371.300000	Y_R 377.433
K (766.491 nm)	0.078097	ppm	0.057823	74.04	-666.663000	Y_R2 488.368
Li (670.783 nm)	0.002537	ppm	0.000689	27.15	-1269.100000	Y_R2 488.368
Mg (279.078 nm)	-0.022734 u	ppm	0.000490	2.16	-445.246000	Y 377.433
Mn (257.610 nm)	0.001403	ppm	0.000028	1.99	389.997000	Y 377.433
Mo (202.032 nm)	0.000195	ppm	0.000149	76.26	1.650740	Y 377.433
Na (589.592 nm)	245.610000 o	ppm	0.514560	0.21	1617480.000000	Y_R2 488.368
Na H (589.593 nm)	257.379594	ppm	0.799393	0.31	945328.707820	Y_R 488.368
Ni (231.604 nm)	0.004222	ppm	0.000487	11.54	26.684700	Y 377.433
P (213.618 nm)	-0.004122 u	ppm	0.003166	76.81	15.600000	Y 242.219
Pb (220.353 nm)	-0.002424 u	ppm	0.000668	27.57	13.164200	Y 242.219
S (181.972 nm)	4.933518	ppm	0.013900	0.28	2540.870859	Y 377.433
Sb (206.834 nm)	-0.004837 u	ppm	0.001377	28.46	-81.853200	Y 377.433
Se (196.026 nm)	-0.002353 u	ppm	0.002040	86.72	1.987860	Y 242.219
Si (288.158 nm)	0.051421	ppm	0.002334	4.54	1371.600000	Y 377.433
Sn (189.925 nm)	0.000970	ppm	0.001219	> 100.00	11.525200	Y 377.433
Sr (421.552 nm)	0.000235	ppm	0.000019	8.19	205.290073	Y_R 488.368
Th (288.505 nm)	4.960840	ppm	0.006775	0.14	12967.900000	Y 377.433
Ti (336.122 nm)	0.001014	ppm	0.000003	0.26	-83.604300	Y 377.433
Tl (190.794 nm)	-0.003436 u	ppm	0.000131	3.81	-14.166900	Y 377.433
U (409.013 nm)	10.111500	ppm	0.000230	0.00	45577.100000	Y 377.433
V (292.401 nm)	0.004294	ppm	0.000161	3.74	22.139700	Y 377.433
Zn (206.200 nm)	-0.004197 u	ppm	0.000292	6.95	5.819910	Y 377.433
Zr (343.823 nm)	-0.004502 u	ppm	0.000084	1.87	-424.944000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000684	19093.256090	0.002458	0.25
Y 377.433	0.994472	1006592.584622	0.002507	0.25
Y_R 377.433	1.029990	77757.300000	0.006641	0.64
Y_R 488.368	1.016370	44497.100000	0.010483	1.03
Y_R2 488.368	1.028501	89254.916480	0.003034	0.30

Sample Name: CCV-5407546

Date: 11/6/2018 4:08:50 PM
Rack:Tube: S1:2
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.494770	ppm	0.001933	0.39	22225.100000	Y 377.433
Al (167.019 nm)	0.520873	ppm	0.013909	2.67	294.433000	Y_R 377.433
Al H (396.152 nm)	0.501923 u	ppm	0.011968	2.38	1383.817146	Y_R 377.433
As (188.980 nm)	0.995322	ppm	0.001724	0.17	1251.660000	Y 242.219
B (249.678 nm)	0.494497	ppm	0.000389	0.08	12428.000000	Y 242.219
Ba (493.408 nm)	0.499390	ppm	0.007582	1.52	58450.300000	Y_R 488.368
Be (234.861 nm)	0.490755	ppm	0.014008	2.85	146249.000000	Y_R 488.368
Bi (223.061 nm)	-0.003047 u	ppm	0.000094	3.10	5.479470	Y 377.433
Ca (315.887 nm)	5.044087	ppm	0.065119	1.29	3938.219142	Y_R 377.433
Cd (214.439 nm)	0.497654	ppm	0.000217	0.04	29746.700000	Y 377.433
Co (228.615 nm)	0.501053	ppm	0.000222	0.04	9056.410000	Y 242.219
Cr (205.560 nm)	0.498752	ppm	0.002331	0.47	7582.400000	Y 377.433
Cu (324.754 nm)	0.497967	ppm	0.000261	0.05	27457.700000	Y 377.433
Fe (238.204 nm)	2.505859	ppm	0.018959	0.76	9292.845109	Y_R 377.433
Fe H (259.940 nm)	2.523590 u	ppm	0.019020	0.75	4777.370000	Y_R 377.433
K (766.491 nm)	50.126900	ppm	0.250824	0.50	56963.300000	Y_R2 488.368
Li (670.783 nm)	0.996226	ppm	0.006632	0.67	31871.200000	Y_R2 488.368
Mg (279.078 nm)	19.718200	ppm	0.029017	0.15	113938.000000	Y 377.433
Mn (257.610 nm)	0.501652	ppm	0.000389	0.08	117381.000000	Y 377.433
Mo (202.032 nm)	0.502220	ppm	0.001516	0.30	4325.060000	Y 377.433
Na (589.592 nm)	5.037700	ppm	0.015161	0.30	34475.800000	Y_R2 488.368
Na H (589.593 nm)	5.357494 u	ppm	0.008893	0.17	22491.874076	Y_R 488.368
Ni (231.604 nm)	0.503739	ppm	0.001041	0.21	3433.500000	Y 377.433
P (213.618 nm)	0.980597	ppm	0.001460	0.15	2155.390000	Y 242.219
Pb (220.353 nm)	1.007300	ppm	0.002435	0.24	2890.590000	Y 242.219
S (181.972 nm)	0.006626	ppm	0.004596	69.36	18.785782	Y 377.433
Sb (206.834 nm)	1.010920	ppm	0.004632	0.46	2752.970000	Y 377.433
Se (196.026 nm)	0.985057	ppm	0.002163	0.22	993.373000	Y 242.219
Si (288.158 nm)	5.087710	ppm	0.015236	0.30	44656.900000	Y 377.433
Sn (189.925 nm)	0.998225	ppm	0.002683	0.27	1993.860000	Y 377.433
Sr (421.552 nm)	0.501342	ppm	0.004755	0.95	105345.925679	Y_R 488.368
Th (288.505 nm)	0.006819	ppm	0.002059	30.19	106.548000	Y 377.433
Ti (336.122 nm)	0.502630	ppm	0.001071	0.21	71368.800000	Y 377.433
Tl (190.794 nm)	1.008660	ppm	0.002008	0.20	2209.750000	Y 377.433
U (409.013 nm)	0.003402	ppm	0.003215	94.50	-229.388000	Y 377.433
V (292.401 nm)	0.497182	ppm	0.001132	0.23	17956.300000	Y 377.433
Zn (206.200 nm)	0.494748	ppm	0.000841	0.17	2611.650000	Y 377.433
Zr (343.823 nm)	0.499606	ppm	0.000724	0.14	65723.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014612	19359.021285	0.002402	0.24
Y 377.433	1.014644	1027010.181523	0.000613	0.06
Y_R 377.433	1.047400	79071.600000	0.026289	2.51
Y_R 488.368	1.028040	45008.400000	0.027430	2.67
Y_R2 488.368	1.036620	89959.529807	0.008227	0.79

Sample Name: CCB

Date: 11/6/2018 4:12:13 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000324	ppm	0.000010	3.16	-429.948000	Y 377.433
Al (167.019 nm)	-0.002740 u	ppm	0.000409	14.94	0.826645	Y_R 377.433
Al H (396.152 nm)	-0.021032 u	ppm	0.004590	21.83	26.168892	Y_R 377.433
As (188.980 nm)	0.000592 u	ppm	0.000850	> 100.00	-0.991481	Y 242.219
B (249.678 nm)	0.000820	ppm	0.000225	27.47	77.632000	Y 242.219
Ba (493.408 nm)	-0.000221 u	ppm	0.000126	56.84	573.834000	Y_R 488.368
Be (234.861 nm)	0.000046	ppm	0.000014	31.06	-32.646100	Y_R 488.368
Bi (223.061 nm)	0.000252 u	ppm	0.001657	> 100.00	13.376700	Y 377.433
Ca (315.887 nm)	0.003384	ppm	0.003186	94.17	-58.906539	Y_R 377.433
Cd (214.439 nm)	0.000090	ppm	0.000060	66.71	6.246780	Y 377.433
Co (228.615 nm)	0.000267	ppm	0.000284	> 100.00	-31.597300	Y 242.219
Cr (205.560 nm)	0.000103	ppm	0.000127	> 100.00	-2.391970	Y 377.433
Cu (324.754 nm)	0.000369	ppm	0.000127	34.52	-270.898000	Y 377.433
Fe (238.204 nm)	0.000076 u	ppm	0.001013	> 100.00	25.118952	Y_R 377.433
Fe H (259.940 nm)	0.003914 u	ppm	0.000882	22.53	10.638300	Y_R 377.433
K (766.491 nm)	0.094238	ppm	0.057114	60.61	-648.077000	Y_R2 488.368
Li (670.783 nm)	0.002494	ppm	0.001590	63.73	-1270.510000	Y_R2 488.368
Mg (279.078 nm)	0.000705	ppm	0.000726	> 100.00	43.432400	Y 377.433
Mn (257.610 nm)	0.000054	ppm	0.000007	12.83	74.453200	Y 377.433
Mo (202.032 nm)	0.000408	ppm	0.000090	22.05	3.488350	Y 377.433
Na (589.592 nm)	0.012085	ppm	0.002219	18.36	376.842000	Y_R2 488.368
Na H (589.593 nm)	-0.236818 u	ppm	0.010990	4.64	1526.634835	Y_R 488.368
Ni (231.604 nm)	0.000535	ppm	0.000433	80.91	-0.451477	Y 377.433
P (213.618 nm)	-0.000916 u	ppm	0.001494	> 100.00	22.565900	Y 242.219
Pb (220.353 nm)	0.000239 u	ppm	0.001155	> 100.00	4.114290	Y 242.219
S (181.972 nm)	-0.005865 u	ppm	0.000583	9.94	11.168549	Y 377.433
Sb (206.834 nm)	-0.000142 u	ppm	0.000335	> 100.00	-23.622900	Y 377.433
Se (196.026 nm)	0.000653 u	ppm	0.002490	> 100.00	13.640800	Y 242.219
Si (288.158 nm)	0.025545	ppm	0.001874	7.34	1149.210000	Y 377.433
Sn (189.925 nm)	-0.000654 u	ppm	0.000607	92.89	8.298290	Y 377.433
Sr (421.552 nm)	-0.000022 u	ppm	0.000102	> 100.00	151.455119	Y_R 488.368
Th (288.505 nm)	0.004955	ppm	0.000266	5.36	85.680700	Y 377.433
Ti (336.122 nm)	-0.000142 u	ppm	0.000015	10.41	-248.463000	Y 377.433
Tl (190.794 nm)	0.001041	ppm	0.000157	15.09	-3.058060	Y 377.433
U (409.013 nm)	0.002762 u	ppm	0.004788	> 100.00	-195.106000	Y 377.433
V (292.401 nm)	0.000077	ppm	0.000047	61.28	37.975000	Y 377.433
Zn (206.200 nm)	-0.005478 u	ppm	0.000010	0.18	-0.871183	Y 377.433
Zr (343.823 nm)	0.000058 u	ppm	0.000165	> 100.00	34.245300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.013430	19336.466149	0.000612	0.06
Y 377.433	1.013405	1025756.351239	0.002559	0.25
Y_R 377.433	1.047150	79052.100000	0.008512	0.81
Y_R 488.368	1.013880	44388.100000	0.006892	0.68
Y_R2 488.368	1.043901	90591.365892	0.001222	0.12

Sample Name: CCVL-5413446

Date: 11/6/2018 4:15:35 PM
Rack:Tube: S1:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010012	ppm	0.000126	1.25	14.117000	Y 377.433
Al (167.019 nm)	0.098864	ppm	0.000961	0.97	57.543300	Y_R 377.433
Al H (396.152 nm)	0.079296 u	ppm	0.000443	0.56	280.099227	Y_R 377.433
As (188.980 nm)	0.013906	ppm	0.000555	3.99	15.774100	Y 242.219
B (249.678 nm)	0.102085	ppm	0.000474	0.46	2607.520000	Y 242.219
Ba (493.408 nm)	0.010058	ppm	0.000046	0.46	1764.470000	Y_R 488.368
Be (234.861 nm)	0.000996	ppm	0.000004	0.39	252.985000	Y_R 488.368
Bi (223.061 nm)	0.097589	ppm	0.000391	0.40	258.499000	Y 377.433
Ca (315.887 nm)	0.208249	ppm	0.000390	0.19	103.537246	Y_R 377.433
Cd (214.439 nm)	0.005167	ppm	0.000053	1.02	309.795000	Y 377.433
Co (228.615 nm)	0.010674	ppm	0.000074	0.69	157.232000	Y 242.219
Cr (205.560 nm)	0.010430	ppm	0.000005	0.05	154.737000	Y 377.433
Cu (324.754 nm)	0.016414	ppm	0.000058	0.36	620.461000	Y 377.433
Fe (238.204 nm)	0.103065	ppm	0.001246	1.21	406.025926	Y_R 377.433
Fe H (259.940 nm)	0.104643 u	ppm	0.001955	1.87	201.196000	Y_R 377.433
K (766.491 nm)	3.171770	ppm	0.004031	0.13	2895.640000	Y_R2 488.368
Li (670.783 nm)	0.023240	ppm	0.001914	8.24	-578.630000	Y_R2 488.368
Mg (279.078 nm)	0.201174	ppm	0.000243	0.12	1200.250000	Y 377.433
Mn (257.610 nm)	0.010539	ppm	0.000027	0.25	2526.380000	Y 377.433
Mo (202.032 nm)	0.018993	ppm	0.000051	0.27	163.540000	Y 377.433
Na (589.592 nm)	1.102610	ppm	0.010260	0.93	7578.020000	Y_R2 488.368
Na H (589.593 nm)	0.850554 u	ppm	0.012266	1.44	5520.021128	Y_R 488.368
Ni (231.604 nm)	0.041960	ppm	0.000564	1.34	282.153000	Y 377.433
P (213.618 nm)	2.861070 o	ppm	0.010855	0.38	6241.640000	Y 242.219
Pb (220.353 nm)	0.010597	ppm	0.000995	9.39	33.826700	Y 242.219
S (181.972 nm)	0.095469	ppm	0.000709	0.74	63.091845	Y 377.433
Sb (206.834 nm)	0.020416	ppm	0.000337	1.65	32.711400	Y 377.433
Se (196.026 nm)	0.017833	ppm	0.001637	9.18	30.730200	Y 242.219
Si (288.158 nm)	0.524154	ppm	0.000915	0.17	5434.590000	Y 377.433
Sn (189.925 nm)	0.100330	ppm	0.001959	1.95	209.034000	Y 377.433
Sr (421.552 nm)	0.010425	ppm	0.000046	0.44	2343.424473	Y_R 488.368
Th (288.505 nm)	0.016794	ppm	0.001314	7.83	117.297000	Y 377.433
Ti (336.122 nm)	0.009899	ppm	0.000118	1.19	1182.140000	Y 377.433
Tl (190.794 nm)	0.016385	ppm	0.001776	10.84	30.606800	Y 377.433
U (409.013 nm)	0.063285	ppm	0.001681	2.66	77.564100	Y 377.433
V (292.401 nm)	0.010285	ppm	0.000073	0.71	403.441000	Y 377.433
Zn (206.200 nm)	0.016300	ppm	0.000174	1.07	112.871000	Y 377.433
Zr (343.823 nm)	0.015330	ppm	0.000091	0.59	2042.660000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017176	19407.934353	0.003448	0.34
Y 377.433	1.017220	1029617.385151	0.004381	0.43
Y_R 377.433	1.037120	78295.500000	0.002281	0.22
Y_R 488.368	1.010460	44238.300000	0.004035	0.40
Y_R2 488.368	1.030073	89391.321493	0.010793	1.05

Sample Name: CPI ICSA

Date: 11/6/2018 4:18:57 PM
Rack:Tube: 1:40

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000126 u	ppm	0.000291	> 100.00	-439.097000	Y 377.433
Al (167.019 nm)	-0.001073 u	ppm	0.000550	51.28	1.757670	Y_R 377.433
Al H (396.152 nm)	-0.018817 u	ppm	0.009801	52.09	31.719241	Y_R 377.433
As (188.980 nm)	-0.000173 u	ppm	0.000501	> 100.00	-1.954330	Y 242.219
B (249.678 nm)	0.001078	ppm	0.000176	16.28	84.079800	Y 242.219
Ba (493.408 nm)	0.000309	ppm	0.000227	73.38	635.264000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000014	> 100.00	-47.485400	Y_R 488.368
Bi (223.061 nm)	0.001360 u	ppm	0.003303	> 100.00	16.166800	Y 377.433
Ca (315.887 nm)	0.003432 u	ppm	0.006831	> 100.00	-58.868509	Y_R 377.433
Cd (214.439 nm)	-0.000001 u	ppm	0.000009	> 100.00	0.828705	Y 377.433
Co (228.615 nm)	0.000207	ppm	0.000123	59.46	-32.691700	Y 242.219
Cr (205.560 nm)	0.000184	ppm	0.000214	> 100.00	-1.155700	Y 377.433
Cu (324.754 nm)	0.000821	ppm	0.000229	27.87	-246.748000	Y 377.433
Fe (238.204 nm)	0.002915	ppm	0.000147	5.05	35.617389	Y_R 377.433
Fe H (259.940 nm)	0.007173 u	ppm	0.000401	5.59	16.803900	Y_R 377.433
K (766.491 nm)	0.063603	ppm	0.017653	27.75	-683.352000	Y_R2 488.368
Li (670.783 nm)	0.002367	ppm	0.001813	76.61	-1274.770000	Y_R2 488.368
Mg (279.078 nm)	0.000607	ppm	0.000578	95.16	42.763300	Y 377.433
Mn (257.610 nm)	0.000120	ppm	0.000023	19.61	89.818000	Y 377.433
Mo (202.032 nm)	0.000115	ppm	0.000163	> 100.00	0.964937	Y 377.433
Na (589.592 nm)	0.025542	ppm	0.002033	7.96	467.559000	Y_R2 488.368
Na H (589.593 nm)	-0.317530 u	ppm	0.005230	1.65	1231.922001	Y_R 488.368
Ni (231.604 nm)	0.000400	ppm	0.000271	67.60	-1.370050	Y 377.433
P (213.618 nm)	0.000430	ppm	0.000242	56.23	25.491700	Y 242.219
Pb (220.353 nm)	0.000159 u	ppm	0.001439	> 100.00	3.896910	Y 242.219
S (181.972 nm)	-0.006099 u	ppm	0.001346	22.07	11.048966	Y 377.433
Sb (206.834 nm)	0.000893	ppm	0.000262	29.38	-20.800900	Y 377.433
Se (196.026 nm)	-0.000417 u	ppm	0.001400	> 100.00	12.575100	Y 242.219
Si (288.158 nm)	0.007460	ppm	0.000988	13.24	993.767000	Y 377.433
Sn (189.925 nm)	-0.000483 u	ppm	0.000023	4.68	8.636770	Y 377.433
Sr (421.552 nm)	-0.000154 u	ppm	0.000059	38.03	123.681015	Y_R 488.368
Th (288.505 nm)	0.002994	ppm	0.000882	29.45	80.735300	Y 377.433
Ti (336.122 nm)	-0.000331 u	ppm	0.000068	20.58	-275.348000	Y 377.433
Tl (190.794 nm)	-0.001340 u	ppm	0.000590	44.06	-8.287970	Y 377.433
U (409.013 nm)	0.002399 u	ppm	0.004110	> 100.00	-196.738000	Y 377.433
V (292.401 nm)	-0.000150 u	ppm	0.000168	> 100.00	29.161000	Y 377.433
Zn (206.200 nm)	-0.005035 u	ppm	0.000212	4.21	1.441130	Y 377.433
Zr (343.823 nm)	-0.000080 u	ppm	0.000038	47.64	16.153300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012249	19313.916865	0.000901	0.09
Y 377.433	1.011604	1023932.689309	0.001275	0.13
Y_R 377.433	1.035740	78190.700000	0.006708	0.65
Y_R 488.368	1.011070	44265.200000	0.008310	0.82
Y_R2 488.368	1.036440	89943.851408	0.007529	0.73

Sample Name: Rinse

Date: 11/6/2018 4:22:20 PM Rack:Tube: 1:41

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000061 u	ppm	0.000317	> 100.00	-442.642000	Y 377.433
Al (167.019 nm)	208.503000 o	ppm	1.177380	0.56	116372.000000	Y_R 377.433
Al H (396.152 nm)	504.939722 o	ppm	0.200065	0.04	1270288.233302	Y_R 377.433
As (188.980 nm)	0.004220	ppm	0.001365	32.36	1.951130	Y 242.219
B (249.678 nm)	0.004429	ppm	0.000343	7.74	-108.670000	Y 242.219
Ba (493.408 nm)	0.000195	ppm	0.000167	85.96	905.902000	Y_R 488.368
Be (234.861 nm)	-0.000565 u	ppm	0.000128	22.66	5502.070000	Y_R 488.368
Bi (223.061 nm)	-0.009241 u	ppm	0.004942	53.48	19.662100	Y 377.433
Ca (315.887 nm)	487.547564 o	ppm	1.410476	0.29	386521.707736	Y_R 377.433
Cd (214.439 nm)	-0.000644 u	ppm	0.000022	3.48	138.811000	Y 377.433
Co (228.615 nm)	-0.002010 u	ppm	0.000033	1.63	-72.808300	Y 242.219
Cr (205.560 nm)	0.003555	ppm	0.000647	18.20	-0.388775	Y 377.433
Cu (324.754 nm)	-0.005494 u	ppm	0.000267	4.87	-530.542000	Y 377.433
Fe (238.204 nm)	184.413270 o	ppm	0.782534	0.42	682083.777933	Y_R 377.433
Fe H (259.940 nm)	188.718000	ppm	0.307892	0.16	357020.000000	Y_R 377.433
K (766.491 nm)	0.090539	ppm	0.030466	33.65	-652.336000	Y_R2 488.368
Li (670.783 nm)	0.003799	ppm	0.001088	28.65	-1227.020000	Y_R2 488.368
Mg (279.078 nm)	499.426000 o	ppm	1.769190	0.35	2884680.000000	Y 377.433
Mn (257.610 nm)	0.002072	ppm	0.000013	0.65	546.400000	Y 377.433
Mo (202.032 nm)	0.000123 u	ppm	0.000231	> 100.00	1.031390	Y 377.433
Na (589.592 nm)	0.245536	ppm	0.001458	0.59	1918.300000	Y_R2 488.368
Na H (589.593 nm)	0.947421 u	ppm	0.095967	10.13	5867.232690	Y_R 488.368
Ni (231.604 nm)	0.000070 u	ppm	0.000196	> 100.00	3.932090	Y 377.433
P (213.618 nm)	0.004518	ppm	0.000216	4.78	34.374000	Y 242.219
Pb (220.353 nm)	-0.006136 u	ppm	0.000143	2.33	-162.344000	Y 242.219
S (181.972 nm)	0.026697	ppm	0.002610	9.78	27.850090	Y 377.433
Sb (206.834 nm)	-0.001401 u	ppm	0.006396	> 100.00	-107.245000	Y 377.433
Se (196.026 nm)	0.005202 u	ppm	0.008284	> 100.00	-10.068100	Y 242.219
Si (288.158 nm)	0.042147	ppm	0.000669	1.59	1291.890000	Y 377.433
Sn (189.925 nm)	0.006390	ppm	0.001233	19.29	22.299400	Y 377.433
Sr (421.552 nm)	0.008671	ppm	0.000159	1.83	1975.322938	Y_R 488.368
Th (288.505 nm)	0.008109	ppm	0.001048	12.93	84.921200	Y 377.433
Ti (336.122 nm)	0.000232	ppm	0.000023	9.74	1333.350000	Y 377.433
Tl (190.794 nm)	0.004699	ppm	0.001511	32.16	0.114945	Y 377.433
U (409.013 nm)	-0.001377 u	ppm	0.003679	> 100.00	-137.330000	Y 377.433
V (292.401 nm)	0.002168	ppm	0.000022	1.01	114.172000	Y 377.433
Zn (206.200 nm)	-0.004638 u	ppm	0.000239	5.14	3.518200	Y 377.433
Zr (343.823 nm)	-0.000865 u	ppm	0.000031	3.53	446.540000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.935172	17843.271948	0.001381	0.15
Y 377.433	0.934094	945478.666174	0.000065	0.01
Y_R 377.433	1.025770	77438.500000	0.000820	0.08
Y_R 488.368	1.003630	43939.600000	0.011084	1.10
Y_R2 488.368	0.995703	86408.682332	0.006702	0.67

Sample Name: Ce 10 ppm

Date: 11/6/2018 4:25:43 PM Rack:Tube: 1:42

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000494	ppm	0.000006	1.27	-422.154000	Y 377.433
Al (167.019 nm)	0.011853	ppm	0.000212	1.79	8.965900	Y_R 377.433
Al H (396.152 nm)	-0.008413 u	ppm	0.002745	32.63	57.900988	Y_R 377.433
As (188.980 nm)	-0.000191 u	ppm	0.002003	> 100.00	-1.977260	Y 242.219
B (249.678 nm)	0.000282	ppm	0.000043	15.36	64.160100	Y 242.219
Ba (493.408 nm)	-0.000212 u	ppm	0.000082	38.85	574.993000	Y_R 488.368
Be (234.861 nm)	-0.000017 u	ppm	0.000002	9.30	-51.159000	Y_R 488.368
Bi (223.061 nm)	-0.000521 u	ppm	0.001579	> 100.00	11.430800	Y 377.433
Ca (315.887 nm)	0.019180	ppm	0.011152	58.14	-46.381436	Y_R 377.433
Cd (214.439 nm)	-0.000004 u	ppm	0.000010	> 100.00	0.665711	Y 377.433
Co (228.615 nm)	-0.000281 u	ppm	0.000208	73.88	-41.540300	Y 242.219
Cr (205.560 nm)	0.000089	ppm	0.000100	> 100.00	-2.600560	Y 377.433
Cu (324.754 nm)	0.000717	ppm	0.000151	20.99	-251.411000	Y 377.433
Fe (238.204 nm)	0.005597	ppm	0.000144	2.57	45.538811	Y_R 377.433
Fe H (259.940 nm)	0.009766 u	ppm	0.002141	21.92	21.708600	Y_R 377.433
K (766.491 nm)	0.074120 u	ppm	0.137557	> 100.00	-671.242000	Y_R2 488.368
Li (670.783 nm)	0.002769	ppm	0.000366	13.22	-1261.360000	Y_R2 488.368
Mg (279.078 nm)	0.023920	ppm	0.000164	0.68	177.518000	Y 377.433
Mn (257.610 nm)	0.000043	ppm	0.000010	24.22	71.761400	Y 377.433
Mo (202.032 nm)	0.000246	ppm	0.000305	> 100.00	2.090900	Y 377.433
Na (589.592 nm)	0.024177	ppm	0.013318	55.09	456.313000	Y_R2 488.368
Na H (589.593 nm)	-0.152214 u	ppm	0.004356	2.86	1836.520966	Y_R 488.368
Ni (231.604 nm)	0.000088	ppm	0.000082	92.80	-3.500130	Y 377.433
P (213.618 nm)	-0.002968 u	ppm	0.000860	28.96	18.108400	Y 242.219
Pb (220.353 nm)	0.001206	ppm	0.001559	> 100.00	6.886170	Y 242.219
S (181.972 nm)	-0.005202 u	ppm	0.008293	> 100.00	11.507765	Y 377.433
Sb (206.834 nm)	0.000025 u	ppm	0.000629	> 100.00	-23.172100	Y 377.433
Se (196.026 nm)	-0.001756 u	ppm	0.000555	31.63	11.242500	Y 242.219
Si (288.158 nm)	-0.001993 u	ppm	0.000206	10.33	912.527000	Y 377.433
Sn (189.925 nm)	-0.000418 u	ppm	0.001320	> 100.00	8.765810	Y 377.433
Sr (421.552 nm)	-0.000048 u	ppm	0.000062	> 100.00	145.953352	Y_R 488.368
Th (288.505 nm)	0.003590	ppm	0.000512	14.25	82.190700	Y 377.433
Ti (336.122 nm)	-0.000259 u	ppm	0.000051	19.59	-265.054000	Y 377.433
Tl (190.794 nm)	-0.000215 u	ppm	0.000110	51.24	-5.819010	Y 377.433
U (409.013 nm)	0.002760	ppm	0.001486	53.82	-195.105000	Y 377.433
V (292.401 nm)	-0.000244 u	ppm	0.000391	> 100.00	26.376200	Y 377.433
Zn (206.200 nm)	-0.005062 u	ppm	0.000024	0.46	1.300930	Y 377.433
Zr (343.823 nm)	-0.000119 u	ppm	0.000047	39.65	11.064500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023862	19535.501606	0.000383	0.04
Y 377.433	1.025095	1037588.829102	0.001751	0.17
Y_R 377.433	1.048340	79142.000000	0.006337	0.60
Y_R 488.368	1.028160	45013.400000	0.000024	0.00
Y_R2 488.368	1.052072	91300.469231	0.008074	0.77

Sample Name: Rinse

Date: 11/6/2018 4:29:05 PM Rack:Tube: 1:43

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.012202 u	ppm	0.000009	0.07	-1004.140000	Y 377.433
Al (167.019 nm)	0.002749	ppm	0.002336	85.00	3.888970	Y_R 377.433
Al H (396.152 nm)	-0.234206 u	ppm	0.001724	0.74	-510.031204	Y_R 377.433
As (188.980 nm)	-0.003871 u	ppm	0.001095	28.29	-6.611860	Y 242.219
B (249.678 nm)	-0.000113 u	ppm	0.000029	25.78	54.328400	Y 242.219
Ba (493.408 nm)	0.000084 u	ppm	0.000377	> 100.00	609.246000	Y_R 488.368
Be (234.861 nm)	0.000036	ppm	0.000004	11.11	-35.468000	Y_R 488.368
Bi (223.061 nm)	-0.004458 u	ppm	0.000206	4.63	1.517480	Y 377.433
Ca (315.887 nm)	0.028383	ppm	0.002257	7.95	-39.084285	Y_R 377.433
Cd (214.439 nm)	0.000006 u	ppm	0.000064	> 100.00	1.274290	Y 377.433
Co (228.615 nm)	0.000328	ppm	0.000076	23.19	-30.512600	Y 242.219
Cr (205.560 nm)	0.000620	ppm	0.000241	38.87	5.484550	Y 377.433
Cu (324.754 nm)	0.000705	ppm	0.000037	5.20	-249.828000	Y 377.433
Fe (238.204 nm)	0.003435	ppm	0.001619	47.11	37.543990	Y_R 377.433
Fe H (259.940 nm)	0.008544 u	ppm	0.001482	17.35	19.396600	Y_R 377.433
K (766.491 nm)	0.085908	ppm	0.010349	12.05	-657.669000	Y_R2 488.368
Li (670.783 nm)	0.002731	ppm	0.000909	33.27	-1262.620000	Y_R2 488.368
Mg (279.078 nm)	-0.040704 u	ppm	0.001284	3.16	-197.061000	Y 377.433
Mn (257.610 nm)	-0.001109 u	ppm	0.000015	1.32	-197.568000	Y 377.433
Mo (202.032 nm)	-0.000219 u	ppm	0.000084	38.35	-1.912860	Y 377.433
Na (589.592 nm)	0.016142	ppm	0.004567	28.29	404.065000	Y_R2 488.368
Na H (589.593 nm)	-0.217485 u	ppm	0.000190	0.09	1597.699443	Y_R 488.368
Ni (231.604 nm)	0.000918	ppm	0.000611	66.54	2.163070	Y 377.433
P (213.618 nm)	-0.003710 u	ppm	0.001257	33.88	16.495500	Y 242.219
Pb (220.353 nm)	0.000175	ppm	0.000037	20.87	4.076080	Y 242.219
S (181.972 nm)	-0.012271 u	ppm	0.003693	30.10	7.887902	Y 377.433
Sb (206.834 nm)	-0.033031 u	ppm	0.001776	5.38	-113.702000	Y 377.433
Se (196.026 nm)	-0.002634 u	ppm	0.000796	30.24	10.368700	Y 242.219
Si (288.158 nm)	0.004380	ppm	0.000436	9.95	967.301000	Y 377.433
Sn (189.925 nm)	0.000148 u	ppm	0.000348	> 100.00	9.891540	Y 377.433
Sr (421.552 nm)	0.000043	ppm	0.000040	93.88	165.000222	Y_R 488.368
Th (288.505 nm)	-0.080502 u	ppm	0.000222	0.28	-132.097000	Y 377.433
Ti (336.122 nm)	-0.000919 u	ppm	0.000019	2.01	-358.966000	Y 377.433
Tl (190.794 nm)	-0.030185 u	ppm	0.002033	6.73	-71.677200	Y 377.433
U (409.013 nm)	-1.472920 u	ppm	0.007336	0.50	-6870.460000	Y 377.433
V (292.401 nm)	-0.001414 u	ppm	0.000121	8.55	-16.611700	Y 377.433
Zn (206.200 nm)	-0.004274 u	ppm	0.000295	6.90	5.418770	Y 377.433
Zr (343.823 nm)	-0.003133 u	ppm	0.000138	4.40	-385.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046268	19963.023299	0.000306	0.03
Y 377.433	1.044740	1057472.484624	0.002727	0.26
Y_R 377.433	1.073050	81007.600000	0.004483	0.42
Y_R 488.368	1.055520	46211.100000	0.006282	0.60
Y_R2 488.368	1.044462	90640.057926	0.005538	0.53

Sample Name: CCVH-5408055

Date: 11/6/2018 4:32:29 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001794 u	ppm	0.000228	12.70	-768.273000	Y 377.433
Al (167.019 nm)	44.932000 o	ppm	0.389038	0.87	25085.300000	Y_R 377.433
Al H (396.152 nm)	49.554859	ppm	0.217052	0.44	124716.738986	Y_R 377.433
As (188.980 nm)	0.001051 u	ppm	0.001783	> 100.00	-0.835948	Y 242.219
B (249.678 nm)	-0.000935 u	ppm	0.000346	36.97	-37.851600	Y 242.219
Ba (493.408 nm)	0.000209 u	ppm	0.000303	> 100.00	668.046000	Y_R 488.368
Be (234.861 nm)	0.000290	ppm	0.000062	21.23	1527.960000	Y_R 488.368
Bi (223.061 nm)	0.974930	ppm	0.002721	0.28	2475.550000	Y 377.433
Ca (315.887 nm)	-0.003452 u	ppm	0.005435	> 100.00	-64.326329	Y_R 377.433
Cd (214.439 nm)	-0.000300 u	ppm	0.000012	4.10	28.745800	Y 377.433
Co (228.615 nm)	0.002953	ppm	0.000012	0.40	17.060200	Y 242.219
Cr (205.560 nm)	0.000017 u	ppm	0.000072	> 100.00	-16.808100	Y 377.433
Cu (324.754 nm)	-0.004384 u	ppm	0.000032	0.73	-222.605000	Y 377.433
Fe (238.204 nm)	47.856015 o	ppm	0.099405	0.21	177021.984090	Y_R 377.433
Fe H (259.940 nm)	48.158300	ppm	0.143876	0.30	91109.100000	Y_R 377.433
K (766.491 nm)	0.055305	ppm	0.034189	61.82	-692.907000	Y_R2 488.368
Li (670.783 nm)	0.003445	ppm	0.000397	11.54	-1238.790000	Y_R2 488.368
Mg (279.078 nm)	-0.021774 u	ppm	0.001512	6.94	-434.977000	Y 377.433
Mn (257.610 nm)	0.001365	ppm	0.000007	0.51	381.102000	Y 377.433
Mo (202.032 nm)	-0.000214 u	ppm	0.000386	> 100.00	-1.873170	Y 377.433
Na (589.592 nm)	240.515000 o	ppm	0.949569	0.39	1583930.000000	Y_R2 488.368
Na H (589.593 nm)	256.127938	ppm	2.227304	0.87	940743.223086	Y_R 488.368
Ni (231.604 nm)	0.004438	ppm	0.000172	3.87	28.134200	Y 377.433
P (213.618 nm)	-0.005379 u	ppm	0.000247	4.59	12.868100	Y 242.219
Pb (220.353 nm)	-0.003412 u	ppm	0.000091	2.68	10.079100	Y 242.219
S (181.972 nm)	4.862231	ppm	0.000258	0.01	2504.361389	Y 377.433
Sb (206.834 nm)	-0.003165 u	ppm	0.000996	31.48	-76.677600	Y 377.433
Se (196.026 nm)	-0.005115 u	ppm	0.001360	26.59	-0.644878	Y 242.219
Si (288.158 nm)	0.014556	ppm	0.002010	13.81	1054.760000	Y 377.433
Sn (189.925 nm)	-0.000461 u	ppm	0.002024	> 100.00	8.681010	Y 377.433
Sr (421.552 nm)	0.000289	ppm	0.000089	30.67	216.701436	Y_R 488.368
Th (288.505 nm)	4.865950	ppm	0.000835	0.02	12722.400000	Y 377.433
Ti (336.122 nm)	0.000946	ppm	0.000229	24.21	-93.295100	Y 377.433
Tl (190.794 nm)	-0.003762 u	ppm	0.001938	51.52	-14.866600	Y 377.433
U (409.013 nm)	9.965480	ppm	0.028457	0.29	44915.900000	Y 377.433
V (292.401 nm)	0.003655	ppm	0.000032	0.87	-0.277178	Y 377.433
Zn (206.200 nm)	-0.004648 u	ppm	0.000618	13.30	3.466600	Y 377.433
Zr (343.823 nm)	-0.004454 u	ppm	0.000018	0.39	-420.454000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.024400	19545.769947	0.004463	0.44
Y 377.433	1.016676	1029066.826182	0.004462	0.44
Y_R 377.433	1.039200	78452.100000	0.007111	0.68
Y_R 488.368	1.017700	44555.700000	0.012598	1.24
Y_R2 488.368	1.044845	90673.320104	0.000436	0.04

Sample Name: CCV-5407546

Date: 11/6/2018 4:35:52 PM
Rack:Tube: S1:2
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.486393	ppm	0.000474	0.10	21841.400000	Y 377.433
Al (167.019 nm)	0.498926	ppm	0.011475	2.30	282.141000	Y_R 377.433
Al H (396.152 nm)	0.502096 u	ppm	0.009555	1.90	1383.586029	Y_R 377.433
As (188.980 nm)	0.975227	ppm	0.001953	0.20	1226.350000	Y 242.219
B (249.678 nm)	0.484834	ppm	0.000260	0.05	12186.300000	Y 242.219
Ba (493.408 nm)	0.493419	ppm	0.004075	0.83	57758.500000	Y_R 488.368
Be (234.861 nm)	0.483684	ppm	0.005249	1.09	144140.000000	Y_R 488.368
Bi (223.061 nm)	-0.002945 u	ppm	0.001187	40.31	5.723710	Y 377.433
Ca (315.887 nm)	4.858901	ppm	0.024798	0.51	3791.378739	Y_R 377.433
Cd (214.439 nm)	0.491379	ppm	0.000565	0.11	29371.600000	Y 377.433
Co (228.615 nm)	0.491072	ppm	0.002889	0.59	8875.320000	Y 242.219
Cr (205.560 nm)	0.486131	ppm	0.001371	0.28	7390.380000	Y 377.433
Cu (324.754 nm)	0.486496	ppm	0.002259	0.46	26818.100000	Y 377.433
Fe (238.204 nm)	2.421838	ppm	0.022822	0.94	8982.089409	Y_R 377.433
Fe H (259.940 nm)	2.446580 u	ppm	0.022330	0.91	4631.680000	Y_R 377.433
K (766.491 nm)	49.262000	ppm	0.047567	0.10	55967.500000	Y_R2 488.368
Li (670.783 nm)	0.974845	ppm	0.001546	0.16	31158.100000	Y_R2 488.368
Mg (279.078 nm)	19.406600	ppm	0.025600	0.13	112138.000000	Y 377.433
Mn (257.610 nm)	0.492488	ppm	0.000493	0.10	115237.000000	Y 377.433
Mo (202.032 nm)	0.494945	ppm	0.000019	0.00	4262.410000	Y 377.433
Na (589.592 nm)	4.951020	ppm	0.012718	0.26	33892.900000	Y_R2 488.368
Na H (589.593 nm)	5.295093 u	ppm	0.058827	1.11	22257.586041	Y_R 488.368
Ni (231.604 nm)	0.494721	ppm	0.000090	0.02	3371.960000	Y 377.433
P (213.618 nm)	0.954466	ppm	0.000869	0.09	2098.610000	Y 242.219
Pb (220.353 nm)	0.990503	ppm	0.001386	0.14	2842.440000	Y 242.219
S (181.972 nm)	-0.005979 u	ppm	0.000541	9.04	12.307835	Y 377.433
Sb (206.834 nm)	0.989400	ppm	0.001025	0.10	2693.780000	Y 377.433
Se (196.026 nm)	0.965624	ppm	0.004413	0.46	974.041000	Y 242.219
Si (288.158 nm)	4.876810	ppm	0.034720	0.71	42844.300000	Y 377.433
Sn (189.925 nm)	0.982336	ppm	0.000879	0.09	1962.270000	Y 377.433
Sr (421.552 nm)	0.494166	ppm	0.005422	1.10	103840.246624	Y_R 488.368
Th (288.505 nm)	0.007603	ppm	0.000763	10.03	108.229000	Y 377.433
Ti (336.122 nm)	0.493824	ppm	0.000849	0.17	70114.100000	Y 377.433
Tl (190.794 nm)	0.991943	ppm	0.000321	0.03	2173.020000	Y 377.433
U (409.013 nm)	0.002727	ppm	0.001772	64.97	-231.841000	Y 377.433
V (292.401 nm)	0.488393	ppm	0.000422	0.09	17640.400000	Y 377.433
Zn (206.200 nm)	0.484833	ppm	0.000012	0.00	2559.860000	Y 377.433
Zr (343.823 nm)	0.490756	ppm	0.000343	0.07	64560.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028256	19619.344250	0.003611	0.35
Y 377.433	1.027152	1039670.112777	0.002397	0.23
Y_R 377.433	1.055680	79696.700000	0.014092	1.33
Y_R 488.368	1.036400	45374.200000	0.015218	1.47
Y_R2 488.368	1.060423	92025.132616	0.005681	0.54

Sample Name: CCB

Date: 11/6/2018 4:39:13 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000562	ppm	0.000364	64.87	-418.990000	Y 377.433
Al (167.019 nm)	-0.002145 u	ppm	0.001416	66.00	1.158550	Y_R 377.433
Al H (396.152 nm)	-0.020245 u	ppm	0.002623	12.95	28.104093	Y_R 377.433
As (188.980 nm)	-0.000440 u	ppm	0.000199	45.18	-2.291750	Y 242.219
B (249.678 nm)	0.000483	ppm	0.000149	30.78	69.190900	Y 242.219
Ba (493.408 nm)	-0.000365 u	ppm	0.000103	28.22	557.182000	Y_R 488.368
Be (234.861 nm)	0.000060	ppm	0.000003	4.23	-28.570000	Y_R 488.368
Bi (223.061 nm)	0.001629	ppm	0.000739	45.33	16.844900	Y 377.433
Ca (315.887 nm)	0.000337 u	ppm	0.004045	> 100.00	-61.322454	Y_R 377.433
Cd (214.439 nm)	0.000038 u	ppm	0.000064	> 100.00	3.143780	Y 377.433
Co (228.615 nm)	0.000043 u	ppm	0.000202	> 100.00	-35.658100	Y 242.219
Cr (205.560 nm)	0.000204	ppm	0.000003	1.26	-0.850061	Y 377.433
Cu (324.754 nm)	0.000385	ppm	0.000041	10.63	-269.987000	Y 377.433
Fe (238.204 nm)	0.000413	ppm	0.000269	65.14	26.366076	Y_R 377.433
Fe H (259.940 nm)	0.004073 u	ppm	0.000429	10.54	10.938200	Y_R 377.433
K (766.491 nm)	0.037689	ppm	0.040654	> 100.00	-713.193000	Y_R2 488.368
Li (670.783 nm)	0.003562	ppm	0.000498	13.97	-1234.900000	Y_R2 488.368
Mg (279.078 nm)	0.001751	ppm	0.000607	34.66	49.490100	Y 377.433
Mn (257.610 nm)	0.000055	ppm	0.000045	82.38	74.565100	Y 377.433
Mo (202.032 nm)	-0.000142 u	ppm	0.000243	> 100.00	-1.248970	Y 377.433
Na (589.592 nm)	0.018755	ppm	0.001486	7.92	420.618000	Y_R2 488.368
Na H (589.593 nm)	-0.186134 u	ppm	0.016206	8.71	1712.254547	Y_R 488.368
Ni (231.604 nm)	-0.000412 u	ppm	0.000417	> 100.00	-6.911220	Y 377.433
P (213.618 nm)	-0.002778 u	ppm	0.000953	34.30	18.520900	Y 242.219
Pb (220.353 nm)	0.001007	ppm	0.001260	> 100.00	6.321320	Y 242.219
S (181.972 nm)	-0.006109 u	ppm	0.001169	19.13	11.043268	Y 377.433
Sb (206.834 nm)	-0.000754 u	ppm	0.000327	43.39	-25.295700	Y 377.433
Se (196.026 nm)	0.000164 u	ppm	0.002278	> 100.00	13.153700	Y 242.219
Si (288.158 nm)	-0.002811 u	ppm	0.001445	51.40	905.494000	Y 377.433
Sn (189.925 nm)	-0.000881 u	ppm	0.000377	42.73	7.846050	Y 377.433
Sr (421.552 nm)	0.000004 u	ppm	0.000116	> 100.00	156.916293	Y_R 488.368
Th (288.505 nm)	0.003077	ppm	0.001769	57.51	80.852900	Y 377.433
Ti (336.122 nm)	-0.000067 u	ppm	0.000003	3.88	-237.715000	Y 377.433
Tl (190.794 nm)	0.001055	ppm	0.001369	> 100.00	-3.025910	Y 377.433
U (409.013 nm)	0.003987	ppm	0.002272	56.97	-189.568000	Y 377.433
V (292.401 nm)	-0.000082 u	ppm	0.000051	62.09	32.275900	Y 377.433
Zn (206.200 nm)	-0.005320 u	ppm	0.000069	1.30	-0.042629	Y 377.433
Zr (343.823 nm)	0.000042 u	ppm	0.000063	> 100.00	32.238700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032265	19695.830431	0.003090	0.30
Y 377.433	1.032661	1045247.187965	0.003904	0.38
Y_R 377.433	1.054810	79630.900000	0.003763	0.36
Y_R 488.368	1.021360	44715.600000	0.002756	0.27
Y_R2 488.368	1.064315	92362.909860	0.006674	0.63

Sample Name: CCVL-5413446

Date: 11/6/2018 4:42:36 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009868	ppm	0.000107	1.09	7.662620	Y 377.433
Al (167.019 nm)	0.100821	ppm	0.000616	0.61	58.630300	Y_R 377.433
Al H (396.152 nm)	0.076310 u	ppm	0.002353	3.08	272.560848	Y_R 377.433
As (188.980 nm)	0.012369	ppm	0.003008	24.32	13.837800	Y 242.219
B (249.678 nm)	0.099975	ppm	0.000032	0.03	2554.790000	Y 242.219
Ba (493.408 nm)	0.009712	ppm	0.000192	1.98	1724.430000	Y_R 488.368
Be (234.861 nm)	0.000977	ppm	0.000019	1.97	247.094000	Y_R 488.368
Bi (223.061 nm)	0.097079	ppm	0.002289	2.36	257.212000	Y 377.433
Ca (315.887 nm)	0.205637	ppm	0.003243	1.58	101.466283	Y_R 377.433
Cd (214.439 nm)	0.005117	ppm	0.000011	0.22	306.826000	Y 377.433
Co (228.615 nm)	0.010314	ppm	0.000038	0.37	150.713000	Y 242.219
Cr (205.560 nm)	0.010110	ppm	0.000041	0.41	149.874000	Y 377.433
Cu (324.754 nm)	0.016242	ppm	0.000475	2.92	611.389000	Y 377.433
Fe (238.204 nm)	0.098260	ppm	0.001142	1.16	388.255559	Y_R 377.433
Fe H (259.940 nm)	0.100537 u	ppm	0.001606	1.60	193.429000	Y_R 377.433
K (766.491 nm)	3.134010	ppm	0.071749	2.29	2852.150000	Y_R2 488.368
Li (670.783 nm)	0.026197 Q	ppm	0.000705	2.69	-480.021000 Q	Y_R2 488.368
Mg (279.078 nm)	0.199388	ppm	0.000487	0.24	1190.060000	Y 377.433
Mn (257.610 nm)	0.010274	ppm	0.000024	0.24	2464.480000	Y 377.433
Mo (202.032 nm)	0.018763	ppm	0.000060	0.32	161.560000	Y 377.433
Na (589.592 nm)	1.062220	ppm	0.007682	0.72	7311.720000	Y_R2 488.368
Na H (589.593 nm)	0.886921 u	ppm	0.011038	1.24	5653.074654	Y_R 488.368
Ni (231.604 nm)	0.041341	ppm	0.000370	0.89	277.932000	Y 377.433
P (213.618 nm)	2.807980 o	ppm	0.016987	0.60	6126.290000	Y 242.219
Pb (220.353 nm)	0.010482	ppm	0.000670	6.40	33.482700	Y 242.219
S (181.972 nm)	0.085593	ppm	0.000197	0.23	58.033173	Y 377.433
Sb (206.834 nm)	0.019549	ppm	0.002341	11.97	30.341200	Y 377.433
Se (196.026 nm)	0.017071	ppm	0.002239	13.12	29.972900	Y 242.219
Si (288.158 nm)	0.492781	ppm	0.004635	0.94	5164.950000	Y 377.433
Sn (189.925 nm)	0.098217	ppm	0.001470	1.50	204.833000	Y 377.433
Sr (421.552 nm)	0.010053	ppm	0.000034	0.34	2265.380813	Y_R 488.368
Th (288.505 nm)	0.019475	ppm	0.005247	26.94	124.054000	Y 377.433
Ti (336.122 nm)	0.009769	ppm	0.000030	0.31	1163.610000	Y 377.433
Tl (190.794 nm)	0.013823	ppm	0.000616	4.46	24.978200	Y 377.433
U (409.013 nm)	0.063237	ppm	0.002215	3.50	77.360000	Y 377.433
V (292.401 nm)	0.009660	ppm	0.000092	0.95	381.200000	Y 377.433
Zn (206.200 nm)	0.015672	ppm	0.000128	0.82	109.587000	Y 377.433
Zr (343.823 nm)	0.014964	ppm	0.000127	0.85	1994.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038246	19809.960754	0.006466	0.62
Y 377.433	1.039296	1051962.398662	0.007099	0.68
Y_R 377.433	1.063990	80323.800000	0.002280	0.21
Y_R 488.368	1.042870	45657.500000	0.004439	0.43
Y_R2 488.368	1.060737	92052.387717	0.005478	0.52

Sample Name: MB 280-435596/1-B

Date: 11/6/2018 4:46:00 PM Rack:Tube: 1:44

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000280	ppm	0.000264	94.34	-431.986000	Y 377.433
Al (167.019 nm)	-0.000699 u	ppm	0.001377	> 100.00	1.965010	Y_R 377.433
Al H (396.152 nm)	-0.015452 u	ppm	0.000658	4.26	40.163438	Y_R 377.433
As (188.980 nm)	0.001224	ppm	0.000882	72.05	-0.196285	Y 242.219
B (249.678 nm)	0.000150	ppm	0.000091	60.38	60.893400	Y 242.219
Ba (493.408 nm)	-0.000399 u	ppm	0.000038	9.60	553.281000	Y_R 488.368
Be (234.861 nm)	0.000088	ppm	0.000003	3.42	-20.023100	Y_R 488.368
Bi (223.061 nm)	0.002805	ppm	0.000912	32.52	19.806100	Y 377.433
Ca (315.887 nm)	0.016292	ppm	0.000071	0.44	-48.671401	Y_R 377.433
Cd (214.439 nm)	0.000088	ppm	0.000043	48.52	6.138940	Y 377.433
Co (228.615 nm)	0.000390	ppm	0.000022	5.61	-29.363200	Y 242.219
Cr (205.560 nm)	0.000122	ppm	0.000071	58.49	-2.104020	Y 377.433
Cu (324.754 nm)	0.000632	ppm	0.000165	26.16	-257.116000	Y 377.433
Fe (238.204 nm)	0.000469	ppm	0.000325	69.33	26.573245	Y_R 377.433
Fe H (259.940 nm)	0.008221 u	ppm	0.001410	17.15	18.786100	Y_R 377.433
K (766.491 nm)	0.056599	ppm	0.023321	41.20	-691.418000	Y_R2 488.368
Li (670.783 nm)	0.003379	ppm	0.001348	39.91	-1241.010000	Y_R2 488.368
Mg (279.078 nm)	0.000381	ppm	0.000271	71.14	41.524200	Y 377.433
Mn (257.610 nm)	0.000108	ppm	0.000006	5.74	86.956300	Y 377.433
Mo (202.032 nm)	-0.000175 u	ppm	0.000043	24.65	-1.534890	Y 377.433
Na (589.592 nm)	0.019094	ppm	0.000707	3.70	422.756000	Y_R2 488.368
Na H (589.593 nm)	-0.278844 u	ppm	0.013890	4.98	1372.556360	Y_R 488.368
Ni (231.604 nm)	0.001299	ppm	0.000929	71.50	4.759770	Y 377.433
P (213.618 nm)	-0.003013 u	ppm	0.002400	79.65	18.009700	Y 242.219
Pb (220.353 nm)	0.000566	ppm	0.000297	52.52	5.057960	Y 242.219
S (181.972 nm)	-0.007885 u	ppm	0.000819	10.39	10.133981	Y 377.433
Sb (206.834 nm)	0.001151	ppm	0.000433	37.60	-20.091500	Y 377.433
Se (196.026 nm)	-0.001807 u	ppm	0.000344	19.06	11.192300	Y 242.219
Si (288.158 nm)	-0.004173 u	ppm	0.000099	2.37	893.792000	Y 377.433
Sn (189.925 nm)	-0.001303 u	ppm	0.000053	4.08	7.006730	Y 377.433
Sr (421.552 nm)	-0.000143 u	ppm	0.000070	48.94	126.045993	Y_R 488.368
Th (288.505 nm)	0.003418	ppm	0.000111	3.24	81.765700	Y 377.433
Ti (336.122 nm)	0.000451	ppm	0.000033	7.37	-163.949000	Y 377.433
Tl (190.794 nm)	0.001664	ppm	0.001482	89.07	-1.688510	Y 377.433
U (409.013 nm)	0.006483	ppm	0.002199	33.91	-178.263000	Y 377.433
V (292.401 nm)	-0.000263 u	ppm	0.000153	58.18	25.304100	Y 377.433
Zn (206.200 nm)	-0.004762 u	ppm	0.000013	0.27	2.867270	Y 377.433
Zr (343.823 nm)	-0.000129 u	ppm	0.000033	25.52	9.704030	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.049974	20033.731684	0.000164	0.02
Y 377.433	1.052314	1065138.864957	0.000913	0.09
Y_R 377.433	1.079830	81519.300000	0.011408	1.06
Y_R 488.368	1.054030	46146.000000	0.011838	1.12
Y_R2 488.368	1.073591	93167.874019	0.000237	0.02

Sample Name: LCS 280-436154/2-A

Date: 11/6/2018 4:49:23 PM
Rack:Tube: 1:45

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051309	ppm	0.000392	0.76	1880.490000	Y 377.433
Al (167.019 nm)	1.904920	ppm	0.020626	1.08	1065.050000	Y_R 377.433
Al H (396.152 nm)	1.981508	ppm	0.009982	0.50	5164.034357	Y_R 377.433
As (188.980 nm)	0.992170	ppm	0.001091	0.11	1247.700000	Y 242.219
B (249.678 nm)	1.039280	ppm	0.001703	0.16	26038.100000	Y 242.219
Ba (493.408 nm)	1.990980 o	ppm	0.007788	0.39	231197.000000	Y_R 488.368
Be (234.861 nm)	0.049976	ppm	0.000050	0.10	14818.900000	Y_R 488.368
Bi (223.061 nm)	1.938060	ppm	0.009245	0.48	4893.120000	Y 377.433
Ca (315.887 nm)	48.168732 o	ppm	0.368041	0.76	38132.128625	Y_R 377.433
Cd (214.439 nm)	0.097716	ppm	0.000210	0.22	5842.400000	Y 377.433
Co (228.615 nm)	0.478478	ppm	0.004383	0.92	8664.720000	Y 242.219
Cr (205.560 nm)	0.195187	ppm	0.000430	0.22	2964.690000	Y 377.433
Cu (324.754 nm)	0.241484	ppm	0.000104	0.04	13188.100000	Y 377.433
Fe (238.204 nm)	0.961332	ppm	0.006283	0.65	3580.359423	Y_R 377.433
Fe H (259.940 nm)	0.961054 u	ppm	0.009876	1.03	1821.350000	Y_R 377.433
K (766.491 nm)	50.124900	ppm	0.172517	0.34	56961.100000	Y_R2 488.368
Li (670.783 nm)	0.985725	ppm	0.003311	0.34	31520.900000	Y_R2 488.368
Mg (279.078 nm)	48.731100 o	ppm	0.120453	0.25	281482.000000	Y 377.433
Mn (257.610 nm)	0.489651	ppm	0.001546	0.32	114574.000000	Y 377.433
Mo (202.032 nm)	1.003280	ppm	0.004627	0.46	8640.180000	Y 377.433
Na (589.592 nm)	49.822600 o	ppm	0.146258	0.29	332359.000000	Y_R2 488.368
Na H (589.593 nm)	52.248299	ppm	0.327988	0.63	195680.627111	Y_R 488.368
Ni (231.604 nm)	0.473891	ppm	0.000780	0.16	3231.020000	Y 377.433
P (213.618 nm)	10.214400 o	ppm	0.029246	0.29	22220.400000	Y 242.219
Pb (220.353 nm)	0.494329	ppm	0.001516	0.31	1421.830000	Y 242.219
S (181.972 nm)	1.984895	ppm	0.016645	0.84	1031.923702	Y 377.433
Sb (206.834 nm)	0.513673	ppm	0.002049	0.40	1375.860000	Y 377.433
Se (196.026 nm)	2.116230	ppm	0.008569	0.40	2119.540000	Y 242.219
Si (288.158 nm)	10.080100	ppm	0.027225	0.27	87565.300000	Y 377.433
Sn (189.925 nm)	1.955710	ppm	0.002691	0.14	3897.130000	Y 377.433
Sr (421.552 nm)	1.000536	ppm	0.004305	0.43	210085.228170	Y_R 488.368
Th (288.505 nm)	0.984841	ppm	0.003673	0.37	2659.460000	Y 377.433
Ti (336.122 nm)	0.988553	ppm	0.003307	0.33	140706.000000	Y 377.433
Tl (190.794 nm)	2.001330	ppm	0.005933	0.30	4387.770000	Y 377.433
U (409.013 nm)	2.021710	ppm	0.008662	0.43	8891.580000	Y 377.433
V (292.401 nm)	0.497994	ppm	0.001500	0.30	18026.700000	Y 377.433
Zn (206.200 nm)	0.483364	ppm	0.002481	0.51	2552.190000	Y 377.433
Zr (343.823 nm)	0.490405	ppm	0.001456	0.30	64509.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018443	19432.113099	0.002432	0.24
Y 377.433	1.020624	1033062.685139	0.003349	0.33
Y_R 377.433	1.064910	80393.000000	0.004798	0.45
Y_R 488.368	1.038850	45481.600000	0.002266	0.22
Y_R2 488.368	1.062063	92167.474875	0.003632	0.34

Sample Name: 280-116286-D-1-B

Date: 11/6/2018 4:52:46 PM Rack:Tube: 1:46

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001069	ppm	0.000324	30.31	-396.799000	Y 377.433
Al (167.019 nm)	0.005992	ppm	0.001067	17.80	5.719350	Y_R 377.433
Al H (396.152 nm)	0.014200 u	ppm	0.007970	56.12	176.777584	Y_R 377.433
As (188.980 nm)	0.001448	ppm	0.000727	50.22	0.085842	Y 242.219
B (249.678 nm)	0.248462	ppm	0.000145	0.06	6263.730000	Y 242.219
Ba (493.408 nm)	0.225314	ppm	0.001354	0.60	26727.600000	Y_R 488.368
Be (234.861 nm)	0.000098	ppm	0.000021	21.68	-16.256300	Y_R 488.368
Bi (223.061 nm)	0.002122	ppm	0.000838	39.48	18.092800	Y 377.433
Ca (315.887 nm)	141.875255 o	ppm	0.871895	0.61	112433.288555	Y_R 377.433
Cd (214.439 nm)	0.000065	ppm	0.000018	27.67	4.811340	Y 377.433
Co (228.615 nm)	0.000312	ppm	0.000229	73.57	-30.798400	Y 242.219
Cr (205.560 nm)	0.000637	ppm	0.000366	57.49	5.727760	Y 377.433
Cu (324.754 nm)	0.000916	ppm	0.000166	18.12	-327.082000	Y 377.433
Fe (238.204 nm)	0.036196	ppm	0.000237	0.65	158.711627	Y_R 377.433
Fe H (259.940 nm)	0.038123 u	ppm	0.003173	8.32	75.355000	Y_R 377.433
K (766.491 nm)	9.460420	ppm	0.015731	0.17	10136.900000	Y_R2 488.368
Li (670.783 nm)	0.045157	ppm	0.001840	4.07	152.302000	Y_R2 488.368
Mg (279.078 nm)	21.579800	ppm	0.072019	0.33	124696.000000	Y 377.433
Mn (257.610 nm)	0.001312	ppm	0.000021	1.58	368.557000	Y 377.433
Mo (202.032 nm)	0.003228	ppm	0.000660	20.45	27.769900	Y 377.433
Na (589.592 nm)	128.331000 o	ppm	0.025686	0.02	845725.000000	Y_R2 488.368
Na H (589.593 nm)	137.444962	ppm	0.908276	0.66	506149.275986	Y_R 488.368
Ni (231.604 nm)	0.000659	ppm	0.000095	14.49	0.398920	Y 377.433
P (213.618 nm)	0.170396	ppm	0.001118	0.66	394.826000	Y 242.219
Pb (220.353 nm)	0.001489	ppm	0.001452	97.48	7.684500	Y 242.219
S (181.972 nm)	77.564124 o	ppm	0.225756	0.29	39738.544996	Y 377.433
Sb (206.834 nm)	-0.001162 u	ppm	0.000522	44.93	-26.450200	Y 377.433
Se (196.026 nm)	0.008927	ppm	0.004024	45.08	21.869400	Y 242.219
Si (288.158 nm)	12.400000 o	ppm	0.016655	0.13	107504.000000	Y 377.433
Sn (189.925 nm)	0.000040 u	ppm	0.001505	> 100.00	9.677610	Y 377.433
Sr (421.552 nm)	1.161789 o	ppm	0.008212	0.71	243918.806602	Y_R 488.368
Th (288.505 nm)	0.001793	ppm	0.001071	59.72	77.908500	Y 377.433
Ti (336.122 nm)	0.000199	ppm	0.000132	66.23	244.833000	Y 377.433
Tl (190.794 nm)	0.003175	ppm	0.002039	64.22	1.624990	Y 377.433
U (409.013 nm)	0.009830	ppm	0.002865	29.14	-190.061000	Y 377.433
V (292.401 nm)	0.003810	ppm	0.000543	14.25	173.220000	Y 377.433
Zn (206.200 nm)	0.004187	ppm	0.000191	4.55	49.607400	Y 377.433
Zr (343.823 nm)	-0.000007 u	ppm	0.000016	> 100.00	25.898900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003293	19143.040762	0.001405	0.14
Y 377.433	1.010742	1023060.902565	0.003601	0.36
Y_R 377.433	1.052850	79482.500000	0.005255	0.50
Y_R 488.368	1.025930	44915.600000	0.008058	0.79
Y_R2 488.368	1.048451	90986.192144	0.012259	1.17

Sample Name: 280-116309-D-1-B

Date: 11/6/2018 4:56:08 PM
Rack:Tube: 1:47

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001043	ppm	0.000221	21.18	-397.202000	Y 377.433
Al (167.019 nm)	2.180980	ppm	0.021062	0.97	1218.320000	Y_R 377.433
Al H (396.152 nm)	2.278114	ppm	0.004182	0.18	6028.007803	Y_R 377.433
As (188.980 nm)	0.000394 u	ppm	0.002343	> 100.00	-1.241100	Y 242.219
B (249.678 nm)	0.005639	ppm	0.000086	1.52	198.025000	Y 242.219
Ba (493.408 nm)	0.004860	ppm	0.000007	0.13	1278.950000	Y_R 488.368
Be (234.861 nm)	-0.000023 u	ppm	0.000022	98.56	-52.990800	Y_R 488.368
Bi (223.061 nm)	-0.000388 u	ppm	0.000131	33.89	11.766400	Y 377.433
Ca (315.887 nm)	507.116837 o	ppm	3.779864	0.75	402038.457169	Y_R 377.433
Cd (214.439 nm)	0.000741	ppm	0.000019	2.52	45.171100	Y 377.433
Co (228.615 nm)	0.000820	ppm	0.000023	2.82	-21.603200	Y 242.219
Cr (205.560 nm)	0.000549	ppm	0.000258	46.93	4.393620	Y 377.433
Cu (324.754 nm)	0.030039	ppm	0.000193	0.64	1073.670000	Y 377.433
Fe (238.204 nm)	0.003230	ppm	0.000353	10.91	36.785813	Y_R 377.433
Fe H (259.940 nm)	0.006702 u	ppm	0.001579	23.56	15.912000	Y_R 377.433
K (766.491 nm)	3.539550	ppm	0.135366	3.82	3319.120000	Y_R2 488.368
Li (670.783 nm)	0.025449	ppm	0.000767	3.02	-504.975000	Y_R2 488.368
Mg (279.078 nm)	29.866300	ppm	0.353213	1.18	172563.000000	Y 377.433
Mn (257.610 nm)	2.199490 o	ppm	0.017263	0.78	514445.000000	Y 377.433
Mo (202.032 nm)	0.000464	ppm	0.000101	21.76	3.966060	Y 377.433
Na (589.592 nm)	20.320200 o	ppm	0.070067	0.34	134105.000000	Y_R2 488.368
Na H (589.593 nm)	21.213175	ppm	0.214160	1.01	80116.592710	Y_R 488.368
Ni (231.604 nm)	-0.000227 u	ppm	0.000001	0.37	-5.637510	Y 377.433
P (213.618 nm)	-0.000513 u	ppm	0.000870	> 100.00	23.441600	Y 242.219
Pb (220.353 nm)	0.001328	ppm	0.000423	31.87	6.431180	Y 242.219
S (181.972 nm)	454.983225 bo	ppm	2.147256	0.47	233038.612064	Y 377.433
Sb (206.834 nm)	-0.002158 u	ppm	0.000337	15.62	-29.301500	Y 377.433
Se (196.026 nm)	-0.003201 u	ppm	0.002826	88.29	11.629800	Y 242.219
Si (288.158 nm)	0.159869	ppm	0.001351	0.84	2303.680000	Y 377.433
Sn (189.925 nm)	0.000850 u	ppm	0.002268	> 100.00	11.286500	Y 377.433
Sr (421.552 nm)	0.821727	ppm	0.005271	0.64	172568.052096	Y_R 488.368
Th (288.505 nm)	0.005599	ppm	0.003792	67.73	131.483000	Y 377.433
Ti (336.122 nm)	-0.000920 u	ppm	0.000063	6.81	1218.720000	Y 377.433
Tl (190.794 nm)	0.005099	ppm	0.000091	1.78	5.861990	Y 377.433
U (409.013 nm)	-0.004232 u	ppm	0.001697	40.10	-322.415000	Y 377.433
V (292.401 nm)	0.000358	ppm	0.000001	0.38	47.721000	Y 377.433
Zn (206.200 nm)	-0.004509 u	ppm	0.000081	1.79	4.189530	Y 377.433
Zr (343.823 nm)	-0.000292 u	ppm	0.000003	0.93	-11.732100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045103	19940.784820	0.004116	0.39
Y 377.433	1.056509	1069385.543308	0.003810	0.36
Y_R 377.433	1.055830	79708.000000	0.010002	0.95
Y_R 488.368	1.039360	45503.900000	0.011214	1.08
Y_R2 488.368	1.009441	87600.903732	0.009427	0.93

Sample Name: 280-116309-D-1-Bsd@5

Date: 11/6/2018 4:59:30 PM Rack:Tube: 1:48

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000617	ppm	0.000038	6.24	-416.678000	Y 377.433
Al (167.019 nm)	0.435237	ppm	0.010184	2.34	245.013000	Y_R 377.433
Al H (396.152 nm)	0.448798 u	ppm	0.002354	0.52	1251.772279	Y_R 377.433
As (188.980 nm)	0.002000	ppm	0.002668	> 100.00	0.781667	Y 242.219
B (249.678 nm)	0.001728	ppm	0.000091	5.27	100.294000	Y 242.219
Ba (493.408 nm)	0.000559	ppm	0.000039	7.00	687.634000	Y_R 488.368
Be (234.861 nm)	0.000006 u	ppm	0.000020	> 100.00	-44.427800	Y_R 488.368
Bi (223.061 nm)	-0.001091 u	ppm	0.001004	92.02	9.995580	Y 377.433
Ca (315.887 nm)	101.024520 o	ppm	0.170880	0.17	80042.168518	Y_R 377.433
Cd (214.439 nm)	0.000164	ppm	0.000006	3.63	10.667200	Y 377.433
Co (228.615 nm)	0.000138	ppm	0.000131	95.03	-33.942000	Y 242.219
Cr (205.560 nm)	0.000347	ppm	0.000110	31.83	1.319970	Y 377.433
Cu (324.754 nm)	0.006175	ppm	0.000221	3.57	-7.763070	Y 377.433
Fe (238.204 nm)	0.001954	ppm	0.000620	31.72	32.063240	Y_R 377.433
Fe H (259.940 nm)	0.005110 u	ppm	0.003613	70.71	12.900200	Y_R 377.433
K (766.491 nm)	0.743470	ppm	0.003888	0.52	99.498800	Y_R2 488.368
Li (670.783 nm)	0.008419	ppm	0.000648	7.70	-1072.910000	Y_R2 488.368
Mg (279.078 nm)	5.932150	ppm	0.076124	1.28	34306.500000	Y 377.433
Mn (257.610 nm)	0.447016	ppm	0.006078	1.36	104603.000000	Y 377.433
Mo (202.032 nm)	0.000445	ppm	0.000177	39.84	3.802660	Y 377.433
Na (589.592 nm)	4.067720	ppm	0.014256	0.35	27083.000000	Y_R2 488.368
Na H (589.593 nm)	4.096601 u	ppm	0.021162	0.52	17403.717654	Y_R 488.368
Ni (231.604 nm)	-0.000711 u	ppm	0.000348	48.89	-8.949880	Y 377.433
P (213.618 nm)	-0.002855 u	ppm	0.000107	3.74	18.353700	Y 242.219
Pb (220.353 nm)	0.001120	ppm	0.000288	25.73	6.480740	Y 242.219
S (181.972 nm)	88.682102 o	ppm	1.271457	1.43	45433.687416	Y 377.433
Sb (206.834 nm)	-0.003756 u	ppm	0.000499	13.28	-33.545300	Y 377.433
Se (196.026 nm)	-0.004569 u	ppm	0.001983	43.40	8.814320	Y 242.219
Si (288.158 nm)	0.028893	ppm	0.000776	2.68	1177.980000	Y 377.433
Sn (189.925 nm)	-0.002578 u	ppm	0.000942	36.55	4.473180	Y 377.433
Sr (421.552 nm)	0.169035	ppm	0.001273	0.75	35622.368579	Y_R 488.368
Th (288.505 nm)	-0.001093 u	ppm	0.001305	> 100.00	79.219000	Y 377.433
Ti (336.122 nm)	-0.000343 u	ppm	0.000143	41.51	39.033700	Y 377.433
Tl (190.794 nm)	0.000783	ppm	0.000752	96.02	-3.623900	Y 377.433
U (409.013 nm)	-0.004901 u	ppm	0.000741	15.11	-248.930000	Y 377.433
V (292.401 nm)	-0.000192 u	ppm	0.000104	54.39	28.674900	Y 377.433
Zn (206.200 nm)	-0.005473 u	ppm	0.000331	6.04	-0.844415	Y 377.433
Zr (343.823 nm)	-0.000193 u	ppm	0.000101	52.34	1.316210	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009579	19262.989526	0.010621	1.05
Y 377.433	1.016482	1028870.548231	0.012335	1.21
Y_R 377.433	1.084820	81896.500000	0.002818	0.26
Y_R 488.368	1.063080	46542.100000	0.003133	0.29
Y_R2 488.368	1.075922	93370.208914	0.006600	0.61

Sample Name: 280-116309-D-1-C MS

Date: 11/6/2018 5:02:53 PM
Rack:Tube: 1:49

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052351	ppm	0.000295	0.56	1928.700000	Y 377.433
Al (167.019 nm)	4.042840 o	ppm	0.025094	0.62	2257.020000	Y_R 377.433
Al H (396.152 nm)	4.266102	ppm	0.025541	0.60	11123.628690	Y_R 377.433
As (188.980 nm)	1.034810	ppm	0.002652	0.26	1301.400000	Y 242.219
B (249.678 nm)	1.075170	ppm	0.001091	0.10	26934.400000	Y 242.219
Ba (493.408 nm)	1.986970 o	ppm	0.010519	0.53	230847.000000	Y_R 488.368
Be (234.861 nm)	0.048253	ppm	0.000116	0.24	14306.900000	Y_R 488.368
Bi (223.061 nm)	1.992910	ppm	0.001519	0.08	5031.250000	Y 377.433
Ca (315.887 nm)	539.480255 o	ppm	4.336494	0.80	427699.917183	Y_R 377.433
Cd (214.439 nm)	0.093273	ppm	0.000047	0.05	5576.850000	Y 377.433
Co (228.615 nm)	0.475001	ppm	0.000995	0.21	8601.600000	Y 242.219
Cr (205.560 nm)	0.192178	ppm	0.000288	0.15	2918.900000	Y 377.433
Cu (324.754 nm)	0.278290	ppm	0.000701	0.25	14939.000000	Y 377.433
Fe (238.204 nm)	0.991770	ppm	0.008681	0.88	3692.933727	Y_R 377.433
Fe H (259.940 nm)	0.985699 u	ppm	0.004719	0.48	1867.980000	Y_R 377.433
K (766.491 nm)	55.297700	ppm	0.156157	0.28	62917.500000	Y_R2 488.368
Li (670.783 nm)	1.046020	ppm	0.001795	0.17	33531.900000	Y_R2 488.368
Mg (279.078 nm)	77.689300 o	ppm	0.011735	0.02	448759.000000	Y 377.433
Mn (257.610 nm)	2.623050 o	ppm	0.005424	0.21	613501.000000	Y 377.433
Mo (202.032 nm)	0.996741	ppm	0.000565	0.06	8583.840000	Y 377.433
Na (589.592 nm)	69.873800 o	ppm	0.399037	0.57	464376.000000	Y_R2 488.368
Na H (589.593 nm)	74.072397	ppm	0.660590	0.89	275631.978610	Y_R 488.368
Ni (231.604 nm)	0.469631	ppm	0.000381	0.08	3201.870000	Y 377.433
P (213.618 nm)	10.441900 o	ppm	0.013603	0.13	22714.800000	Y 242.219
Pb (220.353 nm)	0.486166	ppm	0.000822	0.17	1397.670000	Y 242.219
S (181.972 nm)	447.432344 bo	ppm	0.216365	0.05	229172.464945	Y 377.433
Sb (206.834 nm)	0.522615	ppm	0.001816	0.35	1400.010000	Y 377.433
Se (196.026 nm)	2.113960	ppm	0.010070	0.48	2119.050000	Y 242.219
Si (288.158 nm)	10.381600	ppm	0.011277	0.11	90156.000000	Y 377.433
Sn (189.925 nm)	1.939450	ppm	0.003786	0.20	3864.820000	Y 377.433
Sr (421.552 nm)	1.812164 o	ppm	0.011268	0.62	380378.356364	Y_R 488.368
Th (288.505 nm)	0.990620	ppm	0.003630	0.37	2717.370000	Y 377.433
Ti (336.122 nm)	0.990008	ppm	0.001286	0.13	142454.000000	Y 377.433
Tl (190.794 nm)	1.923860	ppm	0.004080	0.21	4217.560000	Y 377.433
U (409.013 nm)	2.053710	ppm	0.003372	0.16	8942.490000	Y 377.433
V (292.401 nm)	0.500657	ppm	0.000046	0.01	18124.100000	Y 377.433
Zn (206.200 nm)	0.456185	ppm	0.002134	0.47	2410.240000	Y 377.433
Zr (343.823 nm)	0.495192	ppm	0.000738	0.15	65139.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.964105	18395.332620	0.000537	0.06
Y 377.433	0.982973	994953.214142	0.000770	0.08
Y_R 377.433	1.062790	80232.800000	0.000986	0.09
Y_R 488.368	1.039620	45515.100000	0.001490	0.14
Y_R2 488.368	1.007258	87411.450357	0.002596	0.26

Sample Name: 280-116309-D-1-D MSD

Date: 11/6/2018 5:06:15 PM
Rack:Tube: 1:50

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053257	ppm	0.000203	0.38	1968.950000	Y 377.433
Al (167.019 nm)	4.042840 o	ppm	0.025377	0.63	2257.020000	Y_R 377.433
Al H (396.152 nm)	4.274167	ppm	0.008489	0.20	11144.401415	Y_R 377.433
As (188.980 nm)	1.041090	ppm	0.009228	0.89	1309.310000	Y 242.219
B (249.678 nm)	1.092310	ppm	0.005553	0.51	27362.800000	Y 242.219
Ba (493.408 nm)	2.010610 o	ppm	0.010732	0.53	233585.000000	Y_R 488.368
Be (234.861 nm)	0.047493	ppm	0.001662	3.50	14080.100000	Y_R 488.368
Bi (223.061 nm)	2.016990	ppm	0.006304	0.31	5091.880000	Y 377.433
Ca (315.887 nm)	539.161400 o	ppm	0.439643	0.08	427447.093168	Y_R 377.433
Cd (214.439 nm)	0.093858	ppm	0.000581	0.62	5611.830000	Y 377.433
Co (228.615 nm)	0.480213	ppm	0.001094	0.23	8696.400000	Y 242.219
Cr (205.560 nm)	0.193564	ppm	0.000410	0.21	2939.990000	Y 377.433
Cu (324.754 nm)	0.282092	ppm	0.001356	0.48	15152.900000	Y 377.433
Fe (238.204 nm)	0.993748	ppm	0.002181	0.22	3700.248228	Y_R 377.433
Fe H (259.940 nm)	0.986275 u	ppm	0.005319	0.54	1869.070000	Y_R 377.433
K (766.491 nm)	55.527800	ppm	0.002921	0.01	63182.400000	Y_R2 488.368
Li (670.783 nm)	1.060630	ppm	0.002784	0.26	34019.200000	Y_R2 488.368
Mg (279.078 nm)	77.987200 o	ppm	0.240632	0.31	450480.000000	Y 377.433
Mn (257.610 nm)	2.624430 o	ppm	0.005243	0.20	613824.000000	Y 377.433
Mo (202.032 nm)	1.005460	ppm	0.001128	0.11	8658.970000	Y 377.433
Na (589.592 nm)	69.567300 o	ppm	0.064228	0.09	462405.000000	Y_R2 488.368
Na H (589.593 nm)	74.291060	ppm	0.370114	0.50	276455.464055	Y_R 488.368
Ni (231.604 nm)	0.471841	ppm	0.002895	0.61	3216.970000	Y 377.433
P (213.618 nm)	10.536100 o	ppm	0.074372	0.71	22919.400000	Y 242.219
Pb (220.353 nm)	0.492066	ppm	0.001211	0.25	1414.640000	Y 242.219
S (181.972 nm)	449.900924 bo	ppm	1.353073	0.30	230436.748443	Y 377.433
Sb (206.834 nm)	0.530890	ppm	0.000775	0.15	1422.560000	Y 377.433
Se (196.026 nm)	2.145100	ppm	0.012007	0.56	2150.040000	Y 242.219
Si (288.158 nm)	10.446400	ppm	0.032587	0.31	90713.400000	Y 377.433
Sn (189.925 nm)	1.952330	ppm	0.005726	0.29	3890.420000	Y 377.433
Sr (421.552 nm)	1.822379 o	ppm	0.008918	0.49	382521.628754	Y_R 488.368
Th (288.505 nm)	1.006920	ppm	0.001207	0.12	2759.850000	Y 377.433
Ti (336.122 nm)	1.001230	ppm	0.000469	0.05	144051.000000	Y 377.433
Tl (190.794 nm)	1.944540	ppm	0.002164	0.11	4262.940000	Y 377.433
U (409.013 nm)	2.082270	ppm	0.004169	0.20	9071.690000	Y 377.433
V (292.401 nm)	0.505765	ppm	0.000195	0.04	18309.200000	Y 377.433
Zn (206.200 nm)	0.456081	ppm	0.004661	1.02	2409.700000	Y 377.433
Zr (343.823 nm)	0.495939	ppm	0.000107	0.02	65237.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980427	18706.751653	0.019877	2.03
Y 377.433	1.001385	1013589.816079	0.023006	2.30
Y_R 377.433	1.109100	83729.100000	0.014257	1.29
Y_R 488.368	1.086950	47587.500000	0.014428	1.33
Y_R2 488.368	1.120544	97242.519076	0.004896	0.44

Sample Name: CCVH-5408055

Date: 11/6/2018 5:09:37 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001521 u	ppm	0.000075	4.93	-757.349000	Y 377.433
Al (167.019 nm)	46.504300 o	ppm	0.253628	0.55	25962.600000	Y_R 377.433
Al H (396.152 nm)	48.943428	ppm	0.117636	0.24	123178.910604	Y_R 377.433
As (188.980 nm)	-0.000831 u	ppm	0.000688	82.80	-3.214750	Y 242.219
B (249.678 nm)	0.000645	ppm	0.000285	44.24	0.046870	Y 242.219
Ba (493.408 nm)	0.000055 u	ppm	0.000474	> 100.00	651.127000	Y_R 488.368
Be (234.861 nm)	-0.000072 u	ppm	0.000075	> 100.00	1451.860000	Y_R 488.368
Bi (223.061 nm)	0.969084	ppm	0.002686	0.28	2460.990000	Y 377.433
Ca (315.887 nm)	0.008483	ppm	0.009870	> 100.00	-54.862737	Y_R 377.433
Cd (214.439 nm)	-0.000276 u	ppm	0.000112	40.57	31.151600	Y 377.433
Co (228.615 nm)	0.002805	ppm	0.000068	2.44	14.377900	Y 242.219
Cr (205.560 nm)	0.000124	ppm	0.000096	77.51	-15.461800	Y 377.433
Cu (324.754 nm)	-0.004415 u	ppm	0.000061	1.39	-229.541000	Y 377.433
Fe (238.204 nm)	48.893153 o	ppm	0.183482	0.38	180857.877527	Y_R 377.433
Fe H (259.940 nm)	49.027100	ppm	0.015169	0.03	92752.700000	Y_R 377.433
K (766.491 nm)	0.155486	ppm	0.016119	10.37	-577.552000	Y_R2 488.368
Li (670.783 nm)	0.007190	ppm	0.002099	29.19	-1113.920000	Y_R2 488.368
Mg (279.078 nm)	-0.016558 u	ppm	0.002611	15.77	-408.302000	Y 377.433
Mn (257.610 nm)	0.001600	ppm	0.000117	7.30	435.880000	Y 377.433
Mo (202.032 nm)	0.000022 u	ppm	0.000457	> 100.00	0.163869	Y 377.433
Na (589.592 nm)	241.556000 o	ppm	0.323110	0.13	1590780.000000	Y_R2 488.368
Na H (589.593 nm)	254.537114	ppm	3.556184	1.40	934915.058059	Y_R 488.368
Ni (231.604 nm)	0.003609	ppm	0.000149	4.13	22.519100	Y 377.433
P (213.618 nm)	-0.004038 u	ppm	0.001934	47.89	15.783200	Y 242.219
Pb (220.353 nm)	-0.002642 u	ppm	0.001532	58.01	12.768900	Y 242.219
S (181.972 nm)	4.931133	ppm	0.014052	0.28	2539.650256	Y 377.433
Sb (206.834 nm)	-0.000959 u	ppm	0.001200	> 100.00	-71.030400	Y 377.433
Se (196.026 nm)	0.000278 u	ppm	0.001427	> 100.00	4.513280	Y 242.219
Si (288.158 nm)	0.015279	ppm	0.001128	7.39	1060.980000	Y 377.433
Sn (189.925 nm)	0.000749	ppm	0.001012	> 100.00	11.087200	Y 377.433
Sr (421.552 nm)	0.000290	ppm	0.000160	54.96	216.921993	Y_R 488.368
Th (288.505 nm)	4.862640	ppm	0.020576	0.42	12715.100000	Y 377.433
Ti (336.122 nm)	0.001169	ppm	0.000028	2.41	-61.493800	Y 377.433
Tl (190.794 nm)	-0.002158 u	ppm	0.000647	29.98	-11.370300	Y 377.433
U (409.013 nm)	10.017900	ppm	0.022918	0.23	45153.800000	Y 377.433
V (292.401 nm)	0.003628	ppm	0.000150	4.14	-5.518510	Y 377.433
Zn (206.200 nm)	-0.004354 u	ppm	0.000006	0.15	4.998870	Y 377.433
Zr (343.823 nm)	-0.004469 u	ppm	0.000021	0.48	-419.529000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028751	19628.785101	0.000875	0.09
Y 377.433	1.028973	1041513.503047	0.001284	0.12
Y_R 377.433	1.089250	82230.500000	0.000371	0.03
Y_R 488.368	1.067840	46750.800000	0.018855	1.77
Y_R2 488.368	1.076789	93445.435067	0.003504	0.33

Sample Name: CCV-5407546

Date: 11/6/2018 5:13:00 PM
Rack:Tube: S1:2
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.487554	ppm	0.000172	0.04	21895.100000	Y 377.433
Al (167.019 nm)	0.521025	ppm	0.005880	1.13	294.502000	Y_R 377.433
Al H (396.152 nm)	0.493743 u	ppm	0.003663	0.74	1362.363221	Y_R 377.433
As (188.980 nm)	0.980136	ppm	0.001504	0.15	1232.530000	Y 242.219
B (249.678 nm)	0.487977	ppm	0.001815	0.37	12264.700000	Y 242.219
Ba (493.408 nm)	0.486360	ppm	0.000849	0.17	56940.500000	Y_R 488.368
Be (234.861 nm)	0.466119	ppm	0.002167	0.46	138907.000000	Y_R 488.368
Bi (223.061 nm)	-0.001443 u	ppm	0.000298	20.61	9.513760	Y 377.433
Ca (315.887 nm)	5.017416	ppm	0.039429	0.79	3917.063503	Y_R 377.433
Cd (214.439 nm)	0.484138	ppm	0.002668	0.55	28938.900000	Y 377.433
Co (228.615 nm)	0.491068	ppm	0.002634	0.54	8875.100000	Y 242.219
Cr (205.560 nm)	0.485636	ppm	0.001653	0.34	7382.980000	Y 377.433
Cu (324.754 nm)	0.487740	ppm	0.000849	0.17	26887.000000	Y 377.433
Fe (238.204 nm)	2.485613	ppm	0.016644	0.67	9217.966264	Y_R 377.433
Fe H (259.940 nm)	2.498140 u	ppm	0.013027	0.52	4729.210000	Y_R 377.433
K (766.491 nm)	49.141900	ppm	0.011625	0.02	55829.200000	Y_R2 488.368
Li (670.783 nm)	0.978443	ppm	0.002536	0.26	31278.100000	Y_R2 488.368
Mg (279.078 nm)	19.122700	ppm	0.018658	0.10	110498.000000	Y 377.433
Mn (257.610 nm)	0.491518	ppm	0.000789	0.16	115011.000000	Y 377.433
Mo (202.032 nm)	0.491552	ppm	0.000251	0.05	4233.180000	Y 377.433
Na (589.592 nm)	4.952010	ppm	0.021015	0.42	33885.200000	Y_R2 488.368
Na H (589.593 nm)	5.533889 u	ppm	0.045951	0.83	23125.833513	Y_R 488.368
Ni (231.604 nm)	0.490895	ppm	0.001610	0.33	3345.860000	Y 377.433
P (213.618 nm)	0.950253	ppm	0.002970	0.31	2089.450000	Y 242.219
Pb (220.353 nm)	0.990102	ppm	0.004805	0.49	2841.300000	Y 242.219
S (181.972 nm)	0.025948	ppm	0.001940	7.48	28.656333	Y 377.433
Sb (206.834 nm)	0.988808	ppm	0.000129	0.01	2692.120000	Y 377.433
Se (196.026 nm)	0.967807	ppm	0.006496	0.67	976.199000	Y 242.219
Si (288.158 nm)	4.850650	ppm	0.004893	0.10	42619.400000	Y 377.433
Sn (189.925 nm)	0.971310	ppm	0.001162	0.12	1940.360000	Y 377.433
Sr (421.552 nm)	0.490454	ppm	0.000502	0.10	103061.498075	Y_R 488.368
Th (288.505 nm)	0.007039	ppm	0.005550	78.86	107.114000	Y 377.433
Ti (336.122 nm)	0.490112	ppm	0.001630	0.33	69586.100000	Y 377.433
Tl (190.794 nm)	0.989303	ppm	0.006039	0.61	2167.240000	Y 377.433
U (409.013 nm)	0.005653	ppm	0.001850	32.73	-218.647000	Y 377.433
V (292.401 nm)	0.486806	ppm	0.001190	0.24	17582.900000	Y 377.433
Zn (206.200 nm)	0.479228	ppm	0.000075	0.02	2530.590000	Y 377.433
Zr (343.823 nm)	0.491778	ppm	0.001193	0.24	64694.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050223	20038.486874	0.001985	0.19
Y 377.433	1.057883	1070776.454989	0.000044	0.00
Y_R 377.433	1.120220	84568.600000	0.009641	0.86
Y_R 488.368	1.101210	48211.800000	0.006750	0.61
Y_R2 488.368	1.094371	94971.231542	0.000734	0.07

Sample Name: CCB

Date: 11/6/2018 5:16:21 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000275	ppm	0.000069	25.08	-432.145000	Y 377.433
Al (167.019 nm)	-0.003899 u	ppm	0.000816	20.92	0.179183	Y_R 377.433
Al H (396.152 nm)	-0.024501 u	ppm	0.001674	6.83	17.412757	Y_R 377.433
As (188.980 nm)	0.000470 u	ppm	0.000740	> 100.00	-1.145000	Y 242.219
B (249.678 nm)	0.001126	ppm	0.000407	36.17	85.273000	Y 242.219
Ba (493.408 nm)	-0.000409 u	ppm	0.000251	61.46	552.124000	Y_R 488.368
Be (234.861 nm)	0.000059	ppm	0.000015	24.84	-28.744700	Y_R 488.368
Bi (223.061 nm)	-0.001235 u	ppm	0.000733	59.33	9.631050	Y 377.433
Ca (315.887 nm)	0.006141	ppm	0.002045	33.30	-56.719896	Y_R 377.433
Cd (214.439 nm)	0.000063	ppm	0.000002	3.12	4.672920	Y 377.433
Co (228.615 nm)	0.000016 u	ppm	0.000073	> 100.00	-36.145800	Y 242.219
Cr (205.560 nm)	0.000385	ppm	0.000181	47.10	1.900050	Y 377.433
Cu (324.754 nm)	0.000563	ppm	0.000251	44.58	-261.149000	Y 377.433
Fe (238.204 nm)	-0.001351 u	ppm	0.002534	> 100.00	19.840869	Y_R 377.433
Fe H (259.940 nm)	0.002408 u	ppm	0.000183	7.61	7.788040	Y_R 377.433
K (766.491 nm)	0.120367	ppm	0.100154	83.21	-617.990000	Y_R2 488.368
Li (670.783 nm)	0.004203	ppm	0.002480	58.99	-1213.520000	Y_R2 488.368
Mg (279.078 nm)	0.001679	ppm	0.001127	67.12	49.120100	Y 377.433
Mn (257.610 nm)	0.000041	ppm	0.000016	39.57	71.300500	Y 377.433
Mo (202.032 nm)	-0.000106 u	ppm	0.000143	> 100.00	-0.941888	Y 377.433
Na (589.592 nm)	0.036475	ppm	0.003826	10.49	537.604000	Y_R2 488.368
Na H (589.593 nm)	0.010939 u	ppm	0.022273	> 100.00	2434.397321	Y_R 488.368
Ni (231.604 nm)	0.000903	ppm	0.001150	> 100.00	2.058880	Y 377.433
P (213.618 nm)	-0.002653 u	ppm	0.000003	0.12	18.792400	Y 242.219
Pb (220.353 nm)	0.000581 u	ppm	0.001419	> 100.00	5.092430	Y 242.219
S (181.972 nm)	0.022388	ppm	0.000773	3.45	25.638197	Y 377.433
Sb (206.834 nm)	0.002100	ppm	0.000529	25.19	-17.475700	Y 377.433
Se (196.026 nm)	-0.001324 u	ppm	0.000262	19.78	11.673000	Y 242.219
Si (288.158 nm)	-0.005117 u	ppm	0.000500	9.78	885.677000	Y 377.433
Sn (189.925 nm)	-0.001219 u	ppm	0.000115	9.46	7.174210	Y 377.433
Sr (421.552 nm)	-0.000066 u	ppm	0.000069	> 100.00	142.216108	Y_R 488.368
Th (288.505 nm)	0.003374	ppm	0.001261	37.37	81.589000	Y 377.433
Ti (336.122 nm)	0.000015	ppm	0.000009	60.97	-226.024000	Y 377.433
Tl (190.794 nm)	0.000852	ppm	0.000514	60.35	-3.472920	Y 377.433
U (409.013 nm)	0.000563 u	ppm	0.000978	> 100.00	-205.043000	Y 377.433
V (292.401 nm)	-0.000027 u	ppm	0.000154	> 100.00	33.780400	Y 377.433
Zn (206.200 nm)	-0.005267 u	ppm	0.000297	5.64	0.230792	Y 377.433
Zr (343.823 nm)	-0.000082 u	ppm	0.000035	43.15	15.882500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051014	20053.567508	0.000188	0.02
Y 377.433	1.060681	1073608.385201	0.002260	0.21
Y_R 377.433	1.129230	85249.100000	0.000788	0.07
Y_R 488.368	1.112240	48694.700000	0.004350	0.39
Y_R2 488.368	1.089465	94545.485396	0.004057	0.37

Sample Name: CCVL-5413446

Date: 11/6/2018 5:19:44 PM
Rack:Tube: S1:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009936	ppm	0.000114	1.15	10.778700	Y 377.433
Al (167.019 nm)	0.100463	ppm	0.006855	6.82	58.431400	Y_R 377.433
Al H (396.152 nm)	0.082657 u	ppm	0.006224	7.53	288.530072	Y_R 377.433
As (188.980 nm)	0.014249	ppm	0.000715	5.02	16.205400	Y 242.219
B (249.678 nm)	0.101177	ppm	0.000469	0.46	2584.830000	Y 242.219
Ba (493.408 nm)	0.009636	ppm	0.000248	2.57	1715.590000	Y_R 488.368
Be (234.861 nm)	0.000984	ppm	0.000000	0.03	249.068000	Y_R 488.368
Bi (223.061 nm)	0.097478	ppm	0.002925	3.00	258.219000	Y 377.433
Ca (315.887 nm)	0.213621	ppm	0.001787	0.84	107.796730	Y_R 377.433
Cd (214.439 nm)	0.005146	ppm	0.000002	0.03	308.533000	Y 377.433
Co (228.615 nm)	0.010559	ppm	0.000448	4.24	155.141000	Y 242.219
Cr (205.560 nm)	0.009997	ppm	0.000330	3.30	148.153000	Y 377.433
Cu (324.754 nm)	0.016124	ppm	0.000284	1.76	604.509000	Y 377.433
Fe (238.204 nm)	0.098312	ppm	0.000175	0.18	388.446850	Y_R 377.433
Fe H (259.940 nm)	0.100653 u	ppm	0.000114	0.11	193.649000	Y_R 377.433
K (766.491 nm)	3.196420	ppm	0.060569	1.89	2924.010000	Y_R2 488.368
Li (670.783 nm)	0.025979	ppm	0.000435	1.68	-487.271000	Y_R2 488.368
Mg (279.078 nm)	0.196078	ppm	0.000508	0.26	1170.920000	Y 377.433
Mn (257.610 nm)	0.010215	ppm	0.000003	0.03	2450.700000	Y 377.433
Mo (202.032 nm)	0.018802	ppm	0.000092	0.49	161.895000	Y 377.433
Na (589.592 nm)	1.084480	ppm	0.022839	2.11	7457.260000	Y_R2 488.368
Na H (589.593 nm)	0.926924 u	ppm	0.025400	2.74	5799.160681	Y_R 488.368
Ni (231.604 nm)	0.041422	ppm	0.000565	1.36	278.484000	Y 377.433
P (213.618 nm)	2.773370 o	ppm	0.001158	0.04	6051.080000	Y 242.219
Pb (220.353 nm)	0.010155	ppm	0.000143	1.41	32.545600	Y 242.219
S (181.972 nm)	0.113425	ppm	0.000379	0.33	72.287041	Y 377.433
Sb (206.834 nm)	0.020570	ppm	0.000553	2.69	33.136100	Y 377.433
Se (196.026 nm)	0.017276	ppm	0.002740	15.86	30.177000	Y 242.219
Si (288.158 nm)	0.479717	ppm	0.001248	0.26	5052.670000	Y 377.433
Sn (189.925 nm)	0.096425	ppm	0.002368	2.46	201.269000	Y 377.433
Sr (421.552 nm)	0.010169	ppm	0.000191	1.88	2289.732133	Y_R 488.368
Th (288.505 nm)	0.016408	ppm	0.001759	10.72	116.210000	Y 377.433
Ti (336.122 nm)	0.009680	ppm	0.000002	0.02	1151.020000	Y 377.433
Tl (190.794 nm)	0.013641	ppm	0.000056	0.41	24.578900	Y 377.433
U (409.013 nm)	0.067871	ppm	0.000803	1.18	98.327800	Y 377.433
V (292.401 nm)	0.009755	ppm	0.000031	0.32	384.459000	Y 377.433
Zn (206.200 nm)	0.015382	ppm	0.000101	0.66	108.073000	Y 377.433
Zr (343.823 nm)	0.015025	ppm	0.000009	0.06	2002.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057355	20174.567779	0.001696	0.16
Y 377.433	1.066132	1079125.688630	0.002409	0.23
Y_R 377.433	1.110010	83797.600000	0.021298	1.92
Y_R 488.368	1.087600	47615.900000	0.018444	1.70
Y_R2 488.368	1.104754	95872.301772	0.012856	1.16

Sample Name: MB 280-435260/1-A

Date: 11/6/2018 5:23:07 PM Rack:Tube: 1:51

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000472	ppm	0.000337	71.34	-423.257000	Y 377.433
Al (167.019 nm)	0.006385	ppm	0.000833	13.05	5.927790	Y_R 377.433
Al H (396.152 nm)	-0.011257 u	ppm	0.003336	29.64	50.778721	Y_R 377.433
As (188.980 nm)	-0.001335 u	ppm	0.001552	> 100.00	-3.418550	Y 242.219
B (249.678 nm)	0.001178	ppm	0.000283	24.04	86.523100	Y 242.219
Ba (493.408 nm)	0.000658	ppm	0.000121	18.32	675.779000	Y_R 488.368
Be (234.861 nm)	0.000028	ppm	0.000012	42.42	-37.454600	Y_R 488.368
Bi (223.061 nm)	0.001561	ppm	0.001598	> 100.00	16.676000	Y 377.433
Ca (315.887 nm)	0.178935	ppm	0.005918	3.31	80.290294	Y_R 377.433
Cd (214.439 nm)	0.000019 u	ppm	0.000033	> 100.00	2.044500	Y 377.433
Co (228.615 nm)	0.000192	ppm	0.000158	82.19	-32.960900	Y 242.219
Cr (205.560 nm)	0.000671	ppm	0.000024	3.57	6.249280	Y 377.433
Cu (324.754 nm)	0.001004	ppm	0.000078	7.74	-236.927000	Y 377.433
Fe (238.204 nm)	0.019872	ppm	0.000935	4.70	98.335541	Y_R 377.433
Fe H (259.940 nm)	0.022959 u	ppm	0.003236	14.10	46.666300	Y_R 377.433
K (766.491 nm)	0.096301	ppm	0.009924	10.31	-645.702000	Y_R2 488.368
Li (670.783 nm)	0.006294	ppm	0.001586	25.20	-1143.800000	Y_R2 488.368
Mg (279.078 nm)	0.044385	ppm	0.000534	1.20	295.648000	Y 377.433
Mn (257.610 nm)	0.000532	ppm	0.000004	0.80	186.145000	Y 377.433
Mo (202.032 nm)	-0.000223 u	ppm	0.000017	7.81	-1.946790	Y 377.433
Na (589.592 nm)	0.090453	ppm	0.009271	10.25	895.124000	Y_R2 488.368
Na H (589.593 nm)	-0.050711 u	ppm	0.032483	64.05	2209.518031	Y_R 488.368
Ni (231.604 nm)	0.000357 u	ppm	0.000846	> 100.00	-1.663200	Y 377.433
P (213.618 nm)	0.014315	ppm	0.002305	16.10	55.664000	Y 242.219
Pb (220.353 nm)	0.000349 u	ppm	0.001456	> 100.00	4.439520	Y 242.219
S (181.972 nm)	0.029936	ppm	0.006237	20.84	29.504953	Y 377.433
Sb (206.834 nm)	0.001611	ppm	0.000163	10.14	-18.813400	Y 377.433
Se (196.026 nm)	-0.000281 u	ppm	0.001918	> 100.00	12.707400	Y 242.219
Si (288.158 nm)	0.033839	ppm	0.000179	0.53	1220.490000	Y 377.433
Sn (189.925 nm)	0.012400	ppm	0.000917	7.40	34.246400	Y 377.433
Sr (421.552 nm)	0.000455	ppm	0.000160	35.15	251.513651	Y_R 488.368
Th (288.505 nm)	0.005094	ppm	0.002718	53.35	86.097900	Y 377.433
Ti (336.122 nm)	0.000233	ppm	0.000027	11.42	-194.561000	Y 377.433
Tl (190.794 nm)	0.000652	ppm	0.000331	50.75	-3.912910	Y 377.433
U (409.013 nm)	0.003984	ppm	0.000926	23.25	-189.579000	Y 377.433
V (292.401 nm)	-0.000020 u	ppm	0.000016	81.98	33.762000	Y 377.433
Zn (206.200 nm)	-0.003210 u	ppm	0.000040	1.25	10.975800	Y 377.433
Zr (343.823 nm)	-0.000142 u	ppm	0.000017	11.69	8.104410	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.058660	20199.465721	0.001584	0.15
Y 377.433	1.069903	1082942.734450	0.000800	0.07
Y_R 377.433	1.141470	86172.700000	0.005309	0.47
Y_R 488.368	1.118730	48978.800000	0.002769	0.25
Y_R2 488.368	1.117816	97005.832555	0.000421	0.04

Sample Name: LCS 280-435260/2-A

Date: 11/6/2018 5:26:29 PM
Rack:Tube: 1:52

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049581	ppm	0.000373	0.75	1801.460000	Y 377.433
Al (167.019 nm)	1.990330	ppm	0.016040	0.81	1112.700000	Y_R 377.433
Al H (396.152 nm)	1.947656	ppm	0.000335	0.02	5077.873700	Y_R 377.433
As (188.980 nm)	0.950181	ppm	0.002285	0.24	1194.820000	Y 242.219
B (249.678 nm)	0.976628	ppm	0.002379	0.24	24472.800000	Y 242.219
Ba (493.408 nm)	1.934200 o	ppm	0.008356	0.43	224622.000000	Y_R 488.368
Be (234.861 nm)	0.046725	ppm	0.000307	0.66	13852.400000	Y_R 488.368
Bi (223.061 nm)	1.866560	ppm	0.006674	0.36	4713.100000	Y 377.433
Ca (315.887 nm)	49.409111 o	ppm	0.108552	0.22	39115.640338	Y_R 377.433
Cd (214.439 nm)	0.094552	ppm	0.000126	0.13	5653.320000	Y 377.433
Co (228.615 nm)	0.474555	ppm	0.001353	0.29	8593.260000	Y 242.219
Cr (205.560 nm)	0.192537	ppm	0.000476	0.25	2924.400000	Y 377.433
Cu (324.754 nm)	0.240372	ppm	0.000407	0.17	13122.600000	Y 377.433
Fe (238.204 nm)	1.004400	ppm	0.002783	0.28	3739.645277	Y_R 377.433
Fe H (259.940 nm)	1.003120 u	ppm	0.004772	0.48	1900.930000	Y_R 377.433
K (766.491 nm)	49.521700	ppm	0.327175	0.66	56266.500000	Y_R2 488.368
Li (670.783 nm)	0.975637	ppm	0.004538	0.47	31184.500000	Y_R2 488.368
Mg (279.078 nm)	46.951600 o	ppm	0.026664	0.06	271202.000000	Y 377.433
Mn (257.610 nm)	0.480949	ppm	0.000251	0.05	112539.000000	Y 377.433
Mo (202.032 nm)	0.983297	ppm	0.000676	0.07	8468.070000	Y 377.433
Na (589.592 nm)	49.215500 o	ppm	0.094265	0.19	328247.000000	Y_R2 488.368
Na H (589.593 nm)	51.418391	ppm	0.092057	0.18	192586.954769	Y_R 488.368
Ni (231.604 nm)	0.467137	ppm	0.000599	0.13	3184.880000	Y 377.433
P (213.618 nm)	9.705600 o	ppm	0.024311	0.25	21114.800000	Y 242.219
Pb (220.353 nm)	0.486990	ppm	0.001261	0.26	1400.880000	Y 242.219
S (181.972 nm)	1.880866	ppm	0.007694	0.41	978.625238	Y 377.433
Sb (206.834 nm)	0.488869	ppm	0.001765	0.36	1308.030000	Y 377.433
Se (196.026 nm)	1.907400	ppm	0.005468	0.29	1911.710000	Y 242.219
Si (288.158 nm)	1.464200	ppm	0.003729	0.25	13514.000000	Y 377.433
Sn (189.925 nm)	1.925400	ppm	0.006490	0.34	3836.890000	Y 377.433
Sr (421.552 nm)	0.981769	ppm	0.004168	0.42	206147.532807	Y_R 488.368
Th (288.505 nm)	0.970455	ppm	0.002602	0.27	2622.260000	Y 377.433
Ti (336.122 nm)	0.975644	ppm	0.000470	0.05	138871.000000	Y 377.433
Tl (190.794 nm)	1.938700	ppm	0.007396	0.38	4250.220000	Y 377.433
U (409.013 nm)	2.019640	ppm	0.005763	0.29	8882.480000	Y 377.433
V (292.401 nm)	0.488929	ppm	0.001335	0.27	17697.500000	Y 377.433
Zn (206.200 nm)	0.463891	ppm	0.000256	0.06	2450.490000	Y 377.433
Zr (343.823 nm)	0.483773	ppm	0.000095	0.02	63637.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033656	19722.373419	0.000306	0.03
Y 377.433	1.046279	1059030.455858	0.000670	0.06
Y_R 377.433	1.108320	83670.200000	0.005339	0.48
Y_R 488.368	1.084780	47492.200000	0.005115	0.47
Y_R2 488.368	1.089218	94524.018976	0.003802	0.35

Sample Name: 280-116077-A-1-A@20

Date: 11/6/2018 5:29:51 PM Rack:Tube: 1:53

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002409 u	ppm	0.000342	14.21	-1961.030000	Y 377.433
Al (167.019 nm)	1.364640	ppm	0.009153	0.67	768.711000	Y_R 377.433
Al H (396.152 nm)	1.295453	ppm	0.007663	0.59	3349.103086	Y_R 377.433
As (188.980 nm)	0.001877	ppm	0.001711	91.17	0.553862	Y 242.219
B (249.678 nm)	0.019587	ppm	0.000067	0.34	534.144000	Y 242.219
Ba (493.408 nm)	0.090790	ppm	0.000837	0.92	11127.800000	Y_R 488.368
Be (234.861 nm)	0.000057	ppm	0.000018	31.24	225.733000	Y_R 488.368
Bi (223.061 nm)	-0.000957 u	ppm	0.000013	1.34	11.685100	Y 377.433
Ca (315.887 nm)	24.334296 o	ppm	0.027941	0.11	19233.415553	Y_R 377.433
Cd (214.439 nm)	0.000454	ppm	0.000021	4.58	35.929100	Y 377.433
Co (228.615 nm)	0.003658	ppm	0.000027	0.73	30.784300	Y 242.219
Cr (205.560 nm)	0.101606	ppm	0.000524	0.52	1540.440000	Y 377.433
Cu (324.754 nm)	0.024918	ppm	0.000062	0.25	1091.910000	Y 377.433
Fe (238.204 nm)	8.247252 o	ppm	0.020305	0.25	30527.588553	Y_R 377.433
Fe H (259.940 nm)	8.296690	ppm	0.000247	0.00	15698.900000	Y_R 377.433
K (766.491 nm)	0.504008	ppm	0.012934	2.57	-176.237000	Y_R2 488.368
Li (670.783 nm)	0.007386	ppm	0.000369	4.99	-1107.360000	Y_R2 488.368
Mg (279.078 nm)	1.768460	ppm	0.006631	0.37	10240.900000	Y 377.433
Mn (257.610 nm)	0.073625	ppm	0.000150	0.20	17280.000000	Y 377.433
Mo (202.032 nm)	0.015303	ppm	0.000210	1.37	131.763000	Y 377.433
Na (589.592 nm)	0.226862	ppm	0.001079	0.48	1974.410000	Y_R2 488.368
Na H (589.593 nm)	0.080967 u	ppm	0.038069	47.02	2776.323658	Y_R 488.368
Ni (231.604 nm)	0.032790	ppm	0.000344	1.05	219.940000	Y 377.433
P (213.618 nm)	0.717591	ppm	0.002699	0.38	1583.880000	Y 242.219
Pb (220.353 nm)	0.034825	ppm	0.000211	0.60	103.555000	Y 242.219
S (181.972 nm)	0.698687	ppm	0.002435	0.35	372.182427	Y 377.433
Sb (206.834 nm)	0.002983	ppm	0.000640	21.46	-14.052000	Y 377.433
Se (196.026 nm)	-0.001229 u	ppm	0.003170	> 100.00	10.250200	Y 242.219
Si (288.158 nm)	1.378850	ppm	0.003100	0.22	12780.400000	Y 377.433
Sn (189.925 nm)	0.000673	ppm	0.000336	49.97	10.935400	Y 377.433
Sr (421.552 nm)	0.094363	ppm	0.000661	0.70	19954.882537	Y_R 488.368
Th (288.505 nm)	-0.003991 u	ppm	0.001597	40.01	384.838000	Y 377.433
Ti (336.122 nm)	0.029491	ppm	0.000107	0.36	4047.930000	Y 377.433
Tl (190.794 nm)	0.007719	ppm	0.001243	16.10	11.251400	Y 377.433
U (409.013 nm)	-0.011176 u	ppm	0.001771	15.85	-255.247000	Y 377.433
V (292.401 nm)	8.488580 o	ppm	0.011396	0.13	308074.000000	Y 377.433
Zn (206.200 nm)	0.189497	ppm	0.000189	0.10	1017.420000	Y 377.433
Zr (343.823 nm)	0.000989	ppm	0.000102	10.34	180.595000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065420	20328.431628	0.004473	0.42
Y 377.433	1.071634	1084694.389186	0.001594	0.15
Y_R 377.433	1.135500	85722.000000	0.007516	0.66
Y_R 488.368	1.110100	48600.900000	0.000012	0.00
Y_R2 488.368	1.098425	95323.016820	0.002512	0.23

Sample Name: 280-116077-A-1-Asd@100

Date: 11/6/2018 5:33:13 PM Rack:Tube: 1:54

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000093	ppm	0.000100	> 100.00	-717.971000	Y 377.433
Al (167.019 nm)	0.267940	ppm	0.003024	1.13	152.840000	Y_R 377.433
Al H (396.152 nm)	0.241806 u	ppm	0.003211	1.33	689.603937	Y_R 377.433
As (188.980 nm)	-0.002301 u	ppm	0.001967	85.49	-4.648970	Y 242.219
B (249.678 nm)	0.004112	ppm	0.000086	2.10	157.397000	Y 242.219
Ba (493.408 nm)	0.017881	ppm	0.000024	0.13	2673.060000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000025	88.04	12.926200	Y_R 488.368
Bi (223.061 nm)	-0.001165 u	ppm	0.000929	79.69	10.076900	Y 377.433
Ca (315.887 nm)	4.844863	ppm	0.001508	0.03	3779.970073	Y_R 377.433
Cd (214.439 nm)	0.000073	ppm	0.000028	38.49	6.831490	Y 377.433
Co (228.615 nm)	0.000962	ppm	0.000189	19.65	-18.823300	Y 242.219
Cr (205.560 nm)	0.020240	ppm	0.000021	0.10	303.693000	Y 377.433
Cu (324.754 nm)	0.005453	ppm	0.000257	4.71	8.762230	Y 377.433
Fe (238.204 nm)	1.640096	ppm	0.004198	0.26	6090.789351	Y_R 377.433
Fe H (259.940 nm)	1.639500 u	ppm	0.005520	0.34	3104.850000	Y_R 377.433
K (766.491 nm)	0.177794	ppm	0.022707	12.77	-551.865000	Y_R2 488.368
Li (670.783 nm)	0.007977	ppm	0.000721	9.04	-1087.660000	Y_R2 488.368
Mg (279.078 nm)	0.352188	ppm	0.000838	0.24	2070.980000	Y 377.433
Mn (257.610 nm)	0.014663	ppm	0.000020	0.14	3491.050000	Y 377.433
Mo (202.032 nm)	0.003667	ppm	0.000139	3.78	31.547800	Y 377.433
Na (589.592 nm)	0.053312	ppm	0.010070	18.89	684.210000	Y_R2 488.368
Na H (589.593 nm)	-0.145307 u	ppm	0.040968	28.19	1878.625673	Y_R 488.368
Ni (231.604 nm)	0.006664	ppm	0.000404	6.06	41.432300	Y 377.433
P (213.618 nm)	0.134637	ppm	0.002377	1.77	317.122000	Y 242.219
Pb (220.353 nm)	0.006970	ppm	0.001691	24.27	23.468800	Y 242.219
S (181.972 nm)	0.143595	ppm	0.002094	1.46	87.749336	Y 377.433
Sb (206.834 nm)	0.001732	ppm	0.001019	58.84	-18.293900	Y 377.433
Se (196.026 nm)	-0.000237 u	ppm	0.002818	> 100.00	12.452600	Y 242.219
Si (288.158 nm)	0.274221	ppm	0.002584	0.94	3286.490000	Y 377.433
Sn (189.925 nm)	-0.001075 u	ppm	0.000141	13.13	7.461740	Y 377.433
Sr (421.552 nm)	0.018516	ppm	0.000003	0.02	4041.087189	Y_R 488.368
Th (288.505 nm)	0.008303	ppm	0.001070	12.89	157.799000	Y 377.433
Ti (336.122 nm)	0.005785	ppm	0.000021	0.36	610.785000	Y 377.433
Tl (190.794 nm)	0.001528	ppm	0.000221	14.43	-2.061260	Y 377.433
U (409.013 nm)	0.005007	ppm	0.003727	74.43	-184.356000	Y 377.433
V (292.401 nm)	1.674470 o	ppm	0.001242	0.07	60798.100000	Y 377.433
Zn (206.200 nm)	0.036163	ppm	0.000244	0.68	216.608000	Y 377.433
Zr (343.823 nm)	0.000139	ppm	0.000053	37.97	49.762100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067237	20363.105502	0.003706	0.35
Y 377.433	1.073923	1087011.890685	0.003626	0.34
Y_R 377.433	1.131310	85406.000000	0.001547	0.14
Y_R 488.368	1.106780	48455.400000	0.005274	0.48
Y_R2 488.368	1.099860	95447.540463	0.000992	0.09

Sample Name: 280-116077-A-1-B MS@20

Date: 11/6/2018 5:36:35 PM Rack:Tube: 1:55

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000087 bu	ppm	0.000296	> 100.00	-2258.390000	Y 377.433
Al (167.019 nm)	1.952660	ppm	0.003090	0.16	1097.780000	Y_R 377.433
Al H (396.152 nm)	1.876719	ppm	0.008880	0.47	4818.389416	Y_R 377.433
As (188.980 nm)	0.051600	ppm	0.000821	1.59	63.153700	Y 242.219
B (249.678 nm)	0.070766	ppm	0.000002	0.00	1810.980000	Y 242.219
Ba (493.408 nm)	0.190046	ppm	0.001222	0.64	22626.400000	Y_R 488.368
Be (234.861 nm)	0.002377	ppm	0.000043	1.80	971.042000	Y_R 488.368
Bi (223.061 nm)	0.091584	ppm	0.001118	1.22	245.013000	Y 377.433
Ca (315.887 nm)	31.454927 o	ppm	0.011731	0.04	24879.465699	Y_R 377.433
Cd (214.439 nm)	0.005370	ppm	0.000020	0.37	331.499000	Y 377.433
Co (228.615 nm)	0.029405	ppm	0.000065	0.22	499.434000	Y 242.219
Cr (205.560 nm)	0.140224	ppm	0.000164	0.12	2127.690000	Y 377.433
Cu (324.754 nm)	0.047396	ppm	0.000100	0.21	2351.020000	Y 377.433
Fe (238.204 nm)	10.051868 o	ppm	0.025107	0.25	37202.025049	Y_R 377.433
Fe H (259.940 nm)	10.157400	ppm	0.011627	0.11	19218.900000	Y_R 377.433
K (766.491 nm)	3.202030	ppm	0.022183	0.69	2930.470000	Y_R2 488.368
Li (670.783 nm)	0.059532	ppm	0.001650	2.77	631.722000	Y_R2 488.368
Mg (279.078 nm)	4.489840	ppm	0.004431	0.10	25956.300000	Y 377.433
Mn (257.610 nm)	0.111158	ppm	0.000149	0.13	26057.800000	Y 377.433
Mo (202.032 nm)	0.069259	ppm	0.000296	0.43	596.426000	Y 377.433
Na (589.592 nm)	2.873330	ppm	0.008550	0.30	19600.400000	Y_R2 488.368
Na H (589.593 nm)	2.739342 u	ppm	0.049783	1.82	12609.067545	Y_R 488.368
Ni (231.604 nm)	0.065248	ppm	0.000920	1.41	441.551000	Y 377.433
P (213.618 nm)	1.156720	ppm	0.000124	0.01	2538.110000	Y 242.219
Pb (220.353 nm)	0.045994	ppm	0.000009	0.02	135.479000	Y 242.219
S (181.972 nm)	0.901463	ppm	0.004318	0.48	476.125693	Y 377.433
Sb (206.834 nm)	0.025756	ppm	0.000086	0.33	48.503600	Y 377.433
Se (196.026 nm)	0.095376	ppm	0.001629	1.71	106.092000	Y 242.219
Si (288.158 nm)	0.319501	ppm	0.000112	0.04	3675.660000	Y 377.433
Sn (189.925 nm)	0.098832	ppm	0.000734	0.74	206.055000	Y 377.433
Sr (421.552 nm)	0.160755	ppm	0.000739	0.46	33885.115355	Y_R 488.368
Th (288.505 nm)	0.046899 b	ppm	0.008457	18.03	609.646000	Y 377.433
Ti (336.122 nm)	0.095870	ppm	0.000230	0.24	13522.700000	Y 377.433
Tl (190.794 nm)	0.112276	ppm	0.002454	2.19	240.656000	Y 377.433
U (409.013 nm)	0.085398	ppm	0.001189	1.39	180.416000	Y 377.433
V (292.401 nm)	10.934500 bo	ppm	0.031075	0.28	396833.000000	Y 377.433
Zn (206.200 nm)	0.261225	ppm	0.001302	0.50	1392.030000	Y 377.433
Zr (343.823 nm)	0.021493	ppm	0.000052	0.24	2881.820000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061937	20261.982952	0.001750	0.16
Y 377.433	1.068016	1081033.019804	0.001196	0.11
Y_R 377.433	1.137580	85879.500000	0.000283	0.02
Y_R 488.368	1.117280	48915.200000	0.006489	0.58
Y_R2 488.368	1.098558	95334.556442	0.010083	0.92

Sample Name: 280-116077-A-1-C MSD@20

Date: 11/6/2018 5:39:58 PM Rack:Tube: 1:56

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000160 u	ppm	0.000284	> 100.00	-1974.790000	Y 377.433
Al (167.019 nm)	1.884390	ppm	0.014934	0.79	1059.210000	Y_R 377.433
Al H (396.152 nm)	1.810565	ppm	0.001236	0.07	4651.269566	Y_R 377.433
As (188.980 nm)	0.052504	ppm	0.000712	1.36	64.298600	Y 242.219
B (249.678 nm)	0.069708	ppm	0.000175	0.25	1785.700000	Y 242.219
Ba (493.408 nm)	0.185307	ppm	0.001395	0.75	22076.400000	Y_R 488.368
Be (234.861 nm)	0.002443	ppm	0.000025	1.01	967.170000	Y_R 488.368
Bi (223.061 nm)	0.092208	ppm	0.001942	2.11	246.460000	Y 377.433
Ca (315.887 nm)	29.242782 o	ppm	0.001194	0.00	23125.425239	Y_R 377.433
Cd (214.439 nm)	0.005631	ppm	0.000094	1.67	346.394000	Y 377.433
Co (228.615 nm)	0.029525	ppm	0.000555	1.88	501.551000	Y 242.219
Cr (205.560 nm)	0.129256	ppm	0.000198	0.15	1960.940000	Y 377.433
Cu (324.754 nm)	0.045459	ppm	0.000420	0.92	2240.270000	Y 377.433
Fe (238.204 nm)	9.283564 o	ppm	0.010691	0.12	34360.424247	Y_R 377.433
Fe H (259.940 nm)	9.380000	ppm	0.006480	0.07	17748.300000	Y_R 377.433
K (766.491 nm)	3.178460	ppm	0.006171	0.19	2903.330000	Y_R2 488.368
Li (670.783 nm)	0.059326	ppm	0.001996	3.36	624.872000	Y_R2 488.368
Mg (279.078 nm)	4.436950	ppm	0.001400	0.03	25651.900000	Y 377.433
Mn (257.610 nm)	0.104579	ppm	0.000031	0.03	24519.100000	Y 377.433
Mo (202.032 nm)	0.070606	ppm	0.000341	0.48	608.026000	Y 377.433
Na (589.592 nm)	2.892270	ppm	0.012216	0.42	19715.900000	Y_R2 488.368
Na H (589.593 nm)	2.770007 u	ppm	0.014877	0.54	12717.114630	Y_R 488.368
Ni (231.604 nm)	0.064888	ppm	0.000119	0.18	439.059000	Y 377.433
P (213.618 nm)	1.087320	ppm	0.005943	0.55	2387.290000	Y 242.219
Pb (220.353 nm)	0.042532	ppm	0.000163	0.38	125.522000	Y 242.219
S (181.972 nm)	0.810129	ppm	0.007380	0.91	429.333123	Y 377.433
Sb (206.834 nm)	0.026725	ppm	0.001726	6.46	50.967600	Y 377.433
Se (196.026 nm)	0.097711	ppm	0.007823	8.01	108.556000	Y 242.219
Si (288.158 nm)	0.751596	ppm	0.001335	0.18	7389.380000	Y 377.433
Sn (189.925 nm)	0.097709	ppm	0.000221	0.23	203.822000	Y 377.433
Sr (421.552 nm)	0.153990	ppm	0.000749	0.49	32465.692244	Y_R 488.368
Th (288.505 nm)	0.042518	ppm	0.002924	6.88	532.857000	Y 377.433
Ti (336.122 nm)	0.094407	ppm	0.000023	0.02	13308.300000	Y 377.433
Tl (190.794 nm)	0.111161	ppm	0.001148	1.03	238.229000	Y 377.433
U (409.013 nm)	0.089776	ppm	0.005154	5.74	200.092000	Y 377.433
V (292.401 nm)	9.189900 o	ppm	0.006696	0.07	333520.000000	Y 377.433
Zn (206.200 nm)	0.247125	ppm	0.000522	0.21	1318.390000	Y 377.433
Zr (343.823 nm)	0.018879	ppm	0.000066	0.35	2535.970000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057192	20171.451435	0.002702	0.26
Y 377.433	1.062830	1075782.962242	0.001818	0.17
Y_R 377.433	1.129510	85270.100000	0.000687	0.06
Y_R 488.368	1.105310	48391.300000	0.006102	0.55
Y_R2 488.368	1.096869	95188.021168	0.001720	0.16

Sample Name: 280-116077-A-1-Apds@20

Date: 11/6/2018 5:43:19 PM
Rack:Tube: 1:57

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.007714	ppm	0.000154	2.00	-1494.740000	Y 377.433
Al (167.019 nm)	2.331750	ppm	0.019479	0.84	1308.440000	Y_R 377.433
Al H (396.152 nm)	2.241131	ppm	0.008502	0.38	5739.810263	Y_R 377.433
As (188.980 nm)	0.195706	ppm	0.001859	0.95	244.638000	Y 242.219
B (249.678 nm)	0.117027	ppm	0.000003	0.00	2969.110000	Y 242.219
Ba (493.408 nm)	0.187880	ppm	0.000540	0.29	22378.000000	Y_R 488.368
Be (234.861 nm)	0.046883	ppm	0.000271	0.58	14202.000000	Y_R 488.368
Bi (223.061 nm)	-0.000711 u	ppm	0.002238	> 100.00	12.434000	Y 377.433
Ca (315.887 nm)	43.538379 o	ppm	0.251900	0.58	34460.628972	Y_R 377.433
Cd (214.439 nm)	0.048419	ppm	0.000106	0.22	2903.440000	Y 377.433
Co (228.615 nm)	0.051377	ppm	0.000212	0.41	896.755000	Y 242.219
Cr (205.560 nm)	0.148300	ppm	0.000212	0.14	2250.550000	Y 377.433
Cu (324.754 nm)	0.073859	ppm	0.000075	0.10	3815.010000	Y 377.433
Fe (238.204 nm)	9.012888 o	ppm	0.050198	0.56	33359.320922	Y_R 377.433
Fe H (259.940 nm)	9.099180	ppm	0.039430	0.43	17217.100000	Y_R 377.433
K (766.491 nm)	20.438300	ppm	0.035416	0.17	22777.600000	Y_R2 488.368
Li (670.783 nm)	0.104674	ppm	0.001232	1.18	2137.240000	Y_R2 488.368
Mg (279.078 nm)	20.683900	ppm	0.000403	0.00	119493.000000	Y 377.433
Mn (257.610 nm)	0.120433	ppm	0.000015	0.01	28226.900000	Y 377.433
Mo (202.032 nm)	0.063157	ppm	0.000364	0.58	543.877000	Y 377.433
Na (589.592 nm)	20.119900 o	ppm	0.000688	0.00	133154.000000	Y_R2 488.368
Na H (589.593 nm)	20.742216	ppm	0.085740	0.41	78562.564179	Y_R 488.368
Ni (231.604 nm)	0.078872	ppm	0.000278	0.35	534.556000	Y 377.433
P (213.618 nm)	2.672830 o	ppm	0.001665	0.06	5832.610000	Y 242.219
Pb (220.353 nm)	0.130872	ppm	0.000681	0.52	379.867000	Y 242.219
S (181.972 nm)	0.700227	ppm	0.007838	1.12	373.086100	Y 377.433
Sb (206.834 nm)	0.097608	ppm	0.001520	1.56	244.263000	Y 377.433
Se (196.026 nm)	0.191609	ppm	0.001756	0.92	202.071000	Y 242.219
Si (288.158 nm)	10.554000	ppm	0.057944	0.55	91638.400000	Y 377.433
Sn (189.925 nm)	0.094993	ppm	0.000591	0.62	198.424000	Y 377.433
Sr (421.552 nm)	0.142209	ppm	0.000608	0.43	29993.889751	Y_R 488.368
Th (288.505 nm)	0.195866	ppm	0.002010	1.03	904.216000	Y 377.433
Ti (336.122 nm)	0.077779	ppm	0.000015	0.02	10984.900000	Y 377.433
Tl (190.794 nm)	0.205858	ppm	0.000595	0.29	446.518000	Y 377.433
U (409.013 nm)	0.488864	ppm	0.003321	0.68	2000.020000	Y 377.433
V (292.401 nm)	8.457670 o	ppm	0.011155	0.13	306932.000000	Y 377.433
Zn (206.200 nm)	0.380439	ppm	0.000022	0.01	2014.640000	Y 377.433
Zr (343.823 nm)	0.050147	ppm	0.000131	0.26	6646.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.049267	20020.244750	0.000246	0.02
Y 377.433	1.052299	1065124.021318	0.001595	0.15
Y_R 377.433	1.122740	84759.100000	0.003992	0.36
Y_R 488.368	1.092380	47824.900000	0.004130	0.38
Y_R2 488.368	1.089076	94511.748769	0.005178	0.48

Sample Name: 280-116077-A-2-A@10

Date: 11/6/2018 5:46:41 PM Rack:Tube: 1:58

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002311 u	ppm	0.001656	71.67	-1875.530000	Y 377.433
Al (167.019 nm)	2.489300	ppm	0.044900	1.80	1401.300000	Y_R 377.433
Al H (396.152 nm)	2.570103	ppm	0.042353	1.65	6560.266755	Y_R 377.433
As (188.980 nm)	0.005050	ppm	0.003306	65.47	4.476190	Y 242.219
B (249.678 nm)	0.043438	ppm	0.001782	4.10	1117.570000	Y 242.219
Ba (493.408 nm)	0.125833	ppm	0.001777	1.41	15196.800000	Y_R 488.368
Be (234.861 nm)	0.000280	ppm	0.000066	23.60	549.510000	Y_R 488.368
Bi (223.061 nm)	-0.004687 u	ppm	0.000708	15.10	3.651160	Y 377.433
Ca (315.887 nm)	36.293709 o	ppm	0.649620	1.79	28716.201561	Y_R 377.433
Cd (214.439 nm)	0.000715	ppm	0.000051	7.10	59.441700	Y 377.433
Co (228.615 nm)	0.005033	ppm	0.000341	6.78	57.125600	Y 242.219
Cr (205.560 nm)	0.127175	ppm	0.005848	4.60	1927.400000	Y 377.433
Cu (324.754 nm)	0.056654	ppm	0.002351	4.15	2860.580000	Y 377.433
Fe (238.204 nm)	16.452501 o	ppm	0.284999	1.73	60874.987404	Y_R 377.433
Fe H (259.940 nm)	16.649800	ppm	0.288460	1.73	31501.400000	Y_R 377.433
K (766.491 nm)	0.875065	ppm	0.010589	1.21	251.027000	Y_R2 488.368
Li (670.783 nm)	0.007695	ppm	0.001802	23.42	-1097.060000	Y_R2 488.368
Mg (279.078 nm)	2.934470	ppm	0.126104	4.30	16962.400000	Y 377.433
Mn (257.610 nm)	0.150493	ppm	0.006418	4.26	35256.900000	Y 377.433
Mo (202.032 nm)	0.015816	ppm	0.001012	6.40	136.174000	Y 377.433
Na (589.592 nm)	0.347067	ppm	0.005320	1.53	2837.380000	Y_R2 488.368
Na H (589.593 nm)	0.042626 u	ppm	0.004589	10.77	2669.171777	Y_R 488.368
Ni (231.604 nm)	0.053392	ppm	0.002238	4.19	360.814000	Y 377.433
P (213.618 nm)	1.457060	ppm	0.067993	4.67	3190.740000	Y 242.219
Pb (220.353 nm)	0.037808	ppm	0.000289	0.76	112.409000	Y 242.219
S (181.972 nm)	1.075713	ppm	0.043398	4.03	565.464022	Y 377.433
Sb (206.834 nm)	0.004017	ppm	0.000682	16.98	-12.476500	Y 377.433
Se (196.026 nm)	-0.003115 u	ppm	0.000104	3.34	6.856450	Y 242.219
Si (288.158 nm)	2.276700	ppm	0.109045	4.79	20497.100000	Y 377.433
Sn (189.925 nm)	0.003819	ppm	0.000419	10.96	17.189900	Y 377.433
Sr (421.552 nm)	0.136855	ppm	0.001401	1.02	28870.477493	Y_R 488.368
Th (288.505 nm)	-0.000742 u	ppm	0.006998	> 100.00	375.865000	Y 377.433
Ti (336.122 nm)	0.070794	ppm	0.003208	4.53	9967.460000	Y 377.433
Tl (190.794 nm)	0.005804	ppm	0.001366	23.54	6.648740	Y 377.433
U (409.013 nm)	-0.011747 u	ppm	0.002868	24.42	-252.589000	Y 377.433
V (292.401 nm)	7.983130 o	ppm	0.342888	4.30	289726.000000	Y 377.433
Zn (206.200 nm)	0.347894	ppm	0.014385	4.13	1844.680000	Y 377.433
Zr (343.823 nm)	0.002558	ppm	0.000176	6.87	410.896000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.055036	20130.304113	0.001028	0.10
Y 377.433	1.058104	1070999.543157	0.000593	0.06
Y_R 377.433	1.108690	83698.200000	0.005911	0.53
Y_R 488.368	1.083810	47449.700000	0.000532	0.05
Y_R2 488.368	1.108606	96206.598566	0.006493	0.59

Sample Name: CCVH-5408055

Date: 11/6/2018 5:50:04 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001250 u	ppm	0.000005	0.40	-745.907000	Y 377.433
Al (167.019 nm)	46.241300 o	ppm	0.074856	0.16	25815.900000	Y_R 377.433
Al H (396.152 nm)	48.498599	ppm	0.099064	0.20	122060.074977	Y_R 377.433
As (188.980 nm)	-0.000173 u	ppm	0.003013	> 100.00	-2.384450	Y 242.219
B (249.678 nm)	-0.000924 u	ppm	0.000276	29.81	-38.943100	Y 242.219
Ba (493.408 nm)	-0.000277 u	ppm	0.000258	93.10	612.572000	Y_R 488.368
Be (234.861 nm)	-0.000141 u	ppm	0.000008	5.91	1427.480000	Y_R 488.368
Bi (223.061 nm)	0.968718	ppm	0.000485	0.05	2460.050000	Y 377.433
Ca (315.887 nm)	-0.005698 u	ppm	0.011506	> 100.00	-66.107423	Y_R 377.433
Cd (214.439 nm)	-0.000372 u	ppm	0.000000	0.08	25.275700	Y 377.433
Co (228.615 nm)	0.002934	ppm	0.000065	2.22	16.719100	Y 242.219
Cr (205.560 nm)	-0.000058 u	ppm	0.000066	> 100.00	-18.209000	Y 377.433
Cu (324.754 nm)	-0.003909 u	ppm	0.000115	2.95	-198.190000	Y 377.433
Fe (238.204 nm)	48.423715 o	ppm	0.187304	0.39	179121.644517	Y_R 377.433
Fe H (259.940 nm)	48.854200	ppm	0.264691	0.54	92425.600000	Y_R 377.433
K (766.491 nm)	0.095945	ppm	0.015379	16.03	-646.111000	Y_R2 488.368
Li (670.783 nm)	0.006295	ppm	0.000608	9.65	-1143.750000	Y_R2 488.368
Mg (279.078 nm)	-0.020854 u	ppm	0.001480	7.09	-433.914000	Y 377.433
Mn (257.610 nm)	0.001373	ppm	0.000009	0.63	382.799000	Y 377.433
Mo (202.032 nm)	0.000172	ppm	0.000130	75.95	1.450570	Y 377.433
Na (589.592 nm)	242.210000 o	ppm	0.258590	0.11	1595090.000000	Y_R2 488.368
Na H (589.593 nm)	253.118774	ppm	0.382775	0.15	929718.978717	Y_R 488.368
Ni (231.604 nm)	0.003910	ppm	0.000044	1.13	24.567100	Y 377.433
P (213.618 nm)	-0.004354 u	ppm	0.000668	15.33	15.095400	Y 242.219
Pb (220.353 nm)	-0.003396 u	ppm	0.000631	18.59	10.793400	Y 242.219
S (181.972 nm)	4.821433	ppm	0.002233	0.05	2483.466719	Y 377.433
Sb (206.834 nm)	-0.001687 u	ppm	0.000770	45.66	-73.086600	Y 377.433
Se (196.026 nm)	-0.001514 u	ppm	0.001096	72.36	2.748700	Y 242.219
Si (288.158 nm)	0.050528	ppm	0.001216	2.41	1363.930000	Y 377.433
Sn (189.925 nm)	-0.000081 u	ppm	0.000112	> 100.00	9.436840	Y 377.433
Sr (421.552 nm)	0.000347	ppm	0.000008	2.44	228.895724	Y_R 488.368
Th (288.505 nm)	4.872200	ppm	0.025338	0.52	12740.400000	Y 377.433
Ti (336.122 nm)	0.001026	ppm	0.000064	6.26	-81.969700	Y 377.433
Tl (190.794 nm)	-0.003742 u	ppm	0.001593	42.57	-14.845600	Y 377.433
U (409.013 nm)	9.980380	ppm	0.024990	0.25	44984.200000	Y 377.433
V (292.401 nm)	0.004281	ppm	0.000137	3.21	18.606500	Y 377.433
Zn (206.200 nm)	-0.004149 u	ppm	0.000502	12.09	6.069400	Y 377.433
Zr (343.823 nm)	-0.004377 u	ppm	0.000020	0.45	-407.801000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.047902	19994.184440	0.000275	0.03
Y 377.433	1.043006	1055718.030872	0.000574	0.06
Y_R 377.433	1.119900	84544.800000	0.001855	0.17
Y_R 488.368	1.093340	47867.100000	0.004246	0.39
Y_R2 488.368	1.078588	93601.586893	0.004390	0.41

Sample Name: CCV-5407546

Date: 11/6/2018 5:53:26 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.486681	ppm	0.001300	0.27	21855.400000	Y 377.433
Al (167.019 nm)	0.521228	ppm	0.007992	1.53	294.622000	Y_R 377.433
Al H (396.152 nm)	0.487806 u	ppm	0.001396	0.29	1347.807518	Y_R 377.433
As (188.980 nm)	0.974670	ppm	0.002695	0.28	1225.650000	Y 242.219
B (249.678 nm)	0.486671	ppm	0.000457	0.09	12232.200000	Y 242.219
Ba (493.408 nm)	0.487858	ppm	0.002360	0.48	57114.100000	Y_R 488.368
Be (234.861 nm)	0.470386	ppm	0.000732	0.16	140179.000000	Y_R 488.368
Bi (223.061 nm)	-0.001453 u	ppm	0.001344	92.48	9.491780	Y 377.433
Ca (315.887 nm)	5.007737	ppm	0.016323	0.33	3909.389828	Y_R 377.433
Cd (214.439 nm)	0.484026	ppm	0.001651	0.34	28932.200000	Y 377.433
Co (228.615 nm)	0.491081	ppm	0.003777	0.77	8875.420000	Y 242.219
Cr (205.560 nm)	0.485771	ppm	0.001951	0.40	7384.990000	Y 377.433
Cu (324.754 nm)	0.491776	ppm	0.001375	0.28	27112.200000	Y 377.433
Fe (238.204 nm)	2.479698	ppm	0.010677	0.43	9196.087035	Y_R 377.433
Fe H (259.940 nm)	2.498340 u	ppm	0.013384	0.54	4729.600000	Y_R 377.433
K (766.491 nm)	49.339600	ppm	0.195415	0.40	56056.800000	Y_R2 488.368
Li (670.783 nm)	0.978129	ppm	0.005010	0.51	31267.600000	Y_R2 488.368
Mg (279.078 nm)	19.188600	ppm	0.067998	0.35	110878.000000	Y 377.433
Mn (257.610 nm)	0.491238	ppm	0.001336	0.27	114945.000000	Y 377.433
Mo (202.032 nm)	0.494374	ppm	0.001105	0.22	4257.490000	Y 377.433
Na (589.592 nm)	4.994380	ppm	0.020225	0.40	34167.600000	Y_R2 488.368
Na H (589.593 nm)	5.310310 u	ppm	0.037689	0.71	22308.308134	Y_R 488.368
Ni (231.604 nm)	0.494151	ppm	0.001795	0.36	3368.070000	Y 377.433
P (213.618 nm)	0.967797	ppm	0.000484	0.05	2127.580000	Y 242.219
Pb (220.353 nm)	0.987308	ppm	0.003997	0.40	2833.270000	Y 242.219
S (181.972 nm)	0.006893	ppm	0.005847	84.82	18.902020	Y 377.433
Sb (206.834 nm)	0.987805	ppm	0.003993	0.40	2689.390000	Y 377.433
Se (196.026 nm)	0.963056	ppm	0.007144	0.74	971.471000	Y 242.219
Si (288.158 nm)	4.913520	ppm	0.032817	0.67	43159.800000	Y 377.433
Sn (189.925 nm)	0.979646	ppm	0.001107	0.11	1956.930000	Y 377.433
Sr (421.552 nm)	0.493499	ppm	0.002213	0.45	103700.470931	Y_R 488.368
Th (288.505 nm)	0.010127	ppm	0.001020	10.07	115.032000	Y 377.433
Ti (336.122 nm)	0.489732	ppm	0.001436	0.29	69531.900000	Y 377.433
Tl (190.794 nm)	0.983820	ppm	0.005158	0.52	2155.180000	Y 377.433
U (409.013 nm)	0.007657	ppm	0.001848	24.14	-209.803000	Y 377.433
V (292.401 nm)	0.487523	ppm	0.001670	0.34	17608.600000	Y 377.433
Zn (206.200 nm)	0.482038	ppm	0.002086	0.43	2545.270000	Y 377.433
Zr (343.823 nm)	0.492332	ppm	0.001499	0.30	64767.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060541	20235.338941	0.003320	0.31
Y 377.433	1.064627	1077602.487894	0.004697	0.44
Y_R 377.433	1.124120	84862.800000	0.000788	0.07
Y_R 488.368	1.099500	48136.700000	0.002898	0.26
Y_R2 488.368	1.087684	94390.952007	0.005002	0.46

Sample Name: CCB

Date: 11/6/2018 5:56:48 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000605	ppm	0.000257	42.45	-417.114000	Y 377.433
Al (167.019 nm)	-0.003280 u	ppm	0.000385	11.74	0.524559	Y_R 377.433
Al H (396.152 nm)	-0.015211 u	ppm	0.001301	8.55	40.806506	Y_R 377.433
As (188.980 nm)	-0.001078 u	ppm	0.000942	87.38	-3.094470	Y 242.219
B (249.678 nm)	0.000440	ppm	0.000355	80.75	68.134700	Y 242.219
Ba (493.408 nm)	-0.000574 u	ppm	0.000137	23.92	533.051000	Y_R 488.368
Be (234.861 nm)	0.000054	ppm	0.000009	16.21	-30.273400	Y_R 488.368
Bi (223.061 nm)	0.000458 u	ppm	0.001240	> 100.00	13.896000	Y 377.433
Ca (315.887 nm)	-0.000186 u	ppm	0.003702	> 100.00	-61.736785	Y_R 377.433
Cd (214.439 nm)	0.000037	ppm	0.000020	53.73	3.078620	Y 377.433
Co (228.615 nm)	0.000343	ppm	0.000093	27.11	-30.229000	Y 242.219
Cr (205.560 nm)	0.000395	ppm	0.000190	48.19	2.050350	Y 377.433
Cu (324.754 nm)	0.000903	ppm	0.000017	1.86	-241.564000	Y 377.433
Fe (238.204 nm)	-0.001068 u	ppm	0.000362	33.85	20.886895	Y_R 377.433
Fe H (259.940 nm)	0.002263 u	ppm	0.001116	49.30	7.515280	Y_R 377.433
K (766.491 nm)	0.056345	ppm	0.024807	44.03	-691.710000	Y_R2 488.368
Li (670.783 nm)	0.006332	ppm	0.000585	9.24	-1142.530000	Y_R2 488.368
Mg (279.078 nm)	0.000695	ppm	0.000049	7.09	43.388000	Y 377.433
Mn (257.610 nm)	0.000024	ppm	0.000008	32.45	67.317800	Y 377.433
Mo (202.032 nm)	0.000331	ppm	0.000164	49.52	2.822870	Y 377.433
Na (589.592 nm)	0.020400	ppm	0.000683	3.35	431.000000	Y_R2 488.368
Na H (589.593 nm)	-0.130664 u	ppm	0.026362	20.18	1915.263718	Y_R 488.368
Ni (231.604 nm)	0.000414	ppm	0.000315	76.19	-1.276380	Y 377.433
P (213.618 nm)	-0.003341 u	ppm	0.000610	18.27	17.295900	Y 242.219
Pb (220.353 nm)	0.001065	ppm	0.000303	28.45	6.483790	Y 242.219
S (181.972 nm)	0.003494	ppm	0.001069	30.61	15.961459	Y 377.433
Sb (206.834 nm)	0.001076	ppm	0.000594	55.23	-20.288500	Y 377.433
Se (196.026 nm)	-0.001082 u	ppm	0.000472	43.62	11.914400	Y 242.219
Si (288.158 nm)	0.013254	ppm	0.003242	24.46	1043.560000	Y 377.433
Sn (189.925 nm)	-0.001147 u	ppm	0.000431	37.59	7.317340	Y 377.433
Sr (421.552 nm)	-0.000079 u	ppm	0.000044	55.48	139.379091	Y_R 488.368
Th (288.505 nm)	0.004089	ppm	0.003775	92.33	83.458500	Y 377.433
Ti (336.122 nm)	-0.000030 u	ppm	0.000035	> 100.00	-232.421000	Y 377.433
Tl (190.794 nm)	0.001666	ppm	0.000909	54.56	-1.683840	Y 377.433
U (409.013 nm)	0.006266	ppm	0.000011	0.17	-179.251000	Y 377.433
V (292.401 nm)	0.000108 u	ppm	0.000300	> 100.00	38.910400	Y 377.433
Zn (206.200 nm)	-0.005191 u	ppm	0.000183	3.53	0.629044	Y 377.433
Zr (343.823 nm)	-0.000082 u	ppm	0.000042	50.42	15.834800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.058656	20199.381147	0.001653	0.16
Y 377.433	1.062568	1075517.921247	0.001476	0.14
Y_R 377.433	1.118840	84464.700000	0.000103	0.01
Y_R 488.368	1.090270	47732.600000	0.007153	0.66
Y_R2 488.368	1.097369	95231.368698	0.008419	0.77

Sample Name: CCVL-5413446

Date: 11/6/2018 6:00:12 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010469	ppm	0.000214	2.04	35.277900	Y 377.433
Al (167.019 nm)	0.099432	ppm	0.005183	5.21	57.856600	Y_R 377.433
Al H (396.152 nm)	0.078293 u	ppm	0.004106	5.24	277.575662	Y_R 377.433
As (188.980 nm)	0.012788	ppm	0.000461	3.61	14.366000	Y 242.219
B (249.678 nm)	0.100308	ppm	0.000405	0.40	2563.100000	Y 242.219
Ba (493.408 nm)	0.009547	ppm	0.000318	3.33	1705.290000	Y_R 488.368
Be (234.861 nm)	0.000977	ppm	0.000009	0.93	246.953000	Y_R 488.368
Bi (223.061 nm)	0.098466	ppm	0.001697	1.72	260.706000	Y 377.433
Ca (315.887 nm)	0.204730	ppm	0.003774	1.84	100.746554	Y_R 377.433
Cd (214.439 nm)	0.005076	ppm	0.000044	0.87	304.356000	Y 377.433
Co (228.615 nm)	0.010235	ppm	0.000187	1.83	149.274000	Y 242.219
Cr (205.560 nm)	0.009984	ppm	0.000101	1.01	147.945000	Y 377.433
Cu (324.754 nm)	0.016498	ppm	0.000102	0.62	626.078000	Y 377.433
Fe (238.204 nm)	0.098119	ppm	0.001322	1.35	387.733688	Y_R 377.433
Fe H (259.940 nm)	0.099049 u	ppm	0.006206	6.27	190.614000	Y_R 377.433
K (766.491 nm)	3.219720	ppm	0.019140	0.59	2950.840000	Y_R2 488.368
Li (670.783 nm)	0.027482 Q	ppm	0.000826	3.00	-437.150000 Q	Y_R2 488.368
Mg (279.078 nm)	0.195993	ppm	0.000556	0.28	1170.500000	Y 377.433
Mn (257.610 nm)	0.010276	ppm	0.000052	0.51	2465.070000	Y 377.433
Mo (202.032 nm)	0.019028	ppm	0.000190	1.00	163.839000	Y 377.433
Na (589.592 nm)	1.075850	ppm	0.003137	0.29	7400.760000	Y_R2 488.368
Na H (589.593 nm)	0.842483 u	ppm	0.040152	4.77	5489.951741	Y_R 488.368
Ni (231.604 nm)	0.040897	ppm	0.000680	1.66	274.902000	Y 377.433
P (213.618 nm)	2.815640 o	ppm	0.022078	0.78	6142.940000	Y 242.219
Pb (220.353 nm)	0.008464	ppm	0.000629	7.43	27.690100	Y 242.219
S (181.972 nm)	0.101525	ppm	0.002794	2.75	66.192620	Y 377.433
Sb (206.834 nm)	0.019932	ppm	0.001625	8.15	31.385500	Y 377.433
Se (196.026 nm)	0.016811	ppm	0.004123	24.53	29.713700	Y 242.219
Si (288.158 nm)	0.501637	ppm	0.007143	1.42	5241.070000	Y 377.433
Sn (189.925 nm)	0.097178	ppm	0.000372	0.38	202.768000	Y 377.433
Sr (421.552 nm)	0.010243	ppm	0.000053	0.51	2305.226726	Y_R 488.368
Th (288.505 nm)	0.019299	ppm	0.000013	0.07	123.555000	Y 377.433
Ti (336.122 nm)	0.009799	ppm	0.000095	0.97	1167.880000	Y 377.433
Tl (190.794 nm)	0.015881	ppm	0.000578	3.64	29.497900	Y 377.433
U (409.013 nm)	0.062969	ppm	0.006771	10.75	76.138200	Y 377.433
V (292.401 nm)	0.009692	ppm	0.000252	2.60	382.617000	Y 377.433
Zn (206.200 nm)	0.015324	ppm	0.000049	0.32	107.771000	Y 377.433
Zr (343.823 nm)	0.015132	ppm	0.000023	0.15	2016.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061282	20249.491548	0.001766	0.17
Y 377.433	1.066090	1079083.212067	0.002908	0.27
Y_R 377.433	1.118370	84429.100000	0.018437	1.65
Y_R 488.368	1.084770	47491.900000	0.015706	1.45
Y_R2 488.368	1.099259	95395.430702	0.011756	1.07

Sample Name: MB 280-436032/1-A

Date: 11/6/2018 6:03:34 PM Rack:Tube: 1:59

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000756	ppm	0.000014	1.85	-410.258000	Y 377.433
Al (167.019 nm)	-0.002358 u	ppm	0.002019	85.63	1.044060	Y_R 377.433
Al H (396.152 nm)	-0.018686 u	ppm	0.004998	26.75	32.045033	Y_R 377.433
As (188.980 nm)	0.000897	ppm	0.000789	87.89	-0.607141	Y 242.219
B (249.678 nm)	0.000492	ppm	0.000015	3.06	69.406800	Y 242.219
Ba (493.408 nm)	-0.000097 u	ppm	0.000484	> 100.00	588.222000	Y_R 488.368
Be (234.861 nm)	0.000031	ppm	0.000023	74.74	-36.857800	Y_R 488.368
Bi (223.061 nm)	-0.000754 u	ppm	0.002274	> 100.00	10.843500	Y 377.433
Ca (315.887 nm)	-0.000536 u	ppm	0.003276	> 100.00	-62.014382	Y_R 377.433
Cd (214.439 nm)	0.000003 u	ppm	0.000012	> 100.00	1.059780	Y 377.433
Co (228.615 nm)	0.000247 u	ppm	0.000352	> 100.00	-31.983100	Y 242.219
Cr (205.560 nm)	0.000278	ppm	0.000052	18.55	0.265973	Y 377.433
Cu (324.754 nm)	0.001004	ppm	0.000362	36.09	-235.815000	Y 377.433
Fe (238.204 nm)	0.006790	ppm	0.001016	14.96	49.950205	Y_R 377.433
Fe H (259.940 nm)	0.010097 u	ppm	0.001089	10.79	22.334800	Y_R 377.433
K (766.491 nm)	0.040266	ppm	0.046629	> 100.00	-710.224000	Y_R2 488.368
Li (670.783 nm)	0.006574	ppm	0.001161	17.65	-1134.460000	Y_R2 488.368
Mg (279.078 nm)	-0.000631 u	ppm	0.000028	4.37	35.714900	Y 377.433
Mn (257.610 nm)	0.000088	ppm	0.000017	19.46	82.287300	Y 377.433
Mo (202.032 nm)	-0.000215 u	ppm	0.000055	25.61	-1.880000	Y 377.433
Na (589.592 nm)	0.014816	ppm	0.006773	45.72	394.460000	Y_R2 488.368
Na H (589.593 nm)	-0.262661 u	ppm	0.035018	13.33	1431.784846	Y_R 488.368
Ni (231.604 nm)	-0.000369 u	ppm	0.000614	> 100.00	-6.617570	Y 377.433
P (213.618 nm)	-0.001924 u	ppm	0.000191	9.94	20.376300	Y 242.219
Pb (220.353 nm)	-0.000616 u	ppm	0.000765	> 100.00	1.664670	Y 242.219
S (181.972 nm)	0.004730	ppm	0.005925	> 100.00	16.594963	Y 377.433
Sb (206.834 nm)	0.001270	ppm	0.000436	34.32	-19.759600	Y 377.433
Se (196.026 nm)	0.000656	ppm	0.000091	13.91	13.642000	Y 242.219
Si (288.158 nm)	-0.000279 u	ppm	0.000746	> 100.00	927.256000	Y 377.433
Sn (189.925 nm)	-0.000402 u	ppm	0.000572	> 100.00	8.798130	Y 377.433
Sr (421.552 nm)	-0.000042 u	ppm	0.000059	> 100.00	147.199459	Y_R 488.368
Th (288.505 nm)	0.002944	ppm	0.004040	> 100.00	80.529400	Y 377.433
Ti (336.122 nm)	-0.000087 u	ppm	0.000047	53.49	-240.614000	Y 377.433
Tl (190.794 nm)	-0.000091 u	ppm	0.000124	> 100.00	-5.545220	Y 377.433
U (409.013 nm)	0.006398	ppm	0.001926	30.11	-178.629000	Y 377.433
V (292.401 nm)	0.000199	ppm	0.000188	94.27	42.298000	Y 377.433
Zn (206.200 nm)	-0.005174 u	ppm	0.000244	4.71	0.719208	Y 377.433
Zr (343.823 nm)	-0.000237 u	ppm	0.000025	10.41	-4.511460	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067604	20370.106060	0.002624	0.25
Y 377.433	1.072892	1085967.832748	0.001044	0.10
Y_R 377.433	1.131720	85437.000000	0.003757	0.33
Y_R 488.368	1.106300	48434.600000	0.010389	0.94
Y_R2 488.368	1.105538	95940.336586	0.004159	0.38

Sample Name: LCS 280-436032/2-A

Date: 11/6/2018 6:06:57 PM Rack:Tube: 1:60

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052689	ppm	0.000015	0.03	1942.560000	Y 377.433
Al (167.019 nm)	2.059750	ppm	0.003382	0.16	1151.410000	Y_R 377.433
Al H (396.152 nm)	2.034612	ppm	0.014367	0.71	5301.707253	Y_R 377.433
As (188.980 nm)	0.996570	ppm	0.001657	0.17	1253.240000	Y 242.219
B (249.678 nm)	1.050640	ppm	0.001964	0.19	26322.500000	Y 242.219
Ba (493.408 nm)	2.026460 o	ppm	0.018368	0.91	235307.000000	Y_R 488.368
Be (234.861 nm)	0.048970	ppm	0.000616	1.26	14519.000000	Y_R 488.368
Bi (223.061 nm)	1.976550	ppm	0.005071	0.26	4990.060000	Y 377.433
Ca (315.887 nm)	51.213168 o	ppm	0.023523	0.05	40546.105235	Y_R 377.433
Cd (214.439 nm)	0.099650	ppm	0.000239	0.24	5958.030000	Y 377.433
Co (228.615 nm)	0.490632	ppm	0.001119	0.23	8886.180000	Y 242.219
Cr (205.560 nm)	0.202333	ppm	0.000259	0.13	3073.400000	Y 377.433
Cu (324.754 nm)	0.251511	ppm	0.000491	0.20	13747.100000	Y 377.433
Fe (238.204 nm)	1.013449	ppm	0.004778	0.47	3773.112592	Y_R 377.433
Fe H (259.940 nm)	1.016270 u	ppm	0.002002	0.20	1925.810000	Y_R 377.433
K (766.491 nm)	51.818000	ppm	0.066994	0.13	58910.700000	Y_R2 488.368
Li (670.783 nm)	1.018470	ppm	0.004508	0.44	32613.100000	Y_R2 488.368
Mg (279.078 nm)	49.815600 o	ppm	0.055546	0.11	287743.000000	Y 377.433
Mn (257.610 nm)	0.503842	ppm	0.001007	0.20	117893.000000	Y 377.433
Mo (202.032 nm)	1.033220	ppm	0.002777	0.27	8898.030000	Y 377.433
Na (589.592 nm)	50.867200 o	ppm	0.116318	0.23	339312.000000	Y_R2 488.368
Na H (589.593 nm)	53.549950	ppm	0.436748	0.82	200484.333386	Y_R 488.368
Ni (231.604 nm)	0.488408	ppm	0.001330	0.27	3330.110000	Y 377.433
P (213.618 nm)	10.231900 o	ppm	0.034406	0.34	22258.400000	Y 242.219
Pb (220.353 nm)	0.507857	ppm	0.000317	0.06	1460.750000	Y 242.219
S (181.972 nm)	1.970867	ppm	0.000681	0.03	1024.780737	Y 377.433
Sb (206.834 nm)	0.519842	ppm	0.001435	0.28	1392.430000	Y 377.433
Se (196.026 nm)	2.040820	ppm	0.004561	0.22	2044.520000	Y 242.219
Si (288.158 nm)	10.183600	ppm	0.084036	0.83	88454.400000	Y 377.433
Sn (189.925 nm)	2.037060	ppm	0.000540	0.03	4058.850000	Y 377.433
Sr (421.552 nm)	1.028231	ppm	0.009980	0.97	215896.028134	Y_R 488.368
Th (288.505 nm)	1.023110	ppm	0.004504	0.44	2760.470000	Y 377.433
Ti (336.122 nm)	1.019460	ppm	0.001997	0.20	145116.000000	Y 377.433
Tl (190.794 nm)	2.044910	ppm	0.003779	0.18	4483.350000	Y 377.433
U (409.013 nm)	2.105020	ppm	0.009299	0.44	9266.410000	Y 377.433
V (292.401 nm)	0.512926	ppm	0.000883	0.17	18564.800000	Y 377.433
Zn (206.200 nm)	0.488513	ppm	0.001856	0.38	2579.080000	Y 377.433
Zr (343.823 nm)	0.506983	ppm	0.000799	0.16	66689.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032038	19691.501294	0.001762	0.17
Y 377.433	1.038761	1051420.969895	0.001722	0.17
Y_R 377.433	1.115630	84222.500000	0.012658	1.13
Y_R 488.368	1.089340	47692.000000	0.013479	1.24
Y_R2 488.368	1.080190	93740.547687	0.001662	0.15

Sample Name: 280-116342-A-1-A

Date: 11/6/2018 6:10:19 PM
Rack:Tube: 1:61

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001117	ppm	0.000022	1.94	-395.530000	Y 377.433
Al (167.019 nm)	-0.000731 u	ppm	0.002048	> 100.00	1.954620	Y_R 377.433
Al H (396.152 nm)	0.006733 u	ppm	0.000350	5.19	136.026150	Y_R 377.433
As (188.980 nm)	0.008804	ppm	0.000988	11.22	9.349520	Y 242.219
B (249.678 nm)	0.039278	ppm	0.000304	0.77	1038.290000	Y 242.219
Ba (493.408 nm)	0.666803	ppm	0.002645	0.40	77848.100000	Y_R 488.368
Be (234.861 nm)	0.000021	ppm	0.000025	> 100.00	-39.796400	Y_R 488.368
Bi (223.061 nm)	0.001852	ppm	0.000565	30.52	17.406800	Y 377.433
Ca (315.887 nm)	91.951352 o	ppm	0.195551	0.21	72847.926244	Y_R 377.433
Cd (214.439 nm)	0.000058	ppm	0.000013	21.91	4.365410	Y 377.433
Co (228.615 nm)	-0.000079 u	ppm	0.000298	> 100.00	-37.876100	Y 242.219
Cr (205.560 nm)	0.000487	ppm	0.000149	30.60	3.451060	Y 377.433
Cu (324.754 nm)	0.000410	ppm	0.000271	66.12	-325.553000	Y 377.433
Fe (238.204 nm)	0.012688	ppm	0.000442	3.48	71.765336	Y_R 377.433
Fe H (259.940 nm)	0.014149 u	ppm	0.002348	16.60	30.000500	Y_R 377.433
K (766.491 nm)	7.832440	ppm	0.075290	0.96	8262.290000	Y_R2 488.368
Li (670.783 nm)	0.029974	ppm	0.000048	0.16	-354.063000	Y_R2 488.368
Mg (279.078 nm)	15.518700	ppm	0.077111	0.50	89683.400000	Y 377.433
Mn (257.610 nm)	0.065404	ppm	0.000209	0.32	15357.600000	Y 377.433
Mo (202.032 nm)	0.000455	ppm	0.000037	8.12	3.894460	Y 377.433
Na (589.592 nm)	8.929210	ppm	0.032749	0.37	60436.800000	Y_R2 488.368
Na H (589.593 nm)	9.221374	ppm	0.033519	0.36	36805.048526	Y_R 488.368
Ni (231.604 nm)	-0.000111 u	ppm	0.000843	> 100.00	-4.852590	Y 377.433
P (213.618 nm)	0.168265	ppm	0.002064	1.23	390.196000	Y 242.219
Pb (220.353 nm)	0.000361	ppm	0.000177	48.94	4.467050	Y 242.219
S (181.972 nm)	2.093247	ppm	0.022411	1.07	1086.385778	Y 377.433
Sb (206.834 nm)	-0.001363 u	ppm	0.001066	78.26	-26.972200	Y 377.433
Se (196.026 nm)	-0.001097 u	ppm	0.000020	1.85	11.950300	Y 242.219
Si (288.158 nm)	21.809800 o	ppm	0.214882	0.99	188378.000000	Y 377.433
Sn (189.925 nm)	-0.000983 u	ppm	0.000022	2.19	7.643670	Y 377.433
Sr (421.552 nm)	0.649345	ppm	0.001372	0.21	136399.540498	Y_R 488.368
Th (288.505 nm)	0.001168	ppm	0.000485	41.52	77.782500	Y 377.433
Ti (336.122 nm)	-0.000152 u	ppm	0.000074	48.74	38.354700	Y 377.433
Tl (190.794 nm)	0.001064	ppm	0.000300	28.21	-3.007310	Y 377.433
U (409.013 nm)	0.010756	ppm	0.000208	1.93	-176.401000	Y 377.433
V (292.401 nm)	0.010012	ppm	0.000069	0.68	398.147000	Y 377.433
Zn (206.200 nm)	-0.003572 u	ppm	0.000555	15.54	9.082090	Y 377.433
Zr (343.823 nm)	-0.000145 u	ppm	0.000173	> 100.00	7.614000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046654	19970.388011	0.004332	0.41
Y 377.433	1.054224	1067072.362426	0.006328	0.60
Y_R 377.433	1.121460	84662.600000	0.007549	0.67
Y_R 488.368	1.095180	47947.500000	0.008156	0.74
Y_R2 488.368	1.091152	94691.897342	0.005806	0.53

Sample Name: 280-116342-A-4-A

Date: 11/6/2018 6:13:42 PM Rack:Tube: 1:62

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001268	ppm	0.000063	4.94	-388.620000	Y 377.433
Al (167.019 nm)	-0.002365 u	ppm	0.002023	85.52	1.037100	Y_R 377.433
Al H (396.152 nm)	-0.004233 u	ppm	0.003062	72.34	107.821247	Y_R 377.433
As (188.980 nm)	0.008026	ppm	0.001102	13.73	8.369630	Y 242.219
B (249.678 nm)	0.038100	ppm	0.000027	0.07	1008.870000	Y 242.219
Ba (493.408 nm)	0.651976	ppm	0.005860	0.90	76130.600000	Y_R 488.368
Be (234.861 nm)	0.000031	ppm	0.000008	25.87	-36.980800	Y_R 488.368
Bi (223.061 nm)	-0.000554 u	ppm	0.002044	> 100.00	11.348000	Y 377.433
Ca (315.887 nm)	90.628341 o	ppm	0.091539	0.10	71798.892181	Y_R 377.433
Cd (214.439 nm)	0.000061	ppm	0.000036	59.37	4.515930	Y 377.433
Co (228.615 nm)	0.000079	ppm	0.000059	74.60	-35.018400	Y 242.219
Cr (205.560 nm)	0.000513	ppm	0.000088	17.13	3.845810	Y 377.433
Cu (324.754 nm)	0.000288 u	ppm	0.000509	> 100.00	-332.753000	Y 377.433
Fe (238.204 nm)	0.002218	ppm	0.000256	11.54	33.041718	Y_R 377.433
Fe H (259.940 nm)	0.005205 u	ppm	0.002564	49.26	13.079900	Y_R 377.433
K (766.491 nm)	7.731000	ppm	0.011097	0.14	8145.480000	Y_R2 488.368
Li (670.783 nm)	0.030654	ppm	0.001524	4.97	-331.364000	Y_R2 488.368
Mg (279.078 nm)	15.284800	ppm	0.046856	0.31	88332.100000	Y 377.433
Mn (257.610 nm)	0.071264	ppm	0.000116	0.16	16727.900000	Y 377.433
Mo (202.032 nm)	-0.000156 u	ppm	0.000001	0.41	-1.371540	Y 377.433
Na (589.592 nm)	8.764230	ppm	0.022211	0.25	59320.600000	Y_R2 488.368
Na H (589.593 nm)	9.005725 u	ppm	0.031970	0.35	36001.054260	Y_R 488.368
Ni (231.604 nm)	0.000465	ppm	0.000147	31.54	-0.927270	Y 377.433
P (213.618 nm)	0.159814	ppm	0.002387	1.49	371.833000	Y 242.219
Pb (220.353 nm)	0.000189	ppm	0.000227	> 100.00	3.971920	Y 242.219
S (181.972 nm)	2.018386	ppm	0.016302	0.81	1048.059639	Y 377.433
Sb (206.834 nm)	-0.001005 u	ppm	0.000923	91.81	-25.972400	Y 377.433
Se (196.026 nm)	0.000989 u	ppm	0.004884	> 100.00	14.032400	Y 242.219
Si (288.158 nm)	21.462900 o	ppm	0.237270	1.11	185396.000000	Y 377.433
Sn (189.925 nm)	-0.000900 u	ppm	0.000108	11.98	7.809200	Y 377.433
Sr (421.552 nm)	0.640186	ppm	0.003470	0.54	134477.732723	Y_R 488.368
Th (288.505 nm)	0.001090	ppm	0.000686	62.92	77.665900	Y 377.433
Ti (336.122 nm)	-0.000353 u	ppm	0.000117	33.22	5.550120	Y 377.433
Tl (190.794 nm)	0.001139	ppm	0.000314	27.58	-2.838640	Y 377.433
U (409.013 nm)	0.008525	ppm	0.001864	21.86	-186.240000	Y 377.433
V (292.401 nm)	0.010169	ppm	0.000109	1.07	403.337000	Y 377.433
Zn (206.200 nm)	-0.003335 u	ppm	0.000257	7.71	10.322900	Y 377.433
Zr (343.823 nm)	-0.000200 u	ppm	0.000016	7.96	0.341831	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.042189	19885.192753	0.002090	0.20
Y 377.433	1.048726	1061507.209985	0.002454	0.23
Y_R 377.433	1.116240	84268.400000	0.005367	0.48
Y_R 488.368	1.091520	47787.300000	0.000411	0.04
Y_R2 488.368	1.090342	94621.618716	0.005219	0.48

Sample Name: 280-116342-A-4-Asd@5

Date: 11/6/2018 6:17:04 PM Rack:Tube: 1:63

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000936	ppm	0.000056	5.95	-402.291000	Y 377.433
Al (167.019 nm)	-0.002017 u	ppm	0.001659	82.28	1.230090	Y_R 377.433
Al H (396.152 nm)	-0.013037 u	ppm	0.002984	22.89	54.272911	Y_R 377.433
As (188.980 nm)	0.002009	ppm	0.001888	93.95	0.793400	Y 242.219
B (249.678 nm)	0.007925	ppm	0.000126	1.59	255.087000	Y 242.219
Ba (493.408 nm)	0.131273	ppm	0.001029	0.78	15807.400000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000005	16.13	-37.579000	Y_R 488.368
Bi (223.061 nm)	-0.001000 u	ppm	0.001265	> 100.00	10.223400	Y 377.433
Ca (315.887 nm)	18.415889 o	ppm	0.089290	0.48	14540.626585	Y_R 377.433
Cd (214.439 nm)	0.000026	ppm	0.000031	> 100.00	2.416760	Y 377.433
Co (228.615 nm)	-0.000182 u	ppm	0.000106	58.00	-39.755400	Y 242.219
Cr (205.560 nm)	-0.000022 u	ppm	0.000037	> 100.00	-4.291220	Y 377.433
Cu (324.754 nm)	0.000738	ppm	0.000514	69.69	-262.349000	Y 377.433
Fe (238.204 nm)	0.000596	ppm	0.000816	> 100.00	27.043491	Y_R 377.433
Fe H (259.940 nm)	0.005982 u	ppm	0.000666	11.14	14.549100	Y_R 377.433
K (766.491 nm)	1.622350	ppm	0.006682	0.41	1111.510000	Y_R2 488.368
Li (670.783 nm)	0.011385	ppm	0.000588	5.17	-974.020000	Y_R2 488.368
Mg (279.078 nm)	3.086980	ppm	0.007966	0.26	17871.400000	Y 377.433
Mn (257.610 nm)	0.014504	ppm	0.000035	0.24	3453.870000	Y 377.433
Mo (202.032 nm)	0.000109	ppm	0.000129	> 100.00	0.907554	Y 377.433
Na (589.592 nm)	1.791310	ppm	0.003745	0.21	12357.600000	Y_R2 488.368
Na H (589.593 nm)	1.636238 u	ppm	0.014998	0.92	8512.579848	Y_R 488.368
Ni (231.604 nm)	-0.000233 u	ppm	0.000309	> 100.00	-5.690240	Y 377.433
P (213.618 nm)	0.027485	ppm	0.001927	7.01	84.281400	Y 242.219
Pb (220.353 nm)	0.001167	ppm	0.000808	69.25	6.773380	Y 242.219
S (181.972 nm)	0.395185	ppm	0.000345	0.09	216.600763	Y 377.433
Sb (206.834 nm)	0.001708 u	ppm	0.003042	> 100.00	-18.567200	Y 377.433
Se (196.026 nm)	-0.000876 u	ppm	0.000224	25.58	12.130900	Y 242.219
Si (288.158 nm)	4.214730	ppm	0.011702	0.28	37153.900000	Y 377.433
Sn (189.925 nm)	-0.001888 u	ppm	0.000041	2.15	5.844700	Y 377.433
Sr (421.552 nm)	0.128945	ppm	0.000602	0.47	27210.781191	Y_R 488.368
Th (288.505 nm)	0.000451	ppm	0.000334	74.20	74.510100	Y 377.433
Ti (336.122 nm)	-0.000154 u	ppm	0.000022	14.60	-192.390000	Y 377.433
Tl (190.794 nm)	0.001522	ppm	0.000772	50.71	-1.999990	Y 377.433
U (409.013 nm)	0.002203	ppm	0.002554	> 100.00	-201.117000	Y 377.433
V (292.401 nm)	0.002007	ppm	0.000020	1.02	107.769000	Y 377.433
Zn (206.200 nm)	-0.005308 u	ppm	0.000429	8.08	0.015763	Y 377.433
Zr (343.823 nm)	-0.000201 u	ppm	0.000107	53.35	0.224862	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065313	20326.391061	0.002171	0.20
Y 377.433	1.070755	1083804.559229	0.001147	0.11
Y_R 377.433	1.137820	85897.200000	0.003878	0.34
Y_R 488.368	1.109510	48575.200000	0.003938	0.35
Y_R2 488.368	1.106096	95988.699572	0.005089	0.46

Sample Name: 280-116342-A-4-B MS

Date: 11/6/2018 6:20:26 PM
Rack:Tube: 1:64

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052315	ppm	0.000043	0.08	1924.090000	Y 377.433
Al (167.019 nm)	1.979930	ppm	0.020618	1.04	1106.890000	Y_R 377.433
Al H (396.152 nm)	2.001796	ppm	0.009936	0.50	5255.252100	Y_R 377.433
As (188.980 nm)	0.992741	ppm	0.000283	0.03	1248.420000	Y 242.219
B (249.678 nm)	1.081660	ppm	0.000233	0.02	27096.700000	Y 242.219
Ba (493.408 nm)	2.620850 o	ppm	0.002355	0.09	304168.000000	Y_R 488.368
Be (234.861 nm)	0.048133	ppm	0.000130	0.27	14270.100000	Y_R 488.368
Bi (223.061 nm)	1.957550	ppm	0.001806	0.09	4942.220000	Y 377.433
Ca (315.887 nm)	138.975649 o	ppm	0.153721	0.11	110134.204713	Y_R 377.433
Cd (214.439 nm)	0.095958	ppm	0.000082	0.09	5737.360000	Y 377.433
Co (228.615 nm)	0.474742	ppm	0.000921	0.19	8597.530000	Y 242.219
Cr (205.560 nm)	0.195959	ppm	0.001140	0.58	2976.430000	Y 377.433
Cu (324.754 nm)	0.247744	ppm	0.000240	0.10	13482.000000	Y 377.433
Fe (238.204 nm)	0.982067	ppm	0.002465	0.25	3657.046014	Y_R 377.433
Fe H (259.940 nm)	0.984753 u	ppm	0.006297	0.64	1866.190000	Y_R 377.433
K (766.491 nm)	58.421400	ppm	0.080594	0.14	66514.300000	Y_R2 488.368
Li (670.783 nm)	1.022580	ppm	0.004220	0.41	32750.000000	Y_R2 488.368
Mg (279.078 nm)	63.590900 o	ppm	0.052909	0.08	367318.000000	Y 377.433
Mn (257.610 nm)	0.555924	ppm	0.000243	0.04	130073.000000	Y 377.433
Mo (202.032 nm)	1.006690	ppm	0.000648	0.06	8669.500000	Y 377.433
Na (589.592 nm)	58.395600 o	ppm	0.017987	0.03	390084.000000	Y_R2 488.368
Na H (589.593 nm)	61.820927	ppm	0.057201	0.09	231346.564977	Y_R 488.368
Ni (231.604 nm)	0.473309	ppm	0.002042	0.43	3227.030000	Y 377.433
P (213.618 nm)	10.205500 o	ppm	0.033665	0.33	22201.100000	Y 242.219
Pb (220.353 nm)	0.491191	ppm	0.000794	0.16	1412.950000	Y 242.219
S (181.972 nm)	3.984079	ppm	0.018090	0.45	2055.972685	Y 377.433
Sb (206.834 nm)	0.509293	ppm	0.001171	0.23	1363.660000	Y 377.433
Se (196.026 nm)	1.993670	ppm	0.001296	0.06	1997.630000	Y 242.219
Si (288.158 nm)	31.192600 o	ppm	0.024280	0.08	269020.000000	Y 377.433
Sn (189.925 nm)	1.988160	ppm	0.004796	0.24	3961.640000	Y 377.433
Sr (421.552 nm)	1.640723 o	ppm	0.001124	0.07	344407.236651	Y_R 488.368
Th (288.505 nm)	1.001670	ppm	0.004809	0.48	2705.800000	Y 377.433
Ti (336.122 nm)	0.994691	ppm	0.000215	0.02	141865.000000	Y 377.433
Tl (190.794 nm)	1.972250	ppm	0.003526	0.18	4323.800000	Y 377.433
U (409.013 nm)	2.066220	ppm	0.011286	0.55	9075.150000	Y 377.433
V (292.401 nm)	0.511073	ppm	0.000382	0.07	18499.700000	Y 377.433
Zn (206.200 nm)	0.472359	ppm	0.002064	0.44	2494.710000	Y 377.433
Zr (343.823 nm)	0.494134	ppm	0.000219	0.04	65000.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032059	19691.913111	0.000440	0.04
Y 377.433	1.041981	1054680.667858	0.001006	0.10
Y_R 377.433	1.122640	84751.700000	0.003053	0.27
Y_R 488.368	1.094770	47929.500000	0.001068	0.10
Y_R2 488.368	1.082543	93944.734242	0.004376	0.40

Sample Name: 280-116342-A-4-C MSD

Date: 11/6/2018 6:23:49 PM
Rack:Tube: 1:65

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053092	ppm	0.000247	0.46	1959.340000	Y 377.433
Al (167.019 nm)	2.028180	ppm	0.020584	1.01	1133.810000	Y_R 377.433
Al H (396.152 nm)	2.039631	ppm	0.022848	1.12	5353.898274	Y_R 377.433
As (188.980 nm)	1.015220	ppm	0.006399	0.63	1276.720000	Y 242.219
B (249.678 nm)	1.103510 o	ppm	0.003082	0.28	27642.900000	Y 242.219
Ba (493.408 nm)	2.678490 o	ppm	0.031297	1.17	310845.000000	Y_R 488.368
Be (234.861 nm)	0.049075	ppm	0.000498	1.01	14550.300000	Y_R 488.368
Bi (223.061 nm)	1.997410	ppm	0.005304	0.27	5042.590000	Y 377.433
Ca (315.887 nm)	143.123645 o	ppm	1.570086	1.10	113423.210080	Y_R 377.433
Cd (214.439 nm)	0.097801	ppm	0.000257	0.26	5847.530000	Y 377.433
Co (228.615 nm)	0.483227	ppm	0.001433	0.30	8751.970000	Y 242.219
Cr (205.560 nm)	0.200329	ppm	0.000215	0.11	3042.900000	Y 377.433
Cu (324.754 nm)	0.252506	ppm	0.000700	0.28	13745.200000	Y 377.433
Fe (238.204 nm)	1.007536	ppm	0.008435	0.84	3751.243113	Y_R 377.433
Fe H (259.940 nm)	1.009820 u	ppm	0.009360	0.93	1913.610000	Y_R 377.433
K (766.491 nm)	59.855900	ppm	0.067496	0.11	68166.100000	Y_R2 488.368
Li (670.783 nm)	1.048180	ppm	0.001147	0.11	33603.900000	Y_R2 488.368
Mg (279.078 nm)	65.065700 o	ppm	0.146701	0.23	375836.000000	Y 377.433
Mn (257.610 nm)	0.567197	ppm	0.001190	0.21	132709.000000	Y 377.433
Mo (202.032 nm)	1.027060	ppm	0.003660	0.36	8844.990000	Y 377.433
Na (589.592 nm)	59.326500 o	ppm	0.013078	0.02	396331.000000	Y_R2 488.368
Na H (589.593 nm)	63.213569	ppm	0.816983	1.29	236503.160377	Y_R 488.368
Ni (231.604 nm)	0.482484	ppm	0.002038	0.42	3289.670000	Y 377.433
P (213.618 nm)	10.414700 o	ppm	0.035918	0.34	22655.700000	Y 242.219
Pb (220.353 nm)	0.502299	ppm	0.000219	0.04	1444.830000	Y 242.219
S (181.972 nm)	4.100989	ppm	0.023336	0.57	2115.876172	Y 377.433
Sb (206.834 nm)	0.519229	ppm	0.002072	0.40	1390.730000	Y 377.433
Se (196.026 nm)	2.040210	ppm	0.005151	0.25	2043.960000	Y 242.219
Si (288.158 nm)	32.022800 o	ppm	0.205180	0.64	276156.000000	Y 377.433
Sn (189.925 nm)	2.031140	ppm	0.000197	0.01	4047.080000	Y 377.433
Sr (421.552 nm)	1.681371 o	ppm	0.019530	1.16	352935.906421	Y_R 488.368
Th (288.505 nm)	1.018420	ppm	0.004471	0.44	2750.070000	Y 377.433
Ti (336.122 nm)	1.016180	ppm	0.002373	0.23	144938.000000	Y 377.433
Tl (190.794 nm)	2.012170	ppm	0.003289	0.16	4411.400000	Y 377.433
U (409.013 nm)	2.103950	ppm	0.004918	0.23	9244.240000	Y 377.433
V (292.401 nm)	0.520603	ppm	0.000876	0.17	18843.500000	Y 377.433
Zn (206.200 nm)	0.480621	ppm	0.001268	0.26	2537.870000	Y 377.433
Zr (343.823 nm)	0.504439	ppm	0.000729	0.14	66355.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030368	19659.635607	0.003778	0.37
Y 377.433	1.039748	1052419.800808	0.002568	0.25
Y_R 377.433	1.119190	84490.600000	0.010775	0.96
Y_R 488.368	1.092250	47819.600000	0.011681	1.07
Y_R2 488.368	1.083874	94060.324378	0.008652	0.80

Sample Name: 280-116342-A-4-Apds

Date: 11/6/2018 6:27:10 PM Rack:Tube: 1:66

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011729	ppm	0.000082	0.70	80.923400	Y 377.433
Al (167.019 nm)	1.010230	ppm	0.008534	0.84	566.255000	Y_R 377.433
Al H (396.152 nm)	0.996921	ppm	0.004825	0.48	2638.025299	Y_R 377.433
As (188.980 nm)	0.203267	ppm	0.000981	0.48	254.230000	Y 242.219
B (249.678 nm)	0.139708	ppm	0.000373	0.27	3547.600000	Y 242.219
Ba (493.408 nm)	0.740246	ppm	0.001102	0.15	86359.400000	Y_R 488.368
Be (234.861 nm)	0.047897	ppm	0.000177	0.37	14255.400000	Y_R 488.368
Bi (223.061 nm)	-0.001929 u	ppm	0.000480	24.89	8.047400	Y 377.433
Ca (315.887 nm)	109.537717 o	ppm	0.022182	0.02	86792.428368	Y_R 377.433
Cd (214.439 nm)	0.047797	ppm	0.000031	0.07	2858.520000	Y 377.433
Co (228.615 nm)	0.047210	ppm	0.000367	0.78	820.297000	Y 242.219
Cr (205.560 nm)	0.049489	ppm	0.000187	0.38	748.613000	Y 377.433
Cu (324.754 nm)	0.050047	ppm	0.000017	0.03	2434.170000	Y 377.433
Fe (238.204 nm)	0.988719	ppm	0.000458	0.05	3681.649043	Y_R 377.433
Fe H (259.940 nm)	0.998373 u	ppm	0.003644	0.36	1891.950000	Y_R 377.433
K (766.491 nm)	27.849200	ppm	0.046721	0.17	31311.100000	Y_R2 488.368
Li (670.783 nm)	0.130752	ppm	0.000855	0.65	3006.960000	Y_R2 488.368
Mg (279.078 nm)	34.102600	ppm	0.025994	0.08	197019.000000	Y 377.433
Mn (257.610 nm)	0.118374	ppm	0.000099	0.08	27745.200000	Y 377.433
Mo (202.032 nm)	0.048740	ppm	0.000323	0.66	419.715000	Y 377.433
Na (589.592 nm)	28.751200 o	ppm	0.063232	0.22	191100.000000	Y_R2 488.368
Na H (589.593 nm)	29.962806	ppm	0.073232	0.24	112862.676562	Y_R 488.368
Ni (231.604 nm)	0.048255	ppm	0.000456	0.94	325.359000	Y 377.433
P (213.618 nm)	2.142360	ppm	0.003420	0.16	4679.890000	Y 242.219
Pb (220.353 nm)	0.096494	ppm	0.000456	0.47	281.107000	Y 242.219
S (181.972 nm)	1.980371	ppm	0.005895	0.30	1028.706274	Y 377.433
Sb (206.834 nm)	0.094689	ppm	0.001451	1.53	235.178000	Y 377.433
Se (196.026 nm)	0.193488	ppm	0.004518	2.34	205.478000	Y 242.219
Si (288.158 nm)	25.951300 o	ppm	0.140157	0.54	223973.000000	Y 377.433
Sn (189.925 nm)	0.096331	ppm	0.000645	0.67	201.082000	Y 377.433
Sr (421.552 nm)	0.681748	ppm	0.002935	0.43	143198.270686	Y_R 488.368
Th (288.505 nm)	0.203722	ppm	0.002063	1.01	607.343000	Y 377.433
Ti (336.122 nm)	0.048610	ppm	0.000125	0.26	7037.720000	Y 377.433
Tl (190.794 nm)	0.201872	ppm	0.002029	1.00	438.111000	Y 377.433
U (409.013 nm)	0.519756	ppm	0.004109	0.79	2119.910000	Y 377.433
V (292.401 nm)	0.059856	ppm	0.000376	0.63	2183.170000	Y 377.433
Zn (206.200 nm)	0.187605	ppm	0.000478	0.25	1007.540000	Y 377.433
Zr (343.823 nm)	0.048813	ppm	0.000097	0.20	6447.690000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046537	19968.157906	0.000766	0.07
Y 377.433	1.055547	1068411.880389	0.001721	0.16
Y_R 377.433	1.121940	84698.500000	0.005463	0.49
Y_R 488.368	1.094780	47930.200000	0.006019	0.55
Y_R2 488.368	1.087971	94415.861184	0.005988	0.55

Sample Name: CCVH-5408055

Date: 11/6/2018 6:30:33 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000894 u	ppm	0.000316	35.33	-731.362000	Y 377.433
Al (167.019 nm)	45.923900 o	ppm	0.367756	0.80	25639.000000	Y_R 377.433
Al H (396.152 nm)	48.445634	ppm	0.009989	0.02	121926.869266	Y_R 377.433
As (188.980 nm)	0.000341 u	ppm	0.001197	> 100.00	-1.737960	Y 242.219
B (249.678 nm)	-0.000072 u	ppm	0.000074	> 100.00	-17.696100	Y 242.219
Ba (493.408 nm)	-0.000344 u	ppm	0.000109	31.73	604.851000	Y_R 488.368
Be (234.861 nm)	-0.000160 u	ppm	0.000074	46.20	1422.660000	Y_R 488.368
Bi (223.061 nm)	0.973799	ppm	0.006007	0.62	2472.850000	Y 377.433
Ca (315.887 nm)	0.001182 u	ppm	0.015987	> 100.00	-60.651553	Y_R 377.433
Cd (214.439 nm)	-0.000247 u	ppm	0.000079	32.05	32.807400	Y 377.433
Co (228.615 nm)	0.002613	ppm	0.000089	3.42	10.899400	Y 242.219
Cr (205.560 nm)	0.000073	ppm	0.000049	67.18	-16.215900	Y 377.433
Cu (324.754 nm)	-0.003354 u	ppm	0.000110	3.29	-165.298000	Y 377.433
Fe (238.204 nm)	48.274169 o	ppm	0.118132	0.24	178568.542052	Y_R 377.433
Fe H (259.940 nm)	48.783700	ppm	0.225774	0.46	92292.200000	Y_R 377.433
K (766.491 nm)	0.168929	ppm	0.004538	2.69	-562.072000	Y_R2 488.368
Li (670.783 nm)	0.007221	ppm	0.000650	9.01	-1112.890000	Y_R2 488.368
Mg (279.078 nm)	-0.018334 u	ppm	0.002052	11.19	-421.512000	Y 377.433
Mn (257.610 nm)	0.001372	ppm	0.000043	3.16	382.648000	Y 377.433
Mo (202.032 nm)	-0.000281 u	ppm	0.000232	82.40	-2.451730	Y 377.433
Na (589.592 nm)	241.933000 o	ppm	1.830490	0.76	1593260.000000	Y_R2 488.368
Na H (589.593 nm)	250.678156	ppm	0.868085	0.35	920776.890337	Y_R 488.368
Ni (231.604 nm)	0.004035	ppm	0.000936	23.21	25.422900	Y 377.433
P (213.618 nm)	-0.004701 u	ppm	0.000732	15.57	14.340700	Y 242.219
Pb (220.353 nm)	-0.004350 u	ppm	0.002045	47.01	8.278270	Y 242.219
S (181.972 nm)	4.837591	ppm	0.006222	0.13	2491.742315	Y 377.433
Sb (206.834 nm)	-0.003635 u	ppm	0.000786	21.62	-78.656600	Y 377.433
Se (196.026 nm)	-0.001800 u	ppm	0.002415	> 100.00	2.458390	Y 242.219
Si (288.158 nm)	0.018823	ppm	0.001896	10.07	1091.430000	Y 377.433
Sn (189.925 nm)	0.000171 u	ppm	0.001344	> 100.00	9.938180	Y 377.433
Sr (421.552 nm)	0.000252	ppm	0.000070	27.95	208.846971	Y_R 488.368
Th (288.505 nm)	4.902240	ppm	0.003008	0.06	12818.800000	Y 377.433
Ti (336.122 nm)	0.001085	ppm	0.000012	1.11	-73.468300	Y 377.433
Tl (190.794 nm)	-0.002817 u	ppm	0.001066	37.83	-12.813400	Y 377.433
U (409.013 nm)	10.016500	ppm	0.010136	0.10	45147.400000	Y 377.433
V (292.401 nm)	0.003733	ppm	0.000040	1.07	-2.616320	Y 377.433
Zn (206.200 nm)	-0.004143 u	ppm	0.000346	8.36	6.104200	Y 377.433
Zr (343.823 nm)	-0.004501 u	ppm	0.000124	2.76	-423.984000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051162	20056.393255	0.003927	0.37
Y 377.433	1.044801	1057535.149825	0.002572	0.25
Y_R 377.433	1.122620	84749.800000	0.004188	0.37
Y_R 488.368	1.104370	48349.900000	0.006649	0.60
Y_R2 488.368	1.088576	94468.294850	0.002684	0.25

Sample Name: CCV-5407546

Date: 11/6/2018 6:33:55 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.489300	ppm	0.003627	0.74	21975.500000	Y 377.433
Al (167.019 nm)	0.512059	ppm	0.002735	0.53	289.496000	Y_R 377.433
Al H (396.152 nm)	0.494003 u	ppm	0.005135	1.04	1363.585674	Y_R 377.433
As (188.980 nm)	0.977594	ppm	0.000391	0.04	1229.330000	Y 242.219
B (249.678 nm)	0.487750	ppm	0.000739	0.15	12259.100000	Y 242.219
Ba (493.408 nm)	0.489873	ppm	0.004284	0.87	57347.600000	Y_R 488.368
Be (234.861 nm)	0.474003	ppm	0.007566	1.60	141256.000000	Y_R 488.368
Bi (223.061 nm)	-0.002536 u	ppm	0.000626	24.69	6.761540	Y 377.433
Ca (315.887 nm)	4.978684	ppm	0.066695	1.34	3886.354834	Y_R 377.433
Cd (214.439 nm)	0.486646	ppm	0.000498	0.10	29088.700000	Y 377.433
Co (228.615 nm)	0.489775	ppm	0.000507	0.10	8851.850000	Y 242.219
Cr (205.560 nm)	0.488616	ppm	0.002431	0.50	7428.270000	Y 377.433
Cu (324.754 nm)	0.493311	ppm	0.000195	0.04	27197.600000	Y 377.433
Fe (238.204 nm)	2.444416	ppm	0.029183	1.19	9065.594165	Y_R 377.433
Fe H (259.940 nm)	2.484190 u	ppm	0.015415	0.62	4702.820000	Y_R 377.433
K (766.491 nm)	49.181300	ppm	0.082374	0.17	55874.500000	Y_R2 488.368
Li (670.783 nm)	0.978848	ppm	0.001264	0.13	31291.600000	Y_R2 488.368
Mg (279.078 nm)	19.291200	ppm	0.030418	0.16	111471.000000	Y 377.433
Mn (257.610 nm)	0.492196	ppm	0.000567	0.12	115169.000000	Y 377.433
Mo (202.032 nm)	0.495705	ppm	0.000345	0.07	4268.950000	Y 377.433
Na (589.592 nm)	4.982670	ppm	0.014132	0.28	34095.100000	Y_R2 488.368
Na H (589.593 nm)	5.320970 u	ppm	0.089371	1.68	22349.513894	Y_R 488.368
Ni (231.604 nm)	0.497716	ppm	0.000008	0.00	3392.400000	Y 377.433
P (213.618 nm)	0.955370	ppm	0.005817	0.61	2100.570000	Y 242.219
Pb (220.353 nm)	0.985483	ppm	0.000616	0.06	2828.020000	Y 242.219
S (181.972 nm)	-0.000091 u	ppm	0.003886	> 100.00	15.330890	Y 377.433
Sb (206.834 nm)	0.991649	ppm	0.002201	0.22	2700.020000	Y 377.433
Se (196.026 nm)	0.971163	ppm	0.004830	0.50	979.546000	Y 242.219
Si (288.158 nm)	4.886520	ppm	0.005108	0.10	42927.700000	Y 377.433
Sn (189.925 nm)	0.987139	ppm	0.000564	0.06	1971.820000	Y 377.433
Sr (421.552 nm)	0.495338	ppm	0.002913	0.59	104086.182646	Y_R 488.368
Th (288.505 nm)	0.004676	ppm	0.000545	11.66	101.071000	Y 377.433
Ti (336.122 nm)	0.490196	ppm	0.000721	0.15	69597.800000	Y 377.433
Tl (190.794 nm)	0.987256	ppm	0.003149	0.32	2162.710000	Y 377.433
U (409.013 nm)	0.007063	ppm	0.003542	50.15	-212.674000	Y 377.433
V (292.401 nm)	0.487618	ppm	0.000456	0.09	17611.000000	Y 377.433
Zn (206.200 nm)	0.482174	ppm	0.003577	0.74	2545.970000	Y 377.433
Zr (343.823 nm)	0.493135	ppm	0.000847	0.17	64873.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061260	20249.064229	0.000566	0.05
Y 377.433	1.063648	1076611.210827	0.001551	0.15
Y_R 377.433	1.119420	84508.600000	0.018196	1.63
Y_R 488.368	1.093110	47857.000000	0.016928	1.55
Y_R2 488.368	1.098008	95286.859754	0.002041	0.19

Sample Name: CCB

Date: 11/6/2018 6:37:18 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000739	ppm	0.000335	45.34	-410.983000	Y 377.433
Al (167.019 nm)	-0.002748 u	ppm	0.002620	95.34	0.821236	Y_R 377.433
Al H (396.152 nm)	-0.020693 u	ppm	0.002131	10.30	26.970464	Y_R 377.433
As (188.980 nm)	-0.001755 u	ppm	0.001258	71.69	-3.947360	Y 242.219
B (249.678 nm)	0.000656	ppm	0.000060	9.20	73.512900	Y 242.219
Ba (493.408 nm)	-0.000233 u	ppm	0.000409	> 100.00	572.494000	Y_R 488.368
Be (234.861 nm)	0.000057	ppm	0.000015	27.08	-29.410000	Y_R 488.368
Bi (223.061 nm)	0.000464	ppm	0.000159	34.28	13.911300	Y 377.433
Ca (315.887 nm)	0.002422 u	ppm	0.005991	> 100.00	-59.668753	Y_R 377.433
Cd (214.439 nm)	0.000037	ppm	0.000030	80.08	3.103030	Y 377.433
Co (228.615 nm)	0.000241	ppm	0.000079	32.94	-32.090200	Y 242.219
Cr (205.560 nm)	0.000248 u	ppm	0.000432	> 100.00	-0.183866	Y 377.433
Cu (324.754 nm)	0.001213	ppm	0.000129	10.63	-224.447000	Y 377.433
Fe (238.204 nm)	-0.001019 u	ppm	0.001194	> 100.00	21.069941	Y_R 377.433
Fe H (259.940 nm)	0.002828 u	ppm	0.001983	70.13	8.583450	Y_R 377.433
K (766.491 nm)	0.090461	ppm	0.030724	33.96	-652.426000	Y_R2 488.368
Li (670.783 nm)	0.005827	ppm	0.001583	27.17	-1159.380000	Y_R2 488.368
Mg (279.078 nm)	0.001347	ppm	0.000682	50.65	47.119000	Y 377.433
Mn (257.610 nm)	0.000027	ppm	0.000022	81.40	68.132200	Y 377.433
Mo (202.032 nm)	-0.000287 u	ppm	0.000219	76.20	-2.502940	Y 377.433
Na (589.592 nm)	0.019051	ppm	0.006965	36.56	422.798000	Y_R2 488.368
Na H (589.593 nm)	-0.121082 u	ppm	0.008386	6.93	1950.684333	Y_R 488.368
Ni (231.604 nm)	0.000300 u	ppm	0.000670	> 100.00	-2.056500	Y 377.433
P (213.618 nm)	-0.002211 u	ppm	0.001592	72.01	19.753300	Y 242.219
Pb (220.353 nm)	0.000936	ppm	0.000638	68.17	6.116320	Y 242.219
S (181.972 nm)	0.003042	ppm	0.001652	54.31	15.730303	Y 377.433
Sb (206.834 nm)	0.000459 u	ppm	0.001182	> 100.00	-21.978200	Y 377.433
Se (196.026 nm)	0.001323	ppm	0.001470	> 100.00	14.307900	Y 242.219
Si (288.158 nm)	-0.005921 u	ppm	0.000215	3.63	878.762000	Y 377.433
Sn (189.925 nm)	-0.001282 u	ppm	0.001785	> 100.00	7.048690	Y 377.433
Sr (421.552 nm)	0.000057 u	ppm	0.000092	> 100.00	168.058465	Y_R 488.368
Th (288.505 nm)	0.006722	ppm	0.003316	49.33	90.214300	Y 377.433
Ti (336.122 nm)	-0.000075 u	ppm	0.000029	38.46	-238.799000	Y 377.433
Tl (190.794 nm)	0.001274	ppm	0.000608	47.71	-2.544150	Y 377.433
U (409.013 nm)	0.005039	ppm	0.002547	50.55	-184.788000	Y 377.433
V (292.401 nm)	-0.000246 u	ppm	0.000207	84.17	25.997000	Y 377.433
Zn (206.200 nm)	-0.005371 u	ppm	0.000224	4.17	-0.312061	Y 377.433
Zr (343.823 nm)	-0.000100 u	ppm	0.000063	63.04	13.490900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.071912	20452.313429	0.002695	0.25
Y 377.433	1.074643	1087740.534946	0.002550	0.24
Y_R 377.433	1.127510	85118.900000	0.002274	0.20
Y_R 488.368	1.105300	48390.600000	0.011593	1.05
Y_R2 488.368	1.093848	94925.815590	0.009962	0.91

Sample Name: CCVL-5413446

Date: 11/6/2018 6:40:40 PM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010576	ppm	0.000078	0.74	40.012100	Y 377.433
Al (167.019 nm)	0.100703	ppm	0.002378	2.36	58.566700	Y_R 377.433
Al H (396.152 nm)	0.082183 u	ppm	0.000509	0.62	287.415412	Y_R 377.433
As (188.980 nm)	0.015725	ppm	0.000208	1.32	18.064600	Y 242.219
B (249.678 nm)	0.100489	ppm	0.000030	0.03	2567.650000	Y 242.219
Ba (493.408 nm)	0.009819	ppm	0.000110	1.12	1736.720000	Y_R 488.368
Be (234.861 nm)	0.000945	ppm	0.000023	2.47	237.547000	Y_R 488.368
Bi (223.061 nm)	0.100525	ppm	0.000438	0.44	265.892000	Y 377.433
Ca (315.887 nm)	0.210067	ppm	0.000050	0.02	104.978563	Y_R 377.433
Cd (214.439 nm)	0.005102	ppm	0.000030	0.59	305.896000	Y 377.433
Co (228.615 nm)	0.010564	ppm	0.000246	2.32	155.231000	Y 242.219
Cr (205.560 nm)	0.010057	ppm	0.000065	0.65	149.054000	Y 377.433
Cu (324.754 nm)	0.017082	ppm	0.000015	0.09	657.989000	Y 377.433
Fe (238.204 nm)	0.099312	ppm	0.002229	2.24	392.146345	Y_R 377.433
Fe H (259.940 nm)	0.106480 u	ppm	0.002911	2.73	204.672000	Y_R 377.433
K (766.491 nm)	3.164310	ppm	0.013927	0.44	2887.040000	Y_R2 488.368
Li (670.783 nm)	0.027547 Q	ppm	0.000347	1.26	-435.005000 Q	Y_R2 488.368
Mg (279.078 nm)	0.197528	ppm	0.000490	0.25	1179.220000	Y 377.433
Mn (257.610 nm)	0.010293	ppm	0.000028	0.27	2468.970000	Y 377.433
Mo (202.032 nm)	0.019556	ppm	0.000222	1.14	168.383000	Y 377.433
Na (589.592 nm)	1.072260	ppm	0.011648	1.09	7377.460000	Y_R2 488.368
Na H (589.593 nm)	0.934972 u	ppm	0.009135	0.98	5828.954088	Y_R 488.368
Ni (231.604 nm)	0.041568	ppm	0.000404	0.97	279.475000	Y 377.433
P (213.618 nm)	2.803860 o	ppm	0.021563	0.77	6117.330000	Y 242.219
Pb (220.353 nm)	0.010224	ppm	0.000816	7.98	32.746000	Y 242.219
S (181.972 nm)	0.089209	ppm	0.001969	2.21	59.885212	Y 377.433
Sb (206.834 nm)	0.020293	ppm	0.000180	0.89	32.356800	Y 377.433
Se (196.026 nm)	0.017230	ppm	0.001341	7.79	30.130100	Y 242.219
Si (288.158 nm)	0.489669	ppm	0.009132	1.86	5138.200000	Y 377.433
Sn (189.925 nm)	0.098387	ppm	0.000871	0.89	205.171000	Y 377.433
Sr (421.552 nm)	0.010040	ppm	0.000064	0.64	2262.526421	Y_R 488.368
Th (288.505 nm)	0.020445 Q	ppm	0.000825	4.03	126.595000 Q	Y 377.433
Ti (336.122 nm)	0.009774	ppm	0.000093	0.95	1164.350000	Y 377.433
Tl (190.794 nm)	0.015175	ppm	0.001816	11.97	27.947500	Y 377.433
U (409.013 nm)	0.063658	ppm	0.000372	0.58	79.257800	Y 377.433
V (292.401 nm)	0.009708	ppm	0.000080	0.82	382.744000	Y 377.433
Zn (206.200 nm)	0.015302	ppm	0.000131	0.85	107.657000	Y 377.433
Zr (343.823 nm)	0.015065	ppm	0.000165	1.10	2007.720000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069123	20399.099737	0.000912	0.09
Y 377.433	1.070173	1083215.807040	0.000626	0.06
Y_R 377.433	1.135580	85728.000000	0.002726	0.24
Y_R 488.368	1.108450	48528.500000	0.000049	0.00
Y_R2 488.368	1.091901	94756.841617	0.012333	1.13

Sample Name: MB 280-435537/1-A

Date: 11/6/2018 6:44:03 PM Rack:Tube: 1:67

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000667	ppm	0.000078	11.62	-414.351000	Y 377.433
Al (167.019 nm)	-0.002415 u	ppm	0.002490	> 100.00	1.007930	Y_R 377.433
Al H (396.152 nm)	-0.021277 u	ppm	0.003040	14.29	25.515321	Y_R 377.433
As (188.980 nm)	0.001393	ppm	0.000462	33.16	0.016586	Y 242.219
B (249.678 nm)	0.000586	ppm	0.000137	23.38	71.789900	Y 242.219
Ba (493.408 nm)	-0.000531 u	ppm	0.000057	10.75	537.993000	Y_R 488.368
Be (234.861 nm)	0.000006 u	ppm	0.000019	> 100.00	-44.522000	Y_R 488.368
Bi (223.061 nm)	-0.000072 u	ppm	0.001159	> 100.00	12.559800	Y 377.433
Ca (315.887 nm)	0.005267	ppm	0.001187	22.54	-57.412975	Y_R 377.433
Cd (214.439 nm)	-0.000025 u	ppm	0.000011	43.45	-0.612761	Y 377.433
Co (228.615 nm)	0.000165 u	ppm	0.000365	> 100.00	-33.461100	Y 242.219
Cr (205.560 nm)	0.000139	ppm	0.000007	5.10	-1.837120	Y 377.433
Cu (324.754 nm)	0.001122	ppm	0.000130	11.62	-229.964000	Y 377.433
Fe (238.204 nm)	-0.000280 u	ppm	0.000546	> 100.00	23.802244	Y_R 377.433
Fe H (259.940 nm)	0.005085 u	ppm	0.003816	75.03	12.853500	Y_R 377.433
K (766.491 nm)	0.066119	ppm	0.007658	11.58	-680.456000	Y_R2 488.368
Li (670.783 nm)	0.005152	ppm	0.000260	5.05	-1181.890000	Y_R2 488.368
Mg (279.078 nm)	0.000494 u	ppm	0.001344	> 100.00	42.186300	Y 377.433
Mn (257.610 nm)	0.000065	ppm	0.000011	16.46	76.935300	Y 377.433
Mo (202.032 nm)	-0.000185 u	ppm	0.000053	28.46	-1.622130	Y 377.433
Na (589.592 nm)	0.027066	ppm	0.002677	9.89	475.021000	Y_R2 488.368
Na H (589.593 nm)	-0.226612 u	ppm	0.018632	8.22	1563.810228	Y_R 488.368
Ni (231.604 nm)	0.000349	ppm	0.000250	71.43	-1.716150	Y 377.433
P (213.618 nm)	0.000106 u	ppm	0.001191	> 100.00	24.787200	Y 242.219
Pb (220.353 nm)	0.000051 u	ppm	0.000263	> 100.00	3.582210	Y 242.219
S (181.972 nm)	-0.002668 u	ppm	0.004040	> 100.00	12.805943	Y 377.433
Sb (206.834 nm)	0.000300 u	ppm	0.002839	> 100.00	-22.420600	Y 377.433
Se (196.026 nm)	-0.002512 u	ppm	0.002603	> 100.00	10.490300	Y 242.219
Si (288.158 nm)	-0.004879 u	ppm	0.000833	17.08	887.718000	Y 377.433
Sn (189.925 nm)	-0.000661 u	ppm	0.000005	0.71	8.282810	Y 377.433
Sr (421.552 nm)	-0.000172 u	ppm	0.000063	36.97	119.995965	Y_R 488.368
Th (288.505 nm)	0.002686	ppm	0.002623	97.65	79.904700	Y 377.433
Ti (336.122 nm)	-0.000151 u	ppm	0.000098	64.94	-249.632000	Y 377.433
Tl (190.794 nm)	-0.000453 u	ppm	0.001803	> 100.00	-6.338960	Y 377.433
U (409.013 nm)	0.010882	ppm	0.005901	54.23	-158.360000	Y 377.433
V (292.401 nm)	-0.000061 u	ppm	0.000052	85.07	32.575400	Y 377.433
Zn (206.200 nm)	-0.005171 u	ppm	0.000039	0.75	0.735256	Y 377.433
Zr (343.823 nm)	-0.000118 u	ppm	0.000076	64.32	11.145200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.070958	20434.098556	0.001621	0.15
Y 377.433	1.074329	1087422.218820	0.003890	0.36
Y_R 377.433	1.135620	85731.400000	0.004741	0.42
Y_R 488.368	1.111140	48646.300000	0.000793	0.07
Y_R2 488.368	1.104562	95855.578265	0.005905	0.53

Sample Name: LCS 280-435537/2-A

Date: 11/6/2018 6:47:25 PM Rack:Tube: 1:68

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051797	ppm	0.000058	0.11	1902.600000	Y 377.433
Al (167.019 nm)	2.035960	ppm	0.003186	0.16	1138.140000	Y_R 377.433
Al H (396.152 nm)	1.994063	ppm	0.001922	0.10	5199.377391	Y_R 377.433
As (188.980 nm)	0.983080	ppm	0.006789	0.69	1236.260000	Y 242.219
B (249.678 nm)	1.032820	ppm	0.001712	0.17	25876.900000	Y 242.219
Ba (493.408 nm)	2.002200 o	ppm	0.005293	0.26	232498.000000	Y_R 488.368
Be (234.861 nm)	0.048103	ppm	0.000025	0.05	14260.400000	Y_R 488.368
Bi (223.061 nm)	1.947180	ppm	0.001570	0.08	4916.120000	Y 377.433
Ca (315.887 nm)	50.875666 o	ppm	0.146765	0.29	40278.495121	Y_R 377.433
Cd (214.439 nm)	0.098339	ppm	0.000147	0.15	5879.660000	Y 377.433
Co (228.615 nm)	0.483545	ppm	0.001653	0.34	8757.640000	Y 242.219
Cr (205.560 nm)	0.200222	ppm	0.000460	0.23	3041.280000	Y 377.433
Cu (324.754 nm)	0.249867	ppm	0.000110	0.04	13655.400000	Y 377.433
Fe (238.204 nm)	1.002789	ppm	0.005252	0.52	3733.688681	Y_R 377.433
Fe H (259.940 nm)	1.007560 u	ppm	0.001837	0.18	1909.330000	Y_R 377.433
K (766.491 nm)	51.089100	ppm	0.405349	0.79	58071.400000	Y_R2 488.368
Li (670.783 nm)	1.003900	ppm	0.007307	0.73	32126.900000	Y_R2 488.368
Mg (279.078 nm)	49.094600 o	ppm	0.040029	0.08	283579.000000	Y 377.433
Mn (257.610 nm)	0.497181	ppm	0.000621	0.12	116335.000000	Y 377.433
Mo (202.032 nm)	1.028080	ppm	0.001619	0.16	8853.710000	Y 377.433
Na (589.592 nm)	50.210300 o	ppm	0.090422	0.18	334942.000000	Y_R2 488.368
Na H (589.593 nm)	52.977143	ppm	0.007764	0.01	198364.964180	Y_R 488.368
Ni (231.604 nm)	0.485020	ppm	0.003035	0.63	3306.980000	Y 377.433
P (213.618 nm)	10.090200 o	ppm	0.033223	0.33	21950.500000	Y 242.219
Pb (220.353 nm)	0.501268	ppm	0.002088	0.42	1441.810000	Y 242.219
S (181.972 nm)	1.932171	ppm	0.000513	0.03	1004.949298	Y 377.433
Sb (206.834 nm)	0.514065	ppm	0.001199	0.23	1376.660000	Y 377.433
Se (196.026 nm)	1.993690	ppm	0.000531	0.03	1997.600000	Y 242.219
Si (288.158 nm)	10.026000	ppm	0.048527	0.48	87100.300000	Y 377.433
Sn (189.925 nm)	2.025730	ppm	0.005084	0.25	4036.330000	Y 377.433
Sr (421.552 nm)	1.010985	ppm	0.002610	0.26	212277.626652	Y_R 488.368
Th (288.505 nm)	1.009180	ppm	0.001370	0.14	2724.090000	Y 377.433
Ti (336.122 nm)	1.010810	ppm	0.000931	0.09	143884.000000	Y 377.433
Tl (190.794 nm)	2.015370	ppm	0.000713	0.04	4418.450000	Y 377.433
U (409.013 nm)	2.070930	ppm	0.000531	0.03	9112.460000	Y 377.433
V (292.401 nm)	0.506752	ppm	0.000558	0.11	18341.600000	Y 377.433
Zn (206.200 nm)	0.481207	ppm	0.001971	0.41	2540.920000	Y 377.433
Zr (343.823 nm)	0.503005	ppm	0.000428	0.09	66166.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040993	19862.369242	0.001863	0.18
Y 377.433	1.045575	1058317.960183	0.003138	0.30
Y_R 377.433	1.123560	84820.500000	0.003986	0.35
Y_R 488.368	1.096410	48001.400000	0.003259	0.30
Y_R2 488.368	1.089409	94540.606629	0.007802	0.72

Sample Name: LCSD 280-435537/3-A

Date: 11/6/2018 6:50:47 PM Rack:Tube: 1:69

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052209	ppm	0.000048	0.09	1921.530000	Y 377.433
Al (167.019 nm)	2.084740	ppm	0.026773	1.28	1165.350000	Y_R 377.433
Al H (396.152 nm)	2.016385	ppm	0.016666	0.83	5256.599993	Y_R 377.433
As (188.980 nm)	0.992152	ppm	0.005787	0.58	1247.680000	Y 242.219
B (249.678 nm)	1.044430	ppm	0.001799	0.17	26167.000000	Y 242.219
Ba (493.408 nm)	2.019430 o	ppm	0.004514	0.22	234493.000000	Y_R 488.368
Be (234.861 nm)	0.049013	ppm	0.000277	0.57	14531.200000	Y_R 488.368
Bi (223.061 nm)	1.967470	ppm	0.003813	0.19	4967.200000	Y 377.433
Ca (315.887 nm)	51.362767 o	ppm	0.259832	0.51	40664.724770	Y_R 377.433
Cd (214.439 nm)	0.099450	ppm	0.000366	0.37	5946.100000	Y 377.433
Co (228.615 nm)	0.485264	ppm	0.001892	0.39	8789.170000	Y 242.219
Cr (205.560 nm)	0.201690	ppm	0.001528	0.76	3063.580000	Y 377.433
Cu (324.754 nm)	0.251827	ppm	0.000815	0.32	13763.400000	Y 377.433
Fe (238.204 nm)	1.015582	ppm	0.001737	0.17	3781.004325	Y_R 377.433
Fe H (259.940 nm)	1.020080 u	ppm	0.003667	0.36	1933.010000	Y_R 377.433
K (766.491 nm)	51.563000	ppm	0.021597	0.04	58617.000000	Y_R2 488.368
Li (670.783 nm)	1.017540	ppm	0.000165	0.02	32582.100000	Y_R2 488.368
Mg (279.078 nm)	49.523900 o	ppm	0.201223	0.41	286059.000000	Y 377.433
Mn (257.610 nm)	0.501148	ppm	0.001473	0.29	117263.000000	Y 377.433
Mo (202.032 nm)	1.039180	ppm	0.001735	0.17	8949.320000	Y 377.433
Na (589.592 nm)	50.831600 o	ppm	0.046085	0.09	339067.000000	Y_R2 488.368
Na H (589.593 nm)	53.566249	ppm	0.094741	0.18	200539.293048	Y_R 488.368
Ni (231.604 nm)	0.490508	ppm	0.000054	0.01	3344.440000	Y 377.433
P (213.618 nm)	10.116500 o	ppm	0.018756	0.19	22007.700000	Y 242.219
Pb (220.353 nm)	0.505109	ppm	0.001163	0.23	1452.820000	Y 242.219
S (181.972 nm)	1.968052	ppm	0.004627	0.24	1023.336285	Y 377.433
Sb (206.834 nm)	0.518087	ppm	0.001708	0.33	1387.590000	Y 377.433
Se (196.026 nm)	2.009800	ppm	0.004194	0.21	2013.640000	Y 242.219
Si (288.158 nm)	10.103700	ppm	0.073348	0.73	87767.600000	Y 377.433
Sn (189.925 nm)	2.045120	ppm	0.012693	0.62	4074.870000	Y 377.433
Sr (421.552 nm)	1.018918	ppm	0.000554	0.05	213942.150498	Y_R 488.368
Th (288.505 nm)	1.011560	ppm	0.000020	0.00	2730.710000	Y 377.433
Ti (336.122 nm)	1.021550	ppm	0.003041	0.30	145415.000000	Y 377.433
Tl (190.794 nm)	2.031690	ppm	0.005150	0.25	4454.250000	Y 377.433
U (409.013 nm)	2.086180	ppm	0.004380	0.21	9180.970000	Y 377.433
V (292.401 nm)	0.510899	ppm	0.001146	0.22	18490.900000	Y 377.433
Zn (206.200 nm)	0.485670	ppm	0.002593	0.53	2564.240000	Y 377.433
Zr (343.823 nm)	0.508107	ppm	0.001254	0.25	66837.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041993	19881.442143	0.003624	0.35
Y 377.433	1.046554	1059308.805903	0.003678	0.35
Y_R 377.433	1.111450	83906.800000	0.010716	0.96
Y_R 488.368	1.085190	47510.100000	0.006825	0.63
Y_R2 488.368	1.092841	94838.471736	0.004853	0.44

Sample Name: 280-116186-C-1-A

Date: 11/6/2018 6:54:09 PM
Rack:Tube: 1:70

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001353	ppm	0.000389	28.73	-382.949000	Y 377.433
Al (167.019 nm)	0.013598	ppm	0.001264	9.29	10.685000	Y_R 377.433
Al H (396.152 nm)	0.017076 u	ppm	0.002038	11.94	153.402994	Y_R 377.433
As (188.980 nm)	0.003910	ppm	0.000317	8.11	3.177320	Y 242.219
B (249.678 nm)	0.038928	ppm	0.000082	0.21	1027.890000	Y 242.219
Ba (493.408 nm)	0.008102	ppm	0.000188	2.32	1555.520000	Y_R 488.368
Be (234.861 nm)	0.000018	ppm	0.000014	81.58	-6.384600	Y_R 488.368
Bi (223.061 nm)	-0.000043 u	ppm	0.002193	> 100.00	12.816300	Y 377.433
Ca (315.887 nm)	72.242974 o	ppm	0.114034	0.16	57220.876582	Y_R 377.433
Cd (214.439 nm)	0.000024	ppm	0.000031	> 100.00	3.365190	Y 377.433
Co (228.615 nm)	0.000553	ppm	0.000131	23.69	-26.433500	Y 242.219
Cr (205.560 nm)	0.000415	ppm	0.000025	5.97	2.048210	Y 377.433
Cu (324.754 nm)	0.000674	ppm	0.000200	29.65	-294.860000	Y 377.433
Fe (238.204 nm)	1.106473	ppm	0.002475	0.22	4117.168118	Y_R 377.433
Fe H (259.940 nm)	1.115900 u	ppm	0.000475	0.04	2114.290000	Y_R 377.433
K (766.491 nm)	1.267340	ppm	0.021429	1.69	702.723000	Y_R2 488.368
Li (670.783 nm)	0.019798	ppm	0.000585	2.95	-693.435000	Y_R2 488.368
Mg (279.078 nm)	19.959600	ppm	0.005342	0.03	115335.000000	Y 377.433
Mn (257.610 nm)	0.265796	ppm	0.000115	0.04	62222.200000	Y 377.433
Mo (202.032 nm)	-0.000052 u	ppm	0.000332	> 100.00	-0.473991	Y 377.433
Na (589.592 nm)	5.681160	ppm	0.002400	0.04	37720.300000	Y_R2 488.368
Na H (589.593 nm)	5.825918 u	ppm	0.082175	1.41	23745.674665	Y_R 488.368
Ni (231.604 nm)	0.000895	ppm	0.000692	77.27	2.057590	Y 377.433
P (213.618 nm)	0.034894	ppm	0.002112	6.05	100.380000	Y 242.219
Pb (220.353 nm)	0.002027	ppm	0.000218	10.76	9.323940	Y 242.219
S (181.972 nm)	9.922535	ppm	0.020133	0.20	5096.637433	Y 377.433
Sb (206.834 nm)	-0.000204 u	ppm	0.000307	> 100.00	-24.046500	Y 377.433
Se (196.026 nm)	-0.001775 u	ppm	0.000426	23.97	11.224500	Y 242.219
Si (288.158 nm)	4.019240	ppm	0.001653	0.04	35473.700000	Y 377.433
Sn (189.925 nm)	-0.000507 u	ppm	0.000296	58.30	8.589080	Y 377.433
Sr (421.552 nm)	0.092676	ppm	0.001130	1.22	19600.996564	Y_R 488.368
Th (288.505 nm)	0.003392	ppm	0.001823	53.76	86.991700	Y 377.433
Ti (336.122 nm)	-0.000370 u	ppm	0.000059	15.88	-54.674700	Y 377.433
Tl (190.794 nm)	0.001767	ppm	0.000542	30.68	-1.490520	Y 377.433
U (409.013 nm)	0.004848	ppm	0.000724	14.93	-198.350000	Y 377.433
V (292.401 nm)	-0.000214 u	ppm	0.000199	93.27	28.381900	Y 377.433
Zn (206.200 nm)	-0.004630 u	ppm	0.000191	4.12	3.559740	Y 377.433
Zr (343.823 nm)	-0.000068 u	ppm	0.000024	34.71	21.000100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061128	20246.544715	0.002448	0.23
Y 377.433	1.067110	1080115.379991	0.001103	0.10
Y_R 377.433	1.128790	85215.700000	0.000752	0.07
Y_R 488.368	1.099930	48155.500000	0.010261	0.93
Y_R2 488.368	1.092170	94780.219296	0.003581	0.33

Sample Name: 280-116186-C-1-Asd@5

Date: 11/6/2018 6:57:31 PM Rack:Tube: 1:71

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000825	ppm	0.000134	16.20	-407.005000	Y 377.433
Al (167.019 nm)	-0.001534 u	ppm	0.000758	49.45	1.680690	Y_R 377.433
Al H (396.152 nm)	-0.024262 u	ppm	0.006152	25.36	24.413378	Y_R 377.433
As (188.980 nm)	-0.001560 u	ppm	0.000239	15.34	-3.704280	Y 242.219
B (249.678 nm)	0.008696	ppm	0.000197	2.27	273.976000	Y 242.219
Ba (493.408 nm)	0.001522	ppm	0.000215	14.10	779.444000	Y_R 488.368
Be (234.861 nm)	0.000006 u	ppm	0.000012	> 100.00	-36.106900	Y_R 488.368
Bi (223.061 nm)	0.000635	ppm	0.000042	6.65	14.386700	Y 377.433
Ca (315.887 nm)	14.754235 o	ppm	0.184464	1.25	11637.249849	Y_R 377.433
Cd (214.439 nm)	0.000020	ppm	0.000023	> 100.00	2.370050	Y 377.433
Co (228.615 nm)	0.000144 u	ppm	0.000211	> 100.00	-33.842300	Y 242.219
Cr (205.560 nm)	0.000306	ppm	0.000101	32.91	0.621053	Y 377.433
Cu (324.754 nm)	0.001046	ppm	0.000110	10.49	-242.317000	Y 377.433
Fe (238.204 nm)	0.268404	ppm	0.003346	1.25	1017.540138	Y_R 377.433
Fe H (259.940 nm)	0.269692 u	ppm	0.003281	1.22	513.437000	Y_R 377.433
K (766.491 nm)	0.302267	ppm	0.009389	3.11	-408.536000	Y_R2 488.368
Li (670.783 nm)	0.010062	ppm	0.000731	7.26	-1018.150000	Y_R2 488.368
Mg (279.078 nm)	4.111390	ppm	0.030877	0.75	23788.500000	Y 377.433
Mn (257.610 nm)	0.054882	ppm	0.000463	0.84	12896.700000	Y 377.433
Mo (202.032 nm)	-0.000175 u	ppm	0.000110	62.81	-1.533330	Y 377.433
Na (589.592 nm)	1.164450	ppm	0.001213	0.10	7968.090000	Y_R2 488.368
Na H (589.593 nm)	1.024723 u	ppm	0.005808	0.57	6150.119290	Y_R 488.368
Ni (231.604 nm)	0.000066 u	ppm	0.000386	> 100.00	-3.638780	Y 377.433
P (213.618 nm)	0.003785	ppm	0.001573	41.55	32.780900	Y 242.219
Pb (220.353 nm)	0.000825	ppm	0.000482	58.35	5.818780	Y 242.219
S (181.972 nm)	1.993846	ppm	0.019691	0.99	1035.452165	Y 377.433
Sb (206.834 nm)	0.000099 u	ppm	0.001638	> 100.00	-23.018300	Y 377.433
Se (196.026 nm)	-0.001874 u	ppm	0.004274	> 100.00	11.117800	Y 242.219
Si (288.158 nm)	0.801992	ppm	0.003474	0.43	7822.520000	Y 377.433
Sn (189.925 nm)	-0.001887 u	ppm	0.000671	35.58	5.847510	Y 377.433
Sr (421.552 nm)	0.018804	ppm	0.000242	1.29	4101.330706	Y_R 488.368
Th (288.505 nm)	0.001523	ppm	0.001661	> 100.00	77.972600	Y 377.433
Ti (336.122 nm)	-0.000155 u	ppm	0.000058	37.39	-204.110000	Y 377.433
Tl (190.794 nm)	0.000990	ppm	0.001194	> 100.00	-3.175150	Y 377.433
U (409.013 nm)	0.004708	ppm	0.001275	27.07	-188.853000	Y 377.433
V (292.401 nm)	-0.000061 u	ppm	0.000277	> 100.00	32.830800	Y 377.433
Zn (206.200 nm)	-0.005292 u	ppm	0.000071	1.35	0.101346	Y 377.433
Zr (343.823 nm)	-0.000160 u	ppm	0.000056	35.27	6.395920	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074314	20498.131222	0.000114	0.01
Y 377.433	1.076549	1089669.223725	0.000001	0.00
Y_R 377.433	1.134500	85646.400000	0.011360	1.00
Y_R 488.368	1.110320	48610.600000	0.014004	1.26
Y_R2 488.368	1.103995	95806.426800	0.000368	0.03

Sample Name: 280-116186-C-1-G MS

Date: 11/6/2018 7:00:53 PM
Rack:Tube: 1:72

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052927	ppm	0.000340	0.64	1953.780000	Y 377.433
Al (167.019 nm)	2.050580	ppm	0.010505	0.51	1147.060000	Y_R 377.433
Al H (396.152 nm)	2.050482	ppm	0.016090	0.78	5373.520267	Y_R 377.433
As (188.980 nm)	1.003770	ppm	0.000676	0.07	1262.300000	Y 242.219
B (249.678 nm)	1.087740	ppm	0.001020	0.09	27247.100000	Y 242.219
Ba (493.408 nm)	2.022140 o	ppm	0.000212	0.01	234825.000000	Y_R 488.368
Be (234.861 nm)	0.049038	ppm	0.000048	0.10	14574.000000	Y_R 488.368
Bi (223.061 nm)	1.970020	ppm	0.000857	0.04	4973.790000	Y 377.433
Ca (315.887 nm)	123.573416 o	ppm	0.235579	0.19	97921.559934	Y_R 377.433
Cd (214.439 nm)	0.098276	ppm	0.000067	0.07	5876.980000	Y 377.433
Co (228.615 nm)	0.482013	ppm	0.000648	0.13	8730.110000	Y 242.219
Cr (205.560 nm)	0.201313	ppm	0.000126	0.06	3057.550000	Y 377.433
Cu (324.754 nm)	0.252440	ppm	0.000906	0.36	13754.400000	Y 377.433
Fe (238.204 nm)	2.134548	ppm	0.001265	0.06	7919.540158	Y_R 377.433
Fe H (259.940 nm)	2.165270 u	ppm	0.001653	0.08	4099.500000	Y_R 377.433
K (766.491 nm)	53.425900	ppm	0.085632	0.16	60762.100000	Y_R2 488.368
Li (670.783 nm)	1.036950	ppm	0.004980	0.48	33229.400000	Y_R2 488.368
Mg (279.078 nm)	70.137300 o	ppm	0.126084	0.18	405130.000000	Y 377.433
Mn (257.610 nm)	0.766029	ppm	0.001501	0.20	179209.000000	Y 377.433
Mo (202.032 nm)	1.036220	ppm	0.000370	0.04	8923.880000	Y 377.433
Na (589.592 nm)	56.816900 o	ppm	0.028220	0.05	378482.000000	Y_R2 488.368
Na H (589.593 nm)	59.952200	ppm	0.086121	0.14	223937.716928	Y_R 488.368
Ni (231.604 nm)	0.484072	ppm	0.000523	0.11	3300.550000	Y 377.433
P (213.618 nm)	10.251800 o	ppm	0.010819	0.11	22301.600000	Y 242.219
Pb (220.353 nm)	0.502323	ppm	0.000003	0.00	1444.940000	Y 242.219
S (181.972 nm)	12.356460 o	ppm	0.027298	0.22	6344.394244	Y 377.433
Sb (206.834 nm)	0.520850	ppm	0.000799	0.15	1394.870000	Y 377.433
Se (196.026 nm)	2.009020	ppm	0.005837	0.29	2012.870000	Y 242.219
Si (288.158 nm)	14.235700 o	ppm	0.024268	0.17	123281.000000	Y 377.433
Sn (189.925 nm)	2.042380	ppm	0.000024	0.00	4069.430000	Y 377.433
Sr (421.552 nm)	1.113511 o	ppm	0.001351	0.12	233789.386478	Y_R 488.368
Th (288.505 nm)	1.017130	ppm	0.000240	0.02	2750.400000	Y 377.433
Ti (336.122 nm)	1.017420	ppm	0.001843	0.18	145053.000000	Y 377.433
Tl (190.794 nm)	2.010930	ppm	0.002217	0.11	4408.610000	Y 377.433
U (409.013 nm)	2.092940	ppm	0.005668	0.27	9198.970000	Y 377.433
V (292.401 nm)	0.511753	ppm	0.000091	0.02	18521.800000	Y 377.433
Zn (206.200 nm)	0.479436	ppm	0.002212	0.46	2531.680000	Y 377.433
Zr (343.823 nm)	0.506020	ppm	0.000486	0.10	66566.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033001	19709.873583	0.000230	0.02
Y 377.433	1.037859	1050508.495565	0.001002	0.10
Y_R 377.433	1.113470	84059.300000	0.001290	0.12
Y_R 488.368	1.085170	47509.200000	0.001106	0.10
Y_R2 488.368	1.075400	93324.902369	0.003519	0.33

Sample Name: 280-116186-C-1-C MSD

Date: 11/6/2018 7:04:15 PM Rack:Tube: 1:73

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053018	ppm	0.000119	0.22	1958.240000	Y 377.433
Al (167.019 nm)	2.057670	ppm	0.009632	0.47	1150.990000	Y_R 377.433
Al H (396.152 nm)	2.037529	ppm	0.004508	0.22	5340.627058	Y_R 377.433
As (188.980 nm)	1.001400	ppm	0.000669	0.07	1259.320000	Y 242.219
B (249.678 nm)	1.090600	ppm	0.000237	0.02	27318.600000	Y 242.219
Ba (493.408 nm)	2.025490 o	ppm	0.002227	0.11	235213.000000	Y_R 488.368
Be (234.861 nm)	0.049054	ppm	0.000064	0.13	14577.400000	Y_R 488.368
Bi (223.061 nm)	1.977010	ppm	0.000215	0.01	4991.410000	Y 377.433
Ca (315.887 nm)	122.122174 o	ppm	0.262708	0.22	96770.849696	Y_R 377.433
Cd (214.439 nm)	0.098073	ppm	0.000129	0.13	5864.810000	Y 377.433
Co (228.615 nm)	0.480654	ppm	0.000081	0.02	8705.620000	Y 242.219
Cr (205.560 nm)	0.201305	ppm	0.000522	0.26	3057.430000	Y 377.433
Cu (324.754 nm)	0.252210	ppm	0.000321	0.13	13742.800000	Y 377.433
Fe (238.204 nm)	2.100737	ppm	0.000455	0.02	7794.486637	Y_R 377.433
Fe H (259.940 nm)	2.129010 u	ppm	0.000133	0.01	4030.890000	Y_R 377.433
K (766.491 nm)	53.263700	ppm	0.093213	0.18	60575.300000	Y_R2 488.368
Li (670.783 nm)	1.034950	ppm	0.000266	0.03	33162.700000	Y_R2 488.368
Mg (279.078 nm)	69.663500 o	ppm	0.001588	0.00	402394.000000	Y 377.433
Mn (257.610 nm)	0.759060	ppm	0.000193	0.03	177579.000000	Y 377.433
Mo (202.032 nm)	1.039630	ppm	0.002151	0.21	8953.230000	Y 377.433
Na (589.592 nm)	56.573400 o	ppm	0.183656	0.32	376886.000000	Y_R2 488.368
Na H (589.593 nm)	60.055589	ppm	0.157798	0.26	224319.473006	Y_R 488.368
Ni (231.604 nm)	0.483745	ppm	0.001938	0.40	3298.330000	Y 377.433
P (213.618 nm)	10.233500 o	ppm	0.005290	0.05	22261.900000	Y 242.219
Pb (220.353 nm)	0.502365	ppm	0.000234	0.05	1445.030000	Y 242.219
S (181.972 nm)	12.045752 o	ppm	0.008801	0.07	6185.248959	Y 377.433
Sb (206.834 nm)	0.521116	ppm	0.000313	0.06	1395.590000	Y 377.433
Se (196.026 nm)	2.007140	ppm	0.004094	0.20	2010.990000	Y 242.219
Si (288.158 nm)	14.097100 o	ppm	0.036448	0.26	122090.000000	Y 377.433
Sn (189.925 nm)	2.049220	ppm	0.002578	0.13	4083.020000	Y 377.433
Sr (421.552 nm)	1.111702 o	ppm	0.003493	0.31	233409.658937	Y_R 488.368
Th (288.505 nm)	1.015940	ppm	0.003508	0.35	2747.180000	Y 377.433
Ti (336.122 nm)	1.020580	ppm	0.001134	0.11	145498.000000	Y 377.433
Tl (190.794 nm)	2.019220	ppm	0.002879	0.14	4426.800000	Y 377.433
U (409.013 nm)	2.094400	ppm	0.001090	0.05	9205.700000	Y 377.433
V (292.401 nm)	0.512485	ppm	0.000029	0.01	18548.600000	Y 377.433
Zn (206.200 nm)	0.479103	ppm	0.000136	0.03	2529.940000	Y 377.433
Zr (343.823 nm)	0.507447	ppm	0.000517	0.10	66753.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034026	19729.428107	0.004295	0.42
Y 377.433	1.040315	1052994.308689	0.004312	0.41
Y_R 377.433	1.113830	84086.000000	0.001599	0.14
Y_R 488.368	1.088420	47651.700000	0.002578	0.24
Y_R2 488.368	1.082947	93979.798479	0.006539	0.60

Sample Name: 280-116186-C-1-Apds

Date: 11/6/2018 7:07:38 PM Rack:Tube: 1:74

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049075	ppm	0.000086	0.17	1792.030000	Y 377.433
Al (167.019 nm)	0.992972	ppm	0.002640	0.27	557.361000	Y_R 377.433
Al H (396.152 nm)	0.969564	ppm	0.005863	0.60	2560.680616	Y_R 377.433
As (188.980 nm)	0.201500	ppm	0.002168	1.08	251.995000	Y 242.219
B (249.678 nm)	0.138874	ppm	0.000180	0.13	3525.140000	Y 242.219
Ba (493.408 nm)	0.104517	ppm	0.000366	0.35	12727.400000	Y_R 488.368
Be (234.861 nm)	0.047334	ppm	0.000060	0.13	14121.100000	Y_R 488.368
Bi (223.061 nm)	-0.002078 u	ppm	0.000743	35.74	7.851230	Y 377.433
Ca (315.887 nm)	89.771663 o	ppm	0.053134	0.06	71119.647105	Y_R 377.433
Cd (214.439 nm)	0.047715	ppm	0.000201	0.42	2854.680000	Y 377.433
Co (228.615 nm)	0.047070	ppm	0.000158	0.34	817.768000	Y 242.219
Cr (205.560 nm)	0.049081	ppm	0.000246	0.50	742.108000	Y 377.433
Cu (324.754 nm)	0.049261	ppm	0.000090	0.18	2403.850000	Y 377.433
Fe (238.204 nm)	2.057204	ppm	0.003372	0.16	7633.477207	Y_R 377.433
Fe H (259.940 nm)	2.090760 u	ppm	0.006733	0.32	3958.540000	Y_R 377.433
K (766.491 nm)	21.418300	ppm	0.111199	0.52	23906.100000	Y_R2 488.368
Li (670.783 nm)	0.117750	ppm	0.000079	0.07	2573.350000	Y_R2 488.368
Mg (279.078 nm)	38.934300	ppm	0.017619	0.05	224928.000000	Y 377.433
Mn (257.610 nm)	0.308417	ppm	0.000179	0.06	72189.700000	Y 377.433
Mo (202.032 nm)	0.049101	ppm	0.000260	0.53	422.831000	Y 377.433
Na (589.592 nm)	25.699500 o	ppm	0.040215	0.16	169724.000000	Y_R2 488.368
Na H (589.593 nm)	26.404141	ppm	0.040183	0.15	99227.313982	Y_R 488.368
Ni (231.604 nm)	0.048625	ppm	0.000593	1.22	327.923000	Y 377.433
P (213.618 nm)	2.004770	ppm	0.000593	0.03	4380.920000	Y 242.219
Pb (220.353 nm)	0.095525	ppm	0.001886	1.97	278.419000	Y 242.219
S (181.972 nm)	9.885300	ppm	0.010660	0.11	5077.672609	Y 377.433
Sb (206.834 nm)	0.097675	ppm	0.000480	0.49	243.092000	Y 377.433
Se (196.026 nm)	0.196783	ppm	0.004046	2.06	208.702000	Y 242.219
Si (288.158 nm)	8.821450	ppm	0.002270	0.03	76747.200000	Y 377.433
Sn (189.925 nm)	0.098538	ppm	0.000177	0.18	205.471000	Y 377.433
Sr (421.552 nm)	0.139805	ppm	0.000209	0.15	29489.368536	Y_R 488.368
Th (288.505 nm)	0.196334	ppm	0.002070	1.05	591.804000	Y 377.433
Ti (336.122 nm)	0.048610	ppm	0.000040	0.08	6975.850000	Y 377.433
Tl (190.794 nm)	0.199420	ppm	0.000236	0.12	432.692000	Y 377.433
U (409.013 nm)	0.515544	ppm	0.001216	0.24	2105.560000	Y 377.433
V (292.401 nm)	0.049656	ppm	0.000028	0.06	1813.310000	Y 377.433
Zn (206.200 nm)	0.185973	ppm	0.000090	0.05	999.014000	Y 377.433
Zr (343.823 nm)	0.049157	ppm	0.000026	0.05	6496.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.049616	20026.894374	0.000729	0.07
Y 377.433	1.054116	1066963.475557	0.000971	0.09
Y_R 377.433	1.121400	84657.900000	0.000263	0.02
Y_R 488.368	1.093800	47887.000000	0.001582	0.14
Y_R2 488.368	1.078425	93587.384741	0.002238	0.21

Sample Name: 280-116186-C-2-A

Date: 11/6/2018 7:11:01 PM Rack:Tube: 1:75

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001233	ppm	0.000184	14.90	-388.496000	Y 377.433
Al (167.019 nm)	0.001912	ppm	0.001133	59.25	3.705080	Y_R 377.433
Al H (396.152 nm)	-0.004932 u	ppm	0.002613	52.99	96.484681	Y_R 377.433
As (188.980 nm)	0.004674	ppm	0.000803	17.18	4.145130	Y 242.219
B (249.678 nm)	0.037929	ppm	0.000060	0.16	1003.980000	Y 242.219
Ba (493.408 nm)	0.124165	ppm	0.000281	0.23	14996.200000	Y_R 488.368
Be (234.861 nm)	0.000000 u	ppm	0.000013	> 100.00	-33.053800	Y_R 488.368
Bi (223.061 nm)	-0.001799 u	ppm	0.000064	3.54	8.282100	Y 377.433
Ca (315.887 nm)	68.638833 o	ppm	0.493438	0.72	54363.103165	Y_R 377.433
Cd (214.439 nm)	0.000052	ppm	0.000062	> 100.00	4.382350	Y 377.433
Co (228.615 nm)	-0.000050 u	ppm	0.000004	7.75	-37.360400	Y 242.219
Cr (205.560 nm)	0.000349	ppm	0.000145	41.51	1.241100	Y 377.433
Cu (324.754 nm)	0.001006	ppm	0.000021	2.06	-275.473000	Y 377.433
Fe (238.204 nm)	0.419317	ppm	0.003337	0.80	1575.694981	Y_R 377.433
Fe H (259.940 nm)	0.422429 u	ppm	0.004135	0.98	802.383000	Y_R 377.433
K (766.491 nm)	1.885550	ppm	0.035064	1.86	1414.580000	Y_R2 488.368
Li (670.783 nm)	0.025712	ppm	0.001373	5.34	-496.206000	Y_R2 488.368
Mg (279.078 nm)	25.866700	ppm	0.053017	0.20	149458.000000	Y 377.433
Mn (257.610 nm)	0.319714	ppm	0.000529	0.17	74831.700000	Y 377.433
Mo (202.032 nm)	0.000264	ppm	0.000135	50.99	2.245640	Y 377.433
Na (589.592 nm)	12.050700 o	ppm	0.008318	0.07	79895.300000	Y_R2 488.368
Na H (589.593 nm)	12.341610	ppm	0.027900	0.23	47726.372704	Y_R 488.368
Ni (231.604 nm)	0.000119 u	ppm	0.000438	> 100.00	-3.271610	Y 377.433
P (213.618 nm)	0.032640	ppm	0.000337	1.03	95.483000	Y 242.219
Pb (220.353 nm)	0.000977	ppm	0.001064	> 100.00	6.262540	Y 242.219
S (181.972 nm)	6.449290	ppm	0.015857	0.25	3317.952652	Y 377.433
Sb (206.834 nm)	-0.001525 u	ppm	0.001184	77.62	-27.502000	Y 377.433
Se (196.026 nm)	0.000220 u	ppm	0.004248	> 100.00	13.389200	Y 242.219
Si (288.158 nm)	5.681340	ppm	0.007792	0.14	49759.000000	Y 377.433
Sn (189.925 nm)	0.000884	ppm	0.000632	71.55	11.354600	Y 377.433
Sr (421.552 nm)	0.136141	ppm	0.000446	0.33	28720.659236	Y_R 488.368
Th (288.505 nm)	0.000023 u	ppm	0.008056	> 100.00	79.533400	Y 377.433
Ti (336.122 nm)	-0.000308 u	ppm	0.000017	5.43	-57.289900	Y 377.433
Tl (190.794 nm)	0.001646	ppm	0.001364	82.87	-1.736570	Y 377.433
U (409.013 nm)	0.000727 u	ppm	0.002952	> 100.00	-216.927000	Y 377.433
V (292.401 nm)	-0.000397 u	ppm	0.000067	16.77	21.394800	Y 377.433
Zn (206.200 nm)	-0.004967 u	ppm	0.000104	2.10	1.800070	Y 377.433
Zr (343.823 nm)	-0.000275 u	ppm	0.000075	27.42	-8.259250	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061231	20248.517609	0.002908	0.27
Y 377.433	1.063313	1076272.213354	0.004224	0.40
Y_R 377.433	1.132990	85533.000000	0.007946	0.70
Y_R 488.368	1.107230	48475.000000	0.004545	0.41
Y_R2 488.368	1.091133	94690.236440	0.003901	0.36

Sample Name: 280-116186-E-5-A

Date: 11/6/2018 7:14:24 PM Rack:Tube: 1:76

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001045	ppm	0.000162	15.46	-396.972000	Y 377.433
Al (167.019 nm)	0.003156 u	ppm	0.004571	> 100.00	7.233840	Y_R 377.433
Al H (396.152 nm)	-0.009404 u	ppm	0.000575	6.11	63.373108	Y_R 377.433
As (188.980 nm)	0.002031	ppm	0.000787	38.73	0.779765	Y 242.219
B (249.678 nm)	0.038064	ppm	0.000110	0.29	1001.100000	Y 242.219
Ba (493.408 nm)	0.016764	ppm	0.000240	1.43	2549.620000	Y_R 488.368
Be (234.861 nm)	-0.000033 u	ppm	0.000038	> 100.00	88.262200	Y_R 488.368
Bi (223.061 nm)	-0.003292 u	ppm	0.001244	37.80	5.216990	Y 377.433
Ca (315.887 nm)	18.321336 o	ppm	0.032973	0.18	14465.654966	Y_R 377.433
Cd (214.439 nm)	0.000017 u	ppm	0.000050	> 100.00	6.336910	Y 377.433
Co (228.615 nm)	0.002942	ppm	0.000151	5.13	16.836400	Y 242.219
Cr (205.560 nm)	0.000457	ppm	0.000125	27.37	1.719620	Y 377.433
Cu (324.754 nm)	0.001610	ppm	0.000019	1.19	-208.523000	Y 377.433
Fe (238.204 nm)	4.597675	ppm	0.019832	0.43	17029.501581	Y_R 377.433
Fe H (259.940 nm)	4.655540	ppm	0.007690	0.17	8810.580000	Y_R 377.433
K (766.491 nm)	1.671470	ppm	0.004105	0.25	1168.070000	Y_R2 488.368
Li (670.783 nm)	0.007864	ppm	0.002904	36.94	-1091.450000	Y_R2 488.368
Mg (279.078 nm)	6.606200	ppm	0.000318	0.00	38192.500000	Y 377.433
Mn (257.610 nm)	0.556082	ppm	0.000118	0.02	130110.000000	Y 377.433
Mo (202.032 nm)	0.000312	ppm	0.000210	67.19	2.659480	Y 377.433
Na (589.592 nm)	3.920160	ppm	0.022939	0.59	26143.000000	Y_R2 488.368
Na H (589.593 nm)	3.930351 u	ppm	0.022580	0.57	16809.346899	Y_R 488.368
Ni (231.604 nm)	0.011121	ppm	0.000982	8.83	71.957300	Y 377.433
P (213.618 nm)	0.005579	ppm	0.003812	68.33	36.680500	Y 242.219
Pb (220.353 nm)	-0.000224 u	ppm	0.000510	> 100.00	3.181420	Y 242.219
S (181.972 nm)	11.261556 o	ppm	0.006460	0.06	5783.129278	Y 377.433
Sb (206.834 nm)	0.001653	ppm	0.000459	27.78	-19.797800	Y 377.433
Se (196.026 nm)	-0.001722 u	ppm	0.001267	73.56	10.828600	Y 242.219
Si (288.158 nm)	4.159020	ppm	0.000011	0.00	36675.100000	Y 377.433
Sn (189.925 nm)	-0.000784 u	ppm	0.000702	89.55	8.038380	Y 377.433
Sr (421.552 nm)	0.056487	ppm	0.000335	0.59	12007.998513	Y_R 488.368
Th (288.505 nm)	0.001580	ppm	0.000754	47.73	88.047800	Y 377.433
Ti (336.122 nm)	-0.000118 u	ppm	0.000090	76.71	-187.614000	Y 377.433
Tl (190.794 nm)	0.000156 u	ppm	0.000472	> 100.00	-5.116020	Y 377.433
U (409.013 nm)	0.005078	ppm	0.001168	22.99	-183.804000	Y 377.433
V (292.401 nm)	-0.000183 u	ppm	0.000200	> 100.00	28.650700	Y 377.433
Zn (206.200 nm)	0.017669	ppm	0.000071	0.40	120.021000	Y 377.433
Zr (343.823 nm)	-0.000103 u	ppm	0.000048	46.25	26.627800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.085655	20714.524607	0.002527	0.23
Y 377.433	1.085404	1098632.688262	0.002405	0.22
Y_R 377.433	1.148170	86678.600000	0.000143	0.01
Y_R 488.368	1.120270	49046.200000	0.000501	0.04
Y_R2 488.368	1.113163	96602.030487	0.000445	0.04

Sample Name: CCVH-5408055

Date: 11/6/2018 7:17:47 PM
Rack:Tube: S1:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000581 u	ppm	0.000044	7.64	-717.558000	Y 377.433
Al (167.019 nm)	45.994500 o	ppm	0.459847	1.00	25678.600000	Y_R 377.433
Al H (396.152 nm)	48.509723	ppm	0.289078	0.60	122088.054193	Y_R 377.433
As (188.980 nm)	0.000124 u	ppm	0.003225	> 100.00	-2.014640	Y 242.219
B (249.678 nm)	0.000120	ppm	0.000016	13.55	-13.497900	Y 242.219
Ba (493.408 nm)	-0.000083 u	ppm	0.000110	> 100.00	635.490000	Y_R 488.368
Be (234.861 nm)	-0.000232 u	ppm	0.000027	11.80	1413.090000	Y_R 488.368
Bi (223.061 nm)	0.976611	ppm	0.000134	0.01	2480.000000	Y 377.433
Ca (315.887 nm)	-0.001108 u	ppm	0.004836	> 100.00	-62.467874	Y_R 377.433
Cd (214.439 nm)	-0.000236 u	ppm	0.000085	36.01	33.829300	Y 377.433
Co (228.615 nm)	0.002513	ppm	0.000156	6.22	9.083170	Y 242.219
Cr (205.560 nm)	0.000029 u	ppm	0.000166	> 100.00	-16.988900	Y 377.433
Cu (324.754 nm)	-0.003546 u	ppm	0.000043	1.22	-167.404000	Y 377.433
Fe (238.204 nm)	48.523896 o	ppm	0.277450	0.57	179492.166456	Y_R 377.433
Fe H (259.940 nm)	49.086000	ppm	0.261104	0.53	92864.100000	Y_R 377.433
K (766.491 nm)	0.105966	ppm	0.085058	80.27	-634.573000	Y_R2 488.368
Li (670.783 nm)	0.007615	ppm	0.002774	36.43	-1099.720000	Y_R2 488.368
Mg (279.078 nm)	-0.019450 u	ppm	0.000381	1.96	-429.117000	Y 377.433
Mn (257.610 nm)	0.001428	ppm	0.000001	0.06	395.712000	Y 377.433
Mo (202.032 nm)	-0.000257 u	ppm	0.000214	83.36	-2.239340	Y 377.433
Na (589.592 nm)	243.967000 o	ppm	0.249499	0.10	1606650.000000	Y_R2 488.368
Na H (589.593 nm)	253.706436	ppm	2.624813	1.03	931871.464339	Y_R 488.368
Ni (231.604 nm)	0.003362	ppm	0.000313	9.30	20.846300	Y 377.433
P (213.618 nm)	-0.005001 u	ppm	0.002516	50.32	13.690400	Y 242.219
Pb (220.353 nm)	-0.003437 u	ppm	0.001408	40.97	10.947100	Y 242.219
S (181.972 nm)	4.838407	ppm	0.005625	0.12	2492.160210	Y 377.433
Sb (206.834 nm)	-0.003245 u	ppm	0.000241	7.41	-77.749500	Y 377.433
Se (196.026 nm)	-0.004081 u	ppm	0.002410	59.06	0.116625	Y 242.219
Si (288.158 nm)	0.014109	ppm	0.000994	7.05	1050.920000	Y 377.433
Sn (189.925 nm)	-0.001803 u	ppm	0.000827	45.89	6.013820	Y 377.433
Sr (421.552 nm)	0.000269	ppm	0.000026	9.75	212.458685	Y_R 488.368
Th (288.505 nm)	4.928590	ppm	0.001612	0.03	12886.600000	Y 377.433
Ti (336.122 nm)	0.000985	ppm	0.000179	18.15	-87.770200	Y 377.433
Tl (190.794 nm)	-0.004257 u	ppm	0.000116	2.72	-15.989700	Y 377.433
U (409.013 nm)	9.999560	ppm	0.026455	0.26	45071.300000	Y 377.433
V (292.401 nm)	0.003993	ppm	0.000297	7.43	9.759830	Y 377.433
Zn (206.200 nm)	-0.004641 u	ppm	0.000223	4.80	3.502310	Y 377.433
Zr (343.823 nm)	-0.004492 u	ppm	0.000011	0.25	-421.687000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.059157	20208.938451	0.003563	0.34
Y 377.433	1.049664	1062456.712834	0.002637	0.25
Y_R 377.433	1.129260	85251.400000	0.005440	0.48
Y_R 488.368	1.105980	48420.300000	0.013580	1.23
Y_R2 488.368	1.090803	94661.611161	0.007158	0.66

Sample Name: CCV-5407546

Date: 11/6/2018 7:21:09 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.490597	ppm	0.000951	0.19	22035.100000	Y 377.433
Al (167.019 nm)	0.518246	ppm	0.002900	0.56	292.963000	Y_R 377.433
Al H (396.152 nm)	0.486404 u	ppm	0.004061	0.83	1344.789986	Y_R 377.433
As (188.980 nm)	0.970415	ppm	0.002618	0.27	1220.290000	Y 242.219
B (249.678 nm)	0.484957	ppm	0.000160	0.03	12189.400000	Y 242.219
Ba (493.408 nm)	0.487981	ppm	0.001944	0.40	57128.600000	Y_R 488.368
Be (234.861 nm)	0.475416	ppm	0.000150	0.03	141678.000000	Y_R 488.368
Bi (223.061 nm)	-0.002805 u	ppm	0.000331	11.80	6.088690	Y 377.433
Ca (315.887 nm)	5.051640	ppm	0.009053	0.18	3944.205043	Y_R 377.433
Cd (214.439 nm)	0.489441	ppm	0.000793	0.16	29255.800000	Y 377.433
Co (228.615 nm)	0.488428	ppm	0.001774	0.36	8827.540000	Y 242.219
Cr (205.560 nm)	0.491485	ppm	0.002232	0.45	7471.920000	Y 377.433
Cu (324.754 nm)	0.494017	ppm	0.000224	0.05	27237.400000	Y 377.433
Fe (238.204 nm)	2.464993	ppm	0.003030	0.12	9141.701685	Y_R 377.433
Fe H (259.940 nm)	2.511550 u	ppm	0.004827	0.19	4754.580000	Y_R 377.433
K (766.491 nm)	49.272600	ppm	0.152772	0.31	55979.700000	Y_R2 488.368
Li (670.783 nm)	0.975576	ppm	0.001897	0.19	31182.500000	Y_R2 488.368
Mg (279.078 nm)	19.427200	ppm	0.000889	0.00	112257.000000	Y 377.433
Mn (257.610 nm)	0.494019	ppm	0.000636	0.13	115596.000000	Y 377.433
Mo (202.032 nm)	0.498255	ppm	0.000936	0.19	4290.910000	Y 377.433
Na (589.592 nm)	5.000140	ppm	0.007270	0.15	34206.700000	Y_R2 488.368
Na H (589.593 nm)	5.397937 u	ppm	0.024649	0.46	22629.872834	Y_R 488.368
Ni (231.604 nm)	0.502034	ppm	0.000640	0.13	3421.860000	Y 377.433
P (213.618 nm)	0.904992	ppm	0.003056	0.34	1991.100000	Y 242.219
Pb (220.353 nm)	0.987941	ppm	0.000183	0.02	2835.060000	Y 242.219
S (181.972 nm)	0.001421 u	ppm	0.005843	> 100.00	16.111835	Y 377.433
Sb (206.834 nm)	0.992155	ppm	0.001212	0.12	2701.490000	Y 377.433
Se (196.026 nm)	0.967624	ppm	0.004934	0.51	976.022000	Y 242.219
Si (288.158 nm)	4.833530	ppm	0.050743	1.05	42472.300000	Y 377.433
Sn (189.925 nm)	0.998276	ppm	0.005505	0.55	1993.960000	Y 377.433
Sr (421.552 nm)	0.495568	ppm	0.001974	0.40	104134.536833	Y_R 488.368
Th (288.505 nm)	0.004591	ppm	0.003389	73.83	100.979000	Y 377.433
Ti (336.122 nm)	0.491481	ppm	0.001410	0.29	69781.100000	Y 377.433
Tl (190.794 nm)	0.993734	ppm	0.002142	0.22	2176.930000	Y 377.433
U (409.013 nm)	0.004093	ppm	0.003614	88.30	-226.352000	Y 377.433
V (292.401 nm)	0.489421	ppm	0.000052	0.01	17675.600000	Y 377.433
Zn (206.200 nm)	0.485256	ppm	0.000866	0.18	2562.070000	Y 377.433
Zr (343.823 nm)	0.495002	ppm	0.000662	0.13	65118.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.073518	20482.951101	0.000957	0.09
Y 377.433	1.069544	1082579.459401	0.000953	0.09
Y_R 377.433	1.126330	85030.100000	0.000507	0.05
Y_R 488.368	1.096470	48004.000000	0.001243	0.11
Y_R2 488.368	1.095184	95041.755411	0.006131	0.56

Sample Name: CCB

Date: 11/6/2018 7:24:31 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000793	ppm	0.000165	20.84	-408.506000	Y 377.433
Al (167.019 nm)	-0.003143 u	ppm	0.000206	6.56	0.600709	Y_R 377.433
Al H (396.152 nm)	-0.019502 u	ppm	0.004729	24.25	29.975103	Y_R 377.433
As (188.980 nm)	0.001358	ppm	0.000638	47.02	-0.027511	Y 242.219
B (249.678 nm)	0.000752	ppm	0.000056	7.49	75.919000	Y 242.219
Ba (493.408 nm)	-0.000432 u	ppm	0.000440	> 100.00	549.382000	Y_R 488.368
Be (234.861 nm)	0.000060	ppm	0.000011	18.36	-28.397000	Y_R 488.368
Bi (223.061 nm)	-0.000014 u	ppm	0.000422	> 100.00	12.706900	Y 377.433
Ca (315.887 nm)	0.004438	ppm	0.006204	> 100.00	-58.070195	Y_R 377.433
Cd (214.439 nm)	0.000087	ppm	0.000046	52.18	6.100960	Y 377.433
Co (228.615 nm)	0.000459	ppm	0.000230	50.06	-28.133000	Y 242.219
Cr (205.560 nm)	0.000269	ppm	0.000116	43.18	0.135206	Y 377.433
Cu (324.754 nm)	0.001129	ppm	0.000561	49.69	-229.441000	Y 377.433
Fe (238.204 nm)	-0.001751 u	ppm	0.002782	> 100.00	18.363090	Y_R 377.433
Fe H (259.940 nm)	0.004585 u	ppm	0.000579	12.63	11.907700	Y_R 377.433
K (766.491 nm)	0.080510	ppm	0.052375	65.05	-663.884000	Y_R2 488.368
Li (670.783 nm)	0.004979	ppm	0.001200	24.09	-1187.660000	Y_R2 488.368
Mg (279.078 nm)	0.001513 u	ppm	0.003216	> 100.00	48.109400	Y 377.433
Mn (257.610 nm)	0.000040	ppm	0.000010	25.29	71.261500	Y 377.433
Mo (202.032 nm)	-0.000049 u	ppm	0.000216	> 100.00	-0.450843	Y 377.433
Na (589.592 nm)	0.026863	ppm	0.011594	43.16	473.563000	Y_R2 488.368
Na H (589.593 nm)	-0.113838 u	ppm	0.009280	8.15	1976.912156	Y_R 488.368
Ni (231.604 nm)	-0.000193 u	ppm	0.000539	> 100.00	-5.414670	Y 377.433
P (213.618 nm)	-0.003104 u	ppm	0.000486	15.65	17.811800	Y 242.219
Pb (220.353 nm)	0.000638	ppm	0.000174	27.26	5.262140	Y 242.219
S (181.972 nm)	0.002429 u	ppm	0.004426	> 100.00	15.416308	Y 377.433
Sb (206.834 nm)	0.000749	ppm	0.000418	55.78	-21.189200	Y 377.433
Se (196.026 nm)	-0.001029 u	ppm	0.000430	41.78	11.967300	Y 242.219
Si (288.158 nm)	-0.005745 u	ppm	0.001171	20.37	880.274000	Y 377.433
Sn (189.925 nm)	-0.002308 u	ppm	0.000537	23.28	5.010670	Y 377.433
Sr (421.552 nm)	-0.000071 u	ppm	0.000091	> 100.00	141.217880	Y_R 488.368
Th (288.505 nm)	0.004360	ppm	0.000816	18.71	84.153000	Y 377.433
Ti (336.122 nm)	0.000024	ppm	0.000007	27.20	-224.750000	Y 377.433
Tl (190.794 nm)	0.002120	ppm	0.000188	8.89	-0.685300	Y 377.433
U (409.013 nm)	0.005232	ppm	0.001124	21.49	-183.924000	Y 377.433
V (292.401 nm)	-0.000040 u	ppm	0.000129	> 100.00	33.415200	Y 377.433
Zn (206.200 nm)	-0.005048 u	ppm	0.000077	1.52	1.373410	Y 377.433
Zr (343.823 nm)	-0.000085 u	ppm	0.000045	52.61	15.458600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074248	20496.876709	0.001103	0.10
Y 377.433	1.073498	1086581.716944	0.002667	0.25
Y_R 377.433	1.121250	84646.100000	0.003307	0.29
Y_R 488.368	1.086160	47552.700000	0.001896	0.17
Y_R2 488.368	1.092197	94782.590981	0.004155	0.38

Sample Name: CCVL-5413446

Date: 11/6/2018 7:27:52 PM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010596	ppm	0.000213	2.01	40.887300	Y 377.433
Al (167.019 nm)	0.102691	ppm	0.004989	4.86	59.675900	Y_R 377.433
Al H (396.152 nm)	0.078211 u	ppm	0.000633	0.81	277.383384	Y_R 377.433
As (188.980 nm)	0.013908	ppm	0.000554	3.98	15.776500	Y 242.219
B (249.678 nm)	0.100139	ppm	0.000258	0.26	2558.910000	Y 242.219
Ba (493.408 nm)	0.009889	ppm	0.000157	1.59	1744.870000	Y_R 488.368
Be (234.861 nm)	0.000960	ppm	0.000020	2.10	242.123000	Y_R 488.368
Bi (223.061 nm)	0.101256	ppm	0.000250	0.25	267.733000	Y 377.433
Ca (315.887 nm)	0.213920	ppm	0.007788	3.64	108.033685	Y_R 377.433
Cd (214.439 nm)	0.005114	ppm	0.000018	0.36	306.631000	Y 377.433
Co (228.615 nm)	0.010570	ppm	0.000213	2.02	155.349000	Y 242.219
Cr (205.560 nm)	0.010177	ppm	0.000052	0.51	150.894000	Y 377.433
Cu (324.754 nm)	0.016806	ppm	0.000029	0.17	642.652000	Y 377.433
Fe (238.204 nm)	0.100453	ppm	0.000197	0.20	396.365765	Y_R 377.433
Fe H (259.940 nm)	0.101960 u	ppm	0.003389	3.32	196.122000	Y_R 377.433
K (766.491 nm)	3.230460	ppm	0.028878	0.89	2963.210000	Y_R2 488.368
Li (670.783 nm)	0.027576 Q	ppm	0.001011	3.67	-434.020000 Q	Y_R2 488.368
Mg (279.078 nm)	0.199026	ppm	0.000750	0.38	1187.820000	Y 377.433
Mn (257.610 nm)	0.010316	ppm	0.000024	0.23	2474.300000	Y 377.433
Mo (202.032 nm)	0.019134	ppm	0.000089	0.47	164.751000	Y 377.433
Na (589.592 nm)	1.077450	ppm	0.001139	0.11	7411.720000	Y_R2 488.368
Na H (589.593 nm)	0.934382 u	ppm	0.015126	1.62	5826.836532	Y_R 488.368
Ni (231.604 nm)	0.041918	ppm	0.000609	1.45	281.869000	Y 377.433
P (213.618 nm)	2.804140 o	ppm	0.002808	0.10	6117.930000	Y 242.219
Pb (220.353 nm)	0.010079	ppm	0.001182	11.73	32.343200	Y 242.219
S (181.972 nm)	0.087859	ppm	0.001715	1.95	59.194179	Y 377.433
Sb (206.834 nm)	0.020649	ppm	0.000904	4.38	33.335900	Y 377.433
Se (196.026 nm)	0.017465	ppm	0.002043	11.70	30.363700	Y 242.219
Si (288.158 nm)	0.483057	ppm	0.002644	0.55	5081.380000	Y 377.433
Sn (189.925 nm)	0.100915	ppm	0.001299	1.29	210.196000	Y 377.433
Sr (421.552 nm)	0.010056	ppm	0.000054	0.54	2266.039388	Y_R 488.368
Th (288.505 nm)	0.015706	ppm	0.001295	8.24	114.513000	Y 377.433
Ti (336.122 nm)	0.009888	ppm	0.000016	0.16	1180.600000	Y 377.433
Tl (190.794 nm)	0.016780	ppm	0.000377	2.25	31.476700	Y 377.433
U (409.013 nm)	0.064677	ppm	0.000118	0.18	83.869900	Y 377.433
V (292.401 nm)	0.009718	ppm	0.000212	2.18	383.014000	Y 377.433
Zn (206.200 nm)	0.015534	ppm	0.000034	0.22	108.866000	Y 377.433
Zr (343.823 nm)	0.015057	ppm	0.000068	0.45	2006.760000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.081892	20642.721965	0.003076	0.28
Y 377.433	1.078044	1091183.206956	0.001816	0.17
Y_R 377.433	1.140210	86077.700000	0.009811	0.86
Y_R 488.368	1.111330	48654.700000	0.005330	0.48
Y_R2 488.368	1.108596	96205.690397	0.009621	0.87

Sample Name: 280-116186-C-9-A

Date: 11/6/2018 7:31:15 PM Rack:Tube: 1:77

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001637	ppm	0.000091	5.56	-370.298000	Y 377.433
Al (167.019 nm)	0.026688	ppm	0.002014	7.55	17.372800	Y_R 377.433
Al H (396.152 nm)	0.057310 u	ppm	0.000791	1.38	341.768843	Y_R 377.433
As (188.980 nm)	-0.001615 u	ppm	0.000718	44.44	-3.772910	Y 242.219
B (249.678 nm)	0.054452	ppm	0.000372	0.68	1417.060000	Y 242.219
Ba (493.408 nm)	0.010165	ppm	0.000223	2.19	1840.060000	Y_R 488.368
Be (234.861 nm)	0.000025	ppm	0.000026	> 100.00	-32.335500	Y_R 488.368
Bi (223.061 nm)	-0.000673 u	ppm	0.000295	43.76	11.081000	Y 377.433
Ca (315.887 nm)	272.543830 o	ppm	0.235936	0.09	216042.232417	Y_R 377.433
Cd (214.439 nm)	0.000070	ppm	0.000018	25.18	5.296710	Y 377.433
Co (228.615 nm)	0.000071 u	ppm	0.000270	> 100.00	-35.156900	Y 242.219
Cr (205.560 nm)	0.000340	ppm	0.000115	33.73	1.154340	Y 377.433
Cu (324.754 nm)	-0.000356 u	ppm	0.000136	38.17	-476.499000	Y 377.433
Fe (238.204 nm)	0.205505	ppm	0.001393	0.68	784.905194	Y_R 377.433
Fe H (259.940 nm)	0.200091 u	ppm	0.000752	0.38	381.766000	Y_R 377.433
K (766.491 nm)	3.732210	ppm	0.082429	2.21	3540.960000	Y_R2 488.368
Li (670.783 nm)	0.105030	ppm	0.001151	1.10	2149.120000	Y_R2 488.368
Mg (279.078 nm)	247.655000 o	ppm	0.284832	0.12	1430630.000000	Y 377.433
Mn (257.610 nm)	0.539730	ppm	0.000121	0.02	126286.000000	Y 377.433
Mo (202.032 nm)	0.000317	ppm	0.000198	62.65	2.699300	Y 377.433
Na (589.592 nm)	43.554900 o	ppm	0.153651	0.35	287098.000000	Y_R2 488.368
Na H (589.593 nm)	45.131786	ppm	0.085800	0.19	167748.823929	Y_R 488.368
Ni (231.604 nm)	0.000368 u	ppm	0.000883	> 100.00	-1.581970	Y 377.433
P (213.618 nm)	0.007569	ppm	0.000663	8.77	41.005200	Y 242.219
Pb (220.353 nm)	0.000993	ppm	0.000017	1.74	6.256720	Y 242.219
S (181.972 nm)	413.431488 bo	ppm	0.259661	0.06	211753.918970	Y 377.433
Sb (206.834 nm)	-0.002662 u	ppm	0.001560	58.58	-30.580200	Y 377.433
Se (196.026 nm)	0.000486 u	ppm	0.000849	> 100.00	13.878700	Y 242.219
Si (288.158 nm)	8.095200	ppm	0.007116	0.09	70505.400000	Y 377.433
Sn (189.925 nm)	-0.002316 u	ppm	0.000626	27.03	4.994750	Y 377.433
Sr (421.552 nm)	1.125043 o	ppm	0.002192	0.19	236208.825372	Y_R 488.368
Th (288.505 nm)	0.006979	ppm	0.001382	19.81	101.902000	Y 377.433
Ti (336.122 nm)	-0.000725 u	ppm	0.000197	27.14	522.377000	Y 377.433
Tl (190.794 nm)	0.000899	ppm	0.000595	66.20	-3.375940	Y 377.433
U (409.013 nm)	0.010797	ppm	0.001340	12.41	-210.324000	Y 377.433
V (292.401 nm)	0.000414	ppm	0.000027	6.57	50.777400	Y 377.433
Zn (206.200 nm)	-0.004497 u	ppm	0.000082	1.83	4.253540	Y 377.433
Zr (343.823 nm)	-0.000300 u	ppm	0.000034	11.37	-12.112700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054884	20127.419577	0.000245	0.02
Y 377.433	1.059258	1072168.057965	0.001076	0.10
Y_R 377.433	1.133150	85544.900000	0.004167	0.37
Y_R 488.368	1.104990	48377.000000	0.004539	0.41
Y_R2 488.368	1.088741	94482.648048	0.001432	0.13

Sample Name: 280-116186-C-10-A

Date: 11/6/2018 7:34:37 PM
Rack:Tube: 1:78

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000784	ppm	0.000219	27.97	-408.955000	Y 377.433
Al (167.019 nm)	0.022071	ppm	0.001661	7.53	14.664100	Y_R 377.433
Al H (396.152 nm)	0.011663 u	ppm	0.000634	5.43	118.456179	Y_R 377.433
As (188.980 nm)	-0.000527 u	ppm	0.000387	73.32	-2.401340	Y 242.219
B (249.678 nm)	0.039521	ppm	0.000103	0.26	1044.370000	Y 242.219
Ba (493.408 nm)	0.015909	ppm	0.000074	0.46	2447.340000	Y_R 488.368
Be (234.861 nm)	0.000024	ppm	0.000014	61.17	-39.093600	Y_R 488.368
Bi (223.061 nm)	-0.001096 u	ppm	0.000923	84.20	9.982710	Y 377.433
Ca (315.887 nm)	23.209901 o	ppm	0.031127	0.13	18341.866047	Y_R 377.433
Cd (214.439 nm)	-0.000020 u	ppm	0.000010	48.28	-0.321594	Y 377.433
Co (228.615 nm)	-0.000099 u	ppm	0.000233	> 100.00	-38.245100	Y 242.219
Cr (205.560 nm)	0.000479	ppm	0.000185	38.63	3.326330	Y 377.433
Cu (324.754 nm)	0.001310	ppm	0.000074	5.63	-231.761000	Y 377.433
Fe (238.204 nm)	0.006932	ppm	0.001096	15.82	50.476143	Y_R 377.433
Fe H (259.940 nm)	0.009387 u	ppm	0.001717	18.29	20.991300	Y_R 377.433
K (766.491 nm)	1.519820	ppm	0.040342	2.65	993.453000	Y_R2 488.368
Li (670.783 nm)	0.009175	ppm	0.000070	0.76	-1047.700000	Y_R2 488.368
Mg (279.078 nm)	7.040290	ppm	0.002215	0.03	40707.800000	Y 377.433
Mn (257.610 nm)	0.000599	ppm	0.000004	0.73	201.775000	Y 377.433
Mo (202.032 nm)	0.000006 u	ppm	0.000071	> 100.00	0.023862	Y 377.433
Na (589.592 nm)	3.253740	ppm	0.004693	0.14	21754.400000	Y_R2 488.368
Na H (589.593 nm)	3.226818 u	ppm	0.006113	0.19	14231.545575	Y_R 488.368
Ni (231.604 nm)	0.000477	ppm	0.000229	48.03	-0.848391	Y 377.433
P (213.618 nm)	0.010089	ppm	0.002622	25.99	46.481200	Y 242.219
Pb (220.353 nm)	0.000548 u	ppm	0.001632	> 100.00	4.991670	Y 242.219
S (181.972 nm)	10.649629	ppm	0.014671	0.14	5468.367548	Y 377.433
Sb (206.834 nm)	0.000495 u	ppm	0.001484	> 100.00	-21.868200	Y 377.433
Se (196.026 nm)	0.000260 u	ppm	0.001009	> 100.00	13.248400	Y 242.219
Si (288.158 nm)	4.867950	ppm	0.025593	0.53	42768.100000	Y 377.433
Sn (189.925 nm)	-0.000327 u	ppm	0.001179	> 100.00	8.947860	Y 377.433
Sr (421.552 nm)	0.064983	ppm	0.000078	0.12	13790.440076	Y_R 488.368
Th (288.505 nm)	0.003022	ppm	0.000521	17.22	80.743900	Y 377.433
Ti (336.122 nm)	-0.000213 u	ppm	0.000177	82.97	-185.896000	Y 377.433
Tl (190.794 nm)	0.000547 u	ppm	0.001222	> 100.00	-4.141310	Y 377.433
U (409.013 nm)	0.007663	ppm	0.001861	24.29	-177.321000	Y 377.433
V (292.401 nm)	-0.000247 u	ppm	0.000112	45.20	26.505700	Y 377.433
Zn (206.200 nm)	-0.003325 u	ppm	0.000207	6.22	10.376600	Y 377.433
Zr (343.823 nm)	-0.000213 u	ppm	0.000025	11.60	-1.382970	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072433	20462.255190	0.004486	0.42
Y 377.433	1.071942	1085006.132552	0.004447	0.41
Y_R 377.433	1.135790	85744.200000	0.003460	0.30
Y_R 488.368	1.106270	48433.000000	0.003645	0.33
Y_R2 488.368	1.096866	95187.789204	0.007170	0.65

Sample Name: 280-116186-C-11-A

Date: 11/6/2018 7:37:59 PM Rack:Tube: 1:79

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001370	ppm	0.000287	20.93	-382.231000	Y 377.433
Al (167.019 nm)	0.000210 u	ppm	0.000360	> 100.00	2.483880	Y_R 377.433
Al H (396.152 nm)	-0.013904 u	ppm	0.005624	40.45	56.180429	Y_R 377.433
As (188.980 nm)	0.000256 u	ppm	0.002652	> 100.00	-1.415450	Y 242.219
B (249.678 nm)	0.048190	ppm	0.000151	0.31	1260.900000	Y 242.219
Ba (493.408 nm)	0.001787	ppm	0.000108	6.04	812.912000	Y_R 488.368
Be (234.861 nm)	0.000009	ppm	0.000008	85.44	-42.943600	Y_R 488.368
Bi (223.061 nm)	-0.000437 u	ppm	0.001777	> 100.00	11.645600	Y 377.433
Ca (315.887 nm)	27.889944 o	ppm	0.082306	0.30	22052.737594	Y_R 377.433
Cd (214.439 nm)	0.000052	ppm	0.000074	> 100.00	4.031670	Y 377.433
Co (228.615 nm)	0.000150	ppm	0.000086	57.62	-33.735200	Y 242.219
Cr (205.560 nm)	0.000331	ppm	0.000115	34.76	1.076060	Y 377.433
Cu (324.754 nm)	0.001231	ppm	0.000125	10.17	-239.627000	Y 377.433
Fe (238.204 nm)	0.018629	ppm	0.002053	11.02	93.737695	Y_R 377.433
Fe H (259.940 nm)	0.020043 u	ppm	0.002205	11.00	41.150200	Y_R 377.433
K (766.491 nm)	0.938197	ppm	0.046189	4.92	323.722000	Y_R2 488.368
Li (670.783 nm)	0.020966	ppm	0.000347	1.66	-654.487000	Y_R2 488.368
Mg (279.078 nm)	11.285900	ppm	0.007791	0.07	65232.300000	Y 377.433
Mn (257.610 nm)	0.121949	ppm	0.000175	0.14	28581.500000	Y 377.433
Mo (202.032 nm)	-0.000200 u	ppm	0.000064	31.98	-1.752750	Y 377.433
Na (589.592 nm)	3.125690	ppm	0.000192	0.01	20881.900000	Y_R2 488.368
Na H (589.593 nm)	3.028164 u	ppm	0.067699	2.24	13490.103897	Y_R 488.368
Ni (231.604 nm)	0.005431	ppm	0.000049	0.91	32.953100	Y 377.433
P (213.618 nm)	0.013093	ppm	0.003502	26.74	53.008700	Y 242.219
Pb (220.353 nm)	0.000517	ppm	0.000377	72.97	4.919800	Y 242.219
S (181.972 nm)	5.943009	ppm	0.013507	0.23	3058.175934	Y 377.433
Sb (206.834 nm)	-0.001137 u	ppm	0.001211	> 100.00	-26.347500	Y 377.433
Se (196.026 nm)	-0.002989 u	ppm	0.000036	1.20	10.112300	Y 242.219
Si (288.158 nm)	8.791580	ppm	0.036726	0.42	76490.500000	Y 377.433
Sn (189.925 nm)	-0.001423 u	ppm	0.000805	56.59	6.769010	Y 377.433
Sr (421.552 nm)	0.075028	ppm	0.001034	1.38	15898.129178	Y_R 488.368
Th (288.505 nm)	0.003347	ppm	0.000108	3.22	84.087800	Y 377.433
Ti (336.122 nm)	-0.000189 u	ppm	0.000040	21.17	-167.771000	Y 377.433
Tl (190.794 nm)	0.000619	ppm	0.000384	61.98	-3.983730	Y 377.433
U (409.013 nm)	0.003940	ppm	0.000046	1.16	-195.033000	Y 377.433
V (292.401 nm)	-0.000215 u	ppm	0.000041	19.27	27.425300	Y 377.433
Zn (206.200 nm)	-0.004603 u	ppm	0.000304	6.62	3.700460	Y 377.433
Zr (343.823 nm)	-0.000188 u	ppm	0.000093	49.68	2.029930	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065317	20326.474068	0.002200	0.21
Y 377.433	1.066367	1079363.609232	0.002780	0.26
Y_R 377.433	1.137660	85884.900000	0.005466	0.48
Y_R 488.368	1.113620	48754.900000	0.012096	1.09
Y_R2 488.368	1.090346	94621.902835	0.004513	0.41

Sample Name: 280-116186-C-12-A

Date: 11/6/2018 7:41:21 PM Rack:Tube: 1:80

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001175	ppm	0.000139	11.80	-391.021000	Y 377.433
Al (167.019 nm)	0.062895	ppm	0.001578	2.51	38.923400	Y_R 377.433
Al H (396.152 nm)	0.047646 u	ppm	0.005469	11.48	212.826723	Y_R 377.433
As (188.980 nm)	0.004082	ppm	0.002605	63.80	3.384230	Y 242.219
B (249.678 nm)	0.028576	ppm	0.000359	1.25	767.710000	Y 242.219
Ba (493.408 nm)	0.019456	ppm	0.000562	2.89	2862.290000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000007	> 100.00	21.606300	Y_R 488.368
Bi (223.061 nm)	-0.001471 u	ppm	0.000224	15.25	9.404760	Y 377.433
Ca (315.887 nm)	32.112103 o	ppm	0.196729	0.61	25400.546922	Y_R 377.433
Cd (214.439 nm)	0.000014 u	ppm	0.000100	> 100.00	3.874420	Y 377.433
Co (228.615 nm)	0.003608	ppm	0.000012	0.34	28.936600	Y 242.219
Cr (205.560 nm)	0.000439	ppm	0.000302	68.83	2.108870	Y 377.433
Cu (324.754 nm)	0.001279	ppm	0.000016	1.28	-237.574000	Y 377.433
Fe (238.204 nm)	2.209663	ppm	0.014633	0.66	8197.355352	Y_R 377.433
Fe H (259.940 nm)	2.262780 u	ppm	0.014159	0.63	4283.950000	Y_R 377.433
K (766.491 nm)	0.917794	ppm	0.033711	3.67	300.228000	Y_R2 488.368
Li (670.783 nm)	0.022747	ppm	0.001929	8.48	-595.069000	Y_R2 488.368
Mg (279.078 nm)	13.570600	ppm	0.043276	0.32	78426.500000	Y 377.433
Mn (257.610 nm)	0.581189	ppm	0.001796	0.31	135982.000000	Y 377.433
Mo (202.032 nm)	-0.000173 u	ppm	0.000149	86.09	-1.517480	Y 377.433
Na (589.592 nm)	7.367070	ppm	0.005634	0.08	48844.400000	Y_R2 488.368
Na H (589.593 nm)	7.593796 u	ppm	0.071645	0.94	30233.466587	Y_R 488.368
Ni (231.604 nm)	0.002769	ppm	0.000247	8.93	14.881900	Y 377.433
P (213.618 nm)	-0.001585 u	ppm	0.001850	> 100.00	21.112900	Y 242.219
Pb (220.353 nm)	0.001265	ppm	0.000478	37.76	7.224220	Y 242.219
S (181.972 nm)	14.837909 o	ppm	0.001775	0.01	7614.817390	Y 377.433
Sb (206.834 nm)	-0.001185 u	ppm	0.000007	0.56	-26.993400	Y 377.433
Se (196.026 nm)	-0.004681 u	ppm	0.001916	40.93	8.375330	Y 242.219
Si (288.158 nm)	7.090400	ppm	0.032452	0.46	61869.400000	Y 377.433
Sn (189.925 nm)	-0.000992 u	ppm	0.001031	> 100.00	7.625270	Y 377.433
Sr (421.552 nm)	0.061540	ppm	0.000836	1.36	13068.067293	Y_R 488.368
Th (288.505 nm)	0.000233 u	ppm	0.001280	> 100.00	85.237000	Y 377.433
Ti (336.122 nm)	0.000795	ppm	0.000074	9.34	-14.477400	Y 377.433
Tl (190.794 nm)	-0.000163 u	ppm	0.000250	> 100.00	-5.756320	Y 377.433
U (409.013 nm)	0.004648	ppm	0.002323	49.98	-190.599000	Y 377.433
V (292.401 nm)	-0.000157 u	ppm	0.000339	> 100.00	29.665100	Y 377.433
Zn (206.200 nm)	-0.003866 u	ppm	0.000163	4.21	7.546890	Y 377.433
Zr (343.823 nm)	-0.000082 u	ppm	0.000102	> 100.00	22.335700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067230	20362.971311	0.001229	0.12
Y 377.433	1.067803	1080817.187690	0.001590	0.15
Y_R 377.433	1.136400	85790.100000	0.003248	0.29
Y_R 488.368	1.103260	48301.200000	0.008299	0.75
Y_R2 488.368	1.096042	95116.275011	0.003199	0.29

Sample Name: 280-116270-E-1-A

Date: 11/6/2018 7:44:43 PM Rack:Tube: 1:81

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001265	ppm	0.000181	14.29	-387.056000	Y 377.433
Al (167.019 nm)	-0.004118 u	ppm	0.000892	21.66	0.416012	Y_R 377.433
Al H (396.152 nm)	0.003982 u	ppm	0.004411	> 100.00	128.455318	Y_R 377.433
As (188.980 nm)	0.026287	ppm	0.002114	8.04	31.361100	Y 242.219
B (249.678 nm)	0.058725	ppm	0.000316	0.54	1523.370000	Y 242.219
Ba (493.408 nm)	0.073032	ppm	0.000370	0.51	9079.150000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000004	> 100.00	-30.958600	Y_R 488.368
Bi (223.061 nm)	-0.002076 u	ppm	0.000609	29.36	7.603220	Y 377.433
Ca (315.887 nm)	90.338875 o	ppm	0.253847	0.28	71569.370742	Y_R 377.433
Cd (214.439 nm)	0.000040	ppm	0.000011	26.44	3.798320	Y 377.433
Co (228.615 nm)	0.002280	ppm	0.000113	4.95	4.845550	Y 242.219
Cr (205.560 nm)	0.000351	ppm	0.000351	> 100.00	1.239660	Y 377.433
Cu (324.754 nm)	0.000583	ppm	0.000079	13.59	-311.748000	Y 377.433
Fe (238.204 nm)	0.525197	ppm	0.001190	0.23	1967.298285	Y_R 377.433
Fe H (259.940 nm)	0.525699 u	ppm	0.002823	0.54	997.751000	Y_R 377.433
K (766.491 nm)	2.300040	ppm	0.070346	3.06	1891.860000	Y_R2 488.368
Li (670.783 nm)	0.027829	ppm	0.001318	4.73	-425.572000	Y_R2 488.368
Mg (279.078 nm)	26.035300	ppm	0.015221	0.06	150432.000000	Y 377.433
Mn (257.610 nm)	0.173694	ppm	0.000188	0.11	40682.700000	Y 377.433
Mo (202.032 nm)	0.001588	ppm	0.000023	1.48	13.648800	Y 377.433
Na (589.592 nm)	16.497300 o	ppm	0.001315	0.01	109069.000000	Y_R2 488.368
Na H (589.593 nm)	16.770840	ppm	0.059492	0.35	63904.956082	Y_R 488.368
Ni (231.604 nm)	0.002872	ppm	0.000012	0.40	15.510100	Y 377.433
P (213.618 nm)	0.009095	ppm	0.002109	23.19	44.321100	Y 242.219
Pb (220.353 nm)	0.001057	ppm	0.001081	> 100.00	6.495820	Y 242.219
S (181.972 nm)	25.037679 o	ppm	0.085424	0.34	12837.614698	Y 377.433
Sb (206.834 nm)	-0.000623 u	ppm	0.002631	> 100.00	-25.073900	Y 377.433
Se (196.026 nm)	-0.000623 u	ppm	0.001381	> 100.00	12.409800	Y 242.219
Si (288.158 nm)	7.397280	ppm	0.011192	0.15	64506.900000	Y 377.433
Sn (189.925 nm)	-0.000114 u	ppm	0.001014	> 100.00	9.371910	Y 377.433
Sr (421.552 nm)	0.343110	ppm	0.001018	0.30	72146.192527	Y_R 488.368
Th (288.505 nm)	0.001211 u	ppm	0.002041	> 100.00	79.646800	Y 377.433
Ti (336.122 nm)	-0.000430 u	ppm	0.000019	4.38	-6.651980	Y 377.433
Tl (190.794 nm)	0.000642 u	ppm	0.001374	> 100.00	-3.943850	Y 377.433
U (409.013 nm)	0.004128	ppm	0.002849	69.02	-205.565000	Y 377.433
V (292.401 nm)	-0.000562 u	ppm	0.000166	29.59	15.501700	Y 377.433
Zn (206.200 nm)	-0.005315 u	ppm	0.000265	4.99	-0.020766	Y 377.433
Zr (343.823 nm)	-0.000191 u	ppm	0.000003	1.40	3.044790	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067060	20359.735883	0.003300	0.31
Y 377.433	1.070755	1083804.824804	0.003254	0.30
Y_R 377.433	1.140360	86089.200000	0.006913	0.61
Y_R 488.368	1.118610	48973.500000	0.000054	0.00
Y_R2 488.368	1.102911	95712.366355	0.001733	0.16

Sample Name: 280-116270-C-8-A

Date: 11/6/2018 7:48:05 PM
Rack:Tube: 1:82

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001320	ppm	0.000215	16.31	-384.547000	Y 377.433
Al (167.019 nm)	0.008311	ppm	0.001773	21.33	7.435720	Y_R 377.433
Al H (396.152 nm)	0.011214 u	ppm	0.001723	15.36	152.306049	Y_R 377.433
As (188.980 nm)	0.005727	ppm	0.000218	3.80	5.468870	Y 242.219
B (249.678 nm)	0.071338	ppm	0.000067	0.09	1838.180000	Y 242.219
Ba (493.408 nm)	0.053727	ppm	0.000078	0.15	6846.540000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000024	> 100.00	-25.783400	Y_R 488.368
Bi (223.061 nm)	-0.002984 u	ppm	0.000331	11.10	5.338440	Y 377.433
Ca (315.887 nm)	103.680743 o	ppm	0.203382	0.20	82148.324901	Y_R 377.433
Cd (214.439 nm)	0.000097	ppm	0.000087	89.49	7.334090	Y 377.433
Co (228.615 nm)	-0.000393 u	ppm	0.000119	30.39	-43.563100	Y 242.219
Cr (205.560 nm)	0.000275	ppm	0.000075	27.12	0.047882	Y 377.433
Cu (324.754 nm)	0.000501	ppm	0.000160	31.99	-324.470000	Y 377.433
Fe (238.204 nm)	0.658444	ppm	0.000046	0.01	2460.117232	Y_R 377.433
Fe H (259.940 nm)	0.663093 u	ppm	0.003992	0.60	1257.670000	Y_R 377.433
K (766.491 nm)	2.386880	ppm	0.062614	2.62	1991.850000	Y_R2 488.368
Li (670.783 nm)	0.026703	ppm	0.002964	11.10	-463.154000	Y_R2 488.368
Mg (279.078 nm)	26.996800	ppm	0.002425	0.01	155986.000000	Y 377.433
Mn (257.610 nm)	0.207651	ppm	0.000235	0.11	48624.000000	Y 377.433
Mo (202.032 nm)	-0.000042 u	ppm	0.000106	> 100.00	-0.388072	Y 377.433
Na (589.592 nm)	11.274700 o	ppm	0.022148	0.20	74643.700000	Y_R2 488.368
Na H (589.593 nm)	11.511814	ppm	0.007852	0.07	44620.051314	Y_R 488.368
Ni (231.604 nm)	-0.000463 u	ppm	0.000309	66.82	-7.230420	Y 377.433
P (213.618 nm)	0.014557	ppm	0.000486	3.34	56.188400	Y 242.219
Pb (220.353 nm)	0.001271	ppm	0.000060	4.70	7.131440	Y 242.219
S (181.972 nm)	33.386494 o	ppm	0.027223	0.08	17113.533335	Y 377.433
Sb (206.834 nm)	-0.001718 u	ppm	0.000835	48.56	-28.097200	Y 377.433
Se (196.026 nm)	-0.001301 u	ppm	0.000989	76.04	11.737400	Y 242.219
Si (288.158 nm)	7.286780	ppm	0.024671	0.34	63557.200000	Y 377.433
Sn (189.925 nm)	-0.000654 u	ppm	0.000679	> 100.00	8.297450	Y 377.433
Sr (421.552 nm)	0.276939	ppm	0.000280	0.10	58262.528504	Y_R 488.368
Th (288.505 nm)	-0.002345 u	ppm	0.000099	4.20	71.258200	Y 377.433
Ti (336.122 nm)	-0.000479 u	ppm	0.000077	16.11	28.156300	Y 377.433
Tl (190.794 nm)	0.000892	ppm	0.000723	81.04	-3.400240	Y 377.433
U (409.013 nm)	0.004566	ppm	0.003997	87.54	-205.995000	Y 377.433
V (292.401 nm)	-0.000316 u	ppm	0.000061	19.41	24.396000	Y 377.433
Zn (206.200 nm)	-0.005032 u	ppm	0.000496	9.86	1.457760	Y 377.433
Zr (343.823 nm)	-0.000177 u	ppm	0.000090	51.03	5.309770	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063940	20300.205825	0.003100	0.29
Y 377.433	1.067351	1080359.037094	0.003867	0.36
Y_R 377.433	1.138400	85941.100000	0.004823	0.42
Y_R 488.368	1.107570	48490.200000	0.002707	0.24
Y_R2 488.368	1.099976	95457.663322	0.002556	0.23

Sample Name: 280-116270-E-9-A

Date: 11/6/2018 7:51:28 PM
Rack:Tube: 1:83

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001370	ppm	0.000191	13.91	-382.286000	Y 377.433
Al (167.019 nm)	0.005055	ppm	0.000694	13.73	5.760600	Y_R 377.433
Al H (396.152 nm)	-0.002390 u	ppm	0.001472	61.59	117.171084	Y_R 377.433
As (188.980 nm)	0.030162	ppm	0.002131	7.06	36.238000	Y 242.219
B (249.678 nm)	0.163362	ppm	0.000215	0.13	4136.780000	Y 242.219
Ba (493.408 nm)	0.081815	ppm	0.000047	0.06	10099.200000	Y_R 488.368
Be (234.861 nm)	0.000013 u	ppm	0.000026	> 100.00	-15.371900	Y_R 488.368
Bi (223.061 nm)	-0.004793 u	ppm	0.000414	8.64	0.815681	Y 377.433
Ca (315.887 nm)	101.331659 o	ppm	0.095885	0.09	80285.702733	Y_R 377.433
Cd (214.439 nm)	-0.000021 u	ppm	0.000022	> 100.00	0.464129	Y 377.433
Co (228.615 nm)	0.003582	ppm	0.000358	10.00	28.423600	Y 242.219
Cr (205.560 nm)	0.000415	ppm	0.000189	45.45	2.120030	Y 377.433
Cu (324.754 nm)	0.000624	ppm	0.000514	82.35	-316.269000	Y 377.433
Fe (238.204 nm)	0.863956	ppm	0.002883	0.33	3220.208807	Y_R 377.433
Fe H (259.940 nm)	0.873602 u	ppm	0.005170	0.59	1655.910000	Y_R 377.433
K (766.491 nm)	4.576280	ppm	0.014908	0.33	4512.890000	Y_R2 488.368
Li (670.783 nm)	0.047902	ppm	0.001805	3.77	243.856000	Y_R2 488.368
Mg (279.078 nm)	32.261700	ppm	0.047118	0.15	186398.000000	Y 377.433
Mn (257.610 nm)	0.074773	ppm	0.000088	0.12	17548.500000	Y 377.433
Mo (202.032 nm)	0.001602	ppm	0.000491	30.65	13.770200	Y 377.433
Na (589.592 nm)	15.882000 o	ppm	0.059990	0.38	105036.000000	Y_R2 488.368
Na H (589.593 nm)	16.323799	ppm	0.067439	0.41	62275.755276	Y_R 488.368
Ni (231.604 nm)	0.001364	ppm	0.000243	17.80	5.244070	Y 377.433
P (213.618 nm)	0.009061	ppm	0.000170	1.87	44.246500	Y 242.219
Pb (220.353 nm)	-0.000661 u	ppm	0.000177	26.75	1.597000	Y 242.219
S (181.972 nm)	23.098608 o	ppm	0.032386	0.14	11844.279180	Y 377.433
Sb (206.834 nm)	0.000190 u	ppm	0.000425	> 100.00	-22.925200	Y 377.433
Se (196.026 nm)	-0.000816 u	ppm	0.000684	83.82	12.069500	Y 242.219
Si (288.158 nm)	7.208380	ppm	0.030743	0.43	62883.400000	Y 377.433
Sn (189.925 nm)	-0.000437 u	ppm	0.000620	> 100.00	8.729470	Y 377.433
Sr (421.552 nm)	0.529157	ppm	0.002008	0.38	111181.969250	Y_R 488.368
Th (288.505 nm)	0.000141 u	ppm	0.003450	> 100.00	74.887700	Y 377.433
Ti (336.122 nm)	-0.000487 u	ppm	0.000002	0.51	19.638200	Y 377.433
Tl (190.794 nm)	0.001407	ppm	0.000484	34.43	-2.266770	Y 377.433
U (409.013 nm)	0.002066	ppm	0.001741	84.27	-216.660000	Y 377.433
V (292.401 nm)	0.000024 u	ppm	0.000271	> 100.00	36.615300	Y 377.433
Zn (206.200 nm)	-0.005229 u	ppm	0.000014	0.27	0.429187	Y 377.433
Zr (343.823 nm)	-0.000141 u	ppm	0.000003	2.20	10.695000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.059450	20214.522881	0.000006	0.00
Y 377.433	1.061505	1074442.076040	0.000620	0.06
Y_R 377.433	1.130360	85334.300000	0.000118	0.01
Y_R 488.368	1.099940	48156.200000	0.002566	0.23
Y_R2 488.368	1.091902	94757.003995	0.002811	0.26

Sample Name: 280-116270-G-12-A

Date: 11/6/2018 7:54:50 PM Rack:Tube: 1:84

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001067	ppm	0.000016	1.51	-396.058000	Y 377.433
Al (167.019 nm)	0.002745 u	ppm	0.004348	> 100.00	3.890660	Y_R 377.433
Al H (396.152 nm)	-0.010427 u	ppm	0.001823	17.48	62.705654	Y_R 377.433
As (188.980 nm)	0.000368 u	ppm	0.001490	> 100.00	-1.273740	Y 242.219
B (249.678 nm)	0.037160	ppm	0.000217	0.58	985.385000	Y 242.219
Ba (493.408 nm)	0.015540	ppm	0.000260	1.67	2404.590000	Y_R 488.368
Be (234.861 nm)	0.000016	ppm	0.000001	6.99	-41.339800	Y_R 488.368
Bi (223.061 nm)	0.001037	ppm	0.000034	3.29	15.354700	Y 377.433
Ca (315.887 nm)	22.828210 o	ppm	0.018331	0.08	18039.218050	Y_R 377.433
Cd (214.439 nm)	0.000041 u	ppm	0.000061	> 100.00	3.348790	Y 377.433
Co (228.615 nm)	-0.000117 u	ppm	0.000130	> 100.00	-38.564600	Y 242.219
Cr (205.560 nm)	0.000632	ppm	0.000163	25.88	5.652000	Y 377.433
Cu (324.754 nm)	0.001591	ppm	0.000133	8.38	-217.053000	Y 377.433
Fe (238.204 nm)	0.009407	ppm	0.000956	10.16	59.630720	Y_R 377.433
Fe H (259.940 nm)	0.014902 u	ppm	0.000145	0.97	31.424600	Y_R 377.433
K (766.491 nm)	1.482570	ppm	0.048614	3.28	950.549000	Y_R2 488.368
Li (670.783 nm)	0.011006	ppm	0.001400	12.72	-986.654000	Y_R2 488.368
Mg (279.078 nm)	7.042510	ppm	0.000573	0.01	40720.600000	Y 377.433
Mn (257.610 nm)	0.000474	ppm	0.000001	0.15	172.753000	Y 377.433
Mo (202.032 nm)	-0.000350 u	ppm	0.000084	24.03	-3.043770	Y 377.433
Na (589.592 nm)	3.186580	ppm	0.010098	0.32	21310.600000	Y_R2 488.368
Na H (589.593 nm)	3.078414 u	ppm	0.013485	0.44	13687.118436	Y_R 488.368
Ni (231.604 nm)	0.001063	ppm	0.000163	15.32	3.148550	Y 377.433
P (213.618 nm)	0.009181	ppm	0.000327	3.56	44.507900	Y 242.219
Pb (220.353 nm)	-0.000213 u	ppm	0.000758	> 100.00	2.822790	Y 242.219
S (181.972 nm)	10.191735	ppm	0.002004	0.02	5233.857899	Y 377.433
Sb (206.834 nm)	0.002645	ppm	0.001043	39.44	-15.991100	Y 377.433
Se (196.026 nm)	-0.004202 u	ppm	0.001152	27.41	8.807230	Y 242.219
Si (288.158 nm)	4.691870	ppm	0.004378	0.09	41254.800000	Y 377.433
Sn (189.925 nm)	-0.002121 u	ppm	0.000045	2.14	5.380660	Y 377.433
Sr (421.552 nm)	0.062156	ppm	0.000115	0.19	13197.313566	Y_R 488.368
Th (288.505 nm)	0.001145 u	ppm	0.002293	> 100.00	75.968300	Y 377.433
Ti (336.122 nm)	-0.000140 u	ppm	0.000049	34.81	-176.658000	Y 377.433
Tl (190.794 nm)	-0.000392 u	ppm	0.000018	4.58	-6.204780	Y 377.433
U (409.013 nm)	0.001737	ppm	0.000150	8.61	-204.045000	Y 377.433
V (292.401 nm)	-0.000185 u	ppm	0.000228	> 100.00	28.240100	Y 377.433
Zn (206.200 nm)	-0.001876 u	ppm	0.000384	20.48	17.944400	Y 377.433
Zr (343.823 nm)	-0.000267 u	ppm	0.000037	14.03	-8.377620	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087048	20741.112672	0.003002	0.28
Y 377.433	1.086109	1099346.052361	0.001972	0.18
Y_R 377.433	1.150760	86874.300000	0.002200	0.19
Y_R 488.368	1.120370	49050.400000	0.004008	0.36
Y_R2 488.368	1.117120	96945.380672	0.008977	0.80

Sample Name: 280-116270-G-13-A

Date: 11/6/2018 7:58:13 PM Rack:Tube: 1:85

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001362	ppm	0.000448	32.94	-382.659000	Y 377.433
Al (167.019 nm)	0.020108	ppm	0.001209	6.01	13.591700	Y_R 377.433
Al H (396.152 nm)	0.033389 u	ppm	0.003020	9.04	236.945022	Y_R 377.433
As (188.980 nm)	-0.000887 u	ppm	0.000990	> 100.00	-2.854070	Y 242.219
B (249.678 nm)	0.110808	ppm	0.000360	0.32	2825.080000	Y 242.219
Ba (493.408 nm)	0.055023	ppm	0.000187	0.34	7011.440000	Y_R 488.368
Be (234.861 nm)	0.000016	ppm	0.000003	20.61	-40.369700	Y_R 488.368
Bi (223.061 nm)	-0.002006 u	ppm	0.000126	6.26	7.697010	Y 377.433
Ca (315.887 nm)	170.004549 o	ppm	0.150184	0.09	134737.399927	Y_R 377.433
Cd (214.439 nm)	-0.000027 u	ppm	0.000050	> 100.00	-0.718634	Y 377.433
Co (228.615 nm)	-0.000473 u	ppm	0.000426	90.01	-45.013100	Y 242.219
Cr (205.560 nm)	0.000375	ppm	0.000078	20.90	1.742240	Y 377.433
Cu (324.754 nm)	0.003952	ppm	0.000423	10.71	-170.496000	Y 377.433
Fe (238.204 nm)	0.039482	ppm	0.000117	0.30	170.863203	Y_R 377.433
Fe H (259.940 nm)	0.038806 u	ppm	0.000499	1.28	76.646000	Y_R 377.433
K (766.491 nm)	3.125550	ppm	0.009768	0.31	2842.410000	Y_R2 488.368
Li (670.783 nm)	0.033031	ppm	0.000095	0.29	-252.104000	Y_R2 488.368
Mg (279.078 nm)	66.266600 o	ppm	0.046012	0.07	382830.000000	Y 377.433
Mn (257.610 nm)	0.805210	ppm	0.000908	0.11	188372.000000	Y 377.433
Mo (202.032 nm)	-0.000163 u	ppm	0.000037	23.03	-1.428800	Y 377.433
Na (589.592 nm)	12.634800 o	ppm	0.053031	0.42	83601.700000	Y_R2 488.368
Na H (589.593 nm)	12.929980	ppm	0.083023	0.64	49817.018618	Y_R 488.368
Ni (231.604 nm)	-0.001071 u	ppm	0.000168	15.68	-11.401700	Y 377.433
P (213.618 nm)	0.040060	ppm	0.000482	1.20	111.607000	Y 242.219
Pb (220.353 nm)	0.001100	ppm	0.000865	78.63	6.566840	Y 242.219
S (181.972 nm)	131.432162 bo	ppm	0.216358	0.16	67328.971786	Y 377.433
Sb (206.834 nm)	-0.001132 u	ppm	0.002373	> 100.00	-26.333800	Y 377.433
Se (196.026 nm)	-0.003042 u	ppm	0.002841	93.38	10.619300	Y 242.219
Si (288.158 nm)	6.511820	ppm	0.014791	0.23	56896.700000	Y 377.433
Sn (189.925 nm)	-0.001357 u	ppm	0.000150	11.03	6.900970	Y 377.433
Sr (421.552 nm)	0.575831	ppm	0.002315	0.40	120975.109230	Y_R 488.368
Th (288.505 nm)	0.004811	ppm	0.001341	27.87	101.706000	Y 377.433
Ti (336.122 nm)	-0.000445 u	ppm	0.000084	18.91	240.983000	Y 377.433
Tl (190.794 nm)	0.000502 u	ppm	0.001125	> 100.00	-4.242570	Y 377.433
U (409.013 nm)	-0.002947 u	ppm	0.000419	14.21	-253.178000	Y 377.433
V (292.401 nm)	-0.000077 u	ppm	0.000076	98.51	34.395200	Y 377.433
Zn (206.200 nm)	0.040397	ppm	0.000050	0.12	238.721000	Y 377.433
Zr (343.823 nm)	-0.000004 u	ppm	0.000008	> 100.00	26.220700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079839	20603.553399	0.002080	0.19
Y 377.433	1.074063	1087153.152946	0.000403	0.04
Y_R 377.433	1.139330	86011.100000	0.001758	0.15
Y_R 488.368	1.105130	48383.200000	0.001988	0.18
Y_R2 488.368	1.089529	94551.014846	0.001215	0.11

Sample Name: 280-116270-E-14-A

Date: 11/6/2018 8:01:35 PM Rack:Tube: 1:86

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001078	ppm	0.000408	37.84	-395.670000	Y 377.433
Al (167.019 nm)	0.036424	ppm	0.000945	2.59	22.757700	Y_R 377.433
Al H (396.152 nm)	0.046381 u	ppm	0.006160	13.28	251.595486	Y_R 377.433
As (188.980 nm)	-0.000629 u	ppm	0.000234	37.17	-2.530110	Y 242.219
B (249.678 nm)	0.029173	ppm	0.000170	0.58	785.684000	Y 242.219
Ba (493.408 nm)	0.024562	ppm	0.000154	0.63	3474.130000	Y_R 488.368
Be (234.861 nm)	-0.000003 u	ppm	0.000009	> 100.00	-42.736100	Y_R 488.368
Bi (223.061 nm)	-0.001625 u	ppm	0.000002	0.15	8.673640	Y 377.433
Ca (315.887 nm)	128.558769 o	ppm	0.006501	0.01	101874.459803	Y_R 377.433
Cd (214.439 nm)	0.000065	ppm	0.000056	86.30	4.915970	Y 377.433
Co (228.615 nm)	0.000079 u	ppm	0.000287	> 100.00	-34.996600	Y 242.219
Cr (205.560 nm)	0.000583	ppm	0.000116	19.90	4.879830	Y 377.433
Cu (324.754 nm)	0.001297	ppm	0.000170	13.09	-295.148000	Y 377.433
Fe (238.204 nm)	0.141383	ppm	0.000214	0.15	547.749418	Y_R 377.433
Fe H (259.940 nm)	0.141472 u	ppm	0.002719	1.92	270.870000	Y_R 377.433
K (766.491 nm)	1.265490	ppm	0.073107	5.78	700.592000	Y_R2 488.368
Li (670.783 nm)	0.031876	ppm	0.000900	2.82	-290.630000	Y_R2 488.368
Mg (279.078 nm)	40.790000	ppm	0.014498	0.04	235664.000000	Y 377.433
Mn (257.610 nm)	0.146151	ppm	0.000161	0.11	34241.300000	Y 377.433
Mo (202.032 nm)	-0.000075 u	ppm	0.000097	> 100.00	-0.676223	Y 377.433
Na (589.592 nm)	14.142100 o	ppm	0.008697	0.06	93464.300000	Y_R2 488.368
Na H (589.593 nm)	14.481785	ppm	0.017829	0.12	55473.312535	Y_R 488.368
Ni (231.604 nm)	0.001485	ppm	0.000591	39.78	6.035320	Y 377.433
P (213.618 nm)	0.002166	ppm	0.000675	31.15	29.263700	Y 242.219
Pb (220.353 nm)	0.000772	ppm	0.000678	87.73	5.636790	Y 242.219
S (181.972 nm)	74.300472 o	ppm	0.048927	0.07	38067.426064	Y 377.433
Sb (206.834 nm)	-0.001179 u	ppm	0.000580	49.19	-26.484700	Y 377.433
Se (196.026 nm)	0.000108 u	ppm	0.000852	> 100.00	13.192100	Y 242.219
Si (288.158 nm)	5.004210	ppm	0.021102	0.42	43939.300000	Y 377.433
Sn (189.925 nm)	-0.000706 u	ppm	0.000645	91.34	8.194130	Y 377.433
Sr (421.552 nm)	0.267273	ppm	0.001286	0.48	56234.421834	Y_R 488.368
Th (288.505 nm)	0.001234 u	ppm	0.002059	> 100.00	79.194700	Y 377.433
Ti (336.122 nm)	0.000024 u	ppm	0.000068	> 100.00	177.851000	Y 377.433
Tl (190.794 nm)	0.001552	ppm	0.000887	57.19	-1.938680	Y 377.433
U (409.013 nm)	-0.000442 u	ppm	0.002959	> 100.00	-233.870000	Y 377.433
V (292.401 nm)	-0.000158 u	ppm	0.000475	> 100.00	30.373600	Y 377.433
Zn (206.200 nm)	-0.002248 u	ppm	0.000464	20.64	15.997300	Y 377.433
Zr (343.823 nm)	-0.000199 u	ppm	0.000056	27.96	0.976427	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103758	21059.931661	0.000695	0.06
Y 377.433	1.099712	1113115.245503	0.000054	0.00
Y_R 377.433	1.165420	87980.600000	0.000433	0.04
Y_R 488.368	1.131840	49552.500000	0.006581	0.58
Y_R2 488.368	1.127049	97807.078140	0.003571	0.32

Sample Name: CCVH-5408055

Date: 11/6/2018 8:04:58 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000861 u	ppm	0.000252	29.24	-728.362000	Y 377.433
Al (167.019 nm)	45.742100 o	ppm	0.058394	0.13	25537.900000	Y_R 377.433
Al H (396.152 nm)	48.515794	ppm	0.082849	0.17	122103.322625	Y_R 377.433
As (188.980 nm)	-0.000951 u	ppm	0.001465	> 100.00	-3.368830	Y 242.219
B (249.678 nm)	-0.001014 u	ppm	0.000187	18.45	-41.947000	Y 242.219
Ba (493.408 nm)	-0.000413 u	ppm	0.000197	47.65	597.299000	Y_R 488.368
Be (234.861 nm)	-0.000071 u	ppm	0.000061	85.73	1464.420000	Y_R 488.368
Bi (223.061 nm)	0.985858	ppm	0.000301	0.03	2503.300000	Y 377.433
Ca (315.887 nm)	-0.002904 u	ppm	0.001527	52.57	-63.891497	Y_R 377.433
Cd (214.439 nm)	-0.000214 u	ppm	0.000073	34.28	35.230400	Y 377.433
Co (228.615 nm)	0.003032	ppm	0.000283	9.33	18.477300	Y 242.219
Cr (205.560 nm)	0.000151	ppm	0.000071	47.07	-15.172200	Y 377.433
Cu (324.754 nm)	-0.003281 u	ppm	0.000026	0.79	-138.151000	Y 377.433
Fe (238.204 nm)	48.373409 o	ppm	0.063879	0.13	178935.584257	Y_R 377.433
Fe H (259.940 nm)	49.134100	ppm	0.039811	0.08	92955.100000	Y_R 377.433
K (766.491 nm)	0.132603	ppm	0.028291	21.34	-603.900000	Y_R2 488.368
Li (670.783 nm)	0.007315	ppm	0.000982	13.42	-1109.760000	Y_R2 488.368
Mg (279.078 nm)	-0.017949 u	ppm	0.000913	5.09	-418.372000	Y 377.433
Mn (257.610 nm)	0.001421	ppm	0.000018	1.28	394.066000	Y 377.433
Mo (202.032 nm)	-0.000113 u	ppm	0.000007	6.41	-0.996922	Y 377.433
Na (589.592 nm)	244.655000 o	ppm	0.397506	0.16	1611190.000000	Y_R2 488.368
Na H (589.593 nm)	252.860811	ppm	3.749642	1.48	928772.962696	Y_R 488.368
Ni (231.604 nm)	0.004274	ppm	0.000357	8.35	27.071100	Y 377.433
P (213.618 nm)	-0.005608 u	ppm	0.002103	37.51	12.370100	Y 242.219
Pb (220.353 nm)	-0.003712 u	ppm	0.000620	16.69	9.895970	Y 242.219
S (181.972 nm)	4.954515	ppm	0.005549	0.11	2551.624624	Y 377.433
Sb (206.834 nm)	-0.003433 u	ppm	0.000021	0.62	-78.035600	Y 377.433
Se (196.026 nm)	-0.003259 u	ppm	0.001085	33.30	0.916055	Y 242.219
Si (288.158 nm)	0.014144	ppm	0.000369	2.61	1051.210000	Y 377.433
Sn (189.925 nm)	0.000853 u	ppm	0.001778	> 100.00	11.292700	Y 377.433
Sr (421.552 nm)	0.000334	ppm	0.000083	24.99	226.098973	Y_R 488.368
Th (288.505 nm)	4.945230	ppm	0.014495	0.29	12927.500000	Y 377.433
Ti (336.122 nm)	0.001011	ppm	0.000041	4.03	-84.047300	Y 377.433
Tl (190.794 nm)	-0.004037 u	ppm	0.000877	21.73	-15.507600	Y 377.433
U (409.013 nm)	9.871340	ppm	0.024402	0.25	44491.400000	Y 377.433
V (292.401 nm)	0.003826	ppm	0.000474	12.38	11.962800	Y 377.433
Zn (206.200 nm)	-0.004914 u	ppm	0.000034	0.69	2.073880	Y 377.433
Zr (343.823 nm)	-0.004421 u	ppm	0.000024	0.55	-412.068000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120442	21378.263010	0.001778	0.16
Y 377.433	1.094083	1107417.588160	0.001925	0.18
Y_R 377.433	1.156450	87303.700000	0.000324	0.03
Y_R 488.368	1.132090	49563.600000	0.013159	1.16
Y_R2 488.368	1.111786	96482.524397	0.005680	0.51

Sample Name: CCV-5407546

Date: 11/6/2018 8:08:21 PM
Rack:Tube: S1:2
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.489539	ppm	0.001128	0.23	21986.500000	Y 377.433
Al (167.019 nm)	0.516635	ppm	0.001190	0.23	292.074000	Y_R 377.433
Al H (396.152 nm)	0.489445 u	ppm	0.003624	0.74	1353.034373	Y_R 377.433
As (188.980 nm)	0.978430	ppm	0.001857	0.19	1230.390000	Y 242.219
B (249.678 nm)	0.482954	ppm	0.000553	0.11	12139.400000	Y 242.219
Ba (493.408 nm)	0.489603	ppm	0.000702	0.14	57316.700000	Y_R 488.368
Be (234.861 nm)	0.483279	ppm	0.001467	0.30	144021.000000	Y_R 488.368
Bi (223.061 nm)	-0.001985 u	ppm	0.000767	38.66	8.155780	Y 377.433
Ca (315.887 nm)	5.064781	ppm	0.002074	0.04	3954.632274	Y_R 377.433
Cd (214.439 nm)	0.501760	ppm	0.002407	0.48	29992.100000	Y 377.433
Co (228.615 nm)	0.490576	ppm	0.003344	0.68	8866.570000	Y 242.219
Cr (205.560 nm)	0.496590	ppm	0.001932	0.39	7549.540000	Y 377.433
Cu (324.754 nm)	0.496007	ppm	0.001606	0.32	27348.200000	Y 377.433
Fe (238.204 nm)	2.464432	ppm	0.000562	0.02	9139.624328	Y_R 377.433
Fe H (259.940 nm)	2.510480 u	ppm	0.000852	0.03	4752.550000	Y_R 377.433
K (766.491 nm)	49.479400	ppm	0.297583	0.60	56217.800000	Y_R2 488.368
Li (670.783 nm)	0.981807	ppm	0.004731	0.48	31390.300000	Y_R2 488.368
Mg (279.078 nm)	19.896600	ppm	0.024857	0.12	114968.000000	Y 377.433
Mn (257.610 nm)	0.498958	ppm	0.000820	0.16	116751.000000	Y 377.433
Mo (202.032 nm)	0.504666	ppm	0.001253	0.25	4346.130000	Y 377.433
Na (589.592 nm)	5.042990	ppm	0.030810	0.61	34491.700000	Y_R2 488.368
Na H (589.593 nm)	5.287914 u	ppm	0.003886	0.07	22228.166946	Y_R 488.368
Ni (231.604 nm)	0.511270	ppm	0.000738	0.14	3484.880000	Y 377.433
P (213.618 nm)	0.929705	ppm	0.005165	0.56	2044.800000	Y 242.219
Pb (220.353 nm)	0.989664	ppm	0.002344	0.24	2839.960000	Y 242.219
S (181.972 nm)	0.014693	ppm	0.002810	19.12	22.925418	Y 377.433
Sb (206.834 nm)	0.997728	ppm	0.001563	0.16	2716.880000	Y 377.433
Se (196.026 nm)	0.968790	ppm	0.002074	0.21	977.187000	Y 242.219
Si (288.158 nm)	4.904600	ppm	0.013592	0.28	43083.200000	Y 377.433
Sn (189.925 nm)	1.022990	ppm	0.000468	0.05	2043.080000	Y 377.433
Sr (421.552 nm)	0.499357	ppm	0.001259	0.25	104929.390938	Y_R 488.368
Th (288.505 nm)	0.004274	ppm	0.003834	89.70	100.250000	Y 377.433
Ti (336.122 nm)	0.493520	ppm	0.000696	0.14	70071.400000	Y 377.433
Tl (190.794 nm)	1.008540	ppm	0.003836	0.38	2209.430000	Y 377.433
U (409.013 nm)	0.006243	ppm	0.000239	3.83	-216.815000	Y 377.433
V (292.401 nm)	0.493291	ppm	0.000996	0.20	17814.600000	Y 377.433
Zn (206.200 nm)	0.497847	ppm	0.000674	0.14	2627.830000	Y 377.433
Zr (343.823 nm)	0.496014	ppm	0.001033	0.21	65251.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127691	21516.587743	0.000084	0.01
Y 377.433	1.108607	1122118.613629	0.001390	0.13
Y_R 377.433	1.162580	87766.400000	0.003427	0.29
Y_R 488.368	1.131190	49524.400000	0.003719	0.33
Y_R2 488.368	1.120270	97218.761425	0.006199	0.55

Sample Name: CCB

Date: 11/6/2018 8:11:42 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000759	ppm	0.000148	19.51	-410.052000	Y 377.433
Al (167.019 nm)	-0.002226 u	ppm	0.003378	> 100.00	1.112410	Y_R 377.433
Al H (396.152 nm)	-0.018210 u	ppm	0.003730	20.48	33.238987	Y_R 377.433
As (188.980 nm)	0.000811 u	ppm	0.001276	> 100.00	-0.715323	Y 242.219
B (249.678 nm)	0.000539	ppm	0.000198	36.85	70.603100	Y 242.219
Ba (493.408 nm)	-0.000670 u	ppm	0.000057	8.56	521.868000	Y_R 488.368
Be (234.861 nm)	0.000068	ppm	0.000005	6.70	-26.104200	Y_R 488.368
Bi (223.061 nm)	-0.000259 u	ppm	0.001366	> 100.00	12.089700	Y 377.433
Ca (315.887 nm)	0.002516	ppm	0.002491	99.03	-59.594718	Y_R 377.433
Cd (214.439 nm)	0.000094	ppm	0.000058	61.48	6.511310	Y 377.433
Co (228.615 nm)	0.000298	ppm	0.000157	52.55	-31.052100	Y 242.219
Cr (205.560 nm)	0.000135	ppm	0.000001	0.84	-1.907610	Y 377.433
Cu (324.754 nm)	0.001385	ppm	0.000139	10.02	-215.316000	Y 377.433
Fe (238.204 nm)	-0.001367 u	ppm	0.001287	94.13	19.782755	Y_R 377.433
Fe H (259.940 nm)	0.003309 u	ppm	0.000041	1.25	9.492840	Y_R 377.433
K (766.491 nm)	0.106951	ppm	0.012107	11.32	-633.438000	Y_R2 488.368
Li (670.783 nm)	0.008579	ppm	0.002753	32.09	-1067.600000	Y_R2 488.368
Mg (279.078 nm)	0.001423	ppm	0.000607	42.67	47.628300	Y 377.433
Mn (257.610 nm)	0.000043	ppm	0.000009	19.89	71.794000	Y 377.433
Mo (202.032 nm)	0.000034 u	ppm	0.000111	> 100.00	0.262850	Y 377.433
Na (589.592 nm)	0.030279	ppm	0.007249	23.94	495.750000	Y_R2 488.368
Na H (589.593 nm)	-0.154024 u	ppm	0.002496	1.62	1829.543917	Y_R 488.368
Ni (231.604 nm)	-0.000165 u	ppm	0.000704	> 100.00	-5.223720	Y 377.433
P (213.618 nm)	-0.003504 u	ppm	0.000752	21.47	16.942800	Y 242.219
Pb (220.353 nm)	0.002359	ppm	0.000360	15.26	10.196300	Y 242.219
S (181.972 nm)	0.013420	ppm	0.001656	12.34	21.045060	Y 377.433
Sb (206.834 nm)	0.000981	ppm	0.000575	58.63	-20.542600	Y 377.433
Se (196.026 nm)	0.000972	ppm	0.001371	> 100.00	13.958200	Y 242.219
Si (288.158 nm)	-0.005490 u	ppm	0.000525	9.56	882.471000	Y 377.433
Sn (189.925 nm)	-0.001527 u	ppm	0.000021	1.36	6.561970	Y 377.433
Sr (421.552 nm)	-0.000057 u	ppm	0.000149	> 100.00	144.088880	Y_R 488.368
Th (288.505 nm)	0.006266	ppm	0.002954	47.14	88.999600	Y 377.433
Ti (336.122 nm)	-0.000093 u	ppm	0.000042	44.76	-241.469000	Y 377.433
Tl (190.794 nm)	0.000544	ppm	0.000433	79.63	-4.147260	Y 377.433
U (409.013 nm)	0.007952	ppm	0.004224	53.12	-171.612000	Y 377.433
V (292.401 nm)	-0.000157 u	ppm	0.000292	> 100.00	29.103400	Y 377.433
Zn (206.200 nm)	-0.005230 u	ppm	0.000139	2.65	0.426265	Y 377.433
Zr (343.823 nm)	-0.000089 u	ppm	0.000120	> 100.00	14.939300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.124941	21464.121098	0.001236	0.11
Y 377.433	1.107401	1120897.254570	0.000971	0.09
Y_R 377.433	1.161810	87708.300000	0.001443	0.12
Y_R 488.368	1.129480	49449.200000	0.009185	0.81
Y_R2 488.368	1.120354	97226.051047	0.008116	0.72

Sample Name: CCVL-5413446

Date: 11/6/2018 8:15:05 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010472	ppm	0.000154	1.47	35.321500	Y 377.433
Al (167.019 nm)	0.100841	ppm	0.000564	0.56	58.644200	Y_R 377.433
Al H (396.152 nm)	0.085048 u	ppm	0.005626	6.62	294.659167	Y_R 377.433
As (188.980 nm)	0.014371	ppm	0.002393	16.66	16.359500	Y 242.219
B (249.678 nm)	0.099572	ppm	0.000597	0.60	2544.740000	Y 242.219
Ba (493.408 nm)	0.009249	ppm	0.000476	5.14	1670.700000	Y_R 488.368
Be (234.861 nm)	0.000991	ppm	0.000005	0.54	251.363000	Y_R 488.368
Bi (223.061 nm)	0.102215	ppm	0.002200	2.15	270.147000	Y 377.433
Ca (315.887 nm)	0.213396	ppm	0.000589	0.28	107.618208	Y_R 377.433
Cd (214.439 nm)	0.005320	ppm	0.000116	2.19	318.926000	Y 377.433
Co (228.615 nm)	0.010324	ppm	0.000077	0.74	150.889000	Y 242.219
Cr (205.560 nm)	0.010411	ppm	0.000164	1.58	154.446000	Y 377.433
Cu (324.754 nm)	0.017304	ppm	0.000140	0.81	670.702000	Y 377.433
Fe (238.204 nm)	0.099324	ppm	0.001519	1.53	392.191067	Y_R 377.433
Fe H (259.940 nm)	0.104821 u	ppm	0.000742	0.71	201.534000	Y_R 377.433
K (766.491 nm)	3.226540	ppm	0.018808	0.58	2958.690000	Y_R2 488.368
Li (670.783 nm)	0.029546 Q	ppm	0.000422	1.43	-368.316000 Q	Y_R2 488.368
Mg (279.078 nm)	0.204211	ppm	0.000826	0.40	1217.870000	Y 377.433
Mn (257.610 nm)	0.010463	ppm	0.000008	0.08	2508.720000	Y 377.433
Mo (202.032 nm)	0.020150	ppm	0.000374	1.86	173.498000	Y 377.433
Na (589.592 nm)	1.085220	ppm	0.000107	0.01	7462.510000	Y_R2 488.368
Na H (589.593 nm)	0.918932 u	ppm	0.007216	0.79	5770.052084	Y_R 488.368
Ni (231.604 nm)	0.043018	ppm	0.000310	0.72	289.370000	Y 377.433
P (213.618 nm)	2.864430 o	ppm	0.003939	0.14	6248.950000	Y 242.219
Pb (220.353 nm)	0.010827	ppm	0.001150	10.62	34.471300	Y 242.219
S (181.972 nm)	0.103681	ppm	0.001857	1.79	67.297877	Y 377.433
Sb (206.834 nm)	0.019564	ppm	0.000043	0.22	30.385700	Y 377.433
Se (196.026 nm)	0.019859	ppm	0.001144	5.76	32.747200	Y 242.219
Si (288.158 nm)	0.487618	ppm	0.001740	0.36	5120.580000	Y 377.433
Sn (189.925 nm)	0.102126	ppm	0.001266	1.24	212.603000	Y 377.433
Sr (421.552 nm)	0.010245	ppm	0.000009	0.09	2305.582695	Y_R 488.368
Th (288.505 nm)	0.021517 Q	ppm	0.002408	11.19	129.318000 Q	Y 377.433
Ti (336.122 nm)	0.009929	ppm	0.000081	0.81	1186.370000	Y 377.433
Tl (190.794 nm)	0.015589	ppm	0.001326	8.51	28.855900	Y 377.433
U (409.013 nm)	0.065285	ppm	0.003863	5.92	86.601900	Y 377.433
V (292.401 nm)	0.009690	ppm	0.000081	0.83	382.100000	Y 377.433
Zn (206.200 nm)	0.015860	ppm	0.000109	0.69	110.573000	Y 377.433
Zr (343.823 nm)	0.015198	ppm	0.000069	0.46	2025.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.133130	21620.366222	0.003063	0.27
Y 377.433	1.115502	1129097.182775	0.001111	0.10
Y_R 377.433	1.165420	87981.300000	0.008162	0.70
Y_R 488.368	1.135250	49701.900000	0.005918	0.52
Y_R2 488.368	1.131196	98166.944691	0.005298	0.47

Sample Name: MB 280-436149/1-A

Date: 11/6/2018 8:18:28 PM Rack:Tube: 1:87

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001074	ppm	0.000196	18.27	-395.632000	Y 377.433
Al (167.019 nm)	0.000339 u	ppm	0.000749	> 100.00	2.543550	Y_R 377.433
Al H (396.152 nm)	-0.021070 u	ppm	0.001392	6.61	26.031579	Y_R 377.433
As (188.980 nm)	0.000968	ppm	0.000249	25.71	-0.518156	Y 242.219
B (249.678 nm)	-0.000031 u	ppm	0.000138	> 100.00	56.355400	Y 242.219
Ba (493.408 nm)	-0.000628 u	ppm	0.000128	20.41	526.789000	Y_R 488.368
Be (234.861 nm)	0.000080	ppm	0.000003	3.63	-22.432400	Y_R 488.368
Bi (223.061 nm)	0.000683 u	ppm	0.001076	> 100.00	14.463400	Y 377.433
Ca (315.887 nm)	0.015158	ppm	0.003310	21.84	-49.570443	Y_R 377.433
Cd (214.439 nm)	0.000096	ppm	0.000011	11.66	6.619070	Y 377.433
Co (228.615 nm)	0.000416	ppm	0.000469	> 100.00	-28.902100	Y 242.219
Cr (205.560 nm)	0.000083	ppm	0.000030	36.18	-2.691320	Y 377.433
Cu (324.754 nm)	0.001642	ppm	0.000177	10.78	-199.989000	Y 377.433
Fe (238.204 nm)	0.000890	ppm	0.000839	94.30	28.129914	Y_R 377.433
Fe H (259.940 nm)	0.006179 u	ppm	0.000120	1.94	14.922300	Y_R 377.433
K (766.491 nm)	0.124921	ppm	0.084879	67.95	-612.746000	Y_R2 488.368
Li (670.783 nm)	0.008583	ppm	0.000433	5.04	-1067.470000	Y_R2 488.368
Mg (279.078 nm)	0.000720 u	ppm	0.001835	> 100.00	43.549700	Y 377.433
Mn (257.610 nm)	0.000024 u	ppm	0.000035	> 100.00	67.390200	Y 377.433
Mo (202.032 nm)	-0.000151 u	ppm	0.000090	59.87	-1.325200	Y 377.433
Na (589.592 nm)	0.023140	ppm	0.000528	2.28	448.556000	Y_R2 488.368
Na H (589.593 nm)	-0.239458 u	ppm	0.001414	0.59	1516.462286	Y_R 488.368
Ni (231.604 nm)	0.000861	ppm	0.000310	36.01	1.778630	Y 377.433
P (213.618 nm)	-0.004165 u	ppm	0.002260	54.28	15.507400	Y 242.219
Pb (220.353 nm)	0.001343	ppm	0.000810	60.34	7.283500	Y 242.219
S (181.972 nm)	0.008532	ppm	0.000532	6.24	18.541876	Y 377.433
Sb (206.834 nm)	0.000427 u	ppm	0.003286	> 100.00	-22.064600	Y 377.433
Se (196.026 nm)	-0.000600 u	ppm	0.001528	> 100.00	12.393500	Y 242.219
Si (288.158 nm)	-0.006886 u	ppm	0.000148	2.15	870.472000	Y 377.433
Sn (189.925 nm)	-0.001075 u	ppm	0.000420	39.11	7.460900	Y 377.433
Sr (421.552 nm)	-0.000055 u	ppm	0.000034	62.16	144.414941	Y_R 488.368
Th (288.505 nm)	0.004964	ppm	0.001957	39.43	85.676300	Y 377.433
Ti (336.122 nm)	0.000577	ppm	0.000004	0.64	-146.014000	Y 377.433
Tl (190.794 nm)	0.002348	ppm	0.001065	45.34	-0.183881	Y 377.433
U (409.013 nm)	0.007274	ppm	0.005877	80.80	-174.678000	Y 377.433
V (292.401 nm)	-0.000158 u	ppm	0.000022	13.87	29.507300	Y 377.433
Zn (206.200 nm)	-0.004658 u	ppm	0.000164	3.52	3.411420	Y 377.433
Zr (343.823 nm)	-0.000216 u	ppm	0.000028	13.02	-1.786700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.136006	21675.238698	0.010038	0.88
Y 377.433	1.121615	1135285.003471	0.003424	0.31
Y_R 377.433	1.192870	90053.100000	0.002175	0.18
Y_R 488.368	1.158450	50717.600000	0.000889	0.08
Y_R2 488.368	1.151012	99886.655290	0.000448	0.04

Sample Name: LCS 280-436149/2-A

Date: 11/6/2018 8:21:50 PM Rack:Tube: 1:88

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052307	ppm	0.000011	0.02	1925.720000	Y 377.433
Al (167.019 nm)	1.963400	ppm	0.010958	0.56	1097.680000	Y_R 377.433
Al H (396.152 nm)	1.947694	ppm	0.001777	0.09	5081.991838	Y_R 377.433
As (188.980 nm)	0.999267	ppm	0.000586	0.06	1256.640000	Y 242.219
B (249.678 nm)	1.038740	ppm	0.004682	0.45	26024.800000	Y 242.219
Ba (493.408 nm)	1.967560 o	ppm	0.003915	0.20	228486.000000	Y_R 488.368
Be (234.861 nm)	0.049459	ppm	0.000619	1.25	14664.500000	Y_R 488.368
Bi (223.061 nm)	1.973050	ppm	0.009513	0.48	4981.240000	Y 377.433
Ca (315.887 nm)	50.145136 o	ppm	0.065101	0.13	39699.247946	Y_R 377.433
Cd (214.439 nm)	0.098908	ppm	0.000370	0.37	5913.680000	Y 377.433
Co (228.615 nm)	0.478672	ppm	0.001185	0.25	8668.980000	Y 242.219
Cr (205.560 nm)	0.199345	ppm	0.001108	0.56	3027.930000	Y 377.433
Cu (324.754 nm)	0.247828	ppm	0.000685	0.28	13542.300000	Y 377.433
Fe (238.204 nm)	0.980938	ppm	0.000252	0.03	3652.872534	Y_R 377.433
Fe H (259.940 nm)	0.990981 u	ppm	0.004453	0.45	1877.970000	Y_R 377.433
K (766.491 nm)	50.344300	ppm	0.247280	0.49	57213.700000	Y_R2 488.368
Li (670.783 nm)	0.990858	ppm	0.007925	0.80	31692.100000	Y_R2 488.368
Mg (279.078 nm)	49.884500 o	ppm	0.220080	0.44	288143.000000	Y 377.433
Mn (257.610 nm)	0.496123	ppm	0.000027	0.01	116088.000000	Y 377.433
Mo (202.032 nm)	1.018820	ppm	0.000288	0.03	8773.980000	Y 377.433
Na (589.592 nm)	49.341900 o	ppm	0.044776	0.09	329155.000000	Y_R2 488.368
Na H (589.593 nm)	52.132835	ppm	0.193550	0.37	195239.527255	Y_R 488.368
Ni (231.604 nm)	0.490501	ppm	0.003208	0.65	3344.400000	Y 377.433
P (213.618 nm)	10.344300 o	ppm	0.001365	0.01	22502.700000	Y 242.219
Pb (220.353 nm)	0.496258	ppm	0.000877	0.18	1427.440000	Y 242.219
S (181.972 nm)	1.996999	ppm	0.014423	0.72	1038.154151	Y 377.433
Sb (206.834 nm)	0.514530	ppm	0.000981	0.19	1377.990000	Y 377.433
Se (196.026 nm)	2.117550	ppm	0.007128	0.34	2120.870000	Y 242.219
Si (288.158 nm)	10.100900	ppm	0.017603	0.17	87743.300000	Y 377.433
Sn (189.925 nm)	2.022960	ppm	0.010105	0.50	4030.820000	Y 377.433
Sr (421.552 nm)	1.009342	ppm	0.001403	0.14	211932.954127	Y_R 488.368
Th (288.505 nm)	1.001940	ppm	0.006427	0.64	2705.210000	Y 377.433
Ti (336.122 nm)	0.994418	ppm	0.001797	0.18	141547.000000	Y 377.433
Tl (190.794 nm)	2.032860	ppm	0.005696	0.28	4456.940000	Y 377.433
U (409.013 nm)	2.043970	ppm	0.004520	0.22	8990.970000	Y 377.433
V (292.401 nm)	0.503200	ppm	0.000262	0.05	18213.000000	Y 377.433
Zn (206.200 nm)	0.492464	ppm	0.004222	0.86	2599.720000	Y 377.433
Zr (343.823 nm)	0.495481	ppm	0.000293	0.06	65177.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.111822	21213.793511	0.016872	1.52
Y 377.433	1.101830	1115258.364544	0.012322	1.12
Y_R 377.433	1.183120	89317.500000	0.001786	0.15
Y_R 488.368	1.146900	50211.800000	0.000373	0.03
Y_R2 488.368	1.142793	99173.392129	0.002666	0.23

Sample Name: 280-116443-A-1-A

Date: 11/6/2018 8:25:13 PM Rack:Tube: 1:89

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001180	ppm	0.000085	7.18	-394.428000	Y 377.433
Al (167.019 nm)	0.004526	ppm	0.000817	18.05	4.879250	Y_R 377.433
Al H (396.152 nm)	-0.001771 u	ppm	0.000654	36.91	95.815144	Y_R 377.433
As (188.980 nm)	0.009189	ppm	0.001499	16.31	9.835250	Y 242.219
B (249.678 nm)	0.029804	ppm	0.000209	0.70	801.644000	Y 242.219
Ba (493.408 nm)	0.396604	ppm	0.002571	0.65	46544.300000	Y_R 488.368
Be (234.861 nm)	0.000065	ppm	0.000010	14.75	-26.839400	Y_R 488.368
Bi (223.061 nm)	0.000509	ppm	0.000511	> 100.00	14.025400	Y 377.433
Ca (315.887 nm)	48.624478 o	ppm	0.253988	0.52	38493.440509	Y_R 377.433
Cd (214.439 nm)	0.000136	ppm	0.000055	40.78	9.017940	Y 377.433
Co (228.615 nm)	0.000155 u	ppm	0.000506	> 100.00	-33.631600	Y 242.219
Cr (205.560 nm)	0.000715	ppm	0.000001	0.09	6.924620	Y 377.433
Cu (324.754 nm)	0.001494	ppm	0.000403	26.96	-239.901000	Y 377.433
Fe (238.204 nm)	0.002257	ppm	0.000202	8.94	33.186131	Y_R 377.433
Fe H (259.940 nm)	0.005577 u	ppm	0.000317	5.69	13.784100	Y_R 377.433
K (766.491 nm)	7.802070	ppm	0.048851	0.63	8227.310000	Y_R2 488.368
Li (670.783 nm)	0.020808	ppm	0.000624	3.00	-659.754000	Y_R2 488.368
Mg (279.078 nm)	9.126140	ppm	0.013690	0.15	52756.800000	Y 377.433
Mn (257.610 nm)	0.001306	ppm	0.000005	0.39	367.217000	Y 377.433
Mo (202.032 nm)	0.001089	ppm	0.000706	64.86	9.346630	Y 377.433
Na (589.592 nm)	7.957510	ppm	0.058649	0.74	53494.500000	Y_R2 488.368
Na H (589.593 nm)	8.133384 u	ppm	0.060879	0.75	32565.496288	Y_R 488.368
Ni (231.604 nm)	0.000515	ppm	0.000610	> 100.00	-0.581962	Y 377.433
P (213.618 nm)	0.006198	ppm	0.001019	16.45	38.025200	Y 242.219
Pb (220.353 nm)	0.001012	ppm	0.000224	22.14	6.316870	Y 242.219
S (181.972 nm)	8.810822	ppm	0.021309	0.24	4526.627003	Y 377.433
Sb (206.834 nm)	-0.002558 u	ppm	0.000426	16.67	-30.219800	Y 377.433
Se (196.026 nm)	-0.004394 u	ppm	0.000616	14.03	8.618950	Y 242.219
Si (288.158 nm)	24.856000 o	ppm	0.179701	0.72	214559.000000	Y 377.433
Sn (189.925 nm)	-0.000073 u	ppm	0.000508	> 100.00	9.452500	Y 377.433
Sr (421.552 nm)	0.408494	ppm	0.002895	0.71	85864.889811	Y_R 488.368
Th (288.505 nm)	-0.002367 u	ppm	0.000829	35.01	67.771000	Y 377.433
Ti (336.122 nm)	0.000476	ppm	0.000033	6.92	-8.206820	Y 377.433
Tl (190.794 nm)	0.002642	ppm	0.000772	29.22	0.458348	Y 377.433
U (409.013 nm)	0.004904	ppm	0.004738	96.61	-194.622000	Y 377.433
V (292.401 nm)	0.021725	ppm	0.000035	0.16	822.723000	Y 377.433
Zn (206.200 nm)	-0.005151 u	ppm	0.000067	1.30	0.836584	Y 377.433
Zr (343.823 nm)	-0.000163 u	ppm	0.000033	20.41	5.177480	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.138535	21723.483197	0.000088	0.01
Y 377.433	1.123165	1136853.495970	0.001274	0.11
Y_R 377.433	1.195230	90231.200000	0.003982	0.33
Y_R 488.368	1.161670	50858.600000	0.005869	0.51
Y_R2 488.368	1.155560	100281.278292	0.002133	0.18

Sample Name: 280-116443-A-2-A

Date: 11/6/2018 8:28:35 PM
Rack:Tube: 1:90

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001375	ppm	0.000110	8.03	-383.903000	Y 377.433
Al (167.019 nm)	-0.000538 u	ppm	0.001311	> 100.00	2.058350	Y_R 377.433
Al H (396.152 nm)	-0.011038 u	ppm	0.004446	40.28	73.728989	Y_R 377.433
As (188.980 nm)	0.005309	ppm	0.000296	5.58	4.948220	Y 242.219
B (249.678 nm)	0.042186	ppm	0.000456	1.08	1110.940000	Y 242.219
Ba (493.408 nm)	0.231559	ppm	0.001161	0.50	27429.800000	Y_R 488.368
Be (234.861 nm)	0.000092	ppm	0.000017	18.21	-19.172900	Y_R 488.368
Bi (223.061 nm)	-0.001276 u	ppm	0.000097	7.59	9.531090	Y 377.433
Ca (315.887 nm)	50.766489 o	ppm	0.035270	0.07	40191.871266	Y_R 377.433
Cd (214.439 nm)	0.000100	ppm	0.000064	63.82	6.888620	Y 377.433
Co (228.615 nm)	0.000209	ppm	0.000044	21.19	-32.659200	Y 242.219
Cr (205.560 nm)	0.000533	ppm	0.000102	19.11	4.147410	Y 377.433
Cu (324.754 nm)	0.001479	ppm	0.000271	18.33	-241.562000	Y 377.433
Fe (238.204 nm)	0.006310	ppm	0.000949	15.05	48.175545	Y_R 377.433
Fe H (259.940 nm)	0.009504 u	ppm	0.001855	19.52	21.212500	Y_R 377.433
K (766.491 nm)	8.092660	ppm	0.111384	1.38	8561.920000	Y_R2 488.368
Li (670.783 nm)	0.026995	ppm	0.000539	2.00	-453.416000	Y_R2 488.368
Mg (279.078 nm)	7.774160	ppm	0.030747	0.40	44947.000000	Y 377.433
Mn (257.610 nm)	0.003593	ppm	0.000002	0.04	901.970000	Y 377.433
Mo (202.032 nm)	0.004719	ppm	0.000131	2.77	40.612000	Y 377.433
Na (589.592 nm)	10.470000	ppm	0.053097	0.51	69704.800000	Y_R2 488.368
Na H (589.593 nm)	10.674763	ppm	0.049725	0.47	41720.960552	Y_R 488.368
Ni (231.604 nm)	0.000523	ppm	0.000089	17.10	-0.530285	Y 377.433
P (213.618 nm)	0.040644	ppm	0.001069	2.63	112.877000	Y 242.219
Pb (220.353 nm)	0.000640 u	ppm	0.001085	> 100.00	5.243150	Y 242.219
S (181.972 nm)	8.163438	ppm	0.024668	0.30	4195.075480	Y 377.433
Sb (206.834 nm)	-0.001186 u	ppm	0.000082	6.96	-26.507000	Y 377.433
Se (196.026 nm)	-0.000404 u	ppm	0.000247	61.25	12.590900	Y 242.219
Si (288.158 nm)	22.237400 o	ppm	0.003100	0.01	192053.000000	Y 377.433
Sn (189.925 nm)	0.000081 u	ppm	0.000618	> 100.00	9.759330	Y 377.433
Sr (421.552 nm)	0.382743	ppm	0.001930	0.50	80461.840484	Y_R 488.368
Th (288.505 nm)	0.001033 u	ppm	0.002103	> 100.00	76.190200	Y 377.433
Ti (336.122 nm)	0.000429	ppm	0.000000	0.07	-8.227400	Y 377.433
Tl (190.794 nm)	0.001724	ppm	0.000196	11.38	-1.567680	Y 377.433
U (409.013 nm)	0.011833	ppm	0.009139	77.23	-163.691000	Y 377.433
V (292.401 nm)	0.011703	ppm	0.000181	1.54	459.098000	Y 377.433
Zn (206.200 nm)	-0.005161 u	ppm	0.000691	13.38	0.783183	Y 377.433
Zr (343.823 nm)	-0.000153 u	ppm	0.000046	30.14	6.520340	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.138320	21719.395345	0.003355	0.29
Y 377.433	1.122683	1136365.484468	0.004284	0.38
Y_R 377.433	1.187980	89683.900000	0.001110	0.09
Y_R 488.368	1.152740	50467.700000	0.005556	0.48
Y_R2 488.368	1.149604	99764.399720	0.007073	0.62

Sample Name: 280-116443-A-3-A

Date: 11/6/2018 8:31:57 PM Rack:Tube: 2:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001380	ppm	0.000023	1.67	-384.680000	Y 377.433
Al (167.019 nm)	2.535740	ppm	0.000442	0.02	1417.540000	Y_R 377.433
Al H (396.152 nm)	2.496274	ppm	0.001196	0.05	6397.364033	Y_R 377.433
As (188.980 nm)	0.007414	ppm	0.000913	12.31	7.579930	Y 242.219
B (249.678 nm)	0.052540	ppm	0.000044	0.08	1366.390000	Y 242.219
Ba (493.408 nm)	0.297500	ppm	0.001250	0.42	35077.900000	Y_R 488.368
Be (234.861 nm)	0.000215	ppm	0.000000	0.17	83.662600	Y_R 488.368
Bi (223.061 nm)	-0.001407 u	ppm	0.002162	> 100.00	9.550290	Y 377.433
Ca (315.887 nm)	90.290086 o	ppm	0.336114	0.37	71530.684904	Y_R 377.433
Cd (214.439 nm)	0.000039	ppm	0.000000	0.05	5.278750	Y 377.433
Co (228.615 nm)	0.000982	ppm	0.000145	14.77	-16.222600	Y 242.219
Cr (205.560 nm)	0.002106	ppm	0.000038	1.81	27.503500	Y 377.433
Cu (324.754 nm)	0.003247	ppm	0.000119	3.68	-164.679000	Y 377.433
Fe (238.204 nm)	2.104337	ppm	0.005404	0.26	7807.802954	Y_R 377.433
Fe H (259.940 nm)	2.157680 u	ppm	0.004842	0.22	4085.130000	Y_R 377.433
K (766.491 nm)	9.626300	ppm	0.027535	0.29	10327.900000	Y_R2 488.368
Li (670.783 nm)	0.030527	ppm	0.000034	0.11	-335.596000	Y_R2 488.368
Mg (279.078 nm)	13.180400	ppm	0.011980	0.09	76172.800000	Y 377.433
Mn (257.610 nm)	0.073415	ppm	0.000050	0.07	17231.000000	Y 377.433
Mo (202.032 nm)	0.006847	ppm	0.000041	0.60	58.935600	Y 377.433
Na (589.592 nm)	21.830200 o	ppm	0.088556	0.41	144636.000000	Y_R2 488.368
Na H (589.593 nm)	22.309326	ppm	0.019982	0.09	84407.053513	Y_R 488.368
Ni (231.604 nm)	0.002942	ppm	0.000336	11.41	16.056700	Y 377.433
P (213.618 nm)	0.125057	ppm	0.001235	0.99	296.305000	Y 242.219
Pb (220.353 nm)	0.003172	ppm	0.000909	28.65	11.854500	Y 242.219
S (181.972 nm)	21.449433 o	ppm	0.023177	0.11	10999.652887	Y 377.433
Sb (206.834 nm)	-0.001261 u	ppm	0.000609	48.31	-27.370100	Y 377.433
Se (196.026 nm)	0.000884 u	ppm	0.002176	> 100.00	13.572700	Y 242.219
Si (288.158 nm)	29.637600 o	ppm	0.015115	0.05	255655.000000	Y 377.433
Sn (189.925 nm)	-0.000113 u	ppm	0.000265	> 100.00	9.373620	Y 377.433
Sr (421.552 nm)	0.482869	ppm	0.000449	0.09	101470.082889	Y_R 488.368
Th (288.505 nm)	0.001423	ppm	0.000176	12.35	78.903000	Y 377.433
Ti (336.122 nm)	0.070058	ppm	0.001196	1.71	10031.900000	Y 377.433
Tl (190.794 nm)	0.001739	ppm	0.001277	73.41	-1.896920	Y 377.433
U (409.013 nm)	0.007094	ppm	0.006447	90.87	-190.925000	Y 377.433
V (292.401 nm)	0.021651	ppm	0.000375	1.73	821.649000	Y 377.433
Zn (206.200 nm)	0.001246	ppm	0.000042	3.40	34.248700	Y 377.433
Zr (343.823 nm)	0.003073	ppm	0.000048	1.58	436.873000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125885	21482.126757	0.001293	0.11
Y 377.433	1.113784	1127358.400258	0.000317	0.03
Y_R 377.433	1.190850	89900.800000	0.003287	0.28
Y_R 488.368	1.157390	50671.300000	0.002732	0.24
Y_R2 488.368	1.151063	99891.034786	0.007415	0.64

Sample Name: 280-116443-A-4-A

Date: 11/6/2018 8:35:19 PM Rack:Tube: 2:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001489	ppm	0.000019	1.25	-379.508000	Y 377.433
Al (167.019 nm)	-0.001488 u	ppm	0.001368	91.95	1.571360	Y_R 377.433
Al H (396.152 nm)	-0.011817 u	ppm	0.005928	50.16	66.791757	Y_R 377.433
As (188.980 nm)	0.004557	ppm	0.001856	40.73	4.001010	Y 242.219
B (249.678 nm)	0.019675	ppm	0.000020	0.10	548.520000	Y 242.219
Ba (493.408 nm)	0.333027	ppm	0.000540	0.16	39179.100000	Y_R 488.368
Be (234.861 nm)	0.000066	ppm	0.000011	16.98	-24.636400	Y_R 488.368
Bi (223.061 nm)	0.000066 u	ppm	0.001388	> 100.00	12.918700	Y 377.433
Ca (315.887 nm)	40.073024 o	ppm	0.142330	0.36	31712.873090	Y_R 377.433
Cd (214.439 nm)	0.000076	ppm	0.000033	43.95	5.493140	Y 377.433
Co (228.615 nm)	0.000368	ppm	0.000082	22.19	-29.784100	Y 242.219
Cr (205.560 nm)	0.000467	ppm	0.000117	25.02	3.122030	Y 377.433
Cu (324.754 nm)	0.002012	ppm	0.000234	11.65	-205.123000	Y 377.433
Fe (238.204 nm)	0.068271	ppm	0.000920	1.35	277.341029	Y_R 377.433
Fe H (259.940 nm)	0.070032 u	ppm	0.002160	3.08	135.720000	Y_R 377.433
K (766.491 nm)	6.897140	ppm	0.034993	0.51	7185.310000	Y_R2 488.368
Li (670.783 nm)	0.018285	ppm	0.000080	0.44	-743.892000	Y_R2 488.368
Mg (279.078 nm)	7.305950	ppm	0.074550	1.02	42242.200000	Y 377.433
Mn (257.610 nm)	0.000583	ppm	0.000036	6.20	198.157000	Y 377.433
Mo (202.032 nm)	0.000786	ppm	0.000362	46.08	6.738220	Y 377.433
Na (589.592 nm)	3.358150	ppm	0.006170	0.18	23082.200000	Y_R2 488.368
Na H (589.593 nm)	3.233077 u	ppm	0.010879	0.34	14552.815162	Y_R 488.368
Ni (231.604 nm)	0.000175	ppm	0.000000	0.13	-2.898530	Y 377.433
P (213.618 nm)	0.003709	ppm	0.003593	96.87	32.617200	Y 242.219
Pb (220.353 nm)	-0.000556 u	ppm	0.000452	81.27	1.846910	Y 242.219
S (181.972 nm)	3.298108	ppm	0.013282	0.40	1703.295563	Y 377.433
Sb (206.834 nm)	0.000079 u	ppm	0.001119	> 100.00	-23.038100	Y 377.433
Se (196.026 nm)	-0.003114 u	ppm	0.000066	2.10	9.878650	Y 242.219
Si (288.158 nm)	24.111000 o	ppm	0.081262	0.34	208156.000000	Y 377.433
Sn (189.925 nm)	-0.000968 u	ppm	0.000610	62.96	7.672560	Y 377.433
Sr (421.552 nm)	0.361661	ppm	0.000601	0.17	76038.620052	Y_R 488.368
Th (288.505 nm)	0.001655	ppm	0.000279	16.87	77.933000	Y 377.433
Ti (336.122 nm)	0.000437	ppm	0.000029	6.75	-40.563500	Y 377.433
Tl (190.794 nm)	0.001085	ppm	0.000266	24.50	-2.962140	Y 377.433
U (409.013 nm)	0.008672	ppm	0.002657	30.64	-175.887000	Y 377.433
V (292.401 nm)	0.016301	ppm	0.000046	0.28	626.097000	Y 377.433
Zn (206.200 nm)	0.155155	ppm	0.001727	1.11	838.064000	Y 377.433
Zr (343.823 nm)	-0.000148 u	ppm	0.000011	7.48	7.468610	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103347	21052.091724	0.016188	1.47
Y 377.433	1.101612	1115038.376994	0.009939	0.90
Y_R 377.433	1.194300	90161.000000	0.002059	0.17
Y_R 488.368	1.159970	50784.200000	0.004087	0.35
Y_R2 488.368	1.157926	100486.598865	0.002514	0.22

Sample Name: 280-116443-A-4-Asd@5

Date: 11/6/2018 8:38:41 PM
Rack:Tube: 2:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000846	ppm	0.000185	21.91	-406.683000	Y 377.433
Al (167.019 nm)	-0.001256 u	ppm	0.003281	> 100.00	1.664810	Y_R 377.433
Al H (396.152 nm)	-0.019001 u	ppm	0.002309	12.15	34.791496	Y_R 377.433
As (188.980 nm)	-0.000291 u	ppm	0.000529	> 100.00	-2.103900	Y 242.219
B (249.678 nm)	0.004045	ppm	0.000013	0.33	158.154000	Y 242.219
Ba (493.408 nm)	0.066225	ppm	0.000648	0.98	8271.320000	Y_R 488.368
Be (234.861 nm)	0.000040	ppm	0.000001	2.37	-34.042300	Y_R 488.368
Bi (223.061 nm)	-0.000686 u	ppm	0.001927	> 100.00	11.017600	Y 377.433
Ca (315.887 nm)	8.121529	ppm	0.009585	0.12	6378.084765	Y_R 377.433
Cd (214.439 nm)	0.000021 u	ppm	0.000049	> 100.00	2.163050	Y 377.433
Co (228.615 nm)	0.000199	ppm	0.000004	1.98	-32.842500	Y 242.219
Cr (205.560 nm)	0.000188	ppm	0.000110	58.63	-1.109730	Y 377.433
Cu (324.754 nm)	0.001655	ppm	0.000070	4.25	-205.626000	Y 377.433
Fe (238.204 nm)	0.016098	ppm	0.000038	0.24	84.375056	Y_R 377.433
Fe H (259.940 nm)	0.018977 u	ppm	0.002005	10.57	39.134600	Y_R 377.433
K (766.491 nm)	1.525850	ppm	0.013847	0.91	1000.390000	Y_R2 488.368
Li (670.783 nm)	0.009672	ppm	0.001135	11.74	-1031.150000	Y_R2 488.368
Mg (279.078 nm)	1.485150	ppm	0.005121	0.34	8618.300000	Y 377.433
Mn (257.610 nm)	0.000127	ppm	0.000019	15.20	91.465300	Y 377.433
Mo (202.032 nm)	0.000305	ppm	0.000173	56.80	2.596890	Y 377.433
Na (589.592 nm)	0.703719	ppm	0.000973	0.14	5066.550000	Y_R2 488.368
Na H (589.593 nm)	0.463391 u	ppm	0.005440	1.17	4155.170583	Y_R 488.368
Ni (231.604 nm)	0.000081	ppm	0.000098	> 100.00	-3.545490	Y 377.433
P (213.618 nm)	0.000195 u	ppm	0.001030	> 100.00	24.980200	Y 242.219
Pb (220.353 nm)	0.000777 u	ppm	0.001225	> 100.00	5.664290	Y 242.219
S (181.972 nm)	0.643933	ppm	0.007716	1.20	343.962081	Y 377.433
Sb (206.834 nm)	0.001229	ppm	0.000048	3.90	-19.883300	Y 377.433
Se (196.026 nm)	-0.002497 u	ppm	0.001116	44.69	10.502500	Y 242.219
Si (288.158 nm)	4.749580	ppm	0.028843	0.61	41750.800000	Y 377.433
Sn (189.925 nm)	-0.001463 u	ppm	0.001076	73.53	6.689000	Y 377.433
Sr (421.552 nm)	0.073266	ppm	0.000559	0.76	15528.537839	Y_R 488.368
Th (288.505 nm)	0.005524	ppm	0.000937	16.97	87.290900	Y 377.433
Ti (336.122 nm)	-0.000045 u	ppm	0.000148	> 100.00	-209.202000	Y 377.433
Tl (190.794 nm)	-0.000073 u	ppm	0.000759	> 100.00	-5.506580	Y 377.433
U (409.013 nm)	0.006197	ppm	0.002428	39.18	-181.063000	Y 377.433
V (292.401 nm)	0.002961	ppm	0.000250	8.45	142.031000	Y 377.433
Zn (206.200 nm)	0.027233	ppm	0.000214	0.78	169.967000	Y 377.433
Zr (343.823 nm)	-0.000255 u	ppm	0.000077	30.20	-6.756280	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130070	21561.975389	0.003433	0.30
Y 377.433	1.115608	1129204.996021	0.004819	0.43
Y_R 377.433	1.185010	89460.200000	0.005548	0.47
Y_R 488.368	1.158570	50722.900000	0.015778	1.36
Y_R2 488.368	1.150592	99850.189776	0.009226	0.80

Sample Name: 280-116443-A-4-B MS

Date: 11/6/2018 8:42:02 PM
Rack:Tube: 2:4

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052769	ppm	0.000142	0.27	1944.820000	Y 377.433
Al (167.019 nm)	1.963400	ppm	0.003163	0.16	1097.680000	Y_R 377.433
Al H (396.152 nm)	1.967817	ppm	0.001916	0.10	5149.439747	Y_R 377.433
As (188.980 nm)	1.011230	ppm	0.003114	0.31	1271.710000	Y 242.219
B (249.678 nm)	1.085590	ppm	0.000327	0.03	27195.200000	Y 242.219
Ba (493.408 nm)	2.293330 o	ppm	0.005067	0.22	266225.000000	Y_R 488.368
Be (234.861 nm)	0.049384	ppm	0.000162	0.33	14642.000000	Y_R 488.368
Bi (223.061 nm)	2.001580	ppm	0.002677	0.13	5053.090000	Y 377.433
Ca (315.887 nm)	87.700777 o	ppm	0.107043	0.12	69477.642187	Y_R 377.433
Cd (214.439 nm)	0.099154	ppm	0.000226	0.23	5928.360000	Y 377.433
Co (228.615 nm)	0.479144	ppm	0.000573	0.12	8677.960000	Y 242.219
Cr (205.560 nm)	0.200298	ppm	0.000135	0.07	3042.420000	Y 377.433
Cu (324.754 nm)	0.251445	ppm	0.000276	0.11	13721.100000	Y 377.433
Fe (238.204 nm)	0.981186	ppm	0.000595	0.06	3653.787260	Y_R 377.433
Fe H (259.940 nm)	0.997472 u	ppm	0.003258	0.33	1890.250000	Y_R 377.433
K (766.491 nm)	57.490900	ppm	0.550240	0.96	65442.800000	Y_R2 488.368
Li (670.783 nm)	1.012010	ppm	0.004440	0.44	32397.500000	Y_R2 488.368
Mg (279.078 nm)	57.422600 o	ppm	0.076314	0.13	331686.000000	Y 377.433
Mn (257.610 nm)	0.497452	ppm	0.000448	0.09	116398.000000	Y 377.433
Mo (202.032 nm)	1.025390	ppm	0.001931	0.19	8830.550000	Y 377.433
Na (589.592 nm)	53.094700 o	ppm	0.197323	0.37	354523.000000	Y_R2 488.368
Na H (589.593 nm)	55.554689	ppm	0.070339	0.13	208082.639367	Y_R 488.368
Ni (231.604 nm)	0.492334	ppm	0.001125	0.23	3356.890000	Y 377.433
P (213.618 nm)	10.437900 o	ppm	0.029415	0.28	22706.100000	Y 242.219
Pb (220.353 nm)	0.496234	ppm	0.000758	0.15	1427.350000	Y 242.219
S (181.972 nm)	5.316320	ppm	0.022252	0.42	2738.144026	Y 377.433
Sb (206.834 nm)	0.525028	ppm	0.001209	0.23	1406.720000	Y 377.433
Se (196.026 nm)	2.121190	ppm	0.007550	0.36	2124.500000	Y 242.219
Si (288.158 nm)	33.750900 o	ppm	0.044892	0.13	291008.000000	Y 377.433
Sn (189.925 nm)	2.081810	ppm	0.006112	0.29	4147.790000	Y 377.433
Sr (421.552 nm)	1.355180 o	ppm	0.001745	0.13	284495.532107	Y_R 488.368
Th (288.505 nm)	1.006750	ppm	0.005752	0.57	2718.340000	Y 377.433
Ti (336.122 nm)	1.007400	ppm	0.000930	0.09	143514.000000	Y 377.433
Tl (190.794 nm)	2.029550	ppm	0.001967	0.10	4449.590000	Y 377.433
U (409.013 nm)	2.044920	ppm	0.002221	0.11	8987.740000	Y 377.433
V (292.401 nm)	0.520970	ppm	0.000070	0.01	18857.900000	Y 377.433
Zn (206.200 nm)	0.640242	ppm	0.000168	0.03	3371.510000	Y 377.433
Zr (343.823 nm)	0.500864	ppm	0.000805	0.16	65884.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093212	20858.726205	0.004988	0.46
Y 377.433	1.083131	1096331.483227	0.004687	0.43
Y_R 377.433	1.173990	88627.900000	0.002090	0.18
Y_R 488.368	1.142440	50016.800000	0.000521	0.05
Y_R2 488.368	1.123359	97486.848399	0.006780	0.60

Sample Name: 280-116443-A-4-C MSD

Date: 11/6/2018 8:45:24 PM
Rack:Tube: 2:5

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053220	ppm	0.000090	0.17	1965.900000	Y 377.433
Al (167.019 nm)	1.975960	ppm	0.005072	0.26	1104.700000	Y_R 377.433
Al H (396.152 nm)	1.968887	ppm	0.015251	0.77	5153.222406	Y_R 377.433
As (188.980 nm)	1.023610	ppm	0.000529	0.05	1287.290000	Y 242.219
B (249.678 nm)	1.087810	ppm	0.000985	0.09	27250.400000	Y 242.219
Ba (493.408 nm)	2.314440 o	ppm	0.003727	0.16	268669.000000	Y_R 488.368
Be (234.861 nm)	0.049320	ppm	0.000060	0.12	14623.300000	Y_R 488.368
Bi (223.061 nm)	2.000300	ppm	0.001629	0.08	5049.860000	Y 377.433
Ca (315.887 nm)	89.336548 o	ppm	0.151145	0.17	70774.667749	Y_R 377.433
Cd (214.439 nm)	0.099537	ppm	0.000115	0.12	5951.280000	Y 377.433
Co (228.615 nm)	0.477388	ppm	0.002141	0.45	8646.240000	Y 242.219
Cr (205.560 nm)	0.200023	ppm	0.001351	0.68	3038.220000	Y 377.433
Cu (324.754 nm)	0.251541	ppm	0.001426	0.57	13726.100000	Y 377.433
Fe (238.204 nm)	1.007067	ppm	0.001184	0.12	3749.509431	Y_R 377.433
Fe H (259.940 nm)	1.023340 u	ppm	0.003804	0.37	1939.180000	Y_R 377.433
K (766.491 nm)	57.485100	ppm	0.515524	0.90	65436.100000	Y_R2 488.368
Li (670.783 nm)	1.005250	ppm	0.007728	0.77	32172.100000	Y_R2 488.368
Mg (279.078 nm)	57.641100 o	ppm	0.423612	0.73	332948.000000	Y 377.433
Mn (257.610 nm)	0.497242	ppm	0.002977	0.60	116349.000000	Y 377.433
Mo (202.032 nm)	1.029910	ppm	0.007353	0.71	8869.500000	Y 377.433
Na (589.592 nm)	53.282400 o	ppm	0.387772	0.73	355801.000000	Y_R2 488.368
Na H (589.593 nm)	55.953915	ppm	0.157665	0.28	209565.023427	Y_R 488.368
Ni (231.604 nm)	0.491368	ppm	0.004922	1.00	3350.300000	Y 377.433
P (213.618 nm)	10.386300 o	ppm	0.101413	0.98	22593.900000	Y 242.219
Pb (220.353 nm)	0.498344	ppm	0.003936	0.79	1433.380000	Y 242.219
S (181.972 nm)	5.429063	ppm	0.017013	0.31	2795.884769	Y 377.433
Sb (206.834 nm)	0.522900	ppm	0.000691	0.13	1400.850000	Y 377.433
Se (196.026 nm)	2.125840	ppm	0.007829	0.37	2129.120000	Y 242.219
Si (288.158 nm)	34.628600 o	ppm	0.264093	0.76	298551.000000	Y 377.433
Sn (189.925 nm)	2.074180	ppm	0.027761	1.34	4132.630000	Y 377.433
Sr (421.552 nm)	1.372907 o	ppm	0.002938	0.21	288215.003423	Y_R 488.368
Th (288.505 nm)	1.009670	ppm	0.008376	0.83	2725.770000	Y 377.433
Ti (336.122 nm)	1.009100	ppm	0.004273	0.42	143761.000000	Y 377.433
Tl (190.794 nm)	2.025820	ppm	0.014604	0.72	4441.370000	Y 377.433
U (409.013 nm)	2.045630	ppm	0.007531	0.37	8990.550000	Y 377.433
V (292.401 nm)	0.521034	ppm	0.003263	0.63	18860.400000	Y 377.433
Zn (206.200 nm)	0.644855	ppm	0.004792	0.74	3395.610000	Y 377.433
Zr (343.823 nm)	0.502447	ppm	0.002972	0.59	66093.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090958	20815.715936	0.003534	0.32
Y 377.433	1.083301	1096503.520623	0.000195	0.02
Y_R 377.433	1.175720	88758.300000	0.005013	0.43
Y_R 488.368	1.144620	50112.300000	0.003783	0.33
Y_R2 488.368	1.133773	98390.554994	0.003671	0.32

Sample Name: 280-116443-A-4-Apds

Date: 11/6/2018 8:48:46 PM
Rack:Tube: 2:6

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050712	ppm	0.000248	0.49	1864.160000	Y 377.433
Al (167.019 nm)	0.990211	ppm	0.000774	0.08	555.139000	Y_R 377.433
Al H (396.152 nm)	0.970459	ppm	0.006455	0.67	2549.888260	Y_R 377.433
As (188.980 nm)	0.208919	ppm	0.000618	0.30	261.347000	Y 242.219
B (249.678 nm)	0.125425	ppm	0.000427	0.34	3190.740000	Y 242.219
Ba (493.408 nm)	0.420901	ppm	0.002017	0.48	49362.200000	Y_R 488.368
Be (234.861 nm)	0.049576	ppm	0.000216	0.44	14757.600000	Y_R 488.368
Bi (223.061 nm)	-0.000175 u	ppm	0.002316	> 100.00	12.475900	Y 377.433
Ca (315.887 nm)	59.368300 o	ppm	0.251180	0.42	47012.395876	Y_R 377.433
Cd (214.439 nm)	0.050387	ppm	0.000144	0.29	3013.410000	Y 377.433
Co (228.615 nm)	0.047845	ppm	0.000162	0.34	831.874000	Y 242.219
Cr (205.560 nm)	0.050632	ppm	0.000064	0.13	765.971000	Y 377.433
Cu (324.754 nm)	0.051883	ppm	0.000129	0.25	2567.510000	Y 377.433
Fe (238.204 nm)	1.044144	ppm	0.002569	0.25	3886.641179	Y_R 377.433
Fe H (259.940 nm)	1.059990 u	ppm	0.008376	0.79	2008.520000	Y_R 377.433
K (766.491 nm)	26.915100	ppm	0.005625	0.02	30235.500000	Y_R2 488.368
Li (670.783 nm)	0.120115	ppm	0.001352	1.13	2652.220000	Y_R2 488.368
Mg (279.078 nm)	27.249500	ppm	0.004095	0.02	157432.000000	Y 377.433
Mn (257.610 nm)	0.050847	ppm	0.000029	0.06	11953.200000	Y 377.433
Mo (202.032 nm)	0.051742	ppm	0.000526	1.02	445.572000	Y 377.433
Na (589.592 nm)	23.397900 o	ppm	0.057460	0.25	155208.000000	Y_R2 488.368
Na H (589.593 nm)	24.083817	ppm	0.112372	0.47	91024.294427	Y_R 488.368
Ni (231.604 nm)	0.049611	ppm	0.000266	0.54	334.621000	Y 377.433
P (213.618 nm)	2.062460	ppm	0.002171	0.11	4506.270000	Y 242.219
Pb (220.353 nm)	0.099122	ppm	0.001160	1.17	288.653000	Y 242.219
S (181.972 nm)	3.344401	ppm	0.013283	0.40	1727.128026	Y 377.433
Sb (206.834 nm)	0.100569	ppm	0.001131	1.13	251.261000	Y 377.433
Se (196.026 nm)	0.211274	ppm	0.000034	0.02	223.110000	Y 242.219
Si (288.158 nm)	29.079600 o	ppm	0.169419	0.58	250859.000000	Y 377.433
Sn (189.925 nm)	0.101325	ppm	0.000438	0.43	211.010000	Y 377.433
Sr (421.552 nm)	0.404314	ppm	0.001996	0.49	84987.946694	Y_R 488.368
Th (288.505 nm)	0.202979	ppm	0.000874	0.43	604.333000	Y 377.433
Ti (336.122 nm)	0.050396	ppm	0.000004	0.01	7134.840000	Y 377.433
Tl (190.794 nm)	0.207756	ppm	0.001896	0.91	451.029000	Y 377.433
U (409.013 nm)	0.511800	ppm	0.003082	0.60	2093.400000	Y 377.433
V (292.401 nm)	0.067202	ppm	0.000185	0.28	2449.500000	Y 377.433
Zn (206.200 nm)	0.359196	ppm	0.000343	0.10	1903.700000	Y 377.433
Zr (343.823 nm)	0.050066	ppm	0.000092	0.18	6612.560000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.118397	21339.244873	0.000396	0.04
Y 377.433	1.106424	1119908.734106	0.000478	0.04
Y_R 377.433	1.182150	89244.000000	0.003722	0.31
Y_R 488.368	1.147550	50240.500000	0.003618	0.32
Y_R2 488.368	1.144243	99299.205993	0.004007	0.35

Sample Name: CCVH-5408055

Date: 11/6/2018 8:52:08 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000842 u	ppm	0.000379	44.96	-728.795000	Y 377.433
Al (167.019 nm)	45.586200 o	ppm	0.148570	0.33	25451.100000	Y_R 377.433
Al H (396.152 nm)	48.605229	ppm	0.158397	0.33	122328.272568	Y_R 377.433
As (188.980 nm)	-0.000847 u	ppm	0.001765	> 100.00	-3.238660	Y 242.219
B (249.678 nm)	0.000193 u	ppm	0.000743	> 100.00	-11.985000	Y 242.219
Ba (493.408 nm)	-0.000157 u	ppm	0.000352	> 100.00	627.031000	Y_R 488.368
Be (234.861 nm)	-0.000125 u	ppm	0.000054	42.84	1451.990000	Y_R 488.368
Bi (223.061 nm)	0.989031	ppm	0.000757	0.08	2511.310000	Y 377.433
Ca (315.887 nm)	0.001593	ppm	0.001984	> 100.00	-60.325733	Y_R 377.433
Cd (214.439 nm)	-0.000257 u	ppm	0.000019	7.23	32.784900	Y 377.433
Co (228.615 nm)	0.002937	ppm	0.000218	7.42	16.760900	Y 242.219
Cr (205.560 nm)	0.000111 u	ppm	0.000274	> 100.00	-15.807200	Y 377.433
Cu (324.754 nm)	-0.002770 u	ppm	0.000189	6.83	-112.025000	Y 377.433
Fe (238.204 nm)	48.484504 o	ppm	0.135573	0.28	179346.475018	Y_R 377.433
Fe H (259.940 nm)	49.306000	ppm	0.090368	0.18	93280.300000	Y_R 377.433
K (766.491 nm)	0.144697	ppm	0.011633	8.04	-589.974000	Y_R2 488.368
Li (670.783 nm)	0.008762	ppm	0.000086	0.98	-1061.480000	Y_R2 488.368
Mg (279.078 nm)	-0.019231 u	ppm	0.000711	3.70	-427.390000	Y 377.433
Mn (257.610 nm)	0.001444	ppm	0.000029	1.99	399.525000	Y 377.433
Mo (202.032 nm)	-0.000029 u	ppm	0.000040	> 100.00	-0.281887	Y 377.433
Na (589.592 nm)	244.601000 o	ppm	0.932099	0.38	1610830.000000	Y_R2 488.368
Na H (589.593 nm)	254.535532	ppm	1.366566	0.54	934908.807215	Y_R 488.368
Ni (231.604 nm)	0.004280	ppm	0.000774	18.08	27.115900	Y 377.433
P (213.618 nm)	-0.004548 u	ppm	0.002442	53.70	14.673500	Y 242.219
Pb (220.353 nm)	-0.003349 u	ppm	0.000838	25.03	11.069000	Y 242.219
S (181.972 nm)	4.934956	ppm	0.003033	0.06	2541.607406	Y 377.433
Sb (206.834 nm)	-0.002081 u	ppm	0.001914	91.97	-74.524900	Y 377.433
Se (196.026 nm)	-0.003210 u	ppm	0.000904	28.17	0.942498	Y 242.219
Si (288.158 nm)	0.021525	ppm	0.000974	4.53	1114.650000	Y 377.433
Sn (189.925 nm)	0.000805	ppm	0.000182	22.66	11.197100	Y 377.433
Sr (421.552 nm)	0.000181	ppm	0.000036	20.02	194.044840	Y_R 488.368
Th (288.505 nm)	4.966610	ppm	0.005777	0.12	12983.300000	Y 377.433
Ti (336.122 nm)	0.001085	ppm	0.000002	0.18	-73.531800	Y 377.433
Tl (190.794 nm)	-0.003914 u	ppm	0.001029	26.29	-15.239200	Y 377.433
U (409.013 nm)	9.915320	ppm	0.023200	0.23	44690.500000	Y 377.433
V (292.401 nm)	0.004111	ppm	0.000166	4.03	19.762500	Y 377.433
Zn (206.200 nm)	-0.004314 u	ppm	0.000136	3.14	5.209760	Y 377.433
Zr (343.823 nm)	-0.004402 u	ppm	0.000018	0.40	-409.239000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.104342	21071.072388	0.005517	0.50
Y 377.433	1.081972	1095158.818367	0.003803	0.35
Y_R 377.433	1.156640	87318.100000	0.004112	0.36
Y_R 488.368	1.130110	49477.000000	0.001453	0.13
Y_R2 488.368	1.120236	97215.850230	0.001226	0.11

Sample Name: CCV-5407546

Date: 11/6/2018 8:55:30 PM
Rack:Tube: S1:2
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.492897	ppm	0.001903	0.39	22140.700000	Y 377.433
Al (167.019 nm)	0.518485	ppm	0.005808	1.12	293.109000	Y_R 377.433
Al H (396.152 nm)	0.497540 u	ppm	0.001662	0.33	1373.430437	Y_R 377.433
As (188.980 nm)	0.989698	ppm	0.004614	0.47	1244.580000	Y 242.219
B (249.678 nm)	0.488897	ppm	0.001050	0.21	12288.000000	Y 242.219
Ba (493.408 nm)	0.489152	ppm	0.003170	0.65	57264.300000	Y_R 488.368
Be (234.861 nm)	0.481462	ppm	0.000421	0.09	143480.000000	Y_R 488.368
Bi (223.061 nm)	-0.002736 u	ppm	0.000134	4.91	6.263450	Y 377.433
Ca (315.887 nm)	5.087653	ppm	0.031529	0.62	3972.768019	Y_R 377.433
Cd (214.439 nm)	0.502391	ppm	0.001125	0.22	30029.800000	Y 377.433
Co (228.615 nm)	0.492115	ppm	0.001183	0.24	8894.530000	Y 242.219
Cr (205.560 nm)	0.495411	ppm	0.001240	0.25	7531.600000	Y 377.433
Cu (324.754 nm)	0.499220	ppm	0.001162	0.23	27527.600000	Y 377.433
Fe (238.204 nm)	2.469012	ppm	0.014887	0.60	9156.566591	Y_R 377.433
Fe H (259.940 nm)	2.520200 u	ppm	0.012631	0.50	4770.950000	Y_R 377.433
K (766.491 nm)	49.139200	ppm	0.078231	0.16	55826.100000	Y_R2 488.368
Li (670.783 nm)	0.978390	ppm	0.003368	0.34	31276.300000	Y_R2 488.368
Mg (279.078 nm)	19.930500	ppm	0.060429	0.30	115164.000000	Y 377.433
Mn (257.610 nm)	0.500038	ppm	0.000805	0.16	117003.000000	Y 377.433
Mo (202.032 nm)	0.505211	ppm	0.001700	0.34	4350.820000	Y 377.433
Na (589.592 nm)	4.978810	ppm	0.014497	0.29	34068.200000	Y_R2 488.368
Na H (589.593 nm)	5.264430 u	ppm	0.040229	0.76	22141.684449	Y_R 488.368
Ni (231.604 nm)	0.514939	ppm	0.002395	0.47	3509.920000	Y 377.433
P (213.618 nm)	0.989092	ppm	0.000730	0.07	2173.850000	Y 242.219
Pb (220.353 nm)	0.993746	ppm	0.001515	0.15	2851.670000	Y 242.219
S (181.972 nm)	0.004818	ppm	0.003214	66.70	17.870669	Y 377.433
Sb (206.834 nm)	1.001100	ppm	0.007574	0.76	2726.070000	Y 377.433
Se (196.026 nm)	0.974173	ppm	0.003597	0.37	982.544000	Y 242.219
Si (288.158 nm)	4.949390	ppm	0.016599	0.34	43468.100000	Y 377.433
Sn (189.925 nm)	1.025940	ppm	0.008546	0.83	2048.950000	Y 377.433
Sr (421.552 nm)	0.497909	ppm	0.002447	0.49	104625.645745	Y_R 488.368
Th (288.505 nm)	0.008481	ppm	0.002326	27.42	111.138000	Y 377.433
Ti (336.122 nm)	0.496134	ppm	0.001307	0.26	70443.800000	Y 377.433
Tl (190.794 nm)	1.011530	ppm	0.004501	0.44	2216.010000	Y 377.433
U (409.013 nm)	0.004367	ppm	0.000447	10.22	-225.508000	Y 377.433
V (292.401 nm)	0.493611	ppm	0.001327	0.27	17826.500000	Y 377.433
Zn (206.200 nm)	0.500007	ppm	0.004521	0.90	2639.110000	Y 377.433
Zr (343.823 nm)	0.499042	ppm	0.001309	0.26	65649.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.116392	21300.995544	0.002616	0.23
Y 377.433	1.101343	1114765.682929	0.003570	0.32
Y_R 377.433	1.161870	87713.200000	0.001631	0.14
Y_R 488.368	1.133860	49641.100000	0.000154	0.01
Y_R2 488.368	1.137531	98716.760267	0.004185	0.37

Sample Name: CCB

Date: 11/6/2018 8:58:52 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000753	ppm	0.000268	35.56	-410.361000	Y 377.433
Al (167.019 nm)	-0.000958 u	ppm	0.000022	2.34	1.819240	Y_R 377.433
Al H (396.152 nm)	-0.023580 u	ppm	0.006321	26.81	19.713267	Y_R 377.433
As (188.980 nm)	0.001287	ppm	0.000954	74.13	-0.115965	Y 242.219
B (249.678 nm)	0.000921	ppm	0.000237	25.75	80.151500	Y 242.219
Ba (493.408 nm)	-0.000800 u	ppm	0.000029	3.65	506.862000	Y_R 488.368
Be (234.861 nm)	0.000069	ppm	0.000020	29.66	-25.896100	Y_R 488.368
Bi (223.061 nm)	0.000317 u	ppm	0.001693	> 100.00	13.539800	Y 377.433
Ca (315.887 nm)	0.008182	ppm	0.001167	14.26	-55.101452	Y_R 377.433
Cd (214.439 nm)	0.000117	ppm	0.000004	3.53	7.868930	Y 377.433
Co (228.615 nm)	0.000334	ppm	0.000089	26.61	-30.402800	Y 242.219
Cr (205.560 nm)	0.000229	ppm	0.000099	43.14	-0.466470	Y 377.433
Cu (324.754 nm)	0.001478	ppm	0.000059	4.00	-209.583000	Y 377.433
Fe (238.204 nm)	-0.000919 u	ppm	0.001880	> 100.00	21.437737	Y_R 377.433
Fe H (259.940 nm)	0.003591 u	ppm	0.002491	69.37	10.027500	Y_R 377.433
K (766.491 nm)	0.140361	ppm	0.012009	8.56	-594.968000	Y_R2 488.368
Li (670.783 nm)	0.008909	ppm	0.001266	14.22	-1056.600000	Y_R2 488.368
Mg (279.078 nm)	0.001431	ppm	0.001725	> 100.00	47.619400	Y 377.433
Mn (257.610 nm)	0.000042	ppm	0.000005	10.89	71.508800	Y 377.433
Mo (202.032 nm)	-0.000217 u	ppm	0.000076	35.04	-1.898370	Y 377.433
Na (589.592 nm)	0.017192	ppm	0.003695	21.49	409.146000	Y_R2 488.368
Na H (589.593 nm)	-0.185988 u	ppm	0.016166	8.69	1712.238534	Y_R 488.368
Ni (231.604 nm)	0.000347	ppm	0.000075	21.67	-1.732460	Y 377.433
P (213.618 nm)	-0.004130 u	ppm	0.002122	51.40	15.583500	Y 242.219
Pb (220.353 nm)	0.000992	ppm	0.000667	67.22	6.280540	Y 242.219
S (181.972 nm)	-0.002382 u	ppm	0.002199	92.30	12.952030	Y 377.433
Sb (206.834 nm)	0.000457 u	ppm	0.001171	> 100.00	-21.983300	Y 377.433
Se (196.026 nm)	-0.003220 u	ppm	0.000588	18.27	9.786300	Y 242.219
Si (288.158 nm)	-0.004491 u	ppm	0.001897	42.24	891.055000	Y 377.433
Sn (189.925 nm)	-0.001025 u	ppm	0.000405	39.55	7.560200	Y 377.433
Sr (421.552 nm)	0.000014 u	ppm	0.000099	> 100.00	158.982938	Y_R 488.368
Th (288.505 nm)	0.006551	ppm	0.000714	10.89	89.773100	Y 377.433
Ti (336.122 nm)	-0.000137 u	ppm	0.000086	62.51	-247.728000	Y 377.433
Tl (190.794 nm)	0.000491	ppm	0.000330	67.27	-4.266270	Y 377.433
U (409.013 nm)	0.008236	ppm	0.000558	6.78	-170.327000	Y 377.433
V (292.401 nm)	0.000053 u	ppm	0.000108	> 100.00	36.914400	Y 377.433
Zn (206.200 nm)	-0.004973 u	ppm	0.000343	6.90	1.765780	Y 377.433
Zr (343.823 nm)	-0.000148 u	ppm	0.000115	77.57	7.256280	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119493	21360.165317	0.000302	0.03
Y 377.433	1.105051	1118519.442383	0.001156	0.10
Y_R 377.433	1.170430	88359.200000	0.011391	0.97
Y_R 488.368	1.146210	50181.700000	0.016415	1.43
Y_R2 488.368	1.121039	97285.524708	0.005094	0.45

Sample Name: CCVL-5413446

Date: 11/6/2018 9:02:15 PM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010529	ppm	0.000026	0.24	37.711900	Y 377.433
Al (167.019 nm)	0.101502	ppm	0.001519	1.50	59.011900	Y_R 377.433
Al H (396.152 nm)	0.083431 u	ppm	0.002429	2.91	290.516372	Y_R 377.433
As (188.980 nm)	0.013054	ppm	0.002223	17.03	14.701000	Y 242.219
B (249.678 nm)	0.101075	ppm	0.000340	0.34	2582.280000	Y 242.219
Ba (493.408 nm)	0.009287	ppm	0.000208	2.24	1675.140000	Y_R 488.368
Be (234.861 nm)	0.000969	ppm	0.000014	1.46	244.812000	Y_R 488.368
Bi (223.061 nm)	0.103282	ppm	0.004319	4.18	272.832000	Y 377.433
Ca (315.887 nm)	0.218165	ppm	0.015776	7.23	111.399475	Y_R 377.433
Cd (214.439 nm)	0.005248	ppm	0.000034	0.64	314.624000	Y 377.433
Co (228.615 nm)	0.010355	ppm	0.000076	0.74	151.454000	Y 242.219
Cr (205.560 nm)	0.010437	ppm	0.000063	0.60	154.848000	Y 377.433
Cu (324.754 nm)	0.017288	ppm	0.000418	2.42	669.449000	Y 377.433
Fe (238.204 nm)	0.098466	ppm	0.000689	0.70	389.019097	Y_R 377.433
Fe H (259.940 nm)	0.102713 u	ppm	0.002332	2.27	197.546000	Y_R 377.433
K (766.491 nm)	3.192690	ppm	0.026617	0.83	2919.720000	Y_R2 488.368
Li (670.783 nm)	0.030672 Q	ppm	0.000611	1.99	-330.781000 Q	Y_R2 488.368
Mg (279.078 nm)	0.202300	ppm	0.002537	1.25	1206.570000	Y 377.433
Mn (257.610 nm)	0.010459	ppm	0.000012	0.11	2507.870000	Y 377.433
Mo (202.032 nm)	0.019122	ppm	0.000024	0.12	164.646000	Y 377.433
Na (589.592 nm)	1.084960	ppm	0.010634	0.98	7460.210000	Y_R2 488.368
Na H (589.593 nm)	0.862600 u	ppm	0.003994	0.46	5563.391211	Y_R 488.368
Ni (231.604 nm)	0.043273	ppm	0.001152	2.66	291.109000	Y 377.433
P (213.618 nm)	2.868880 o	ppm	0.017535	0.61	6258.630000	Y 242.219
Pb (220.353 nm)	0.010480	ppm	0.001123	10.71	33.511900	Y 242.219
S (181.972 nm)	0.090313	ppm	0.001033	1.14	60.451172	Y 377.433
Sb (206.834 nm)	0.020160	ppm	0.001937	9.61	31.986800	Y 377.433
Se (196.026 nm)	0.018969	ppm	0.001985	10.46	31.860900	Y 242.219
Si (288.158 nm)	0.492170	ppm	0.005594	1.14	5159.700000	Y 377.433
Sn (189.925 nm)	0.102864	ppm	0.000258	0.25	214.070000	Y 377.433
Sr (421.552 nm)	0.010110	ppm	0.000150	1.49	2277.335028	Y_R 488.368
Th (288.505 nm)	0.015994	ppm	0.000706	4.42	115.383000	Y 377.433
Ti (336.122 nm)	0.009918	ppm	0.000081	0.82	1184.910000	Y 377.433
Tl (190.794 nm)	0.015515	ppm	0.002843	18.32	28.695700	Y 377.433
U (409.013 nm)	0.071471	ppm	0.001317	1.84	114.585000	Y 377.433
V (292.401 nm)	0.009825	ppm	0.000345	3.51	386.659000	Y 377.433
Zn (206.200 nm)	0.016193	ppm	0.000475	2.94	112.311000	Y 377.433
Zr (343.823 nm)	0.015215	ppm	0.000189	1.24	2027.440000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.126540	21494.615467	0.003639	0.32
Y 377.433	1.111863	1125413.492078	0.002348	0.21
Y_R 377.433	1.183590	89352.600000	0.007512	0.63
Y_R 488.368	1.160420	50803.800000	0.010204	0.88
Y_R2 488.368	1.141098	99026.290358	0.002867	0.25

Sample Name: 280-116443-A-5-A

Date: 11/6/2018 9:05:37 PM
Rack:Tube: 2:7

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001350	ppm	0.000087	6.45	-385.852000	Y 377.433
Al (167.019 nm)	-0.002613 u	ppm	0.005438	> 100.00	0.902050	Y_R 377.433
Al H (396.152 nm)	-0.009846 u	ppm	0.000370	3.75	71.496107	Y_R 377.433
As (188.980 nm)	0.005958	ppm	0.000774	12.98	5.766350	Y 242.219
B (249.678 nm)	0.019745	ppm	0.000000	0.00	550.349000	Y 242.219
Ba (493.408 nm)	0.328556	ppm	0.000949	0.29	38661.100000	Y_R 488.368
Be (234.861 nm)	0.000083	ppm	0.000026	31.37	-21.312300	Y_R 488.368
Bi (223.061 nm)	0.001139	ppm	0.000080	6.99	15.610300	Y 377.433
Ca (315.887 nm)	39.539214 o	ppm	0.119478	0.30	31289.607183	Y_R 377.433
Cd (214.439 nm)	0.000102	ppm	0.000039	38.21	7.014350	Y 377.433
Co (228.615 nm)	0.000065	ppm	0.000076	> 100.00	-35.267400	Y 242.219
Cr (205.560 nm)	0.000505	ppm	0.000152	30.18	3.721950	Y 377.433
Cu (324.754 nm)	0.001960	ppm	0.000044	2.23	-207.923000	Y 377.433
Fe (238.204 nm)	0.007236	ppm	0.000534	7.38	51.600954	Y_R 377.433
Fe H (259.940 nm)	0.009944 u	ppm	0.000146	1.47	22.046000	Y_R 377.433
K (766.491 nm)	6.870440	ppm	0.026621	0.39	7154.570000	Y_R2 488.368
Li (670.783 nm)	0.019205	ppm	0.000386	2.01	-713.202000	Y_R2 488.368
Mg (279.078 nm)	7.348730	ppm	0.025239	0.34	42489.400000	Y 377.433
Mn (257.610 nm)	0.000447	ppm	0.000014	3.25	166.265000	Y 377.433
Mo (202.032 nm)	0.000463	ppm	0.000115	24.93	3.955130	Y 377.433
Na (589.592 nm)	3.308890	ppm	0.011945	0.36	22749.400000	Y_R2 488.368
Na H (589.593 nm)	3.149979 u	ppm	0.009693	0.31	14244.463417	Y_R 488.368
Ni (231.604 nm)	0.000597	ppm	0.000648	> 100.00	-0.021393	Y 377.433
P (213.618 nm)	0.002422	ppm	0.001216	50.21	29.819500	Y 242.219
Pb (220.353 nm)	0.002125	ppm	0.001047	49.30	9.530440	Y 242.219
S (181.972 nm)	3.284954	ppm	0.002332	0.07	1696.558404	Y 377.433
Sb (206.834 nm)	-0.000992 u	ppm	0.001318	> 100.00	-25.947600	Y 377.433
Se (196.026 nm)	0.000887 u	ppm	0.005967	> 100.00	13.872000	Y 242.219
Si (288.158 nm)	24.001600 o	ppm	0.118401	0.49	207216.000000	Y 377.433
Sn (189.925 nm)	-0.000609 u	ppm	0.001002	> 100.00	8.387020	Y 377.433
Sr (421.552 nm)	0.357075	ppm	0.000068	0.02	75076.401803	Y_R 488.368
Th (288.505 nm)	0.005270	ppm	0.002020	38.33	87.183100	Y 377.433
Ti (336.122 nm)	0.000396	ppm	0.000056	14.01	-48.064500	Y 377.433
Tl (190.794 nm)	0.001968	ppm	0.001279	64.99	-1.022050	Y 377.433
U (409.013 nm)	0.009549	ppm	0.002394	25.07	-171.893000	Y 377.433
V (292.401 nm)	0.016473	ppm	0.000081	0.49	632.221000	Y 377.433
Zn (206.200 nm)	0.136600	ppm	0.000626	0.46	741.155000	Y 377.433
Zr (343.823 nm)	-0.000217 u	ppm	0.000106	48.66	-1.823300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.132532	21608.944131	0.005302	0.47
Y 377.433	1.119634	1133279.424320	0.005963	0.53
Y_R 377.433	1.208440	91228.900000	0.002296	0.19
Y_R 488.368	1.173530	51377.800000	0.000727	0.06
Y_R2 488.368	1.161174	100768.460518	0.001284	0.11

Sample Name: MB 280-436148/1-A

Date: 11/6/2018 9:08:59 PM Rack:Tube: 2:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001018	ppm	0.000033	3.29	-398.223000	Y 377.433
Al (167.019 nm)	0.000324 u	ppm	0.001536	> 100.00	2.539650	Y_R 377.433
Al H (396.152 nm)	-0.014580 u	ppm	0.005014	34.39	42.369161	Y_R 377.433
As (188.980 nm)	0.000970	ppm	0.000934	96.28	-0.515874	Y 242.219
B (249.678 nm)	0.000752	ppm	0.000067	8.88	75.908300	Y 242.219
Ba (493.408 nm)	-0.000586 u	ppm	0.000193	33.00	531.623000	Y_R 488.368
Be (234.861 nm)	0.000023	ppm	0.000006	24.70	-39.166300	Y_R 488.368
Bi (223.061 nm)	0.000119 u	ppm	0.002457	> 100.00	13.042000	Y 377.433
Ca (315.887 nm)	0.009866	ppm	0.001147	11.63	-53.766735	Y_R 377.433
Cd (214.439 nm)	0.000052	ppm	0.000007	13.53	4.012720	Y 377.433
Co (228.615 nm)	0.000313	ppm	0.000222	71.07	-30.786600	Y 242.219
Cr (205.560 nm)	0.000129	ppm	0.000101	78.71	-1.998770	Y 377.433
Cu (324.754 nm)	0.001619	ppm	0.000081	5.01	-201.374000	Y 377.433
Fe (238.204 nm)	0.006752	ppm	0.000534	7.91	49.809587	Y_R 377.433
Fe H (259.940 nm)	0.010842 u	ppm	0.000492	4.54	23.743200	Y_R 377.433
K (766.491 nm)	0.124993	ppm	0.029506	23.61	-612.663000	Y_R2 488.368
Li (670.783 nm)	0.008984	ppm	0.000916	10.19	-1054.080000	Y_R2 488.368
Mg (279.078 nm)	-0.000310 u	ppm	0.000861	> 100.00	37.523800	Y 377.433
Mn (257.610 nm)	0.000092	ppm	0.000013	14.59	83.216300	Y 377.433
Mo (202.032 nm)	0.000078 u	ppm	0.000306	> 100.00	0.640237	Y 377.433
Na (589.592 nm)	0.026370	ppm	0.005751	21.81	471.072000	Y_R2 488.368
Na H (589.593 nm)	-0.283863 u	ppm	0.005999	2.11	1354.361932	Y_R 488.368
Ni (231.604 nm)	-0.000304 u	ppm	0.000450	> 100.00	-6.177470	Y 377.433
P (213.618 nm)	-0.001285 u	ppm	0.002103	> 100.00	21.764200	Y 242.219
Pb (220.353 nm)	-0.000632 u	ppm	0.000774	> 100.00	1.624270	Y 242.219
S (181.972 nm)	-0.001631 u	ppm	0.000310	19.01	13.337091	Y 377.433
Sb (206.834 nm)	-0.000418 u	ppm	0.002634	> 100.00	-24.381900	Y 377.433
Se (196.026 nm)	-0.004166 u	ppm	0.001851	44.43	8.843250	Y 242.219
Si (288.158 nm)	-0.003930 u	ppm	0.000129	3.27	895.873000	Y 377.433
Sn (189.925 nm)	-0.001258 u	ppm	0.000588	46.77	7.096530	Y 377.433
Sr (421.552 nm)	-0.000097 u	ppm	0.000081	83.91	135.642037	Y_R 488.368
Th (288.505 nm)	0.003495	ppm	0.000477	13.65	81.962800	Y 377.433
Ti (336.122 nm)	-0.000096 u	ppm	0.000064	66.66	-241.912000	Y 377.433
Tl (190.794 nm)	-0.000046 u	ppm	0.001497	> 100.00	-5.444530	Y 377.433
U (409.013 nm)	0.009325	ppm	0.007526	80.70	-165.388000	Y 377.433
V (292.401 nm)	-0.000135 u	ppm	0.000361	> 100.00	30.220000	Y 377.433
Zn (206.200 nm)	-0.005006 u	ppm	0.000246	4.91	1.592840	Y 377.433
Zr (343.823 nm)	-0.000196 u	ppm	0.000097	49.26	0.903375	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.134810	21652.412575	0.000854	0.08
Y 377.433	1.118954	1132591.070564	0.000762	0.07
Y_R 377.433	1.184820	89445.200000	0.002007	0.17
Y_R 488.368	1.159470	50762.400000	0.007298	0.63
Y_R2 488.368	1.146117	99461.852429	0.003925	0.34

Sample Name: LCS 280-436148/2-A

Date: 11/6/2018 9:12:21 PM Rack:Tube: 2:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052097	ppm	0.000276	0.53	1916.390000	Y 377.433
Al (167.019 nm)	2.006430	ppm	0.003330	0.17	1121.680000	Y_R 377.433
Al H (396.152 nm)	1.985237	ppm	0.008463	0.43	5178.033787	Y_R 377.433
As (188.980 nm)	0.982299	ppm	0.007061	0.72	1235.270000	Y 242.219
B (249.678 nm)	1.023050	ppm	0.000295	0.03	25633.000000	Y 242.219
Ba (493.408 nm)	1.988520 o	ppm	0.006232	0.31	230914.000000	Y_R 488.368
Be (234.861 nm)	0.049415	ppm	0.000030	0.06	14650.500000	Y_R 488.368
Bi (223.061 nm)	1.954310	ppm	0.001772	0.09	4934.060000	Y 377.433
Ca (315.887 nm)	50.838021 o	ppm	0.018089	0.04	40248.646771	Y_R 377.433
Cd (214.439 nm)	0.099433	ppm	0.000217	0.22	5945.030000	Y 377.433
Co (228.615 nm)	0.480306	ppm	0.000437	0.09	8699.060000	Y 242.219
Cr (205.560 nm)	0.201990	ppm	0.000568	0.28	3068.150000	Y 377.433
Cu (324.754 nm)	0.249035	ppm	0.000102	0.04	13610.200000	Y 377.433
Fe (238.204 nm)	0.991105	ppm	0.000924	0.09	3690.475580	Y_R 377.433
Fe H (259.940 nm)	1.001310 u	ppm	0.007531	0.75	1897.510000	Y_R 377.433
K (766.491 nm)	51.422300	ppm	0.274061	0.53	58455.000000	Y_R2 488.368
Li (670.783 nm)	1.007280	ppm	0.002299	0.23	32239.800000	Y_R2 488.368
Mg (279.078 nm)	50.201700 o	ppm	0.008232	0.02	289974.000000	Y 377.433
Mn (257.610 nm)	0.499998	ppm	0.000057	0.01	116994.000000	Y 377.433
Mo (202.032 nm)	1.035390	ppm	0.000702	0.07	8916.650000	Y 377.433
Na (589.592 nm)	50.306100 o	ppm	0.142137	0.28	335546.000000	Y_R2 488.368
Na H (589.593 nm)	52.441331	ppm	0.077706	0.15	196389.299884	Y_R 488.368
Ni (231.604 nm)	0.494097	ppm	0.001185	0.24	3368.920000	Y 377.433
P (213.618 nm)	10.151100 o	ppm	0.001185	0.01	22082.900000	Y 242.219
Pb (220.353 nm)	0.497233	ppm	0.000551	0.11	1430.180000	Y 242.219
S (181.972 nm)	1.961929	ppm	0.001462	0.07	1020.202852	Y 377.433
Sb (206.834 nm)	0.511876	ppm	0.001093	0.21	1370.710000	Y 377.433
Se (196.026 nm)	1.993270	ppm	0.007532	0.38	1997.190000	Y 242.219
Si (288.158 nm)	10.045300	ppm	0.075873	0.76	87265.800000	Y 377.433
Sn (189.925 nm)	2.067860	ppm	0.000462	0.02	4120.070000	Y 377.433
Sr (421.552 nm)	1.013260	ppm	0.001474	0.15	212754.862511	Y_R 488.368
Th (288.505 nm)	1.010890	ppm	0.002724	0.27	2728.550000	Y 377.433
Ti (336.122 nm)	1.008820	ppm	0.000054	0.01	143601.000000	Y 377.433
Tl (190.794 nm)	2.031800	ppm	0.000580	0.03	4454.520000	Y 377.433
U (409.013 nm)	2.053290	ppm	0.006426	0.31	9032.570000	Y 377.433
V (292.401 nm)	0.507101	ppm	0.000237	0.05	18354.000000	Y 377.433
Zn (206.200 nm)	0.495624	ppm	0.000089	0.02	2616.220000	Y 377.433
Zr (343.823 nm)	0.501961	ppm	0.000296	0.06	66029.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.105294	21089.246693	0.000906	0.08
Y 377.433	1.092997	1106318.249448	0.001194	0.11
Y_R 377.433	1.149340	86767.300000	0.000706	0.06
Y_R 488.368	1.122930	49162.400000	0.000434	0.04
Y_R2 488.368	1.112982	96586.348111	0.003101	0.28

Sample Name: 280-116342-A-3-A

Date: 11/6/2018 9:15:42 PM
Rack:Tube: 2:10

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000544	ppm	0.000171	31.51	-419.902000	Y 377.433
Al (167.019 nm)	0.000966	ppm	0.000301	31.17	2.893100	Y_R 377.433
Al H (396.152 nm)	-0.023084 u	ppm	0.009076	39.32	21.080433	Y_R 377.433
As (188.980 nm)	0.000194 u	ppm	0.001143	> 100.00	-1.493310	Y 242.219
B (249.678 nm)	0.001771	ppm	0.000085	4.83	101.394000	Y 242.219
Ba (493.408 nm)	-0.000187 u	ppm	0.000025	13.45	577.836000	Y_R 488.368
Be (234.861 nm)	0.000015	ppm	0.000010	62.21	-41.706100	Y_R 488.368
Bi (223.061 nm)	0.000171 u	ppm	0.000740	> 100.00	13.172600	Y 377.433
Ca (315.887 nm)	0.271135	ppm	0.000370	0.14	153.397322	Y_R 377.433
Cd (214.439 nm)	0.000018 u	ppm	0.000052	> 100.00	1.968440	Y 377.433
Co (228.615 nm)	0.000142	ppm	0.000060	42.18	-33.858600	Y 242.219
Cr (205.560 nm)	0.000348	ppm	0.000087	25.06	1.341580	Y 377.433
Cu (324.754 nm)	0.001657	ppm	0.000191	11.51	-199.644000	Y 377.433
Fe (238.204 nm)	0.000654	ppm	0.000263	40.27	27.255241	Y_R 377.433
Fe H (259.940 nm)	0.001889 u	ppm	0.002429	> 100.00	6.807310	Y_R 377.433
K (766.491 nm)	0.234499	ppm	0.046249	19.72	-486.570000	Y_R2 488.368
Li (670.783 nm)	0.008452	ppm	0.001156	13.68	-1071.810000	Y_R2 488.368
Mg (279.078 nm)	0.006883	ppm	0.000232	3.38	79.094000	Y 377.433
Mn (257.610 nm)	0.000290	ppm	0.000018	6.05	129.604000	Y 377.433
Mo (202.032 nm)	-0.000198 u	ppm	0.000188	95.18	-1.731270	Y 377.433
Na (589.592 nm)	0.067620	ppm	0.015691	23.21	742.584000	Y_R2 488.368
Na H (589.593 nm)	-0.177930 u	ppm	0.002995	1.68	1742.414051	Y_R 488.368
Ni (231.604 nm)	-0.000228 u	ppm	0.000107	46.95	-5.654780	Y 377.433
P (213.618 nm)	-0.001939 u	ppm	0.001620	83.54	20.342600	Y 242.219
Pb (220.353 nm)	0.001258	ppm	0.000189	15.04	7.046210	Y 242.219
S (181.972 nm)	0.017506	ppm	0.007091	40.51	23.138255	Y 377.433
Sb (206.834 nm)	-0.000467 u	ppm	0.001307	> 100.00	-24.512100	Y 377.433
Se (196.026 nm)	-0.000778 u	ppm	0.002337	> 100.00	12.216800	Y 242.219
Si (288.158 nm)	-0.001609 u	ppm	0.000370	23.02	915.821000	Y 377.433
Sn (189.925 nm)	-0.000544 u	ppm	0.000683	> 100.00	8.516540	Y 377.433
Sr (421.552 nm)	0.000086 u	ppm	0.000182	> 100.00	174.129242	Y_R 488.368
Th (288.505 nm)	0.002238	ppm	0.002090	93.35	78.743100	Y 377.433
Ti (336.122 nm)	-0.000066 u	ppm	0.000021	32.14	-236.801000	Y 377.433
Tl (190.794 nm)	0.001671	ppm	0.000958	57.36	-1.673090	Y 377.433
U (409.013 nm)	0.005100	ppm	0.003989	78.22	-184.563000	Y 377.433
V (292.401 nm)	-0.000272 u	ppm	0.000082	30.18	25.173400	Y 377.433
Zn (206.200 nm)	-0.003606 u	ppm	0.000090	2.50	8.904650	Y 377.433
Zr (343.823 nm)	-0.000211 u	ppm	0.000070	32.99	-1.069450	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120634	21381.930061	0.000462	0.04
Y 377.433	1.105869	1119346.672325	0.000713	0.06
Y_R 377.433	1.168060	88180.500000	0.001838	0.16
Y_R 488.368	1.133770	49636.900000	0.005430	0.48
Y_R2 488.368	1.129847	98049.917823	0.001009	0.09

Sample Name: 280-116342-A-3-Asd@5

Date: 11/6/2018 9:19:05 PM Rack:Tube: 2:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000853	ppm	0.000187	21.90	-405.823000	Y 377.433
Al (167.019 nm)	-0.002019 u	ppm	0.001465	72.54	1.229700	Y_R 377.433
Al H (396.152 nm)	-0.024041 u	ppm	0.000966	4.02	18.568500	Y_R 377.433
As (188.980 nm)	0.000588 u	ppm	0.001375	> 100.00	-0.996075	Y 242.219
B (249.678 nm)	0.000802	ppm	0.000281	35.06	77.188400	Y 242.219
Ba (493.408 nm)	-0.000444 u	ppm	0.000228	51.27	548.030000	Y_R 488.368
Be (234.861 nm)	0.000017	ppm	0.000010	58.22	-41.334200	Y_R 488.368
Bi (223.061 nm)	-0.001179 u	ppm	0.002315	> 100.00	9.773260	Y 377.433
Ca (315.887 nm)	0.042556	ppm	0.002356	5.54	-27.846306	Y_R 377.433
Cd (214.439 nm)	0.000028	ppm	0.000001	5.17	2.540300	Y 377.433
Co (228.615 nm)	0.000339	ppm	0.000013	3.87	-30.302000	Y 242.219
Cr (205.560 nm)	0.000119	ppm	0.000117	98.65	-2.149890	Y 377.433
Cu (324.754 nm)	0.001425	ppm	0.000290	20.37	-212.051000	Y 377.433
Fe (238.204 nm)	0.001938	ppm	0.000837	43.22	32.004058	Y_R 377.433
Fe H (259.940 nm)	0.005845 u	ppm	0.000601	10.29	14.290200	Y_R 377.433
K (766.491 nm)	0.108583	ppm	0.021581	19.88	-631.559000	Y_R2 488.368
Li (670.783 nm)	0.008929	ppm	0.000238	2.67	-1055.920000	Y_R2 488.368
Mg (279.078 nm)	0.001539	ppm	0.000774	50.29	48.218500	Y 377.433
Mn (257.610 nm)	0.000057	ppm	0.000015	26.39	75.237400	Y 377.433
Mo (202.032 nm)	-0.000141 u	ppm	0.000033	23.24	-1.244160	Y 377.433
Na (589.592 nm)	0.017620	ppm	0.009395	53.32	412.321000	Y_R2 488.368
Na H (589.593 nm)	-0.273865 u	ppm	0.004706	1.72	1390.459809	Y_R 488.368
Ni (231.604 nm)	0.000465	ppm	0.000464	99.67	-0.925166	Y 377.433
P (213.618 nm)	-0.001900 u	ppm	0.000668	35.18	20.429100	Y 242.219
Pb (220.353 nm)	0.001125	ppm	0.000340	30.18	6.663440	Y 242.219
S (181.972 nm)	-0.001561 u	ppm	0.003646	> 100.00	13.372891	Y 377.433
Sb (206.834 nm)	0.000043 u	ppm	0.001928	> 100.00	-23.121100	Y 377.433
Se (196.026 nm)	-0.002176 u	ppm	0.002035	93.49	10.824300	Y 242.219
Si (288.158 nm)	-0.005650 u	ppm	0.000433	7.67	881.092000	Y 377.433
Sn (189.925 nm)	-0.002200 u	ppm	0.000905	41.15	5.224480	Y 377.433
Sr (421.552 nm)	0.000027 u	ppm	0.000164	> 100.00	161.636489	Y_R 488.368
Th (288.505 nm)	0.004127	ppm	0.002102	50.93	83.578200	Y 377.433
Ti (336.122 nm)	-0.000131 u	ppm	0.000032	24.15	-246.837000	Y 377.433
Tl (190.794 nm)	0.001026	ppm	0.000205	20.00	-3.088340	Y 377.433
U (409.013 nm)	0.007152	ppm	0.004653	65.06	-175.221000	Y 377.433
V (292.401 nm)	0.000027	ppm	0.000021	77.79	36.193800	Y 377.433
Zn (206.200 nm)	-0.003670 u	ppm	0.000087	2.37	8.574030	Y 377.433
Zr (343.823 nm)	-0.000287 u	ppm	0.000080	27.84	-11.020200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.118504	21341.290688	0.006448	0.58
Y 377.433	1.104714	1118177.647380	0.006091	0.55
Y_R 377.433	1.165220	87966.100000	0.002389	0.21
Y_R 488.368	1.139180	49873.800000	0.005681	0.50
Y_R2 488.368	1.120650	97251.763537	0.000660	0.06

Sample Name: 280-116342-A-3-B MS

Date: 11/6/2018 9:22:27 PM Rack:Tube: 2:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053035	ppm	0.000337	0.64	1959.210000	Y 377.433
Al (167.019 nm)	2.007530	ppm	0.016627	0.83	1122.290000	Y_R 377.433
Al H (396.152 nm)	1.991613	ppm	0.001061	0.05	5195.742711	Y_R 377.433
As (188.980 nm)	0.993078	ppm	0.006496	0.65	1248.850000	Y 242.219
B (249.678 nm)	1.039750	ppm	0.002659	0.26	26050.300000	Y 242.219
Ba (493.408 nm)	2.006050 o	ppm	0.002024	0.10	232944.000000	Y_R 488.368
Be (234.861 nm)	0.049574	ppm	0.000261	0.53	14697.200000	Y_R 488.368
Bi (223.061 nm)	1.980070	ppm	0.000823	0.04	4998.930000	Y 377.433
Ca (315.887 nm)	51.509170 o	ppm	0.161401	0.31	40780.810435	Y_R 377.433
Cd (214.439 nm)	0.100633	ppm	0.000211	0.21	6016.760000	Y 377.433
Co (228.615 nm)	0.486727	ppm	0.001777	0.37	8815.990000	Y 242.219
Cr (205.560 nm)	0.203244	ppm	0.000100	0.05	3087.210000	Y 377.433
Cu (324.754 nm)	0.252899	ppm	0.000060	0.02	13825.500000	Y 377.433
Fe (238.204 nm)	0.995885	ppm	0.003206	0.32	3708.154186	Y_R 377.433
Fe H (259.940 nm)	1.008640 u	ppm	0.007739	0.77	1911.380000	Y_R 377.433
K (766.491 nm)	51.834500	ppm	0.047050	0.09	58929.600000	Y_R2 488.368
Li (670.783 nm)	1.015830	ppm	0.003582	0.35	32525.100000	Y_R2 488.368
Mg (279.078 nm)	50.786400 o	ppm	0.053059	0.10	293351.000000	Y 377.433
Mn (257.610 nm)	0.506844	ppm	0.000537	0.11	118595.000000	Y 377.433
Mo (202.032 nm)	1.051460	ppm	0.003445	0.33	9055.050000	Y 377.433
Na (589.592 nm)	50.749300 o	ppm	0.115286	0.23	338502.000000	Y_R2 488.368
Na H (589.593 nm)	53.042250	ppm	0.184890	0.35	198608.502914	Y_R 488.368
Ni (231.604 nm)	0.503102	ppm	0.001899	0.38	3430.390000	Y 377.433
P (213.618 nm)	10.286600 o	ppm	0.025037	0.24	22377.300000	Y 242.219
Pb (220.353 nm)	0.502142	ppm	0.001464	0.29	1444.270000	Y 242.219
S (181.972 nm)	1.992278	ppm	0.012159	0.61	1035.764208	Y 377.433
Sb (206.834 nm)	0.518733	ppm	0.000098	0.02	1389.320000	Y 377.433
Se (196.026 nm)	2.018860	ppm	0.003966	0.20	2022.670000	Y 242.219
Si (288.158 nm)	10.190000	ppm	0.064373	0.63	88509.700000	Y 377.433
Sn (189.925 nm)	2.104310	ppm	0.007412	0.35	4192.520000	Y 377.433
Sr (421.552 nm)	1.023302	ppm	0.000074	0.01	214861.840526	Y_R 488.368
Th (288.505 nm)	1.022780	ppm	0.006557	0.64	2760.030000	Y 377.433
Ti (336.122 nm)	1.024460	ppm	0.001038	0.10	145830.000000	Y 377.433
Tl (190.794 nm)	2.057750	ppm	0.002564	0.12	4511.440000	Y 377.433
U (409.013 nm)	2.081120	ppm	0.003690	0.18	9157.640000	Y 377.433
V (292.401 nm)	0.514152	ppm	0.001136	0.22	18608.800000	Y 377.433
Zn (206.200 nm)	0.503026	ppm	0.004178	0.83	2654.880000	Y 377.433
Zr (343.823 nm)	0.509968	ppm	0.000408	0.08	67082.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.091394	20824.027140	0.001391	0.13
Y 377.433	1.079303	1092456.921030	0.001536	0.14
Y_R 377.433	1.149820	86803.600000	0.004919	0.43
Y_R 488.368	1.120820	49070.000000	0.004262	0.38
Y_R2 488.368	1.105871	95969.243814	0.001346	0.12

Sample Name: 280-116342-A-3-C MSD

Date: 11/6/2018 9:25:50 PM
Rack:Tube: 2:13

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051680	ppm	0.000326	0.63	1897.360000	Y 377.433
Al (167.019 nm)	1.982270	ppm	0.015053	0.76	1108.200000	Y_R 377.433
Al H (396.152 nm)	1.961673	ppm	0.004161	0.21	5118.424330	Y_R 377.433
As (188.980 nm)	0.979444	ppm	0.002550	0.26	1231.680000	Y 242.219
B (249.678 nm)	1.018980	ppm	0.000458	0.04	25531.400000	Y 242.219
Ba (493.408 nm)	1.975140 o	ppm	0.000396	0.02	229363.000000	Y_R 488.368
Be (234.861 nm)	0.049006	ppm	0.000332	0.68	14528.700000	Y_R 488.368
Bi (223.061 nm)	1.944920	ppm	0.002438	0.13	4910.410000	Y 377.433
Ca (315.887 nm)	50.797827 o	ppm	0.164336	0.32	40216.775596	Y_R 377.433
Cd (214.439 nm)	0.098850	ppm	0.000145	0.15	5910.200000	Y 377.433
Co (228.615 nm)	0.478395	ppm	0.001892	0.40	8664.330000	Y 242.219
Cr (205.560 nm)	0.200263	ppm	0.000223	0.11	3041.880000	Y 377.433
Cu (324.754 nm)	0.248163	ppm	0.000565	0.23	13561.900000	Y 377.433
Fe (238.204 nm)	0.980607	ppm	0.003238	0.33	3651.646345	Y_R 377.433
Fe H (259.940 nm)	0.997450 u	ppm	0.001449	0.15	1890.210000	Y_R 377.433
K (766.491 nm)	50.805200	ppm	0.138240	0.27	57744.400000	Y_R2 488.368
Li (670.783 nm)	0.995381	ppm	0.000929	0.09	31843.000000	Y_R2 488.368
Mg (279.078 nm)	49.882400 o	ppm	0.006510	0.01	288130.000000	Y 377.433
Mn (257.610 nm)	0.498065	ppm	0.000034	0.01	116542.000000	Y 377.433
Mo (202.032 nm)	1.031160	ppm	0.001202	0.12	8880.300000	Y 377.433
Na (589.592 nm)	49.876800 o	ppm	0.436027	0.87	332695.000000	Y_R2 488.368
Na H (589.593 nm)	52.308921	ppm	0.019191	0.04	195893.231043	Y_R 488.368
Ni (231.604 nm)	0.493588	ppm	0.000224	0.05	3365.440000	Y 377.433
P (213.618 nm)	10.098900 o	ppm	0.003134	0.03	21969.300000	Y 242.219
Pb (220.353 nm)	0.496077	ppm	0.000699	0.14	1426.890000	Y 242.219
S (181.972 nm)	1.946760	ppm	0.003211	0.16	1012.430340	Y 377.433
Sb (206.834 nm)	0.510225	ppm	0.002366	0.46	1366.170000	Y 377.433
Se (196.026 nm)	1.980750	ppm	0.002442	0.12	1984.730000	Y 242.219
Si (288.158 nm)	9.965000	ppm	0.022648	0.23	86575.600000	Y 377.433
Sn (189.925 nm)	2.060770	ppm	0.005953	0.29	4105.970000	Y 377.433
Sr (421.552 nm)	1.007988	ppm	0.001484	0.15	211648.736115	Y_R 488.368
Th (288.505 nm)	1.008170	ppm	0.005891	0.58	2721.500000	Y 377.433
Ti (336.122 nm)	1.004110	ppm	0.001191	0.12	142930.000000	Y 377.433
Tl (190.794 nm)	2.020590	ppm	0.000802	0.04	4429.890000	Y 377.433
U (409.013 nm)	2.049000	ppm	0.000734	0.04	9013.240000	Y 377.433
V (292.401 nm)	0.505249	ppm	0.000183	0.04	18287.300000	Y 377.433
Zn (206.200 nm)	0.494502	ppm	0.000642	0.13	2610.360000	Y 377.433
Zr (343.823 nm)	0.500367	ppm	0.000394	0.08	65819.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.094388	20881.154582	0.004215	0.39
Y 377.433	1.082606	1095800.358379	0.003374	0.31
Y_R 377.433	1.144830	86426.600000	0.003120	0.27
Y_R 488.368	1.115170	48823.000000	0.002762	0.25
Y_R2 488.368	1.107787	96135.448995	0.000693	0.06

Sample Name: 280-116342-A-3-Apds

Date: 11/6/2018 9:29:13 PM
Rack:Tube: 2:14
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049231	ppm	0.000048	0.10	1799.060000	Y 377.433
Al (167.019 nm)	1.006320	ppm	0.006352	0.63	564.084000	Y_R 377.433
Al H (396.152 nm)	0.970137	ppm	0.007462	0.77	2532.000277	Y_R 377.433
As (188.980 nm)	0.195380	ppm	0.000389	0.20	244.298000	Y 242.219
B (249.678 nm)	0.101523	ppm	0.000398	0.39	2593.760000	Y 242.219
Ba (493.408 nm)	0.099054	ppm	0.000966	0.98	12077.600000	Y_R 488.368
Be (234.861 nm)	0.048458	ppm	0.000470	0.97	14422.700000	Y_R 488.368
Bi (223.061 nm)	-0.002457 u	ppm	0.000469	19.09	6.721440	Y 377.433
Ca (315.887 nm)	20.495966 o	ppm	0.030649	0.15	16189.977905	Y_R 377.433
Cd (214.439 nm)	0.050283	ppm	0.000229	0.46	3007.120000	Y 377.433
Co (228.615 nm)	0.048165	ppm	0.000338	0.70	837.667000	Y 242.219
Cr (205.560 nm)	0.050782	ppm	0.000024	0.05	768.273000	Y 377.433
Cu (324.754 nm)	0.050587	ppm	0.000012	0.02	2517.780000	Y 377.433
Fe (238.204 nm)	0.988351	ppm	0.002282	0.23	3680.287712	Y_R 377.433
Fe H (259.940 nm)	1.007340 u	ppm	0.002377	0.24	1908.920000	Y_R 377.433
K (766.491 nm)	20.401000	ppm	0.106325	0.52	22734.700000	Y_R2 488.368
Li (670.783 nm)	0.109932	ppm	0.000085	0.08	2312.610000	Y_R2 488.368
Mg (279.078 nm)	19.841300	ppm	0.041246	0.21	114638.000000	Y 377.433
Mn (257.610 nm)	0.050804	ppm	0.000062	0.12	11943.100000	Y 377.433
Mo (202.032 nm)	0.049820	ppm	0.000015	0.03	429.019000	Y 377.433
Na (589.592 nm)	20.145900 o	ppm	0.080357	0.40	133146.000000	Y_R2 488.368
Na H (589.593 nm)	20.744227	ppm	0.247430	1.19	78486.430356	Y_R 488.368
Ni (231.604 nm)	0.049185	ppm	0.000934	1.90	331.705000	Y 377.433
P (213.618 nm)	1.993830	ppm	0.001548	0.08	4357.140000	Y 242.219
Pb (220.353 nm)	0.098932	ppm	0.000615	0.62	288.131000	Y 242.219
S (181.972 nm)	0.022277	ppm	0.005894	26.46	25.706347	Y 377.433
Sb (206.834 nm)	0.100378	ppm	0.001303	1.30	250.764000	Y 377.433
Se (196.026 nm)	0.195285	ppm	0.001238	0.63	207.209000	Y 242.219
Si (288.158 nm)	4.942250	ppm	0.006528	0.13	43406.700000	Y 377.433
Sn (189.925 nm)	0.102398	ppm	0.001035	1.01	213.143000	Y 377.433
Sr (421.552 nm)	0.051168	ppm	0.000557	1.09	10892.017989	Y_R 488.368
Th (288.505 nm)	0.202649	ppm	0.003923	1.94	602.971000	Y 377.433
Ti (336.122 nm)	0.049865	ppm	0.000040	0.08	6937.140000	Y 377.433
Tl (190.794 nm)	0.206175	ppm	0.001079	0.52	447.560000	Y 377.433
U (409.013 nm)	0.512010	ppm	0.005168	1.01	2101.680000	Y 377.433
V (292.401 nm)	0.050528	ppm	0.000242	0.48	1843.690000	Y 377.433
Zn (206.200 nm)	0.198229	ppm	0.001265	0.64	1063.030000	Y 377.433
Zr (343.823 nm)	0.050342	ppm	0.000082	0.16	6648.770000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.109274	21165.189074	0.000553	0.05
Y 377.433	1.093658	1106986.617224	0.000666	0.06
Y_R 377.433	1.157900	87413.200000	0.000370	0.03
Y_R 488.368	1.125620	49280.300000	0.008716	0.77
Y_R2 488.368	1.122664	97426.558897	0.004347	0.39

Sample Name: 280-116443-A-6-A

Date: 11/6/2018 9:32:37 PM Rack:Tube: 2:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000912	ppm	0.000189	20.74	-403.038000	Y 377.433
Al (167.019 nm)	0.001369	ppm	0.000930	67.94	3.120820	Y_R 377.433
Al H (396.152 nm)	-0.019724 u	ppm	0.000465	2.36	29.880219	Y_R 377.433
As (188.980 nm)	0.000163 u	ppm	0.000601	> 100.00	-1.532420	Y 242.219
B (249.678 nm)	0.001578	ppm	0.000003	0.18	96.554400	Y 242.219
Ba (493.408 nm)	-0.000323 u	ppm	0.000449	> 100.00	562.345000	Y_R 488.368
Be (234.861 nm)	0.000008	ppm	0.000006	81.51	-43.840200	Y_R 488.368
Bi (223.061 nm)	-0.000163 u	ppm	0.001819	> 100.00	12.333500	Y 377.433
Ca (315.887 nm)	1.040516	ppm	0.018452	1.77	763.450019	Y_R 377.433
Cd (214.439 nm)	0.000063	ppm	0.000053	84.50	4.643480	Y 377.433
Co (228.615 nm)	0.000287	ppm	0.000160	55.74	-31.251200	Y 242.219
Cr (205.560 nm)	0.000086 u	ppm	0.000183	> 100.00	-2.648560	Y 377.433
Cu (324.754 nm)	0.001563	ppm	0.000024	1.55	-205.767000	Y 377.433
Fe (238.204 nm)	0.004749	ppm	0.001610	33.90	42.400556	Y_R 377.433
Fe H (259.940 nm)	0.012268 u	ppm	0.000387	3.16	26.441900	Y_R 377.433
K (766.491 nm)	0.602772	ppm	0.068191	11.31	-62.511700	Y_R2 488.368
Li (670.783 nm)	0.008524	ppm	0.000908	10.66	-1069.430000	Y_R2 488.368
Mg (279.078 nm)	0.012148	ppm	0.000023	0.19	109.526000	Y 377.433
Mn (257.610 nm)	0.000178	ppm	0.000008	4.31	103.437000	Y 377.433
Mo (202.032 nm)	0.000057	ppm	0.000056	98.49	0.462835	Y 377.433
Na (589.592 nm)	0.176706	ppm	0.002221	1.26	1461.030000	Y_R2 488.368
Na H (589.593 nm)	-0.083308 u	ppm	0.008517	10.22	2089.157331	Y_R 488.368
Ni (231.604 nm)	0.000391	ppm	0.000009	2.37	-1.431080	Y 377.433
P (213.618 nm)	-0.000943 u	ppm	0.001246	> 100.00	22.508300	Y 242.219
Pb (220.353 nm)	0.001207	ppm	0.000921	76.28	6.894220	Y 242.219
S (181.972 nm)	0.156303	ppm	0.005252	3.36	94.222858	Y 377.433
Sb (206.834 nm)	-0.000143 u	ppm	0.002427	> 100.00	-23.632600	Y 377.433
Se (196.026 nm)	0.000898	ppm	0.000073	8.11	13.883100	Y 242.219
Si (288.158 nm)	0.003827	ppm	0.000031	0.81	962.546000	Y 377.433
Sn (189.925 nm)	-0.000870 u	ppm	0.000628	72.13	7.867550	Y 377.433
Sr (421.552 nm)	0.000522	ppm	0.000141	27.11	265.501124	Y_R 488.368
Th (288.505 nm)	0.003026	ppm	0.002402	79.39	80.743100	Y 377.433
Ti (336.122 nm)	-0.000052 u	ppm	0.000061	> 100.00	-232.352000	Y 377.433
Tl (190.794 nm)	0.000335	ppm	0.000281	83.85	-4.608940	Y 377.433
U (409.013 nm)	0.007186	ppm	0.001579	21.97	-175.272000	Y 377.433
V (292.401 nm)	-0.000110 u	ppm	0.000163	> 100.00	30.922300	Y 377.433
Zn (206.200 nm)	0.000140	ppm	0.000162	> 100.00	28.470900	Y 377.433
Zr (343.823 nm)	-0.000177 u	ppm	0.000013	7.22	3.427700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122332	21414.334697	0.001248	0.11
Y 377.433	1.105264	1118734.768300	0.002505	0.23
Y_R 377.433	1.169370	88279.200000	0.009313	0.80
Y_R 488.368	1.150020	50348.400000	0.015108	1.31
Y_R2 488.368	1.143527	99237.105138	0.002713	0.24

Sample Name: 280-116408-E-1-A

Date: 11/6/2018 9:35:58 PM
Rack:Tube: 2:16

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001509	ppm	0.000010	0.67	-376.354000	Y 377.433
Al (167.019 nm)	0.034955	ppm	0.004830	13.82	21.882700	Y_R 377.433
Al H (396.152 nm)	0.065264 u	ppm	0.000946	1.45	355.460430	Y_R 377.433
As (188.980 nm)	0.002278	ppm	0.001686	74.02	1.130800	Y 242.219
B (249.678 nm)	0.515991	ppm	0.000979	0.19	12946.600000	Y 242.219
Ba (493.408 nm)	0.014810	ppm	0.000410	2.77	2374.480000	Y_R 488.368
Be (234.861 nm)	0.000088	ppm	0.000004	4.02	-18.319700	Y_R 488.368
Bi (223.061 nm)	-0.001611 u	ppm	0.001578	97.96	8.694340	Y 377.433
Ca (315.887 nm)	258.317399 o	ppm	1.128314	0.44	204761.896379	Y_R 377.433
Cd (214.439 nm)	0.000043	ppm	0.000023	53.26	3.536200	Y 377.433
Co (228.615 nm)	-0.000266 u	ppm	0.000285	> 100.00	-41.244500	Y 242.219
Cr (205.560 nm)	0.000955	ppm	0.000110	11.51	10.565200	Y 377.433
Cu (324.754 nm)	0.003953	ppm	0.000333	8.43	-224.051000	Y 377.433
Fe (238.204 nm)	0.058118	ppm	0.000448	0.77	239.789363	Y_R 377.433
Fe H (259.940 nm)	0.055862 u	ppm	0.000835	1.49	108.913000	Y_R 377.433
K (766.491 nm)	24.076600	ppm	0.100121	0.42	26967.100000	Y_R2 488.368
Li (670.783 nm)	0.364870	ppm	0.001377	0.38	10815.000000	Y_R2 488.368
Mg (279.078 nm)	229.139000 o	ppm	0.348725	0.15	1323670.000000	Y 377.433
Mn (257.610 nm)	0.016965	ppm	0.000004	0.03	4029.230000	Y 377.433
Mo (202.032 nm)	0.000552	ppm	0.000149	27.00	4.726730	Y 377.433
Na (589.592 nm)	942.692000 o	ppm	3.600600	0.38	6207330.000000	Y_R2 488.368
Na H (589.593 nm)	974.467527	ppm	4.637235	0.48	3572465.931375	Y_R 488.368
Ni (231.604 nm)	0.003292	ppm	0.000504	15.30	18.361800	Y 377.433
P (213.618 nm)	0.022453	ppm	0.000303	1.35	73.347900	Y 242.219
Pb (220.353 nm)	0.000177 u	ppm	0.000653	> 100.00	3.933020	Y 242.219
S (181.972 nm)	971.425819 bo	ppm	0.793704	0.08	497528.739191	Y 377.433
Sb (206.834 nm)	-0.002259 u	ppm	0.001459	64.59	-29.455700	Y 377.433
Se (196.026 nm)	0.114890	ppm	0.002771	2.41	127.331000	Y 242.219
Si (288.158 nm)	8.302230	ppm	0.079582	0.96	72284.700000	Y 377.433
Sn (189.925 nm)	-0.000261 u	ppm	0.001426	> 100.00	9.079420	Y 377.433
Sr (421.552 nm)	5.222311 o	ppm	0.021279	0.41	1095884.277850	Y_R 488.368
Th (288.505 nm)	0.007498	ppm	0.003610	48.14	92.858700	Y 377.433
Ti (336.122 nm)	0.000241	ppm	0.000006	2.29	614.276000	Y 377.433
Tl (190.794 nm)	0.001984	ppm	0.002196	> 100.00	-0.989411	Y 377.433
U (409.013 nm)	0.010655	ppm	0.001590	14.92	-208.346000	Y 377.433
V (292.401 nm)	0.000573	ppm	0.000073	12.65	57.598800	Y 377.433
Zn (206.200 nm)	-0.003538 u	ppm	0.000529	14.94	9.263870	Y 377.433
Zr (343.823 nm)	-0.000076 u	ppm	0.000013	16.64	16.817700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.998234	19046.516654	0.001233	0.12
Y 377.433	0.993435	1005543.008087	0.000587	0.06
Y_R 377.433	1.108020	83647.400000	0.002325	0.21
Y_R 488.368	1.089110	47682.000000	0.008607	0.79
Y_R2 488.368	1.077684	93523.087156	0.002268	0.21

Sample Name: CCVH-5408055

Date: 11/6/2018 9:39:21 PM
Rack:Tube: S1:1
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000724 u	ppm	0.000275	38.05	-724.860000	Y 377.433
Al (167.019 nm)	44.928700 o	ppm	0.228105	0.51	25084.400000	Y_R 377.433
Al H (396.152 nm)	48.298246	ppm	0.234895	0.49	121556.155338	Y_R 377.433
As (188.980 nm)	0.000869 u	ppm	0.002746	> 100.00	-1.075600	Y 242.219
B (249.678 nm)	0.000007 u	ppm	0.000675	> 100.00	-16.241000	Y 242.219
Ba (493.408 nm)	-0.000476 u	ppm	0.000358	75.15	589.857000	Y_R 488.368
Be (234.861 nm)	-0.000153 u	ppm	0.000025	16.27	1435.650000	Y_R 488.368
Bi (223.061 nm)	0.991296	ppm	0.004619	0.47	2516.970000	Y 377.433
Ca (315.887 nm)	0.015703	ppm	0.008912	56.76	-49.137844	Y_R 377.433
Cd (214.439 nm)	-0.000242 u	ppm	0.000016	6.68	33.415500	Y 377.433
Co (228.615 nm)	0.002936	ppm	0.000121	4.12	16.739600	Y 242.219
Cr (205.560 nm)	0.000135	ppm	0.000058	42.93	-15.368100	Y 377.433
Cu (324.754 nm)	-0.002763 u	ppm	0.000023	0.82	-114.282000	Y 377.433
Fe (238.204 nm)	48.134228 o	ppm	0.181254	0.38	178050.967479	Y_R 377.433
Fe H (259.940 nm)	49.074700	ppm	0.140380	0.29	92842.800000	Y_R 377.433
K (766.491 nm)	0.186308	ppm	0.011030	5.92	-542.061000	Y_R2 488.368
Li (670.783 nm)	0.010322	ppm	0.001179	11.43	-1009.440000	Y_R2 488.368
Mg (279.078 nm)	-0.012906 u	ppm	0.001423	11.02	-392.110000	Y 377.433
Mn (257.610 nm)	0.001396	ppm	0.000002	0.17	388.372000	Y 377.433
Mo (202.032 nm)	-0.000376 u	ppm	0.000070	18.65	-3.267170	Y 377.433
Na (589.592 nm)	244.762000 o	ppm	0.271349	0.11	1611890.000000	Y_R2 488.368
Na H (589.593 nm)	251.148760	ppm	2.896791	1.15	922500.812394	Y_R 488.368
Ni (231.604 nm)	0.004437	ppm	0.000490	11.04	28.176500	Y 377.433
P (213.618 nm)	-0.007066 u	ppm	0.000771	10.92	9.202150	Y 242.219
Pb (220.353 nm)	-0.003418 u	ppm	0.000056	1.64	11.114500	Y 242.219
S (181.972 nm)	5.086544	ppm	0.011206	0.22	2619.243216	Y 377.433
Sb (206.834 nm)	-0.001308 u	ppm	0.002287	> 100.00	-72.525200	Y 377.433
Se (196.026 nm)	-0.003353 u	ppm	0.000268	7.98	0.846745	Y 242.219
Si (288.158 nm)	0.014958	ppm	0.000355	2.37	1058.210000	Y 377.433
Sn (189.925 nm)	0.000863	ppm	0.000887	> 100.00	11.312500	Y 377.433
Sr (421.552 nm)	0.000435	ppm	0.000142	32.76	247.253492	Y_R 488.368
Th (288.505 nm)	4.970910	ppm	0.012893	0.26	12995.500000	Y 377.433
Ti (336.122 nm)	0.001169	ppm	0.000061	5.20	-61.488800	Y 377.433
Tl (190.794 nm)	-0.004056 u	ppm	0.001428	35.20	-15.544700	Y 377.433
U (409.013 nm)	9.954340	ppm	0.004574	0.05	44866.700000	Y 377.433
V (292.401 nm)	0.004108	ppm	0.000060	1.47	17.027500	Y 377.433
Zn (206.200 nm)	-0.004329 u	ppm	0.000124	2.86	5.128730	Y 377.433
Zr (343.823 nm)	-0.004451 u	ppm	0.000053	1.20	-416.455000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.123513	21436.871980	0.002584	0.23
Y 377.433	1.099646	1113048.239335	0.004331	0.39
Y_R 377.433	1.188280	89706.400000	0.006751	0.57
Y_R 488.368	1.165500	51026.200000	0.011828	1.01
Y_R2 488.368	1.140793	98999.840368	0.000961	0.08

Sample Name: CCV-5407546

Date: 11/6/2018 9:42:45 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.493077	ppm	0.000849	0.17	22149.000000	Y 377.433
Al (167.019 nm)	0.513118	ppm	0.004404	0.86	290.117000	Y_R 377.433
Al H (396.152 nm)	0.490466 u	ppm	0.005797	1.18	1355.733298	Y_R 377.433
As (188.980 nm)	0.985250	ppm	0.003226	0.33	1238.970000	Y 242.219
B (249.678 nm)	0.488876	ppm	0.001039	0.21	12287.400000	Y 242.219
Ba (493.408 nm)	0.491506	ppm	0.001985	0.40	57536.900000	Y_R 488.368
Be (234.861 nm)	0.481595	ppm	0.000986	0.20	143519.000000	Y_R 488.368
Bi (223.061 nm)	-0.000950 u	ppm	0.000329	34.67	10.762200	Y 377.433
Ca (315.887 nm)	5.083840	ppm	0.001422	0.03	3969.744881	Y_R 377.433
Cd (214.439 nm)	0.501313	ppm	0.001159	0.23	29965.400000	Y 377.433
Co (228.615 nm)	0.491805	ppm	0.003216	0.65	8888.940000	Y 242.219
Cr (205.560 nm)	0.496966	ppm	0.001608	0.32	7555.260000	Y 377.433
Cu (324.754 nm)	0.500689	ppm	0.000647	0.13	27608.700000	Y 377.433
Fe (238.204 nm)	2.464203	ppm	0.001182	0.05	9138.777631	Y_R 377.433
Fe H (259.940 nm)	2.524050 u	ppm	0.008517	0.34	4778.220000	Y_R 377.433
K (766.491 nm)	49.954200	ppm	0.342762	0.69	56764.500000	Y_R2 488.368
Li (670.783 nm)	0.990524	ppm	0.005596	0.56	31681.000000	Y_R2 488.368
Mg (279.078 nm)	19.887400	ppm	0.040283	0.20	114915.000000	Y 377.433
Mn (257.610 nm)	0.499545	ppm	0.001552	0.31	116888.000000	Y 377.433
Mo (202.032 nm)	0.505205	ppm	0.000808	0.16	4350.770000	Y 377.433
Na (589.592 nm)	5.101360	ppm	0.014478	0.28	34880.700000	Y_R2 488.368
Na H (589.593 nm)	5.565399 u	ppm	0.041844	0.75	23246.917218	Y_R 488.368
Ni (231.604 nm)	0.515171	ppm	0.000826	0.16	3511.500000	Y 377.433
P (213.618 nm)	0.912355	ppm	0.007422	0.81	2007.100000	Y 242.219
Pb (220.353 nm)	0.990143	ppm	0.002515	0.25	2841.340000	Y 242.219
S (181.972 nm)	0.054091	ppm	0.005082	9.40	43.106637	Y 377.433
Sb (206.834 nm)	1.003870	ppm	0.002376	0.24	2733.670000	Y 377.433
Se (196.026 nm)	0.979595	ppm	0.000588	0.06	987.940000	Y 242.219
Si (288.158 nm)	4.897520	ppm	0.056570	1.16	43022.300000	Y 377.433
Sn (189.925 nm)	1.023780	ppm	0.002195	0.21	2044.650000	Y 377.433
Sr (421.552 nm)	0.500767	ppm	0.001560	0.31	105225.386575	Y_R 488.368
Th (288.505 nm)	0.006349	ppm	0.001756	27.66	105.735000	Y 377.433
Ti (336.122 nm)	0.495957	ppm	0.000467	0.09	70418.500000	Y 377.433
Tl (190.794 nm)	1.006480	ppm	0.002647	0.26	2204.900000	Y 377.433
U (409.013 nm)	0.002815	ppm	0.000353	12.55	-232.615000	Y 377.433
V (292.401 nm)	0.493473	ppm	0.002113	0.43	17820.800000	Y 377.433
Zn (206.200 nm)	0.498015	ppm	0.001006	0.20	2628.710000	Y 377.433
Zr (343.823 nm)	0.499065	ppm	0.001149	0.23	65652.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130434	21568.929540	0.001629	0.14
Y 377.433	1.116453	1130059.617775	0.001920	0.17
Y_R 377.433	1.180350	89108.300000	0.000155	0.01
Y_R 488.368	1.148120	50265.400000	0.000770	0.07
Y_R2 488.368	1.137732	98734.163820	0.001796	0.16

Sample Name: CCB

Date: 11/6/2018 9:46:07 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000832	ppm	0.000263	31.65	-406.756000	Y 377.433
Al (167.019 nm)	-0.004774 u	ppm	0.001387	29.05	-0.308862	Y_R 377.433
Al H (396.152 nm)	-0.019551 u	ppm	0.003418	17.48	29.869908	Y_R 377.433
As (188.980 nm)	0.000747	ppm	0.000627	83.92	-0.795978	Y 242.219
B (249.678 nm)	0.001166	ppm	0.000142	12.17	86.267100	Y 242.219
Ba (493.408 nm)	-0.000565 u	ppm	0.000303	53.62	534.087000	Y_R 488.368
Be (234.861 nm)	0.000064	ppm	0.000021	33.47	-27.381800	Y_R 488.368
Bi (223.061 nm)	0.003720	ppm	0.002341	62.93	22.109200	Y 377.433
Ca (315.887 nm)	0.016570	ppm	0.002242	13.53	-48.450828	Y_R 377.433
Cd (214.439 nm)	0.000068	ppm	0.000023	32.85	4.977440	Y 377.433
Co (228.615 nm)	0.000478	ppm	0.000109	22.86	-27.796300	Y 242.219
Cr (205.560 nm)	0.000252	ppm	0.000217	86.44	-0.129248	Y 377.433
Cu (324.754 nm)	0.001287	ppm	0.000137	10.65	-220.363000	Y 377.433
Fe (238.204 nm)	-0.002175 u	ppm	0.001368	62.89	16.794008	Y_R 377.433
Fe H (259.940 nm)	0.004018 u	ppm	0.000648	16.14	10.834400	Y_R 377.433
K (766.491 nm)	0.132279	ppm	0.014172	10.71	-604.274000	Y_R2 488.368
Li (670.783 nm)	0.009679	ppm	0.000239	2.47	-1030.890000	Y_R2 488.368
Mg (279.078 nm)	0.001480	ppm	0.000034	2.33	47.894500	Y 377.433
Mn (257.610 nm)	0.000031 u	ppm	0.000049	> 100.00	68.948400	Y 377.433
Mo (202.032 nm)	0.000023	ppm	0.000032	> 100.00	0.168600	Y 377.433
Na (589.592 nm)	0.036270	ppm	0.000537	1.48	536.121000	Y_R2 488.368
Na H (589.593 nm)	-0.032851 u	ppm	0.012627	38.44	2273.904733	Y_R 488.368
Ni (231.604 nm)	0.000609	ppm	0.000071	11.66	0.057452	Y 377.433
P (213.618 nm)	-0.004128 u	ppm	0.000249	6.03	15.587900	Y 242.219
Pb (220.353 nm)	0.000959	ppm	0.000705	73.51	6.183680	Y 242.219
S (181.972 nm)	0.042670	ppm	0.001095	2.57	36.025725	Y 377.433
Sb (206.834 nm)	0.002069	ppm	0.001016	49.14	-17.571200	Y 377.433
Se (196.026 nm)	-0.001856 u	ppm	0.003345	> 100.00	11.144400	Y 242.219
Si (288.158 nm)	-0.005588 u	ppm	0.000037	0.66	881.630000	Y 377.433
Sn (189.925 nm)	-0.001156 u	ppm	0.000684	59.16	7.299590	Y 377.433
Sr (421.552 nm)	0.000000 u	ppm	0.000009	> 100.00	155.987122	Y_R 488.368
Th (288.505 nm)	0.003865	ppm	0.003562	92.18	82.912600	Y 377.433
Ti (336.122 nm)	-0.000040 u	ppm	0.000006	15.84	-233.878000	Y 377.433
Tl (190.794 nm)	0.001880	ppm	0.001297	68.95	-1.211180	Y 377.433
U (409.013 nm)	0.008691	ppm	0.002503	28.80	-168.275000	Y 377.433
V (292.401 nm)	-0.000006 u	ppm	0.000244	> 100.00	34.649100	Y 377.433
Zn (206.200 nm)	-0.005385 u	ppm	0.000135	2.51	-0.383756	Y 377.433
Zr (343.823 nm)	-0.000158 u	ppm	0.000114	71.86	5.884100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.135191	21659.692842	0.000627	0.06
Y 377.433	1.121639	1135309.530463	0.000185	0.02
Y_R 377.433	1.189990	89835.900000	0.004376	0.37
Y_R 488.368	1.157520	50676.900000	0.008023	0.69
Y_R2 488.368	1.146648	99507.909747	0.002554	0.22

Sample Name: CCVL-5413446

Date: 11/6/2018 9:49:29 PM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010499	ppm	0.000156	1.48	36.500400	Y 377.433
Al (167.019 nm)	0.100953	ppm	0.001469	1.46	58.707000	Y_R 377.433
Al H (396.152 nm)	0.081938 u	ppm	0.002785	3.40	286.784402	Y_R 377.433
As (188.980 nm)	0.014170	ppm	0.000809	5.71	16.105800	Y 242.219
B (249.678 nm)	0.100559	ppm	0.000568	0.56	2569.390000	Y 242.219
Ba (493.408 nm)	0.009752	ppm	0.000196	2.01	1728.980000	Y_R 488.368
Be (234.861 nm)	0.000973	ppm	0.000007	0.69	246.091000	Y_R 488.368
Bi (223.061 nm)	0.102791	ppm	0.001428	1.39	271.596000	Y 377.433
Ca (315.887 nm)	0.213207	ppm	0.006694	3.14	107.468579	Y_R 377.433
Cd (214.439 nm)	0.005240	ppm	0.000061	1.16	314.180000	Y 377.433
Co (228.615 nm)	0.010677	ppm	0.000046	0.44	157.277000	Y 242.219
Cr (205.560 nm)	0.010207	ppm	0.000209	2.04	151.348000	Y 377.433
Cu (324.754 nm)	0.017312	ppm	0.000006	0.04	670.607000	Y 377.433
Fe (238.204 nm)	0.100106	ppm	0.001930	1.93	395.084986	Y_R 377.433
Fe H (259.940 nm)	0.101152 u	ppm	0.000604	0.60	194.592000	Y_R 377.433
K (766.491 nm)	3.333610	ppm	0.045461	1.36	3081.990000	Y_R2 488.368
Li (670.783 nm)	0.031882 Q	ppm	0.000371	1.17	-290.417000 Q	Y_R2 488.368
Mg (279.078 nm)	0.204613	ppm	0.000773	0.38	1220.100000	Y 377.433
Mn (257.610 nm)	0.010427	ppm	0.000008	0.08	2500.240000	Y 377.433
Mo (202.032 nm)	0.019426	ppm	0.000117	0.60	167.265000	Y 377.433
Na (589.592 nm)	1.100410	ppm	0.003313	0.30	7562.290000	Y_R2 488.368
Na H (589.593 nm)	1.053394 u	ppm	0.008393	0.80	6262.555335	Y_R 488.368
Ni (231.604 nm)	0.043208	ppm	0.000253	0.59	290.668000	Y 377.433
P (213.618 nm)	2.850900 o	ppm	0.027099	0.95	6219.560000	Y 242.219
Pb (220.353 nm)	0.009504	ppm	0.000641	6.74	30.691800	Y 242.219
S (181.972 nm)	0.127149	ppm	0.000451	0.35	79.316714	Y 377.433
Sb (206.834 nm)	0.020477	ppm	0.000968	4.73	32.867900	Y 377.433
Se (196.026 nm)	0.017524	ppm	0.001142	6.51	30.423200	Y 242.219
Si (288.158 nm)	0.487757	ppm	0.006558	1.34	5121.770000	Y 377.433
Sn (189.925 nm)	0.102788	ppm	0.001252	1.22	213.919000	Y 377.433
Sr (421.552 nm)	0.010372	ppm	0.000230	2.22	2332.311593	Y_R 488.368
Th (288.505 nm)	0.020647 Q	ppm	0.001118	5.41	127.161000 Q	Y 377.433
Ti (336.122 nm)	0.009980	ppm	0.000031	0.31	1193.660000	Y 377.433
Tl (190.794 nm)	0.015226	ppm	0.000544	3.57	28.060300	Y 377.433
U (409.013 nm)	0.069153	ppm	0.001393	2.01	104.092000	Y 377.433
V (292.401 nm)	0.009787	ppm	0.000294	3.01	385.413000	Y 377.433
Zn (206.200 nm)	0.016252	ppm	0.000025	0.15	112.621000	Y 377.433
Zr (343.823 nm)	0.015226	ppm	0.000122	0.80	2028.940000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.143171	21811.948423	0.005392	0.47
Y 377.433	1.127531	1141272.950595	0.004861	0.43
Y_R 377.433	1.187050	89613.500000	0.000581	0.05
Y_R 488.368	1.147200	50224.900000	0.004889	0.43
Y_R2 488.368	1.160833	100738.916974	0.001552	0.13

Sample Name: 280-116408-E-2-A

Date: 11/6/2018 9:52:52 PM Rack:Tube: 2:17

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001821	ppm	0.000049	2.67	-363.557000	Y 377.433
Al (167.019 nm)	2.359420	ppm	0.000035	0.00	1320.670000	Y_R 377.433
Al H (396.152 nm)	2.569053	ppm	0.013581	0.53	6742.246422	Y_R 377.433
As (188.980 nm)	0.004044	ppm	0.000880	21.75	3.317450	Y 242.219
B (249.678 nm)	1.342440 o	ppm	0.000217	0.02	33585.500000	Y 242.219
Ba (493.408 nm)	0.046369	ppm	0.000360	0.78	6081.000000	Y_R 488.368
Be (234.861 nm)	0.000141	ppm	0.000024	16.98	128.316000	Y_R 488.368
Bi (223.061 nm)	-0.002455 u	ppm	0.001226	49.94	7.261950	Y 377.433
Ca (315.887 nm)	463.410281 o	ppm	0.824302	0.18	367382.916182	Y_R 377.433
Cd (214.439 nm)	0.000157	ppm	0.000069	43.82	14.346000	Y 377.433
Co (228.615 nm)	0.009130	ppm	0.000759	8.32	130.924000	Y 242.219
Cr (205.560 nm)	0.006282	ppm	0.000036	0.57	90.492900	Y 377.433
Cu (324.754 nm)	0.004121	ppm	0.000130	3.15	-340.270000	Y 377.433
Fe (238.204 nm)	4.203267	ppm	0.000606	0.01	15570.769435	Y_R 377.433
Fe H (259.940 nm)	4.278600 u	ppm	0.000792	0.02	8097.480000	Y_R 377.433
K (766.491 nm)	18.533200	ppm	0.089174	0.48	20584.000000	Y_R2 488.368
Li (670.783 nm)	0.366240	ppm	0.001134	0.31	10860.700000	Y_R2 488.368
Mg (279.078 nm)	309.749000 o	ppm	0.040271	0.01	1789300.000000	Y 377.433
Mn (257.610 nm)	1.450060 o	ppm	0.001066	0.07	339180.000000	Y 377.433
Mo (202.032 nm)	0.002759	ppm	0.000713	25.83	23.735900	Y 377.433
Na (589.592 nm)	285.943000 o	ppm	0.158985	0.06	1883140.000000	Y_R2 488.368
Na H (589.593 nm)	299.424455	ppm	3.402038	1.14	1099409.483193	Y_R 488.368
Ni (231.604 nm)	0.026976	ppm	0.000410	1.52	180.095000	Y 377.433
P (213.618 nm)	0.160569	ppm	0.002293	1.43	373.474000	Y 242.219
Pb (220.353 nm)	0.004447	ppm	0.001108	24.90	15.807000	Y 242.219
S (181.972 nm)	720.070841 bo	ppm	1.136297	0.16	368801.120861	Y 377.433
Sb (206.834 nm)	-0.003281 u	ppm	0.001979	60.33	-33.420200	Y 377.433
Se (196.026 nm)	0.021341	ppm	0.001329	6.23	34.646100	Y 242.219
Si (288.158 nm)	15.725500 o	ppm	0.003833	0.02	136086.000000	Y 377.433
Sn (189.925 nm)	0.000848	ppm	0.000738	87.09	11.282400	Y 377.433
Sr (421.552 nm)	3.317366 o	ppm	0.028185	0.85	696195.073333	Y_R 488.368
Th (288.505 nm)	0.012376	ppm	0.003986	32.21	135.326000	Y 377.433
Ti (336.122 nm)	0.057454	ppm	0.001269	2.21	9404.520000	Y 377.433
Tl (190.794 nm)	0.001471	ppm	0.001982	> 100.00	-2.444480	Y 377.433
U (409.013 nm)	0.091974	ppm	0.003079	3.35	124.176000	Y 377.433
V (292.401 nm)	0.007898	ppm	0.000248	3.14	320.629000	Y 377.433
Zn (206.200 nm)	0.010187	ppm	0.000007	0.07	80.942000	Y 377.433
Zr (343.823 nm)	0.003525	ppm	0.000124	3.51	502.579000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037852	19802.431180	0.000403	0.04
Y 377.433	1.046355	1059107.747019	0.000748	0.07
Y_R 377.433	1.150410	86847.600000	0.001373	0.12
Y_R 488.368	1.128350	49399.700000	0.009678	0.86
Y_R2 488.368	1.112506	96544.997694	0.002590	0.23

Sample Name: 280-116408-E-3-A

Date: 11/6/2018 9:56:13 PM Rack:Tube: 2:18

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001108	ppm	0.000047	4.28	-394.392000	Y 377.433
Al (167.019 nm)	0.160007	ppm	0.003777	2.36	113.081000	Y_R 377.433
Al H (396.152 nm)	0.166689 u	ppm	0.003320	1.99	548.876507	Y_R 377.433
As (188.980 nm)	0.035599	ppm	0.001474	4.14	42.809500	Y 242.219
B (249.678 nm)	2.465050 o	ppm	0.012407	0.50	61586.500000	Y 242.219
Ba (493.408 nm)	0.578415	ppm	0.004000	0.69	67645.900000	Y_R 488.368
Be (234.861 nm)	-0.000141 u	ppm	0.000025	17.70	907.556000	Y_R 488.368
Bi (223.061 nm)	-0.001079 u	ppm	0.003149	> 100.00	15.289600	Y 377.433
Ca (315.887 nm)	113.782192 o	ppm	0.061233	0.05	90157.905079	Y_R 377.433
Cd (214.439 nm)	-0.000145 u	ppm	0.000011	7.27	22.970100	Y 377.433
Co (228.615 nm)	0.002311	ppm	0.000205	8.88	5.518980	Y 242.219
Cr (205.560 nm)	0.000649	ppm	0.000387	59.55	-2.915870	Y 377.433
Cu (324.754 nm)	0.001833	ppm	0.000113	6.15	-227.131000	Y 377.433
Fe (238.204 nm)	31.559075 o	ppm	0.038050	0.12	116747.181638	Y_R 377.433
Fe H (259.940 nm)	32.564700	ppm	0.091159	0.28	61609.100000	Y_R 377.433
K (766.491 nm)	5.704970	ppm	0.032278	0.57	5812.550000	Y_R2 488.368
Li (670.783 nm)	0.036013	ppm	0.001567	4.35	-152.649000	Y_R2 488.368
Mg (279.078 nm)	83.925100 o	ppm	0.214738	0.26	484781.000000	Y 377.433
Mn (257.610 nm)	0.494080	ppm	0.001413	0.29	115610.000000	Y 377.433
Mo (202.032 nm)	0.014170	ppm	0.000048	0.34	122.000000	Y 377.433
Na (589.592 nm)	165.857000 o	ppm	0.519265	0.31	1093530.000000	Y_R2 488.368
Na H (589.593 nm)	171.279700	ppm	0.817201	0.48	630439.000442	Y_R 488.368
Ni (231.604 nm)	0.010326	ppm	0.000396	3.83	67.654000	Y 377.433
P (213.618 nm)	0.283824	ppm	0.002111	0.74	641.305000	Y 242.219
Pb (220.353 nm)	-0.000479 u	ppm	0.000412	86.10	4.697600	Y 242.219
S (181.972 nm)	1.428285	ppm	0.006389	0.45	746.880106	Y 377.433
Sb (206.834 nm)	-0.002126 u	ppm	0.001475	69.35	-36.717500	Y 377.433
Se (196.026 nm)	-0.001926 u	ppm	0.000027	1.42	5.242460	Y 242.219
Si (288.158 nm)	19.014900 o	ppm	0.022262	0.12	164357.000000	Y 377.433
Sn (189.925 nm)	-0.000417 u	ppm	0.000083	19.82	8.768310	Y 377.433
Sr (421.552 nm)	0.799964	ppm	0.009428	1.18	168001.812244	Y_R 488.368
Th (288.505 nm)	0.009565	ppm	0.001067	11.16	105.981000	Y 377.433
Ti (336.122 nm)	0.003306	ppm	0.000026	0.79	598.700000	Y 377.433
Tl (190.794 nm)	0.001463	ppm	0.000583	39.88	-3.020390	Y 377.433
U (409.013 nm)	-0.003366 u	ppm	0.000786	23.34	-214.902000	Y 377.433
V (292.401 nm)	0.000929	ppm	0.000260	27.94	69.741700	Y 377.433
Zn (206.200 nm)	-0.002611 u	ppm	0.000006	0.21	14.103300	Y 377.433
Zr (343.823 nm)	0.000298	ppm	0.000067	22.30	158.929000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.105279	21088.955366	0.005801	0.52
Y 377.433	1.102271	1115705.529382	0.004639	0.42
Y_R 377.433	1.206320	91068.500000	0.001971	0.16
Y_R 488.368	1.174830	51434.500000	0.007598	0.65
Y_R2 488.368	1.156699	100380.185921	0.004624	0.40

Sample Name: 280-116408-E-4-A

Date: 11/6/2018 9:59:35 PM Rack:Tube: 2:19

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001678	ppm	0.000182	10.83	-369.715000	Y 377.433
Al (167.019 nm)	0.361500	ppm	0.007037	1.95	204.210000	Y_R 377.433
Al H (396.152 nm)	0.422135 u	ppm	0.003533	0.84	1325.728586	Y_R 377.433
As (188.980 nm)	-0.001797 u	ppm	0.002657	> 100.00	-4.004170	Y 242.219
B (249.678 nm)	2.904160 o	ppm	0.014329	0.49	72603.100000	Y 242.219
Ba (493.408 nm)	0.014699	ppm	0.000465	3.16	2400.370000	Y_R 488.368
Be (234.861 nm)	0.000056	ppm	0.000007	13.15	-16.002300	Y_R 488.368
Bi (223.061 nm)	-0.002197 u	ppm	0.000933	42.48	7.285920	Y 377.433
Ca (315.887 nm)	423.850139 o	ppm	1.565526	0.37	336015.125390	Y_R 377.433
Cd (214.439 nm)	0.000111	ppm	0.000080	71.77	7.959170	Y 377.433
Co (228.615 nm)	0.004244	ppm	0.000467	11.01	40.802100	Y 242.219
Cr (205.560 nm)	0.001450	ppm	0.000340	23.45	17.963100	Y 377.433
Cu (324.754 nm)	0.001168	ppm	0.000205	17.56	-486.158000	Y 377.433
Fe (238.204 nm)	0.451945	ppm	0.000220	0.05	1696.370400	Y_R 377.433
Fe H (259.940 nm)	0.442695 u	ppm	0.000851	0.19	840.724000	Y_R 377.433
K (766.491 nm)	22.342100	ppm	0.055910	0.25	24969.900000	Y_R2 488.368
Li (670.783 nm)	0.360647	ppm	0.001677	0.46	10674.100000	Y_R2 488.368
Mg (279.078 nm)	343.031000 o	ppm	0.854903	0.25	1981560.000000	Y 377.433
Mn (257.610 nm)	0.993477	ppm	0.000894	0.09	232401.000000	Y 377.433
Mo (202.032 nm)	0.009091	ppm	0.000181	1.99	78.259000	Y 377.433
Na (589.592 nm)	333.254000 o	ppm	0.454591	0.14	2194580.000000	Y_R2 488.368
Na H (589.593 nm)	351.049394	ppm	3.942485	1.12	1288512.625299	Y_R 488.368
Ni (231.604 nm)	0.025971	ppm	0.000623	2.40	173.087000	Y 377.433
P (213.618 nm)	0.019570	ppm	0.000456	2.33	67.082900	Y 242.219
Pb (220.353 nm)	-0.001049 u	ppm	0.000401	38.18	0.390316	Y 242.219
S (181.972 nm)	816.024380 bo	ppm	2.315705	0.28	417942.485637	Y 377.433
Sb (206.834 nm)	-0.002770 u	ppm	0.001069	38.58	-31.135400	Y 377.433
Se (196.026 nm)	0.218503	ppm	0.005466	2.50	231.179000	Y 242.219
Si (288.158 nm)	9.954150	ppm	0.012632	0.13	86482.400000	Y 377.433
Sn (189.925 nm)	-0.000629 u	ppm	0.000984	> 100.00	8.346770	Y 377.433
Sr (421.552 nm)	5.000187 o	ppm	0.043093	0.86	1049279.126203	Y_R 488.368
Th (288.505 nm)	0.009846	ppm	0.000119	1.21	119.524000	Y 377.433
Ti (336.122 nm)	0.011435	ppm	0.000321	2.80	2726.790000	Y 377.433
Tl (190.794 nm)	0.002979	ppm	0.000979	32.87	1.134490	Y 377.433
U (409.013 nm)	0.088612	ppm	0.001804	2.04	113.232000	Y 377.433
V (292.401 nm)	0.001532	ppm	0.000008	0.53	88.593700	Y 377.433
Zn (206.200 nm)	-0.001853 u	ppm	0.000195	10.52	18.061700	Y 377.433
Zr (343.823 nm)	0.000057	ppm	0.000025	43.77	35.485900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.047759	19991.465347	0.004387	0.42
Y 377.433	1.059880	1072797.825912	0.004809	0.45
Y_R 377.433	1.189700	89814.200000	0.005797	0.49
Y_R 488.368	1.152350	50450.500000	0.002487	0.22
Y_R2 488.368	1.124888	97619.563986	0.005857	0.52

Sample Name: 280-116408-E-5-A

Date: 11/6/2018 10:02:57 PM Rack:Tube: 2:20

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001491	ppm	0.000256	17.16	-377.353000	Y 377.433
Al (167.019 nm)	0.044804	ppm	0.002501	5.58	27.390800	Y_R 377.433
Al H (396.152 nm)	0.083926 u	ppm	0.005375	6.40	436.759922	Y_R 377.433
As (188.980 nm)	0.002180	ppm	0.002028	93.03	1.007870	Y 242.219
B (249.678 nm)	2.459770 o	ppm	0.001686	0.07	61502.500000	Y 242.219
Ba (493.408 nm)	0.013272	ppm	0.000452	3.40	2214.770000	Y_R 488.368
Be (234.861 nm)	0.000080	ppm	0.000013	16.80	-19.883900	Y_R 488.368
Bi (223.061 nm)	0.001197	ppm	0.000079	6.60	15.770800	Y 377.433
Ca (315.887 nm)	337.362370 o	ppm	0.212661	0.06	267437.761010	Y_R 377.433
Cd (214.439 nm)	0.000103	ppm	0.000012	11.34	7.138670	Y 377.433
Co (228.615 nm)	0.000029 u	ppm	0.000060	> 100.00	-35.865300	Y 242.219
Cr (205.560 nm)	0.000420	ppm	0.000086	20.36	2.413100	Y 377.433
Cu (324.754 nm)	0.002835	ppm	0.000473	16.69	-337.536000	Y 377.433
Fe (238.204 nm)	0.084295	ppm	0.000079	0.09	336.604095	Y_R 377.433
Fe H (259.940 nm)	0.078339 u	ppm	0.004515	5.76	151.436000	Y_R 377.433
K (766.491 nm)	20.708200	ppm	0.099252	0.48	23088.400000	Y_R2 488.368
Li (670.783 nm)	0.370723	ppm	0.002329	0.63	11010.200000	Y_R2 488.368
Mg (279.078 nm)	370.536000 o	ppm	0.321343	0.09	2140450.000000	Y 377.433
Mn (257.610 nm)	0.023884	ppm	0.000029	0.12	5647.320000	Y 377.433
Mo (202.032 nm)	-0.000107 u	ppm	0.000034	31.72	-0.946873	Y 377.433
Na (589.592 nm)	366.815000 o	ppm	1.440270	0.39	2415560.000000	Y_R2 488.368
Na H (589.593 nm)	384.409105	ppm	0.307410	0.08	1410727.732583	Y_R 488.368
Ni (231.604 nm)	0.012715	ppm	0.000561	4.42	82.639300	Y 377.433
P (213.618 nm)	0.016289	ppm	0.000703	4.32	59.951900	Y 242.219
Pb (220.353 nm)	-0.000146 u	ppm	0.000654	> 100.00	3.032760	Y 242.219
S (181.972 nm)	809.361902 bo	ppm	1.645878	0.20	414527.922759	Y 377.433
Sb (206.834 nm)	-0.002786 u	ppm	0.000389	13.95	-30.957000	Y 377.433
Se (196.026 nm)	0.059243	ppm	0.000090	0.15	71.954200	Y 242.219
Si (288.158 nm)	8.569080	ppm	0.067196	0.78	74578.200000	Y 377.433
Sn (189.925 nm)	-0.000018 u	ppm	0.000258	> 100.00	9.561800	Y 377.433
Sr (421.552 nm)	5.453844 o	ppm	0.023639	0.43	1144463.807677	Y_R 488.368
Th (288.505 nm)	0.007826	ppm	0.001543	19.71	94.092000	Y 377.433
Ti (336.122 nm)	0.001053	ppm	0.000009	0.87	977.741000	Y 377.433
Tl (190.794 nm)	0.002103	ppm	0.000282	13.40	-0.732561	Y 377.433
U (409.013 nm)	0.046538	ppm	0.000544	1.17	-61.065600	Y 377.433
V (292.401 nm)	0.000627	ppm	0.000059	9.44	58.193800	Y 377.433
Zn (206.200 nm)	-0.001341 u	ppm	0.000168	12.55	20.735900	Y 377.433
Zr (343.823 nm)	0.000461	ppm	0.000100	21.69	87.470000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015033	19367.047691	0.002807	0.28
Y 377.433	1.020285	1032719.490731	0.003703	0.36
Y_R 377.433	1.124040	84857.400000	0.006853	0.61
Y_R 488.368	1.098030	48072.400000	0.002462	0.22
Y_R2 488.368	1.092771	94832.350959	0.005898	0.54

Sample Name: CCVH-5408055

Date: 11/6/2018 10:06:19 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000506 u	ppm	0.000046	9.02	-714.757000	Y 377.433
Al (167.019 nm)	45.022600 o	ppm	0.131528	0.29	25136.900000	Y_R 377.433
Al H (396.152 nm)	48.571071	ppm	0.150704	0.31	122242.355477	Y_R 377.433
As (188.980 nm)	0.000745 u	ppm	0.001179	> 100.00	-1.235240	Y 242.219
B (249.678 nm)	0.001999	ppm	0.000534	26.72	32.997300	Y 242.219
Ba (493.408 nm)	-0.000527 u	ppm	0.000304	57.77	584.349000	Y_R 488.368
Be (234.861 nm)	-0.000165 u	ppm	0.000014	8.54	1442.730000	Y_R 488.368
Bi (223.061 nm)	0.991855	ppm	0.000421	0.04	2518.430000	Y 377.433
Ca (315.887 nm)	0.018160	ppm	0.001199	6.60	-47.189852	Y_R 377.433
Cd (214.439 nm)	-0.000318 u	ppm	0.000065	20.33	29.221100	Y 377.433
Co (228.615 nm)	0.003224	ppm	0.000206	6.39	21.966400	Y 242.219
Cr (205.560 nm)	0.000082	ppm	0.000014	17.65	-16.277200	Y 377.433
Cu (324.754 nm)	-0.002718 u	ppm	0.000304	11.18	-112.432000	Y 377.433
Fe (238.204 nm)	48.508679 o	ppm	0.186884	0.39	179435.887954	Y_R 377.433
Fe H (259.940 nm)	49.473900	ppm	0.171660	0.35	93597.900000	Y_R 377.433
K (766.491 nm)	0.213209	ppm	0.002270	1.06	-511.085000	Y_R2 488.368
Li (670.783 nm)	0.010720	ppm	0.001258	11.73	-996.185000	Y_R2 488.368
Mg (279.078 nm)	-0.000703 u	ppm	0.005532	> 100.00	-321.988000	Y 377.433
Mn (257.610 nm)	0.001422	ppm	0.000012	0.85	394.457000	Y 377.433
Mo (202.032 nm)	0.000011	ppm	0.000014	> 100.00	0.070207	Y 377.433
Na (589.592 nm)	244.518000 o	ppm	0.867453	0.35	1610280.000000	Y_R2 488.368
Na H (589.593 nm)	255.394589	ppm	0.713702	0.28	938055.692726	Y_R 488.368
Ni (231.604 nm)	0.003980	ppm	0.000449	11.27	25.072900	Y 377.433
P (213.618 nm)	-0.003997 u	ppm	0.000838	20.97	15.871100	Y 242.219
Pb (220.353 nm)	-0.004075 u	ppm	0.000113	2.77	9.158590	Y 242.219
S (181.972 nm)	5.142936	ppm	0.032062	0.62	2648.124033	Y 377.433
Sb (206.834 nm)	-0.002245 u	ppm	0.000988	44.01	-75.161600	Y 377.433
Se (196.026 nm)	-0.002815 u	ppm	0.001200	42.63	1.320250	Y 242.219
Si (288.158 nm)	0.018366	ppm	0.000891	4.85	1087.500000	Y 377.433
Sn (189.925 nm)	0.000564	ppm	0.000540	95.88	10.718000	Y 377.433
Sr (421.552 nm)	0.000419	ppm	0.000016	3.80	243.912486	Y_R 488.368
Th (288.505 nm)	4.954140	ppm	0.007882	0.16	12952.400000	Y 377.433
Ti (336.122 nm)	0.001074	ppm	0.000051	4.77	-75.019000	Y 377.433
Tl (190.794 nm)	-0.002633 u	ppm	0.002421	91.96	-12.426000	Y 377.433
U (409.013 nm)	9.959540	ppm	0.008014	0.08	44890.600000	Y 377.433
V (292.401 nm)	0.004081	ppm	0.000162	3.97	15.795600	Y 377.433
Zn (206.200 nm)	-0.004442 u	ppm	0.000564	12.70	4.541100	Y 377.433
Zr (343.823 nm)	-0.004392 u	ppm	0.000019	0.43	-407.621000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113656	21248.788962	0.005976	0.54
Y 377.433	1.093173	1106495.921244	0.007188	0.66
Y_R 377.433	1.175670	88754.500000	0.001798	0.15
Y_R 488.368	1.151040	50393.300000	0.000087	0.01
Y_R2 488.368	1.136352	98614.385272	0.009453	0.83

Sample Name: CCV-5407546

Date: 11/6/2018 10:09:42 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.494685	ppm	0.000488	0.10	22222.500000	Y 377.433
Al (167.019 nm)	0.513550	ppm	0.007287	1.42	290.356000	Y_R 377.433
Al H (396.152 nm)	0.486372 u	ppm	0.003647	0.75	1345.337065	Y_R 377.433
As (188.980 nm)	0.990084	ppm	0.002880	0.29	1245.060000	Y 242.219
B (249.678 nm)	0.493562	ppm	0.000209	0.04	12404.600000	Y 242.219
Ba (493.408 nm)	0.491191	ppm	0.000226	0.05	57500.500000	Y_R 488.368
Be (234.861 nm)	0.483119	ppm	0.000096	0.02	143973.000000	Y_R 488.368
Bi (223.061 nm)	-0.003262 u	ppm	0.001788	54.82	4.940240	Y 377.433
Ca (315.887 nm)	5.090780	ppm	0.017014	0.33	3975.247098	Y_R 377.433
Cd (214.439 nm)	0.501267	ppm	0.000495	0.10	29962.600000	Y 377.433
Co (228.615 nm)	0.493944	ppm	0.000482	0.10	8927.660000	Y 242.219
Cr (205.560 nm)	0.497642	ppm	0.000255	0.05	7565.550000	Y 377.433
Cu (324.754 nm)	0.502599	ppm	0.000789	0.16	27715.000000	Y 377.433
Fe (238.204 nm)	2.465765	ppm	0.004353	0.18	9144.555508	Y_R 377.433
Fe H (259.940 nm)	2.533720 u	ppm	0.006206	0.24	4796.520000	Y_R 377.433
K (766.491 nm)	49.786600	ppm	0.050403	0.10	56571.500000	Y_R2 488.368
Li (670.783 nm)	0.988469	ppm	0.000126	0.01	31612.400000	Y_R2 488.368
Mg (279.078 nm)	19.970500	ppm	0.008658	0.04	115395.000000	Y 377.433
Mn (257.610 nm)	0.501046	ppm	0.000105	0.02	117239.000000	Y 377.433
Mo (202.032 nm)	0.504669	ppm	0.000050	0.01	4346.150000	Y 377.433
Na (589.592 nm)	5.084700	ppm	0.005459	0.11	34770.600000	Y_R2 488.368
Na H (589.593 nm)	5.563379 u	ppm	0.022488	0.40	23239.308802	Y_R 488.368
Ni (231.604 nm)	0.512663	ppm	0.000571	0.11	3494.400000	Y 377.433
P (213.618 nm)	0.993127	ppm	0.001108	0.11	2182.620000	Y 242.219
Pb (220.353 nm)	0.996016	ppm	0.000019	0.00	2858.190000	Y 242.219
S (181.972 nm)	0.083560	ppm	0.004537	5.43	58.201261	Y 377.433
Sb (206.834 nm)	1.008190	ppm	0.002088	0.21	2745.500000	Y 377.433
Se (196.026 nm)	0.980192	ppm	0.000072	0.01	988.536000	Y 242.219
Si (288.158 nm)	4.953420	ppm	0.027270	0.55	43502.700000	Y 377.433
Sn (189.925 nm)	1.026900	ppm	0.002662	0.26	2050.860000	Y 377.433
Sr (421.552 nm)	0.499356	ppm	0.000207	0.04	104929.204224	Y_R 488.368
Th (288.505 nm)	0.006290	ppm	0.001290	20.52	105.576000	Y 377.433
Ti (336.122 nm)	0.496452	ppm	0.000031	0.01	70489.000000	Y 377.433
Tl (190.794 nm)	1.013760	ppm	0.002845	0.28	2220.920000	Y 377.433
U (409.013 nm)	0.005933	ppm	0.000287	4.84	-218.490000	Y 377.433
V (292.401 nm)	0.494406	ppm	0.000217	0.04	17854.500000	Y 377.433
Zn (206.200 nm)	0.498391	ppm	0.000338	0.07	2630.670000	Y 377.433
Zr (343.823 nm)	0.499745	ppm	0.000675	0.14	65742.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115837	21290.406241	0.000188	0.02
Y 377.433	1.101806	1115234.264413	0.001063	0.10
Y_R 377.433	1.164310	87896.900000	0.002235	0.19
Y_R 488.368	1.135170	49698.200000	0.001524	0.13
Y_R2 488.368	1.125555	97677.418457	0.002578	0.23

Sample Name: CCB

Date: 11/6/2018 10:23:29 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000994	ppm	0.000071	7.17	-399.302000	Y 377.433
Al (167.019 nm)	-0.004069 u	ppm	0.002576	63.31	0.084033	Y_R 377.433
Al H (396.152 nm)	-0.023237 u	ppm	0.000023	0.10	20.588946	Y_R 377.433
As (188.980 nm)	-0.000635 u	ppm	0.002364	> 100.00	-2.536740	Y 242.219
B (249.678 nm)	0.000979	ppm	0.000233	23.80	81.598100	Y 242.219
Ba (493.408 nm)	-0.000422 u	ppm	0.000187	44.41	550.599000	Y_R 488.368
Be (234.861 nm)	0.000030	ppm	0.000001	4.19	-37.385300	Y_R 488.368
Bi (223.061 nm)	0.001437	ppm	0.000757	52.71	16.360100	Y 377.433
Ca (315.887 nm)	0.011952	ppm	0.002088	17.47	-52.112757	Y_R 377.433
Cd (214.439 nm)	0.000062	ppm	0.000078	> 100.00	4.569750	Y 377.433
Co (228.615 nm)	0.000326	ppm	0.000044	13.40	-30.546000	Y 242.219
Cr (205.560 nm)	0.000180	ppm	0.000124	68.47	-1.211350	Y 377.433
Cu (324.754 nm)	0.001397	ppm	0.000235	16.85	-213.221000	Y 377.433
Fe (238.204 nm)	-0.001969 u	ppm	0.001628	82.71	17.556506	Y_R 377.433
Fe H (259.940 nm)	0.001483 u	ppm	0.000250	16.87	6.039210	Y_R 377.433
K (766.491 nm)	0.152604	ppm	0.039215	25.70	-580.870000	Y_R2 488.368
Li (670.783 nm)	0.009712	ppm	0.000004	0.04	-1029.800000	Y_R2 488.368
Mg (279.078 nm)	-0.000021 u	ppm	0.000068	> 100.00	39.274400	Y 377.433
Mn (257.610 nm)	0.000004 u	ppm	0.000014	> 100.00	62.798200	Y 377.433
Mo (202.032 nm)	-0.000033 u	ppm	0.000108	> 100.00	-0.309326	Y 377.433
Na (589.592 nm)	0.048698	ppm	0.004210	8.64	616.822000	Y_R2 488.368
Na H (589.593 nm)	0.000907 u	ppm	0.007385	> 100.00	2397.054213	Y_R 488.368
Ni (231.604 nm)	-0.000049 u	ppm	0.000552	> 100.00	-4.430350	Y 377.433
P (213.618 nm)	-0.002576 u	ppm	0.003169	> 100.00	18.960200	Y 242.219
Pb (220.353 nm)	0.001436	ppm	0.000846	58.95	7.548740	Y 242.219
S (181.972 nm)	0.058732 Z	ppm	0.000026	0.04	44.251742 Z	Y 377.433
Sb (206.834 nm)	0.000689	ppm	0.000298	43.22	-21.342000	Y 377.433
Se (196.026 nm)	-0.000831 u	ppm	0.001901	> 100.00	12.163700	Y 242.219
Si (288.158 nm)	-0.004643 u	ppm	0.000188	4.05	889.747000	Y 377.433
Sn (189.925 nm)	-0.000596 u	ppm	0.002380	> 100.00	8.413090	Y 377.433
Sr (421.552 nm)	-0.000027 u	ppm	0.000106	> 100.00	150.365949	Y_R 488.368
Th (288.505 nm)	0.005856	ppm	0.000704	12.01	87.960500	Y 377.433
Ti (336.122 nm)	-0.000055 u	ppm	0.000093	> 100.00	-235.997000	Y 377.433
Tl (190.794 nm)	-0.000049 u	ppm	0.000161	> 100.00	-5.450820	Y 377.433
U (409.013 nm)	-0.000465 u	ppm	0.003125	> 100.00	-209.677000	Y 377.433
V (292.401 nm)	-0.000064 u	ppm	0.000027	41.48	33.061900	Y 377.433
Zn (206.200 nm)	-0.005145 u	ppm	0.000105	2.04	0.870811	Y 377.433
Zr (343.823 nm)	-0.000240 u	ppm	0.000061	25.58	-4.863120	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.111593	21209.429287	0.001057	0.10
Y 377.433	1.100229	1113638.127698	0.000300	0.03
Y_R 377.433	1.163210	87814.400000	0.003515	0.30
Y_R 488.368	1.130190	49480.300000	0.003933	0.35
Y_R2 488.368	1.117677	96993.796110	0.003683	0.33

Sample Name: CCVL-5413446

Date: 11/6/2018 10:26:51 PM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010491	ppm	0.000142	1.36	36.105300	Y 377.433
Al (167.019 nm)	0.101110	ppm	0.000603	0.60	58.792700	Y_R 377.433
Al H (396.152 nm)	0.078648 u	ppm	0.010313	13.11	278.492706	Y_R 377.433
As (188.980 nm)	0.013621	ppm	0.000521	3.83	15.415100	Y 242.219
B (249.678 nm)	0.101555	ppm	0.000296	0.29	2594.280000	Y 242.219
Ba (493.408 nm)	0.009713	ppm	0.000086	0.89	1724.500000	Y_R 488.368
Be (234.861 nm)	0.000966	ppm	0.000003	0.32	243.715000	Y_R 488.368
Bi (223.061 nm)	0.101967	ppm	0.001190	1.17	269.522000	Y 377.433
Ca (315.887 nm)	0.221358	ppm	0.008828	3.99	113.931295	Y_R 377.433
Cd (214.439 nm)	0.005286	ppm	0.000021	0.40	316.913000	Y 377.433
Co (228.615 nm)	0.010231	ppm	0.000176	1.73	149.208000	Y 242.219
Cr (205.560 nm)	0.010116	ppm	0.000057	0.56	149.961000	Y 377.433
Cu (324.754 nm)	0.017400	ppm	0.000083	0.48	676.480000	Y 377.433
Fe (238.204 nm)	0.098049	ppm	0.000974	0.99	387.477005	Y_R 377.433
Fe H (259.940 nm)	0.101729 u	ppm	0.001289	1.27	195.684000	Y_R 377.433
K (766.491 nm)	3.256340	ppm	0.106709	3.28	2993.010000	Y_R2 488.368
Li (670.783 nm)	0.031495 Q	ppm	0.001811	5.75	-303.332000 Q	Y_R2 488.368
Mg (279.078 nm)	0.204365	ppm	0.000231	0.11	1218.660000	Y 377.433
Mn (257.610 nm)	0.010379	ppm	0.000017	0.17	2489.180000	Y 377.433
Mo (202.032 nm)	0.019090	ppm	0.000689	3.61	164.371000	Y 377.433
Na (589.592 nm)	1.112570	ppm	0.011049	0.99	7642.650000	Y_R2 488.368
Na H (589.593 nm)	1.066661 u	ppm	0.008435	0.79	6311.314191	Y_R 488.368
Ni (231.604 nm)	0.042541	ppm	0.000112	0.26	286.118000	Y 377.433
P (213.618 nm)	2.885360 o	ppm	0.024890	0.86	6294.430000	Y 242.219
Pb (220.353 nm)	0.009278	ppm	0.000880	9.48	30.045200	Y 242.219
S (181.972 nm)	0.150671 Q	ppm	0.000236	0.16	91.363352 Q	Y 377.433
Sb (206.834 nm)	0.021222	ppm	0.002354	11.09	34.900000	Y 377.433
Se (196.026 nm)	0.018872	ppm	0.002772	14.69	31.765300	Y 242.219
Si (288.158 nm)	0.500062	ppm	0.001007	0.20	5227.530000	Y 377.433
Sn (189.925 nm)	0.102338	ppm	0.000927	0.91	213.024000	Y 377.433
Sr (421.552 nm)	0.010183	ppm	0.000090	0.89	2292.578269	Y_R 488.368
Th (288.505 nm)	0.019441	ppm	0.004431	22.79	124.081000	Y 377.433
Ti (336.122 nm)	0.009803	ppm	0.000032	0.33	1168.440000	Y 377.433
Tl (190.794 nm)	0.015039	ppm	0.001163	7.73	27.648600	Y 377.433
U (409.013 nm)	0.059847	ppm	0.001155	1.93	62.002500	Y 377.433
V (292.401 nm)	0.009662	ppm	0.000052	0.54	381.314000	Y 377.433
Zn (206.200 nm)	0.015890	ppm	0.000334	2.10	110.726000	Y 377.433
Zr (343.823 nm)	0.015095	ppm	0.000156	1.03	2011.720000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119760	21365.258225	0.000156	0.01
Y 377.433	1.107178	1120671.977981	0.000211	0.02
Y_R 377.433	1.179320	89030.400000	0.000481	0.04
Y_R 488.368	1.144560	50109.500000	0.000904	0.08
Y_R2 488.368	1.133388	98357.188935	0.001656	0.15

Sample Name: MB 280-436151/1-A

Date: 11/6/2018 10:30:13 PM Rack:Tube: 2:21

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000802	ppm	0.000025	3.07	-408.071000	Y 377.433
Al (167.019 nm)	-0.000956 u	ppm	0.001732	> 100.00	1.835540	Y_R 377.433
Al H (396.152 nm)	-0.017457 u	ppm	0.005560	31.85	35.120282	Y_R 377.433
As (188.980 nm)	-0.000277 u	ppm	0.000378	> 100.00	-2.085980	Y 242.219
B (249.678 nm)	0.000770	ppm	0.000031	3.98	76.336300	Y 242.219
Ba (493.408 nm)	-0.000628 u	ppm	0.000175	27.87	526.786000	Y_R 488.368
Be (234.861 nm)	0.000019	ppm	0.000023	> 100.00	-39.872300	Y_R 488.368
Bi (223.061 nm)	-0.000405 u	ppm	0.001216	> 100.00	11.725800	Y 377.433
Ca (315.887 nm)	0.014902	ppm	0.004072	27.32	-49.773292	Y_R 377.433
Cd (214.439 nm)	0.000034	ppm	0.000014	41.69	2.911430	Y 377.433
Co (228.615 nm)	0.000217	ppm	0.000120	55.30	-32.527800	Y 242.219
Cr (205.560 nm)	0.000159	ppm	0.000076	47.65	-1.547340	Y 377.433
Cu (324.754 nm)	0.001457	ppm	0.000053	3.66	-210.229000	Y 377.433
Fe (238.204 nm)	0.020880	ppm	0.000461	2.21	102.062177	Y_R 377.433
Fe H (259.940 nm)	0.025811 u	ppm	0.001825	7.07	52.062100	Y_R 377.433
K (766.491 nm)	0.131344	ppm	0.033104	25.20	-605.350000	Y_R2 488.368
Li (670.783 nm)	0.009671	ppm	0.000033	0.35	-1031.180000	Y_R2 488.368
Mg (279.078 nm)	0.001574	ppm	0.001019	64.74	48.409600	Y 377.433
Mn (257.610 nm)	0.000192	ppm	0.000005	2.48	106.761000	Y 377.433
Mo (202.032 nm)	-0.000257 u	ppm	0.000116	45.10	-2.237480	Y 377.433
Na (589.592 nm)	0.048555	ppm	0.006925	14.26	615.958000	Y_R2 488.368
Na H (589.593 nm)	-0.108297 u	ppm	0.012479	11.52	1997.008217	Y_R 488.368
Ni (231.604 nm)	0.000553	ppm	0.000029	5.15	-0.325239	Y 377.433
P (213.618 nm)	-0.002857 u	ppm	0.002721	95.24	18.349500	Y 242.219
Pb (220.353 nm)	-0.000672 u	ppm	0.000354	52.75	1.508070	Y 242.219
S (181.972 nm)	0.029021	ppm	0.003980	13.71	29.035788	Y 377.433
Sb (206.834 nm)	0.000920	ppm	0.000181	19.66	-20.721400	Y 377.433
Se (196.026 nm)	-0.001274 u	ppm	0.001735	> 100.00	11.718900	Y 242.219
Si (288.158 nm)	-0.000853 u	ppm	0.000890	> 100.00	922.320000	Y 377.433
Sn (189.925 nm)	-0.002052 u	ppm	0.000311	15.16	5.519050	Y 377.433
Sr (421.552 nm)	-0.000079 u	ppm	0.000095	> 100.00	139.481461	Y_R 488.368
Th (288.505 nm)	0.006029	ppm	0.001379	22.87	88.425100	Y 377.433
Ti (336.122 nm)	-0.000138 u	ppm	0.000101	73.24	-247.797000	Y 377.433
Tl (190.794 nm)	0.000759	ppm	0.000990	> 100.00	-3.675900	Y 377.433
U (409.013 nm)	0.006658	ppm	0.002328	34.97	-177.447000	Y 377.433
V (292.401 nm)	-0.000249 u	ppm	0.000179	71.70	26.154000	Y 377.433
Zn (206.200 nm)	-0.004171 u	ppm	0.000108	2.59	5.957580	Y 377.433
Zr (343.823 nm)	-0.000219 u	ppm	0.000081	37.03	-2.090850	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.128103	21524.452284	0.000116	0.01
Y 377.433	1.117011	1130624.283202	0.001782	0.16
Y_R 377.433	1.185530	89499.100000	0.001225	0.10
Y_R 488.368	1.150450	50367.200000	0.004484	0.39
Y_R2 488.368	1.151698	99946.172124	0.006513	0.57

Sample Name: LCS 280-436151/2-A

Date: 11/6/2018 10:33:35 PM
Rack:Tube: 2:22

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054402	ppm	0.000224	0.41	2017.400000	Y 377.433
Al (167.019 nm)	2.053930	ppm	0.013737	0.67	1148.180000	Y_R 377.433
Al H (396.152 nm)	2.041183	ppm	0.004672	0.23	5320.088782	Y_R 377.433
As (188.980 nm)	1.026570	ppm	0.001430	0.14	1291.030000	Y 242.219
B (249.678 nm)	1.030580	ppm	0.000708	0.07	25821.900000	Y 242.219
Ba (493.408 nm)	2.069220 o	ppm	0.001541	0.07	240261.000000	Y_R 488.368
Be (234.861 nm)	0.050468	ppm	0.000091	0.18	14965.300000	Y_R 488.368
Bi (223.061 nm)	2.034590	ppm	0.001973	0.10	5136.210000	Y 377.433
Ca (315.887 nm)	52.704585 o	ppm	0.203891	0.39	41728.673169	Y_R 377.433
Cd (214.439 nm)	0.103239	ppm	0.000087	0.08	6172.570000	Y 377.433
Co (228.615 nm)	0.500679	ppm	0.000161	0.03	9068.380000	Y 242.219
Cr (205.560 nm)	0.209635	ppm	0.000492	0.23	3184.490000	Y 377.433
Cu (324.754 nm)	0.260205	ppm	0.000447	0.17	14232.900000	Y 377.433
Fe (238.204 nm)	1.028626	ppm	0.009721	0.95	3829.247809	Y_R 377.433
Fe H (259.940 nm)	1.048370 u	ppm	0.004053	0.39	1986.540000	Y_R 377.433
K (766.491 nm)	53.024200	ppm	0.070490	0.13	60299.500000	Y_R2 488.368
Li (670.783 nm)	1.042930	ppm	0.001295	0.12	33428.800000	Y_R2 488.368
Mg (279.078 nm)	52.195300 o	ppm	0.010191	0.02	301488.000000	Y 377.433
Mn (257.610 nm)	0.519243	ppm	0.000029	0.01	121495.000000	Y 377.433
Mo (202.032 nm)	1.042160	ppm	0.000712	0.07	8975.030000	Y 377.433
Na (589.592 nm)	52.231500 o	ppm	0.232001	0.44	348386.000000	Y_R2 488.368
Na H (589.593 nm)	54.693872	ppm	0.075625	0.14	204717.672094	Y_R 488.368
Ni (231.604 nm)	0.514299	ppm	0.001200	0.23	3506.840000	Y 377.433
P (213.618 nm)	10.664500 o	ppm	0.008482	0.08	23198.600000	Y 242.219
Pb (220.353 nm)	0.518289	ppm	0.000181	0.03	1490.760000	Y 242.219
S (181.972 nm)	2.025916	ppm	0.006515	0.32	1053.020786	Y 377.433
Sb (206.834 nm)	0.510190	ppm	0.001134	0.22	1366.060000	Y 377.433
Se (196.026 nm)	2.103260	ppm	0.000870	0.04	2106.670000	Y 242.219
Si (288.158 nm)	8.849190	ppm	0.001938	0.02	76985.700000	Y 377.433
Sn (189.925 nm)	2.094290	ppm	0.006015	0.29	4172.610000	Y 377.433
Sr (421.552 nm)	1.051758	ppm	0.001324	0.13	220832.540772	Y_R 488.368
Th (288.505 nm)	1.044790	ppm	0.000247	0.02	2817.980000	Y 377.433
Ti (336.122 nm)	1.018100	ppm	0.000677	0.07	144928.000000	Y 377.433
Tl (190.794 nm)	2.114280	ppm	0.001176	0.06	4635.790000	Y 377.433
U (409.013 nm)	2.131130	ppm	0.001632	0.08	9384.110000	Y 377.433
V (292.401 nm)	0.526755	ppm	0.000286	0.05	19063.900000	Y 377.433
Zn (206.200 nm)	0.515327	ppm	0.000125	0.02	2719.120000	Y 377.433
Zr (343.823 nm)	0.505361	ppm	0.000669	0.13	66476.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.089333	20784.705671	0.003240	0.30
Y 377.433	1.078562	1091707.275981	0.003131	0.29
Y_R 377.433	1.166160	88036.500000	0.001797	0.15
Y_R 488.368	1.138210	49831.700000	0.001576	0.14
Y_R2 488.368	1.124450	97581.490119	0.006414	0.57

Sample Name: 280-116460-A-1-B

Date: 11/6/2018 10:36:56 PM
Rack:Tube: 2:23

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001157	ppm	0.000293	25.35	-392.395000	Y 377.433
Al (167.019 nm)	0.077150	ppm	0.003659	4.74	45.406500	Y_R 377.433
Al H (396.152 nm)	0.072535 u	ppm	0.008555	11.79	304.355087	Y_R 377.433
As (188.980 nm)	0.001007	ppm	0.001207	> 100.00	-0.469187	Y 242.219
B (249.678 nm)	0.040502	ppm	0.000076	0.19	1068.810000	Y 242.219
Ba (493.408 nm)	0.051430	ppm	0.000012	0.02	6577.860000	Y_R 488.368
Be (234.861 nm)	0.000023	ppm	0.000019	82.65	-39.166100	Y_R 488.368
Bi (223.061 nm)	-0.001349 u	ppm	0.001792	> 100.00	9.355080	Y 377.433
Ca (315.887 nm)	94.292183 o	ppm	0.311440	0.33	74704.003681	Y_R 377.433
Cd (214.439 nm)	0.000046	ppm	0.000018	40.13	3.667360	Y 377.433
Co (228.615 nm)	0.000100	ppm	0.000048	48.00	-34.596500	Y 242.219
Cr (205.560 nm)	0.000721	ppm	0.000119	16.46	6.950770	Y 377.433
Cu (324.754 nm)	0.000922	ppm	0.000251	27.20	-296.855000	Y 377.433
Fe (238.204 nm)	0.057385	ppm	0.002180	3.80	237.078477	Y_R 377.433
Fe H (259.940 nm)	0.058862 u	ppm	0.002754	4.68	114.589000	Y_R 377.433
K (766.491 nm)	6.472700	ppm	0.079964	1.24	6696.570000	Y_R2 488.368
Li (670.783 nm)	0.015965	ppm	0.000050	0.31	-821.265000	Y_R2 488.368
Mg (279.078 nm)	5.761220	ppm	0.010412	0.18	33319.000000	Y 377.433
Mn (257.610 nm)	0.025269	ppm	0.000001	0.00	5971.210000	Y 377.433
Mo (202.032 nm)	0.023000	ppm	0.000071	0.31	198.046000	Y 377.433
Na (589.592 nm)	147.498000 o	ppm	0.372152	0.25	971576.000000	Y_R2 488.368
Na H (589.593 nm)	152.373328	ppm	0.637408	0.42	560677.896368	Y_R 488.368
Ni (231.604 nm)	-0.000408 u	ppm	0.000712	> 100.00	-6.880920	Y 377.433
P (213.618 nm)	0.001058	ppm	0.000950	89.80	26.855900	Y 242.219
Pb (220.353 nm)	0.000059 u	ppm	0.000955	> 100.00	3.479160	Y 242.219
S (181.972 nm)	148.039736 bo	ppm	0.112824	0.08	75832.600421	Y 377.433
Sb (206.834 nm)	0.000179 u	ppm	0.000513	> 100.00	-22.895200	Y 377.433
Se (196.026 nm)	0.001686	ppm	0.000448	26.59	14.679300	Y 242.219
Si (288.158 nm)	2.255790	ppm	0.008628	0.38	20317.400000	Y 377.433
Sn (189.925 nm)	-0.000531 u	ppm	0.000120	22.69	8.542410	Y 377.433
Sr (421.552 nm)	2.154490 o	ppm	0.003729	0.17	452204.212818	Y_R 488.368
Th (288.505 nm)	0.003094	ppm	0.002733	88.32	81.624600	Y 377.433
Ti (336.122 nm)	0.001130	ppm	0.000035	3.09	228.174000	Y 377.433
Tl (190.794 nm)	0.002378	ppm	0.000321	13.51	-0.181397	Y 377.433
U (409.013 nm)	0.001902 u	ppm	0.003802	> 100.00	-216.860000	Y 377.433
V (292.401 nm)	0.002634	ppm	0.000124	4.70	130.199000	Y 377.433
Zn (206.200 nm)	0.015567	ppm	0.000994	6.38	109.040000	Y 377.433
Zr (343.823 nm)	0.000040	ppm	0.000024	61.69	32.045200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087975	20758.802570	0.000810	0.07
Y 377.433	1.078832	1091980.000066	0.001614	0.15
Y_R 377.433	1.175780	88763.300000	0.004842	0.41
Y_R 488.368	1.153390	50496.100000	0.002265	0.20
Y_R2 488.368	1.130860	98137.790743	0.007949	0.70

Sample Name: 280-116460-A-1-B SD@5

Date: 11/6/2018 10:40:17 PM Rack:Tube: 2:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000730	ppm	0.000081	11.16	-411.559000	Y 377.433
Al (167.019 nm)	0.011257	ppm	0.002227	19.79	8.638500	Y_R 377.433
Al H (396.152 nm)	-0.001880 u	ppm	0.004905	> 100.00	83.033156	Y_R 377.433
As (188.980 nm)	0.001714	ppm	0.002318	> 100.00	0.421645	Y 242.219
B (249.678 nm)	0.008903	ppm	0.000108	1.21	279.508000	Y 242.219
Ba (493.408 nm)	0.009840	ppm	0.000133	1.36	1743.630000	Y_R 488.368
Be (234.861 nm)	0.000023	ppm	0.000003	14.72	-39.363900	Y_R 488.368
Bi (223.061 nm)	0.000314 u	ppm	0.002472	> 100.00	13.534000	Y 377.433
Ca (315.887 nm)	19.254084 o	ppm	0.050307	0.26	15205.243721	Y_R 377.433
Cd (214.439 nm)	0.000030	ppm	0.000027	88.10	2.701120	Y 377.433
Co (228.615 nm)	0.000085 u	ppm	0.000412	> 100.00	-34.905100	Y 242.219
Cr (205.560 nm)	0.000259	ppm	0.000134	51.73	-0.035552	Y 377.433
Cu (324.754 nm)	0.001570	ppm	0.000300	19.14	-215.562000	Y 377.433
Fe (238.204 nm)	0.012062	ppm	0.000945	7.84	69.447792	Y_R 377.433
Fe H (259.940 nm)	0.016067 u	ppm	0.002315	14.41	33.628100	Y_R 377.433
K (766.491 nm)	1.362600	ppm	0.009663	0.71	812.413000	Y_R2 488.368
Li (670.783 nm)	0.010150	ppm	0.000208	2.05	-1015.190000	Y_R2 488.368
Mg (279.078 nm)	1.154860	ppm	0.003285	0.28	6710.330000	Y 377.433
Mn (257.610 nm)	0.005165	ppm	0.000021	0.40	1269.630000	Y 377.433
Mo (202.032 nm)	0.004136	ppm	0.000081	1.96	35.589700	Y 377.433
Na (589.592 nm)	30.557800 o	ppm	0.055229	0.18	201521.000000	Y_R2 488.368
Na H (589.593 nm)	31.132168	ppm	0.255036	0.82	116459.398834	Y_R 488.368
Ni (231.604 nm)	-0.000222 u	ppm	0.000091	40.96	-5.614700	Y 377.433
P (213.618 nm)	-0.001680 u	ppm	0.000401	23.88	20.906800	Y 242.219
Pb (220.353 nm)	0.000882	ppm	0.000012	1.35	5.947120	Y 242.219
S (181.972 nm)	29.278942 o	ppm	0.152794	0.52	15009.358092	Y 377.433
Sb (206.834 nm)	0.000209 u	ppm	0.000718	> 100.00	-22.696000	Y 377.433
Se (196.026 nm)	-0.002177 u	ppm	0.004556	> 100.00	10.825600	Y 242.219
Si (288.158 nm)	0.435323	ppm	0.002350	0.54	4671.110000	Y 377.433
Sn (189.925 nm)	-0.000784 u	ppm	0.000128	16.27	8.038900	Y 377.433
Sr (421.552 nm)	0.437276	ppm	0.003024	0.69	91903.948960	Y_R 488.368
Th (288.505 nm)	0.002836	ppm	0.002037	71.84	80.442700	Y 377.433
Ti (336.122 nm)	0.000157	ppm	0.000008	4.78	-145.570000	Y 377.433
Tl (190.794 nm)	-0.000152 u	ppm	0.001121	> 100.00	-5.690680	Y 377.433
U (409.013 nm)	0.005752	ppm	0.000833	14.48	-185.200000	Y 377.433
V (292.401 nm)	0.000408	ppm	0.000132	32.32	49.791900	Y 377.433
Zn (206.200 nm)	-0.001183 u	ppm	0.000157	13.29	21.561700	Y 377.433
Zr (343.823 nm)	-0.000212 u	ppm	0.000041	19.19	-1.226790	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.124941	21464.122832	0.002006	0.18
Y 377.433	1.111931	1125482.495756	0.002058	0.19
Y_R 377.433	1.191080	89918.000000	0.005242	0.44
Y_R 488.368	1.172510	51333.400000	0.013455	1.15
Y_R2 488.368	1.140472	98971.929708	0.000838	0.07

Sample Name: 280-116460-A-1-C MS

Date: 11/6/2018 10:43:39 PM
Rack:Tube: 2:25

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054818	ppm	0.000191	0.35	2036.910000	Y 377.433
Al (167.019 nm)	2.145810	ppm	0.002998	0.14	1199.460000	Y_R 377.433
Al H (396.152 nm)	2.190371	ppm	0.010612	0.48	5737.643214	Y_R 377.433
As (188.980 nm)	1.054910	ppm	0.004655	0.44	1326.710000	Y 242.219
B (249.678 nm)	1.102780 o	ppm	0.002541	0.23	27625.700000	Y 242.219
Ba (493.408 nm)	2.125500 o	ppm	0.002379	0.11	246800.000000	Y_R 488.368
Be (234.861 nm)	0.050130	ppm	0.000367	0.73	14864.800000	Y_R 488.368
Bi (223.061 nm)	2.066770	ppm	0.001497	0.07	5217.260000	Y 377.433
Ca (315.887 nm)	144.181688 o	ppm	0.236069	0.16	114262.149471	Y_R 377.433
Cd (214.439 nm)	0.101430	ppm	0.000338	0.33	6064.530000	Y 377.433
Co (228.615 nm)	0.507632	ppm	0.001696	0.33	9194.670000	Y 242.219
Cr (205.560 nm)	0.206234	ppm	0.001243	0.60	3132.660000	Y 377.433
Cu (324.754 nm)	0.266069	ppm	0.000839	0.32	14503.200000	Y 377.433
Fe (238.204 nm)	1.100401	ppm	0.008587	0.78	4094.709492	Y_R 377.433
Fe H (259.940 nm)	1.118530 u	ppm	0.005431	0.49	2119.270000	Y_R 377.433
K (766.491 nm)	60.339200	ppm	0.499925	0.83	68722.600000	Y_R2 488.368
Li (670.783 nm)	1.070060	ppm	0.006869	0.64	34333.700000	Y_R2 488.368
Mg (279.078 nm)	57.529900 o	ppm	0.158112	0.27	332304.000000	Y 377.433
Mn (257.610 nm)	0.544464	ppm	0.002027	0.37	127393.000000	Y 377.433
Mo (202.032 nm)	1.073860	ppm	0.003595	0.33	9248.010000	Y 377.433
Na (589.592 nm)	192.802000 o	ppm	0.644431	0.33	1274060.000000	Y_R2 488.368
Na H (589.593 nm)	201.168969	ppm	0.442112	0.22	741395.923543	Y_R 488.368
Ni (231.604 nm)	0.514360	ppm	0.002786	0.54	3507.200000	Y 377.433
P (213.618 nm)	10.850400 o	ppm	0.032729	0.30	23602.400000	Y 242.219
Pb (220.353 nm)	0.514040	ppm	0.001553	0.30	1478.370000	Y 242.219
S (181.972 nm)	147.351435 bo	ppm	0.390872	0.27	75481.364278	Y 377.433
Sb (206.834 nm)	0.532308	ppm	0.002302	0.43	1426.260000	Y 377.433
Se (196.026 nm)	2.101350	ppm	0.003694	0.18	2104.780000	Y 242.219
Si (288.158 nm)	11.905000 o	ppm	0.027346	0.23	103250.000000	Y 377.433
Sn (189.925 nm)	2.119490	ppm	0.003589	0.17	4222.690000	Y 377.433
Sr (421.552 nm)	3.173074 o	ppm	0.021285	0.67	665920.183455	Y_R 488.368
Th (288.505 nm)	1.043540	ppm	0.006098	0.58	2815.400000	Y 377.433
Ti (336.122 nm)	1.029620	ppm	0.003557	0.35	146855.000000	Y 377.433
Tl (190.794 nm)	2.067250	ppm	0.003340	0.16	4532.330000	Y 377.433
U (409.013 nm)	2.140080	ppm	0.012484	0.58	9406.920000	Y 377.433
V (292.401 nm)	0.531703	ppm	0.002196	0.41	19243.300000	Y 377.433
Zn (206.200 nm)	0.522861	ppm	0.001196	0.23	2758.470000	Y 377.433
Zr (343.823 nm)	0.510075	ppm	0.002021	0.40	67096.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.082930	20662.534803	0.000302	0.03
Y 377.433	1.077975	1091112.993132	0.000140	0.01
Y_R 377.433	1.174560	88670.700000	0.006425	0.55
Y_R 488.368	1.148990	50303.300000	0.003472	0.30
Y_R2 488.368	1.125419	97665.654332	0.008416	0.75

Sample Name: 280-116460-A-1-D MSD

Date: 11/6/2018 10:47:01 PM Rack:Tube: 2:26

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054993	ppm	0.000439	0.80	2044.310000	Y 377.433
Al (167.019 nm)	2.153610	ppm	0.007146	0.33	1203.820000	Y_R 377.433
Al H (396.152 nm)	2.198238	ppm	0.006981	0.32	5757.813313	Y_R 377.433
As (188.980 nm)	1.058930	ppm	0.005047	0.48	1331.770000	Y 242.219
B (249.678 nm)	1.096590	ppm	0.001086	0.10	27471.100000	Y 242.219
Ba (493.408 nm)	2.128690 o	ppm	0.005077	0.24	247169.000000	Y_R 488.368
Be (234.861 nm)	0.051299	ppm	0.000070	0.14	15213.600000	Y_R 488.368
Bi (223.061 nm)	2.074990	ppm	0.007681	0.37	5237.970000	Y 377.433
Ca (315.887 nm)	144.449519 o	ppm	0.246742	0.17	114474.517139	Y_R 377.433
Cd (214.439 nm)	0.102306	ppm	0.000086	0.08	6116.910000	Y 377.433
Co (228.615 nm)	0.509039	ppm	0.001543	0.30	9220.130000	Y 242.219
Cr (205.560 nm)	0.207279	ppm	0.000436	0.21	3148.530000	Y 377.433
Cu (324.754 nm)	0.265385	ppm	0.000206	0.08	14465.600000	Y 377.433
Fe (238.204 nm)	1.117455	ppm	0.003223	0.29	4157.784395	Y_R 377.433
Fe H (259.940 nm)	1.132550 u	ppm	0.002562	0.23	2145.790000	Y_R 377.433
K (766.491 nm)	60.063300	ppm	0.207860	0.35	68404.900000	Y_R2 488.368
Li (670.783 nm)	1.066940	ppm	0.000071	0.01	34229.400000	Y_R2 488.368
Mg (279.078 nm)	57.965300 o	ppm	0.031590	0.05	334819.000000	Y 377.433
Mn (257.610 nm)	0.546717	ppm	0.000145	0.03	127920.000000	Y 377.433
Mo (202.032 nm)	1.076810	ppm	0.001695	0.16	9273.420000	Y 377.433
Na (589.592 nm)	193.159000 o	ppm	0.104411	0.05	1276420.000000	Y_R2 488.368
Na H (589.593 nm)	202.062279	ppm	1.456205	0.72	744672.341905	Y_R 488.368
Ni (231.604 nm)	0.517625	ppm	0.000976	0.19	3529.490000	Y 377.433
P (213.618 nm)	10.888100 o	ppm	0.013156	0.12	23684.400000	Y 242.219
Pb (220.353 nm)	0.513986	ppm	0.001635	0.32	1478.210000	Y 242.219
S (181.972 nm)	146.791199 bo	ppm	0.237163	0.16	75194.446520	Y 377.433
Sb (206.834 nm)	0.527891	ppm	0.001131	0.21	1414.170000	Y 377.433
Se (196.026 nm)	2.099270	ppm	0.006555	0.31	2102.700000	Y 242.219
Si (288.158 nm)	11.415500 o	ppm	0.022532	0.20	99042.400000	Y 377.433
Sn (189.925 nm)	2.116970	ppm	0.007096	0.34	4217.690000	Y 377.433
Sr (421.552 nm)	3.203546 o	ppm	0.023822	0.74	672313.608009	Y_R 488.368
Th (288.505 nm)	1.049770	ppm	0.005415	0.52	2831.530000	Y 377.433
Ti (336.122 nm)	1.028440	ppm	0.002224	0.22	146688.000000	Y 377.433
Tl (190.794 nm)	2.080690	ppm	0.001559	0.07	4561.870000	Y 377.433
U (409.013 nm)	2.139130	ppm	0.001868	0.09	9402.610000	Y 377.433
V (292.401 nm)	0.533386	ppm	0.001178	0.22	19304.200000	Y 377.433
Zn (206.200 nm)	0.529249	ppm	0.001583	0.30	2791.830000	Y 377.433
Zr (343.823 nm)	0.509280	ppm	0.000634	0.12	66991.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.056004	20148.779715	0.000189	0.02
Y 377.433	1.048830	1061612.316701	0.000397	0.04
Y_R 377.433	1.126570	85047.800000	0.000182	0.02
Y_R 488.368	1.097540	48050.900000	0.001958	0.18
Y_R2 488.368	1.098266	95309.230219	0.000390	0.04

Sample Name: 280-116460-A-2-B

Date: 11/6/2018 10:50:23 PM Rack:Tube: 2:27

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001585	ppm	0.000323	20.39	-372.617000	Y 377.433
Al (167.019 nm)	0.001647 u	ppm	0.004715	> 100.00	18.827600	Y_R 377.433
Al H (396.152 nm)	0.040221 u	ppm	0.004222	10.50	394.568519	Y_R 377.433
As (188.980 nm)	0.008449	ppm	0.003666	43.39	8.698210	Y 242.219
B (249.678 nm)	0.206366	ppm	0.000185	0.09	5177.370000	Y 242.219
Ba (493.408 nm)	0.062809	ppm	0.000292	0.46	8009.460000	Y_R 488.368
Be (234.861 nm)	-0.000074 u	ppm	0.000051	68.62	652.104000	Y_R 488.368
Bi (223.061 nm)	-0.003987 u	ppm	0.001251	31.39	6.508780	Y 377.433
Ca (315.887 nm)	493.401987 o	ppm	1.808195	0.37	391163.760180	Y_R 377.433
Cd (214.439 nm)	0.000008 u	ppm	0.000023	> 100.00	23.575000	Y 377.433
Co (228.615 nm)	0.000196 u	ppm	0.000325	> 100.00	-32.895400	Y 242.219
Cr (205.560 nm)	0.009429	ppm	0.000149	1.58	133.201000	Y 377.433
Cu (324.754 nm)	-0.001424 u	ppm	0.000224	15.76	-648.917000	Y 377.433
Fe (238.204 nm)	22.773620 o	ppm	0.016342	0.07	84253.868766	Y_R 377.433
Fe H (259.940 nm)	23.539100	ppm	0.037569	0.16	44534.400000	Y_R 377.433
K (766.491 nm)	29.146300	ppm	0.105830	0.36	32804.700000	Y_R2 488.368
Li (670.783 nm)	0.087608	ppm	0.000600	0.69	1568.070000	Y_R2 488.368
Mg (279.078 nm)	63.058400 o	ppm	0.194300	0.31	364259.000000	Y 377.433
Mn (257.610 nm)	2.676340 o	ppm	0.014399	0.54	625965.000000	Y 377.433
Mo (202.032 nm)	0.000640	ppm	0.000496	77.45	5.487150	Y 377.433
Na (589.592 nm)	586.723000 o	ppm	2.170180	0.37	3863610.000000	Y_R2 488.368
Na H (589.593 nm)	622.342568	ppm	2.111276	0.34	2282467.386268	Y_R 488.368
Ni (231.604 nm)	0.054649	ppm	0.000154	0.28	369.654000	Y 377.433
P (213.618 nm)	0.111959	ppm	0.001676	1.50	267.843000	Y 242.219
Pb (220.353 nm)	0.000732	ppm	0.000147	20.03	7.468810	Y 242.219
S (181.972 nm)	201.111566 bo	ppm	0.007495	0.00	103019.793912	Y 377.433
Sb (206.834 nm)	-0.002824 u	ppm	0.001694	60.00	-36.156500	Y 377.433
Se (196.026 nm)	-0.002755 u	ppm	0.000288	10.47	7.941580	Y 242.219
Si (288.158 nm)	12.174700 o	ppm	0.148548	1.22	105567.000000	Y 377.433
Sn (189.925 nm)	0.001496	ppm	0.002082	> 100.00	12.571300	Y 377.433
Sr (421.552 nm)	11.937497 bo	ppm	0.098609	0.83	2504842.918476	Y_R 488.368
Th (288.505 nm)	0.011167	ppm	0.004007	35.89	154.841000	Y 377.433
Ti (336.122 nm)	-0.000857 u	ppm	0.000042	4.92	1193.010000	Y 377.433
Tl (190.794 nm)	0.004207	ppm	0.000353	8.39	3.288850	Y 377.433
U (409.013 nm)	-0.023064 u	ppm	0.002682	11.63	-384.170000	Y 377.433
V (292.401 nm)	0.001158	ppm	0.000249	21.54	76.126700	Y 377.433
Zn (206.200 nm)	-0.000380 u	ppm	0.000067	17.62	25.755300	Y 377.433
Zr (343.823 nm)	0.000335	ppm	0.000011	3.15	137.993000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.006850	19210.905360	0.004595	0.46
Y 377.433	1.005857	1018116.306310	0.006258	0.62
Y_R 377.433	1.104090	83350.800000	0.006696	0.61
Y_R 488.368	1.076700	47138.500000	0.003845	0.36
Y_R2 488.368	1.063441	92287.060338	0.019682	1.85

Sample Name: 280-116334-E-2-C

Date: 11/6/2018 10:53:46 PM Rack:Tube: 2:28

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001378	ppm	0.000016	1.13	-381.731000	Y 377.433
Al (167.019 nm)	0.064568	ppm	0.003238	5.01	39.759000	Y_R 377.433
Al H (396.152 nm)	0.052009 u	ppm	0.005580	10.73	222.193156	Y_R 377.433
As (188.980 nm)	0.002229	ppm	0.002401	> 100.00	1.051910	Y 242.219
B (249.678 nm)	0.596232	ppm	0.000789	0.13	14948.000000	Y 242.219
Ba (493.408 nm)	0.113466	ppm	0.000947	0.83	13749.300000	Y_R 488.368
Be (234.861 nm)	0.000037	ppm	0.000019	51.87	29.729400	Y_R 488.368
Bi (223.061 nm)	-0.001065 u	ppm	0.001649	> 100.00	10.404800	Y 377.433
Ca (315.887 nm)	28.437257 o	ppm	0.095503	0.34	22486.710002	Y_R 377.433
Cd (214.439 nm)	0.000085	ppm	0.000004	5.13	7.987670	Y 377.433
Co (228.615 nm)	0.001560	ppm	0.000368	23.61	-8.110990	Y 242.219
Cr (205.560 nm)	0.002314	ppm	0.000037	1.58	30.685200	Y 377.433
Cu (324.754 nm)	0.004934	ppm	0.000174	3.53	-29.995700	Y 377.433
Fe (238.204 nm)	2.058883	ppm	0.007122	0.35	7639.689939	Y_R 377.433
Fe H (259.940 nm)	2.117080 u	ppm	0.004798	0.23	4008.320000	Y_R 377.433
K (766.491 nm)	18.074800	ppm	0.031191	0.17	20056.100000	Y_R2 488.368
Li (670.783 nm)	0.051112	ppm	0.000794	1.55	350.911000	Y_R2 488.368
Mg (279.078 nm)	34.970800	ppm	0.007346	0.02	202046.000000	Y 377.433
Mn (257.610 nm)	0.070726	ppm	0.000090	0.13	16602.200000	Y 377.433
Mo (202.032 nm)	0.000100 u	ppm	0.000244	> 100.00	0.831078	Y 377.433
Na (589.592 nm)	115.150000 o	ppm	0.065851	0.06	758716.000000	Y_R2 488.368
Na H (589.593 nm)	120.754038	ppm	1.060305	0.88	444895.632071	Y_R 488.368
Ni (231.604 nm)	0.019241	ppm	0.001394	7.25	127.241000	Y 377.433
P (213.618 nm)	0.325538	ppm	0.001136	0.35	731.949000	Y 242.219
Pb (220.353 nm)	0.000378	ppm	0.000511	> 100.00	4.671130	Y 242.219
S (181.972 nm)	6.856457	ppm	0.010319	0.15	3525.871778	Y 377.433
Sb (206.834 nm)	0.000262 u	ppm	0.001143	> 100.00	-22.957100	Y 377.433
Se (196.026 nm)	-0.000662 u	ppm	0.002778	> 100.00	11.983700	Y 242.219
Si (288.158 nm)	2.146990	ppm	0.002515	0.12	19382.300000	Y 377.433
Sn (189.925 nm)	-0.000070 u	ppm	0.000915	> 100.00	9.459450	Y 377.433
Sr (421.552 nm)	0.785741	ppm	0.007671	0.98	165017.654818	Y_R 488.368
Th (288.505 nm)	0.005871	ppm	0.001499	25.54	89.451300	Y 377.433
Ti (336.122 nm)	0.001898	ppm	0.000099	5.23	130.929000	Y 377.433
Tl (190.794 nm)	0.001348	ppm	0.000117	8.69	-2.445680	Y 377.433
U (409.013 nm)	-0.001492 u	ppm	0.001015	68.00	-217.940000	Y 377.433
V (292.401 nm)	0.001665	ppm	0.000204	12.23	95.969800	Y 377.433
Zn (206.200 nm)	0.007859	ppm	0.000231	2.94	68.784600	Y 377.433
Zr (343.823 nm)	0.001779	ppm	0.000117	6.57	266.623000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090991	20816.347313	0.000289	0.03
Y 377.433	1.076656	1089778.144164	0.000530	0.05
Y_R 377.433	1.161700	87700.200000	0.002429	0.21
Y_R 488.368	1.125940	49294.200000	0.006090	0.54
Y_R2 488.368	1.136450	98622.875383	0.003268	0.29

Sample Name: 280-116410-A-1-D

Date: 11/6/2018 10:57:09 PM Rack:Tube: 2:29

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000937	ppm	0.000072	7.72	-401.966000	Y 377.433
Al (167.019 nm)	0.013984	ppm	0.002695	19.27	10.163000	Y_R 377.433
Al H (396.152 nm)	-0.005974 u	ppm	0.003501	58.60	67.221581	Y_R 377.433
As (188.980 nm)	-0.000188 u	ppm	0.002515	> 100.00	-1.974140	Y 242.219
B (249.678 nm)	0.008619	ppm	0.000098	1.14	272.422000	Y 242.219
Ba (493.408 nm)	0.167987	ppm	0.001628	0.97	20057.000000	Y_R 488.368
Be (234.861 nm)	0.000233	ppm	0.000004	1.81	23.791900	Y_R 488.368
Bi (223.061 nm)	0.000393 u	ppm	0.001954	> 100.00	13.734000	Y 377.433
Ca (315.887 nm)	7.401069	ppm	0.023182	0.31	5806.821578	Y_R 377.433
Cd (214.439 nm)	0.000078	ppm	0.000015	18.97	5.555800	Y 377.433
Co (228.615 nm)	0.000270	ppm	0.000048	17.78	-31.559200	Y 242.219
Cr (205.560 nm)	0.000993	ppm	0.000208	20.95	11.157500	Y 377.433
Cu (324.754 nm)	0.001634	ppm	0.000180	11.02	-204.781000	Y 377.433
Fe (238.204 nm)	0.017548	ppm	0.003986	22.71	89.740204	Y_R 377.433
Fe H (259.940 nm)	0.021577 u	ppm	0.003157	14.63	44.053100	Y_R 377.433
K (766.491 nm)	0.626612	ppm	0.028232	4.51	-35.060800	Y_R2 488.368
Li (670.783 nm)	0.015980	ppm	0.001139	7.13	-820.768000	Y_R2 488.368
Mg (279.078 nm)	3.842890	ppm	0.006744	0.18	22237.900000	Y 377.433
Mn (257.610 nm)	0.021045	ppm	0.000002	0.01	4983.570000	Y 377.433
Mo (202.032 nm)	-0.000130 u	ppm	0.000197	> 100.00	-1.144560	Y 377.433
Na (589.592 nm)	47.685900 o	ppm	0.035655	0.07	314618.000000	Y_R2 488.368
Na H (589.593 nm)	50.510462	ppm	0.468873	0.93	187602.887880	Y_R 488.368
Ni (231.604 nm)	0.002080	ppm	0.001413	67.93	10.090300	Y 377.433
P (213.618 nm)	0.002464	ppm	0.000155	6.29	29.910900	Y 242.219
Pb (220.353 nm)	-0.000190 u	ppm	0.000447	> 100.00	2.885170	Y 242.219
S (181.972 nm)	0.657843	ppm	0.002741	0.42	351.137071	Y 377.433
Sb (206.834 nm)	0.001056	ppm	0.000675	63.91	-20.325600	Y 377.433
Se (196.026 nm)	-0.003273 u	ppm	0.002882	88.06	9.747290	Y 242.219
Si (288.158 nm)	15.667100 o	ppm	0.171648	1.10	135583.000000	Y 377.433
Sn (189.925 nm)	-0.001492 u	ppm	0.000600	40.19	6.632170	Y 377.433
Sr (421.552 nm)	0.041013	ppm	0.000507	1.24	8761.209681	Y_R 488.368
Th (288.505 nm)	0.003094	ppm	0.001196	38.67	81.352100	Y 377.433
Ti (336.122 nm)	0.000090	ppm	0.000021	22.95	-192.235000	Y 377.433
Tl (190.794 nm)	0.000230 u	ppm	0.002280	> 100.00	-4.839350	Y 377.433
U (409.013 nm)	0.004921	ppm	0.002003	40.70	-186.702000	Y 377.433
V (292.401 nm)	-0.000200 u	ppm	0.000019	9.46	27.742900	Y 377.433
Zn (206.200 nm)	-0.003806 u	ppm	0.000284	7.45	7.860990	Y 377.433
Zr (343.823 nm)	-0.000124 u	ppm	0.000092	74.54	10.408200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.112791	21232.294806	0.001687	0.15
Y 377.433	1.097718	1111096.212798	0.002122	0.19
Y_R 377.433	1.179260	89026.000000	0.005033	0.43
Y_R 488.368	1.153890	50517.900000	0.013106	1.14
Y_R2 488.368	1.149198	99729.183674	0.004830	0.42

Sample Name: 280-116410-A-2-B

Date: 11/6/2018 11:00:31 PM Rack:Tube: 2:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000930	ppm	0.000100	10.80	-402.734000	Y 377.433
Al (167.019 nm)	0.066490	ppm	0.001336	2.01	39.466800	Y_R 377.433
Al H (396.152 nm)	0.046701 u	ppm	0.001021	2.19	202.120777	Y_R 377.433
As (188.980 nm)	0.000542	ppm	0.000098	18.10	-1.055450	Y 242.219
B (249.678 nm)	0.019698	ppm	0.000077	0.39	549.115000	Y 242.219
Ba (493.408 nm)	0.131597	ppm	0.000499	0.38	15843.800000	Y_R 488.368
Be (234.861 nm)	0.000033	ppm	0.000023	69.20	-34.609500	Y_R 488.368
Bi (223.061 nm)	0.000286 u	ppm	0.000604	> 100.00	13.472700	Y 377.433
Ca (315.887 nm)	12.972625 o	ppm	0.022293	0.17	10224.587001	Y_R 377.433
Cd (214.439 nm)	0.000066	ppm	0.000045	68.03	4.893130	Y 377.433
Co (228.615 nm)	0.000190	ppm	0.000202	> 100.00	-32.955000	Y 242.219
Cr (205.560 nm)	0.002918	ppm	0.000291	9.99	40.436400	Y 377.433
Cu (324.754 nm)	0.001615	ppm	0.000271	16.78	-209.432000	Y 377.433
Fe (238.204 nm)	0.061684	ppm	0.000402	0.65	252.979641	Y_R 377.433
Fe H (259.940 nm)	0.062980 u	ppm	0.000247	0.39	122.379000	Y_R 377.433
K (766.491 nm)	1.080680	ppm	0.004259	0.39	487.791000	Y_R2 488.368
Li (670.783 nm)	0.044665	ppm	0.000298	0.67	135.907000	Y_R2 488.368
Mg (279.078 nm)	7.188040	ppm	0.009928	0.14	41561.100000	Y 377.433
Mn (257.610 nm)	0.004119	ppm	0.000018	0.44	1025.190000	Y 377.433
Mo (202.032 nm)	-0.000117 u	ppm	0.000121	> 100.00	-1.031430	Y 377.433
Na (589.592 nm)	22.964000 o	ppm	0.136774	0.60	151766.000000	Y_R2 488.368
Na H (589.593 nm)	23.803773	ppm	0.104143	0.44	89725.869199	Y_R 488.368
Ni (231.604 nm)	0.003051	ppm	0.000292	9.57	16.714700	Y 377.433
P (213.618 nm)	0.388043	ppm	0.000225	0.06	867.772000	Y 242.219
Pb (220.353 nm)	0.000453 u	ppm	0.001046	> 100.00	4.721730	Y 242.219
S (181.972 nm)	0.411735	ppm	0.006153	1.49	225.051965	Y 377.433
Sb (206.834 nm)	-0.000722 u	ppm	0.002127	> 100.00	-25.148500	Y 377.433
Se (196.026 nm)	-0.000492 u	ppm	0.002360	> 100.00	12.493600	Y 242.219
Si (288.158 nm)	22.226700 o	ppm	0.278597	1.25	191961.000000	Y 377.433
Sn (189.925 nm)	-0.001118 u	ppm	0.001217	> 100.00	7.374540	Y 377.433
Sr (421.552 nm)	0.086713	ppm	0.000438	0.50	18349.932060	Y_R 488.368
Th (288.505 nm)	0.002346	ppm	0.002352	> 100.00	79.221300	Y 377.433
Ti (336.122 nm)	0.001245	ppm	0.000036	2.86	-10.391400	Y 377.433
Tl (190.794 nm)	0.000251	ppm	0.000246	97.98	-4.800510	Y 377.433
U (409.013 nm)	0.006764	ppm	0.003968	58.67	-179.381000	Y 377.433
V (292.401 nm)	0.002215	ppm	0.000043	1.93	114.824000	Y 377.433
Zn (206.200 nm)	-0.002277 u	ppm	0.000076	3.34	15.848400	Y 377.433
Zr (343.823 nm)	-0.000153 u	ppm	0.000107	69.75	6.705930	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.109222	21164.199593	0.003945	0.36
Y 377.433	1.093538	1106865.139064	0.003999	0.37
Y_R 377.433	1.166820	88086.700000	0.001149	0.10
Y_R 488.368	1.131750	49548.500000	0.004618	0.41
Y_R2 488.368	1.116118	96858.477397	0.006338	0.57

Sample Name: CCVH-5408055

Date: 11/6/2018 11:03:54 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000840 u	ppm	0.000102	12.13	-729.546000	Y 377.433
Al (167.019 nm)	45.506000 o	ppm	0.043598	0.10	25406.600000	Y_R 377.433
Al H (396.152 nm)	48.897318	ppm	0.034056	0.07	123062.935407	Y_R 377.433
As (188.980 nm)	-0.002004 u	ppm	0.001100	54.88	-4.698740	Y 242.219
B (249.678 nm)	0.000180 u	ppm	0.000267	> 100.00	-12.757300	Y 242.219
Ba (493.408 nm)	-0.000206 u	ppm	0.000088	42.63	621.684000	Y_R 488.368
Be (234.861 nm)	-0.000126 u	ppm	0.000020	15.98	1461.050000	Y_R 488.368
Bi (223.061 nm)	0.997043	ppm	0.002530	0.25	2531.530000	Y 377.433
Ca (315.887 nm)	-0.002071 u	ppm	0.000531	25.65	-63.231032	Y_R 377.433
Cd (214.439 nm)	-0.000253 u	ppm	0.000016	6.14	33.297600	Y 377.433
Co (228.615 nm)	0.002823	ppm	0.000041	1.45	14.707900	Y 242.219
Cr (205.560 nm)	0.000064 u	ppm	0.000224	> 100.00	-16.609700	Y 377.433
Cu (324.754 nm)	-0.003433 u	ppm	0.000151	4.40	-144.945000	Y 377.433
Fe (238.204 nm)	48.770958 o	ppm	0.058246	0.12	180405.934500	Y_R 377.433
Fe H (259.940 nm)	49.721200	ppm	0.000899	0.00	94065.800000	Y_R 377.433
K (766.491 nm)	0.120331	ppm	0.035866	29.81	-618.031000	Y_R2 488.368
Li (670.783 nm)	0.010584	ppm	0.000206	1.95	-1000.740000	Y_R2 488.368
Mg (279.078 nm)	-0.019053 u	ppm	0.000437	2.29	-427.806000	Y 377.433
Mn (257.610 nm)	0.001438	ppm	0.000011	0.78	398.017000	Y 377.433
Mo (202.032 nm)	0.000140	ppm	0.000141	> 100.00	1.181890	Y 377.433
Na (589.592 nm)	243.638000 o	ppm	0.701327	0.29	1604490.000000	Y_R2 488.368
Na H (589.593 nm)	256.933288	ppm	0.792641	0.31	943693.070124	Y_R 488.368
Ni (231.604 nm)	0.004727	ppm	0.000179	3.79	30.182500	Y 377.433
P (213.618 nm)	-0.004590 u	ppm	0.002009	43.77	14.583900	Y 242.219
Pb (220.353 nm)	-0.004107 u	ppm	0.000599	14.58	8.925170	Y 242.219
S (181.972 nm)	5.049499	ppm	0.022829	0.45	2600.270918	Y 377.433
Sb (206.834 nm)	-0.003869 u	ppm	0.001412	36.50	-79.618900	Y 377.433
Se (196.026 nm)	-0.001786 u	ppm	0.000701	39.25	2.305550	Y 242.219
Si (288.158 nm)	0.135434	ppm	0.000060	0.04	2093.660000	Y 377.433
Sn (189.925 nm)	0.000824 u	ppm	0.001697	> 100.00	11.235900	Y 377.433
Sr (421.552 nm)	0.000389	ppm	0.000007	1.91	237.741444	Y_R 488.368
Th (288.505 nm)	4.988130	ppm	0.008585	0.17	13039.000000	Y 377.433
Ti (336.122 nm)	0.000965	ppm	0.000025	2.61	-90.635100	Y 377.433
Tl (190.794 nm)	-0.002395 u	ppm	0.001499	62.61	-11.910500	Y 377.433
U (409.013 nm)	9.960620	ppm	0.011841	0.12	44895.700000	Y 377.433
V (292.401 nm)	0.003924	ppm	0.000177	4.51	13.609700	Y 377.433
Zn (206.200 nm)	-0.004772 u	ppm	0.000286	6.00	2.817360	Y 377.433
Zr (343.823 nm)	-0.004382 u	ppm	0.000077	1.76	-405.704000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.078617	20580.241952	0.003627	0.34
Y 377.433	1.053266	1066102.406853	0.004136	0.39
Y_R 377.433	1.132300	85480.500000	0.001545	0.14
Y_R 488.368	1.105070	48380.700000	0.000504	0.05
Y_R2 488.368	1.118253	97043.766388	0.000079	0.01

Sample Name: CCV-5407546

Date: 11/6/2018 11:07:17 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.497033	ppm	0.000752	0.15	22330.000000	Y 377.433
Al (167.019 nm)	0.512052	ppm	0.001688	0.33	289.530000	Y_R 377.433
Al H (396.152 nm)	0.496639 u	ppm	0.001018	0.21	1371.590772	Y_R 377.433
As (188.980 nm)	0.995238	ppm	0.003654	0.37	1251.550000	Y 242.219
B (249.678 nm)	0.493501	ppm	0.000274	0.06	12403.200000	Y 242.219
Ba (493.408 nm)	0.495133	ppm	0.001980	0.40	57956.900000	Y_R 488.368
Be (234.861 nm)	0.479074	ppm	0.006832	1.43	142768.000000	Y_R 488.368
Bi (223.061 nm)	-0.003202 u	ppm	0.000646	20.19	5.093830	Y 377.433
Ca (315.887 nm)	5.124016	ppm	0.032879	0.64	4001.602613	Y_R 377.433
Cd (214.439 nm)	0.504955	ppm	0.001786	0.35	30183.100000	Y 377.433
Co (228.615 nm)	0.496586	ppm	0.001125	0.23	8975.610000	Y 242.219
Cr (205.560 nm)	0.505037	ppm	0.001384	0.27	7678.150000	Y 377.433
Cu (324.754 nm)	0.504710	ppm	0.000277	0.05	27833.200000	Y 377.433
Fe (238.204 nm)	2.480787	ppm	0.012662	0.51	9200.115414	Y_R 377.433
Fe H (259.940 nm)	2.544470 u	ppm	0.012120	0.48	4816.850000	Y_R 377.433
K (766.491 nm)	50.214700	ppm	0.233735	0.47	57064.500000	Y_R2 488.368
Li (670.783 nm)	0.998057	ppm	0.003733	0.37	31932.200000	Y_R2 488.368
Mg (279.078 nm)	20.101700	ppm	0.059376	0.30	116153.000000	Y 377.433
Mn (257.610 nm)	0.503824	ppm	0.001374	0.27	117889.000000	Y 377.433
Mo (202.032 nm)	0.509846	ppm	0.000224	0.04	4390.730000	Y 377.433
Na (589.592 nm)	5.096870	ppm	0.016519	0.32	34857.800000	Y_R2 488.368
Na H (589.593 nm)	5.519077 u	ppm	0.046220	0.84	23080.308412	Y_R 488.368
Ni (231.604 nm)	0.517116	ppm	0.000596	0.12	3524.780000	Y 377.433
P (213.618 nm)	1.002460	ppm	0.003510	0.35	2202.890000	Y 242.219
Pb (220.353 nm)	0.999944	ppm	0.004347	0.43	2869.430000	Y 242.219
S (181.972 nm)	0.034523	ppm	0.000006	0.02	33.092959	Y 377.433
Sb (206.834 nm)	1.014780	ppm	0.000211	0.02	2763.710000	Y 377.433
Se (196.026 nm)	0.988361	ppm	0.003624	0.37	996.665000	Y 242.219
Si (288.158 nm)	5.059980	ppm	0.015903	0.31	44418.600000	Y 377.433
Sn (189.925 nm)	1.029710	ppm	0.002745	0.27	2056.450000	Y 377.433
Sr (421.552 nm)	0.504305	ppm	0.002878	0.57	105967.729626	Y_R 488.368
Th (288.505 nm)	0.006940	ppm	0.002145	30.91	107.441000	Y 377.433
Ti (336.122 nm)	0.499386	ppm	0.000894	0.18	70907.000000	Y 377.433
Tl (190.794 nm)	1.018950	ppm	0.000597	0.06	2232.310000	Y 377.433
U (409.013 nm)	0.001923 u	ppm	0.004418	> 100.00	-236.746000	Y 377.433
V (292.401 nm)	0.497046	ppm	0.001230	0.25	17948.800000	Y 377.433
Zn (206.200 nm)	0.503492	ppm	0.001693	0.34	2657.310000	Y 377.433
Zr (343.823 nm)	0.501649	ppm	0.001695	0.34	65992.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.112911	21234.576170	0.006557	0.59
Y 377.433	1.096065	1109423.003326	0.008586	0.78
Y_R 377.433	1.176720	88834.000000	0.008048	0.68
Y_R 488.368	1.146850	50209.900000	0.009233	0.81
Y_R2 488.368	1.141423	99054.448167	0.001686	0.15

Sample Name: CCB

Date: 11/6/2018 11:10:40 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000738	ppm	0.000123	16.71	-411.053000	Y 377.433
Al (167.019 nm)	-0.001919 u	ppm	0.000575	29.94	1.283810	Y_R 377.433
Al H (396.152 nm)	-0.022266 u	ppm	0.000839	3.77	23.031095	Y_R 377.433
As (188.980 nm)	-0.000484 u	ppm	0.000534	> 100.00	-2.346060	Y 242.219
B (249.678 nm)	0.001008	ppm	0.000314	31.16	82.319000	Y 242.219
Ba (493.408 nm)	-0.000775 u	ppm	0.000131	16.93	509.734000	Y_R 488.368
Be (234.861 nm)	0.000043	ppm	0.000012	27.96	-33.591500	Y_R 488.368
Bi (223.061 nm)	0.001877	ppm	0.000255	13.61	17.469200	Y 377.433
Ca (315.887 nm)	0.006894 u	ppm	0.010307	> 100.00	-56.123380	Y_R 377.433
Cd (214.439 nm)	0.000057	ppm	0.000012	21.43	4.293440	Y 377.433
Co (228.615 nm)	0.000274	ppm	0.000096	35.19	-31.485000	Y 242.219
Cr (205.560 nm)	0.000285	ppm	0.000097	34.11	0.378528	Y 377.433
Cu (324.754 nm)	0.001560	ppm	0.000179	11.51	-204.930000	Y 377.433
Fe (238.204 nm)	-0.000952 u	ppm	0.000450	47.19	21.314999	Y_R 377.433
Fe H (259.940 nm)	0.003815 u	ppm	0.001586	41.56	10.450300	Y_R 377.433
K (766.491 nm)	0.116076	ppm	0.043283	37.29	-622.931000	Y_R2 488.368
Li (670.783 nm)	0.008994	ppm	0.001453	16.16	-1053.740000	Y_R2 488.368
Mg (279.078 nm)	0.001796	ppm	0.000347	19.31	49.701000	Y 377.433
Mn (257.610 nm)	0.000027	ppm	0.000013	48.04	68.176900	Y 377.433
Mo (202.032 nm)	-0.000066 u	ppm	0.000187	> 100.00	-0.593006	Y 377.433
Na (589.592 nm)	0.043219	ppm	0.005298	12.26	580.308000	Y_R2 488.368
Na H (589.593 nm)	0.001990 u	ppm	0.016540	> 100.00	2400.817484	Y_R 488.368
Ni (231.604 nm)	0.000679	ppm	0.000619	91.17	0.532404	Y 377.433
P (213.618 nm)	-0.002501 u	ppm	0.000010	0.41	19.122500	Y 242.219
Pb (220.353 nm)	0.000250 u	ppm	0.000804	> 100.00	4.154830	Y 242.219
S (181.972 nm)	0.030130	ppm	0.006920	22.97	29.603410	Y 377.433
Sb (206.834 nm)	0.001144 u	ppm	0.002304	> 100.00	-20.106700	Y 377.433
Se (196.026 nm)	0.000170	ppm	0.000031	18.46	13.159300	Y 242.219
Si (288.158 nm)	0.015269	ppm	0.001599	10.47	1060.890000	Y 377.433
Sn (189.925 nm)	-0.001097 u	ppm	0.001205	> 100.00	7.418010	Y 377.433
Sr (421.552 nm)	-0.000032 u	ppm	0.000116	> 100.00	149.205841	Y_R 488.368
Th (288.505 nm)	0.005443	ppm	0.001978	36.33	86.951000	Y 377.433
Ti (336.122 nm)	-0.000051 u	ppm	0.000081	> 100.00	-235.439000	Y 377.433
Tl (190.794 nm)	0.000807	ppm	0.000443	54.89	-3.569390	Y 377.433
U (409.013 nm)	0.004813	ppm	0.000107	2.22	-185.817000	Y 377.433
V (292.401 nm)	-0.000343 u	ppm	0.000059	17.21	22.553800	Y 377.433
Zn (206.200 nm)	-0.005275 u	ppm	0.000191	3.61	0.189652	Y 377.433
Zr (343.823 nm)	-0.000070 u	ppm	0.000026	36.80	17.436300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.114492	21264.743709	0.002285	0.21
Y 377.433	1.100757	1114172.844391	0.002570	0.23
Y_R 377.433	1.176580	88823.200000	0.002657	0.23
Y_R 488.368	1.158090	50701.800000	0.001180	0.10
Y_R2 488.368	1.133206	98341.372855	0.016029	1.41

Sample Name: CCVL-5413446

Date: 11/6/2018 11:14:03 PM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010892	ppm	0.000053	0.49	54.472000	Y 377.433
Al (167.019 nm)	0.101669	ppm	0.001410	1.39	59.105700	Y_R 377.433
Al H (396.152 nm)	0.075444 u	ppm	0.003177	4.21	270.462841	Y_R 377.433
As (188.980 nm)	0.013102	ppm	0.001245	9.51	14.762100	Y 242.219
B (249.678 nm)	0.101229	ppm	0.000391	0.39	2586.150000	Y 242.219
Ba (493.408 nm)	0.009430	ppm	0.000022	0.23	1691.690000	Y_R 488.368
Be (234.861 nm)	0.000974	ppm	0.000004	0.41	246.301000	Y_R 488.368
Bi (223.061 nm)	0.100812	ppm	0.001661	1.65	266.613000	Y 377.433
Ca (315.887 nm)	0.211853	ppm	0.008313	3.92	106.395146	Y_R 377.433
Cd (214.439 nm)	0.005375	ppm	0.000015	0.27	322.247000	Y 377.433
Co (228.615 nm)	0.010817	ppm	0.000107	0.99	159.816000	Y 242.219
Cr (205.560 nm)	0.010518	ppm	0.000003	0.03	156.084000	Y 377.433
Cu (324.754 nm)	0.017057	ppm	0.000170	1.00	657.039000	Y 377.433
Fe (238.204 nm)	0.099619	ppm	0.001266	1.27	393.283274	Y_R 377.433
Fe H (259.940 nm)	0.105432 u	ppm	0.001851	1.76	202.689000	Y_R 377.433
K (766.491 nm)	3.331470	ppm	0.000119	0.00	3079.520000	Y_R2 488.368
Li (670.783 nm)	0.030574 Q	ppm	0.000926	3.03	-334.036000 Q	Y_R2 488.368
Mg (279.078 nm)	0.204709	ppm	0.000632	0.31	1220.690000	Y 377.433
Mn (257.610 nm)	0.010511	ppm	0.000008	0.08	2519.990000	Y 377.433
Mo (202.032 nm)	0.019567	ppm	0.000245	1.25	168.485000	Y 377.433
Na (589.592 nm)	1.107300	ppm	0.005641	0.51	7607.470000	Y_R2 488.368
Na H (589.593 nm)	1.043679 u	ppm	0.015252	1.46	6226.881570	Y_R 488.368
Ni (231.604 nm)	0.043340	ppm	0.000075	0.17	291.564000	Y 377.433
P (213.618 nm)	2.898850 o	ppm	0.010015	0.35	6323.740000	Y 242.219
Pb (220.353 nm)	0.010448	ppm	0.000814	7.79	33.394100	Y 242.219
S (181.972 nm)	0.123665	ppm	0.009047	7.32	77.532593	Y 377.433
Sb (206.834 nm)	0.019451	ppm	0.001697	8.73	30.080100	Y 377.433
Se (196.026 nm)	0.019712	ppm	0.004986	25.29	32.600700	Y 242.219
Si (288.158 nm)	0.513589	ppm	0.012670	2.47	5343.790000	Y 377.433
Sn (189.925 nm)	0.104167	ppm	0.000365	0.35	216.659000	Y 377.433
Sr (421.552 nm)	0.010114	ppm	0.000214	2.12	2278.045166	Y_R 488.368
Th (288.505 nm)	0.019679 Q	ppm	0.001667	8.47	124.658000 Q	Y 377.433
Ti (336.122 nm)	0.009912	ppm	0.000076	0.77	1184.000000	Y 377.433
Tl (190.794 nm)	0.015356	ppm	0.000150	0.98	28.345400	Y 377.433
U (409.013 nm)	0.062723	ppm	0.000943	1.50	75.019700	Y 377.433
V (292.401 nm)	0.009814	ppm	0.000170	1.73	386.596000	Y 377.433
Zn (206.200 nm)	0.016609	ppm	0.000256	1.54	114.484000	Y 377.433
Zr (343.823 nm)	0.015196	ppm	0.000103	0.68	2025.030000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119368	21357.780559	0.001156	0.10
Y 377.433	1.103173	1116617.703393	0.001861	0.17
Y_R 377.433	1.174160	88641.000000	0.000333	0.03
Y_R 488.368	1.153100	50483.400000	0.005659	0.49
Y_R2 488.368	1.148231	99645.292079	0.002865	0.25

Sample Name: 280-116410-A-3-B

Date: 11/6/2018 11:17:25 PM Rack:Tube: 2:31

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001202	ppm	0.000612	50.95	-389.902000	Y 377.433
Al (167.019 nm)	0.000567 u	ppm	0.001782	> 100.00	3.507220	Y_R 377.433
Al H (396.152 nm)	-0.011696 u	ppm	0.008029	68.64	61.430480	Y_R 377.433
As (188.980 nm)	0.003824	ppm	0.000711	18.60	3.067940	Y 242.219
B (249.678 nm)	0.019865	ppm	0.000022	0.11	551.500000	Y 242.219
Ba (493.408 nm)	0.119409	ppm	0.000434	0.36	14436.500000	Y_R 488.368
Be (234.861 nm)	0.000026	ppm	0.000030	> 100.00	0.083071	Y_R 488.368
Bi (223.061 nm)	0.000162 u	ppm	0.001584	> 100.00	13.356000	Y 377.433
Ca (315.887 nm)	27.133700 o	ppm	0.010126	0.04	21453.101279	Y_R 377.433
Cd (214.439 nm)	0.000060 u	ppm	0.000087	> 100.00	5.652740	Y 377.433
Co (228.615 nm)	0.000541	ppm	0.000273	50.55	-26.648400	Y 242.219
Cr (205.560 nm)	0.000215	ppm	0.000019	8.74	-1.024830	Y 377.433
Cu (324.754 nm)	0.001584	ppm	0.000031	1.93	-217.878000	Y 377.433
Fe (238.204 nm)	1.227527	ppm	0.000575	0.05	4564.887961	Y_R 377.433
Fe H (259.940 nm)	1.241400 u	ppm	0.001170	0.09	2351.710000	Y_R 377.433
K (766.491 nm)	1.547460	ppm	0.027804	1.80	1025.270000	Y_R2 488.368
Li (670.783 nm)	0.044551	ppm	0.000782	1.75	132.102000	Y_R2 488.368
Mg (279.078 nm)	10.611800	ppm	0.024245	0.23	61336.600000	Y 377.433
Mn (257.610 nm)	0.078725	ppm	0.000139	0.18	18472.900000	Y 377.433
Mo (202.032 nm)	0.000242	ppm	0.000143	59.09	2.053180	Y 377.433
Na (589.592 nm)	50.614700 o	ppm	0.235998	0.47	333803.000000	Y_R2 488.368
Na H (589.593 nm)	52.685602	ppm	0.356730	0.68	195525.753667	Y_R 488.368
Ni (231.604 nm)	0.000582 u	ppm	0.000828	> 100.00	-0.078716	Y 377.433
P (213.618 nm)	0.238579	ppm	0.003060	1.28	542.989000	Y 242.219
Pb (220.353 nm)	0.000381	ppm	0.000403	> 100.00	4.627680	Y 242.219
S (181.972 nm)	1.242135	ppm	0.001904	0.15	650.523319	Y 377.433
Sb (206.834 nm)	-0.001187 u	ppm	0.000520	43.85	-26.781200	Y 377.433
Se (196.026 nm)	0.001236	ppm	0.000292	23.61	14.042600	Y 242.219
Si (288.158 nm)	21.844500 o	ppm	0.343204	1.57	188677.000000	Y 377.433
Sn (189.925 nm)	-0.001911 u	ppm	0.000090	4.72	5.799430	Y 377.433
Sr (421.552 nm)	0.146631	ppm	0.001278	0.87	30921.561693	Y_R 488.368
Th (288.505 nm)	0.003736	ppm	0.001280	34.27	84.113600	Y 377.433
Ti (336.122 nm)	-0.000068 u	ppm	0.000098	> 100.00	-152.940000	Y 377.433
Tl (190.794 nm)	0.000871	ppm	0.000302	34.71	-3.463810	Y 377.433
U (409.013 nm)	0.003269	ppm	0.002275	69.61	-196.786000	Y 377.433
V (292.401 nm)	-0.000192 u	ppm	0.000189	98.84	28.580800	Y 377.433
Zn (206.200 nm)	-0.000219 u	ppm	0.000148	67.74	26.595100	Y 377.433
Zr (343.823 nm)	-0.000214 u	ppm	0.000045	20.97	2.118520	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115933	21292.246408	0.002466	0.22
Y 377.433	1.104100	1117556.037821	0.003444	0.31
Y_R 377.433	1.185320	89483.600000	0.000463	0.04
Y_R 488.368	1.167940	51132.900000	0.007883	0.67
Y_R2 488.368	1.154621	100199.849673	0.014692	1.27

Sample Name: 280-116410-A-4-B

Date: 11/6/2018 11:20:46 PM Rack:Tube: 2:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000905	ppm	0.000014	1.57	-403.385000	Y 377.433
Al (167.019 nm)	-0.000863 u	ppm	0.001424	> 100.00	1.875430	Y_R 377.433
Al H (396.152 nm)	-0.021281 u	ppm	0.007459	35.05	25.505559	Y_R 377.433
As (188.980 nm)	-0.001513 u	ppm	0.001647	> 100.00	-3.642980	Y 242.219
B (249.678 nm)	0.000352	ppm	0.000247	70.22	65.941500	Y 242.219
Ba (493.408 nm)	-0.000453 u	ppm	0.000055	12.15	547.001000	Y_R 488.368
Be (234.861 nm)	0.000025	ppm	0.000023	94.10	-38.814500	Y_R 488.368
Bi (223.061 nm)	0.001109 u	ppm	0.002289	> 100.00	15.536000	Y 377.433
Ca (315.887 nm)	0.017407	ppm	0.006592	37.87	-47.787514	Y_R 377.433
Cd (214.439 nm)	0.000059	ppm	0.000024	41.02	4.445010	Y 377.433
Co (228.615 nm)	0.000188	ppm	0.000072	38.14	-33.036400	Y 242.219
Cr (205.560 nm)	0.000252	ppm	0.000020	8.01	-0.117997	Y 377.433
Cu (324.754 nm)	0.001776	ppm	0.000078	4.42	-193.020000	Y 377.433
Fe (238.204 nm)	0.004197	ppm	0.000119	2.83	40.361893	Y_R 377.433
Fe H (259.940 nm)	0.006586 u	ppm	0.002687	40.80	15.693500	Y_R 377.433
K (766.491 nm)	0.171331	ppm	0.009640	5.63	-559.306000	Y_R2 488.368
Li (670.783 nm)	0.009668	ppm	0.001139	11.79	-1031.280000	Y_R2 488.368
Mg (279.078 nm)	0.001909	ppm	0.001049	54.94	50.378600	Y 377.433
Mn (257.610 nm)	0.000099	ppm	0.000005	5.24	84.937100	Y 377.433
Mo (202.032 nm)	-0.000184 u	ppm	0.000078	42.36	-1.608610	Y 377.433
Na (589.592 nm)	0.058169	ppm	0.001724	2.96	679.912000	Y_R2 488.368
Na H (589.593 nm)	-0.067544 u	ppm	0.000801	1.19	2146.619741	Y_R 488.368
Ni (231.604 nm)	0.000725	ppm	0.000222	30.62	0.846940	Y 377.433
P (213.618 nm)	0.000270 u	ppm	0.000961	> 100.00	25.143200	Y 242.219
Pb (220.353 nm)	-0.000520 u	ppm	0.000853	> 100.00	1.943840	Y 242.219
S (181.972 nm)	0.016904	ppm	0.005402	31.96	22.829606	Y 377.433
Sb (206.834 nm)	-0.000039 u	ppm	0.001497	> 100.00	-23.336100	Y 377.433
Se (196.026 nm)	-0.001866 u	ppm	0.001022	54.79	11.132600	Y 242.219
Si (288.158 nm)	0.114553	ppm	0.001215	1.06	1914.200000	Y 377.433
Sn (189.925 nm)	-0.000800 u	ppm	0.001018	> 100.00	8.008190	Y 377.433
Sr (421.552 nm)	-0.000086 u	ppm	0.000019	21.75	137.946475	Y_R 488.368
Th (288.505 nm)	0.003179	ppm	0.002321	73.01	81.132100	Y 377.433
Ti (336.122 nm)	-0.000017 u	ppm	0.000080	> 100.00	-230.582000	Y 377.433
Tl (190.794 nm)	0.000256 u	ppm	0.000780	> 100.00	-4.781800	Y 377.433
U (409.013 nm)	0.005293	ppm	0.000018	0.34	-183.628000	Y 377.433
V (292.401 nm)	-0.000184 u	ppm	0.000151	82.24	28.277100	Y 377.433
Zn (206.200 nm)	-0.003904 u	ppm	0.000202	5.19	7.351010	Y 377.433
Zr (343.823 nm)	-0.000220 u	ppm	0.000016	7.07	-2.306320	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.134121	21639.269717	0.002958	0.26
Y 377.433	1.121609	1135278.586688	0.003492	0.31
Y_R 377.433	1.187730	89665.300000	0.004457	0.38
Y_R 488.368	1.159740	50773.900000	0.006433	0.55
Y_R2 488.368	1.149650	99768.449677	0.005900	0.51

Sample Name: 280-116410-A-6-A

Date: 11/6/2018 11:24:08 PM Rack:Tube: 2:33

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001014	ppm	0.000189	18.63	-398.361000	Y 377.433
Al (167.019 nm)	-0.000113 u	ppm	0.001680	> 100.00	2.316850	Y_R 377.433
Al H (396.152 nm)	-0.021054 u	ppm	0.001392	6.61	26.070630	Y_R 377.433
As (188.980 nm)	-0.000732 u	ppm	0.001163	> 100.00	-2.658830	Y 242.219
B (249.678 nm)	0.000684	ppm	0.000013	1.94	74.149800	Y 242.219
Ba (493.408 nm)	-0.000736 u	ppm	0.000143	19.38	514.269000	Y_R 488.368
Be (234.861 nm)	0.000018	ppm	0.000007	36.00	-39.703500	Y_R 488.368
Bi (223.061 nm)	0.001047	ppm	0.000569	54.34	15.385500	Y 377.433
Ca (315.887 nm)	0.019812	ppm	0.005163	26.06	-45.880471	Y_R 377.433
Cd (214.439 nm)	0.000030	ppm	0.000031	> 100.00	2.737910	Y 377.433
Co (228.615 nm)	0.000056	ppm	0.000052	92.94	-35.426800	Y 242.219
Cr (205.560 nm)	0.000522	ppm	0.000052	9.98	3.974900	Y 377.433
Cu (324.754 nm)	0.001624	ppm	0.000191	11.78	-202.040000	Y 377.433
Fe (238.204 nm)	0.037550	ppm	0.000959	2.55	163.718952	Y_R 377.433
Fe H (259.940 nm)	0.037911 u	ppm	0.001784	4.71	74.952600	Y_R 377.433
K (766.491 nm)	0.151320	ppm	0.026416	17.46	-582.349000	Y_R2 488.368
Li (670.783 nm)	0.008948	ppm	0.000244	2.73	-1055.280000	Y_R2 488.368
Mg (279.078 nm)	0.002345	ppm	0.000203	8.65	52.872200	Y 377.433
Mn (257.610 nm)	0.000232	ppm	0.000004	1.87	116.069000	Y 377.433
Mo (202.032 nm)	-0.000145 u	ppm	0.000213	> 100.00	-1.280180	Y 377.433
Na (589.592 nm)	0.084839	ppm	0.008793	10.36	854.354000	Y_R2 488.368
Na H (589.593 nm)	-0.066268 u	ppm	0.005223	7.88	2150.750921	Y_R 488.368
Ni (231.604 nm)	0.000580	ppm	0.000161	27.81	-0.138440	Y 377.433
P (213.618 nm)	-0.001465 u	ppm	0.000588	40.16	21.372900	Y 242.219
Pb (220.353 nm)	0.001103	ppm	0.001362	> 100.00	6.601370	Y 242.219
S (181.972 nm)	0.022892	ppm	0.004378	19.12	25.896764	Y 377.433
Sb (206.834 nm)	0.000421	ppm	0.000038	9.01	-22.072500	Y 377.433
Se (196.026 nm)	-0.003034 u	ppm	0.004480	> 100.00	9.963430	Y 242.219
Si (288.158 nm)	0.031113	ppm	0.001225	3.94	1197.060000	Y 377.433
Sn (189.925 nm)	-0.000640 u	ppm	0.000414	64.59	8.324960	Y 377.433
Sr (421.552 nm)	0.000026 u	ppm	0.000101	> 100.00	161.380970	Y_R 488.368
Th (288.505 nm)	0.004217	ppm	0.000145	3.44	83.768500	Y 377.433
Ti (336.122 nm)	0.000011 u	ppm	0.000049	> 100.00	-226.645000	Y 377.433
Tl (190.794 nm)	-0.000237 u	ppm	0.000359	> 100.00	-5.864760	Y 377.433
U (409.013 nm)	0.005323	ppm	0.003707	69.65	-183.466000	Y 377.433
V (292.401 nm)	-0.000131 u	ppm	0.000119	91.01	29.931500	Y 377.433
Zn (206.200 nm)	-0.003712 u	ppm	0.000218	5.88	8.351920	Y 377.433
Zr (343.823 nm)	-0.000205 u	ppm	0.000100	48.92	-0.151402	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.126764	21498.899236	0.002707	0.24
Y 377.433	1.114390	1127971.984562	0.003714	0.33
Y_R 377.433	1.196490	90326.800000	0.003104	0.26
Y_R 488.368	1.169290	51192.000000	0.005298	0.45
Y_R2 488.368	1.170625	101588.691550	0.009734	0.83

Sample Name: 280-116412-A-1-B

Date: 11/6/2018 11:27:30 PM Rack:Tube: 2:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001738	ppm	0.000131	7.55	-389.870000	Y 377.433
Al (167.019 nm)	0.451267	ppm	0.005545	1.23	261.597000	Y_R 377.433
Al H (396.152 nm)	0.478475 u	ppm	0.000061	0.01	1319.967283	Y_R 377.433
As (188.980 nm)	0.338270	ppm	0.000957	0.28	424.148000	Y 242.219
B (249.678 nm)	7.139230 o	ppm	0.009053	0.13	178383.000000	Y 242.219
Ba (493.408 nm)	4.048130 o	ppm	0.000249	0.01	469472.000000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000003	11.29	315.612000	Y_R 488.368
Bi (223.061 nm)	-0.003837 u	ppm	0.000030	0.78	4.950550	Y 377.433
Ca (315.887 nm)	84.048271 o	ppm	0.595949	0.71	66581.462456	Y_R 377.433
Cd (214.439 nm)	0.000234	ppm	0.000112	47.65	25.901300	Y 377.433
Co (228.615 nm)	0.077688	ppm	0.000098	0.13	1381.910000	Y 242.219
Cr (205.560 nm)	0.224239	ppm	0.000788	0.35	3406.360000	Y 377.433
Cu (324.754 nm)	0.008437	ppm	0.000098	1.17	133.322000	Y 377.433
Fe (238.204 nm)	11.212932 o	ppm	0.067777	0.60	41496.257849	Y_R 377.433
Fe H (259.940 nm)	11.547300	ppm	0.066240	0.57	21848.300000	Y_R 377.433
K (766.491 nm)	604.518000 bo	ppm	3.047690	0.50	695332.000000	Y_R2 488.368
Li (670.783 nm)	0.054674	ppm	0.000214	0.39	469.728000	Y_R2 488.368
Mg (279.078 nm)	94.252600 o	ppm	0.298378	0.32	544473.000000	Y 377.433
Mn (257.610 nm)	0.198670	ppm	0.000112	0.06	46523.700000	Y 377.433
Mo (202.032 nm)	0.012606	ppm	0.000010	0.08	108.531000	Y 377.433
Na (589.592 nm)	1685.650000 o	ppm	14.569700	0.86	11107300.000000	Y_R2 488.368
Na H (589.593 nm)	1668.234542	ppm	2.100943	0.13	6117943.188023	Y_R 488.368
Ni (231.604 nm)	0.386709	ppm	0.000920	0.24	2634.330000	Y 377.433
P (213.618 nm)	12.576400 o	ppm	0.011069	0.09	27353.000000	Y 242.219
Pb (220.353 nm)	0.002673	ppm	0.001281	47.93	11.861100	Y 242.219
S (181.972 nm)	38.207513 o	ppm	0.032413	0.08	19582.589253	Y 377.433
Sb (206.834 nm)	0.001420	ppm	0.000199	14.01	-15.507200	Y 377.433
Se (196.026 nm)	0.002813	ppm	0.000740	26.30	13.833500	Y 242.219
Si (288.158 nm)	2.350030	ppm	0.200009	8.51	21127.400000	Y 377.433
Sn (189.925 nm)	0.068138	ppm	0.000681	1.00	145.041000	Y 377.433
Sr (421.552 nm)	1.484721 o	ppm	0.001507	0.10	311675.306176	Y_R 488.368
Th (288.505 nm)	0.015045	ppm	0.005066	33.67	126.565000	Y 377.433
Ti (336.122 nm)	0.315499	ppm	0.000340	0.11	44965.800000	Y 377.433
Tl (190.794 nm)	0.001431	ppm	0.000407	28.46	-3.626820	Y 377.433
U (409.013 nm)	-0.030229 u	ppm	0.002432	8.05	-359.161000	Y 377.433
V (292.401 nm)	0.305388	ppm	0.000046	0.01	11070.300000	Y 377.433
Zn (206.200 nm)	0.247410	ppm	0.000259	0.10	1319.880000	Y 377.433
Zr (343.823 nm)	0.119931	ppm	0.000225	0.19	15828.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.964340	18399.818052	0.003318	0.34
Y 377.433	0.965436	977202.083435	0.002417	0.25
Y_R 377.433	1.131360	85409.900000	0.007795	0.69
Y_R 488.368	1.102070	48249.400000	0.001746	0.16
Y_R2 488.368	1.087045	94335.481372	0.008831	0.81

Sample Name: 280-116419-E-1-A

Date: 11/6/2018 11:30:52 PM Rack:Tube: 2:35

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001126	ppm	0.000326	28.93	-417.858000	Y 377.433
Al (167.019 nm)	0.060701	ppm	0.001425	2.35	36.242800	Y_R 377.433
Al H (396.152 nm)	0.044668 u	ppm	0.005015	11.23	203.001693	Y_R 377.433
As (188.980 nm)	0.003446	ppm	0.000645	18.71	2.601860	Y 242.219
B (249.678 nm)	0.222422	ppm	0.000062	0.03	5613.170000	Y 242.219
Ba (493.408 nm)	0.006690	ppm	0.000386	5.78	1380.210000	Y_R 488.368
Be (234.861 nm)	0.000061	ppm	0.000006	9.63	-26.532300	Y_R 488.368
Bi (223.061 nm)	-0.000560 u	ppm	0.001006	> 100.00	11.344600	Y 377.433
Ca (315.887 nm)	25.553169 o	ppm	0.092812	0.36	20199.876380	Y_R 377.433
Cd (214.439 nm)	0.000088	ppm	0.000006	6.54	6.233380	Y 377.433
Co (228.615 nm)	-0.000428 u	ppm	0.000251	58.59	-44.036600	Y 242.219
Cr (205.560 nm)	0.005175	ppm	0.000006	0.11	74.780200	Y 377.433
Cu (324.754 nm)	0.002162	ppm	0.000138	6.37	-185.907000	Y 377.433
Fe (238.204 nm)	0.067820	ppm	0.001827	2.69	275.671390	Y_R 377.433
Fe H (259.940 nm)	0.064549 u	ppm	0.001679	2.60	125.347000	Y_R 377.433
K (766.491 nm)	25.879500	ppm	0.125393	0.48	29043.100000	Y_R2 488.368
Li (670.783 nm)	0.022324	ppm	0.000329	1.48	-609.186000	Y_R2 488.368
Mg (279.078 nm)	63.410000 o	ppm	0.109241	0.17	366329.000000	Y 377.433
Mn (257.610 nm)	0.002345	ppm	0.000026	1.13	610.257000	Y 377.433
Mo (202.032 nm)	0.006089	ppm	0.000082	1.35	52.410700	Y 377.433
Na (589.592 nm)	463.235000 o	ppm	2.687710	0.58	3050400.000000	Y_R2 488.368
Na H (589.593 nm)	489.508234	ppm	7.566112	1.55	1795761.928803	Y_R 488.368
Ni (231.604 nm)	0.000132 u	ppm	0.000259	> 100.00	-3.196320	Y 377.433
P (213.618 nm)	0.070388	ppm	0.002911	4.14	177.509000	Y 242.219
Pb (220.353 nm)	-0.001004 u	ppm	0.002013	> 100.00	0.519634	Y 242.219
S (181.972 nm)	53.406796 o	ppm	0.050403	0.09	27366.401903	Y 377.433
Sb (206.834 nm)	-0.001229 u	ppm	0.001299	> 100.00	-26.505200	Y 377.433
Se (196.026 nm)	-0.000227 u	ppm	0.000701	> 100.00	12.755200	Y 242.219
Si (288.158 nm)	23.431900 o	ppm	0.097408	0.42	202319.000000	Y 377.433
Sn (189.925 nm)	-0.000563 u	ppm	0.000628	> 100.00	8.478150	Y 377.433
Sr (421.552 nm)	0.340307	ppm	0.005762	1.69	71558.201009	Y_R 488.368
Th (288.505 nm)	0.010013	ppm	0.001236	12.35	104.350000	Y 377.433
Ti (336.122 nm)	0.004800	ppm	0.000011	0.24	535.295000	Y 377.433
Tl (190.794 nm)	0.002813	ppm	0.000429	15.26	0.798537	Y 377.433
U (409.013 nm)	-0.006960 u	ppm	0.003684	52.93	-243.859000	Y 377.433
V (292.401 nm)	0.147219	ppm	0.000071	0.05	5376.830000	Y 377.433
Zn (206.200 nm)	-0.003907 u	ppm	0.000234	5.98	7.334320	Y 377.433
Zr (343.823 nm)	-0.000108 u	ppm	0.000083	77.19	12.689700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072006	20454.093289	0.001309	0.12
Y 377.433	1.060607	1073532.965967	0.001025	0.10
Y_R 377.433	1.166470	88060.600000	0.003456	0.30
Y_R 488.368	1.131830	49552.300000	0.018607	1.64
Y_R2 488.368	1.129856	98050.667762	0.005925	0.52

Sample Name: 280-116419-E-2-A

Date: 11/6/2018 11:34:14 PM
Rack:Tube: 2:36

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001334	ppm	0.000021	1.59	-408.690000	Y 377.433
Al (167.019 nm)	0.236578	ppm	0.001518	0.64	134.409000	Y_R 377.433
Al H (396.152 nm)	0.229241 u	ppm	0.003754	1.64	670.549883	Y_R 377.433
As (188.980 nm)	0.003503	ppm	0.001797	51.31	2.672170	Y 242.219
B (249.678 nm)	0.241822	ppm	0.000168	0.07	6097.570000	Y 242.219
Ba (493.408 nm)	0.012118	ppm	0.000076	0.63	2010.720000	Y_R 488.368
Be (234.861 nm)	0.000033	ppm	0.000002	5.86	-29.809900	Y_R 488.368
Bi (223.061 nm)	-0.002652 u	ppm	0.000315	11.87	6.101500	Y 377.433
Ca (315.887 nm)	32.769409 o	ppm	0.022487	0.07	25921.734271	Y_R 377.433
Cd (214.439 nm)	0.000085	ppm	0.000028	32.28	6.206040	Y 377.433
Co (228.615 nm)	-0.000210 u	ppm	0.000228	> 100.00	-39.595300	Y 242.219
Cr (205.560 nm)	0.007362	ppm	0.000207	2.82	108.028000	Y 377.433
Cu (324.754 nm)	0.008233	ppm	0.000064	0.77	148.711000	Y 377.433
Fe (238.204 nm)	0.228062	ppm	0.000498	0.22	868.334079	Y_R 377.433
Fe H (259.940 nm)	0.224720 u	ppm	0.002832	1.26	428.358000	Y_R 377.433
K (766.491 nm)	30.527400	ppm	0.255466	0.84	34395.000000	Y_R2 488.368
Li (670.783 nm)	0.026662	ppm	0.000172	0.64	-464.518000	Y_R2 488.368
Mg (279.078 nm)	76.826800 o	ppm	0.014948	0.02	443831.000000	Y 377.433
Mn (257.610 nm)	0.007113	ppm	0.000052	0.73	1725.350000	Y 377.433
Mo (202.032 nm)	0.008622	ppm	0.000268	3.11	74.221100	Y 377.433
Na (589.592 nm)	519.654000 o	ppm	2.056110	0.40	3421890.000000	Y_R2 488.368
Na H (589.593 nm)	552.502064	ppm	0.758583	0.14	2026550.985907	Y_R 488.368
Ni (231.604 nm)	0.000781	ppm	0.000158	20.23	1.240200	Y 377.433
P (213.618 nm)	0.049743	ppm	0.003017	6.07	132.649000	Y 242.219
Pb (220.353 nm)	0.001251	ppm	0.001623	> 100.00	6.929010	Y 242.219
S (181.972 nm)	65.628333 o	ppm	0.103685	0.16	33625.658729	Y 377.433
Sb (206.834 nm)	-0.001377 u	ppm	0.001719	> 100.00	-26.909800	Y 377.433
Se (196.026 nm)	-0.000008 u	ppm	0.000224	> 100.00	12.952600	Y 242.219
Si (288.158 nm)	24.768300 o	ppm	0.123413	0.50	213805.000000	Y 377.433
Sn (189.925 nm)	-0.001303 u	ppm	0.000759	58.22	7.006990	Y 377.433
Sr (421.552 nm)	0.405124	ppm	0.000491	0.12	85157.891248	Y_R 488.368
Th (288.505 nm)	0.013669	ppm	0.003177	23.24	113.883000	Y 377.433
Ti (336.122 nm)	0.018724	ppm	0.000043	0.23	2540.870000	Y 377.433
Tl (190.794 nm)	0.001666	ppm	0.000143	8.56	-1.789540	Y 377.433
U (409.013 nm)	-0.008539 u	ppm	0.005249	61.47	-252.257000	Y 377.433
V (292.401 nm)	0.149421	ppm	0.000094	0.06	5456.800000	Y 377.433
Zn (206.200 nm)	-0.002906 u	ppm	0.000169	5.82	12.560700	Y 377.433
Zr (343.823 nm)	0.000344	ppm	0.000109	31.86	72.516300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062800	20278.451623	0.002872	0.27
Y 377.433	1.052002	1064823.453321	0.002250	0.21
Y_R 377.433	1.146310	86538.000000	0.000892	0.08
Y_R 488.368	1.119860	49028.200000	0.001857	0.17
Y_R2 488.368	1.110708	96389.006743	0.008048	0.72

Sample Name: 280-116419-E-3-A

Date: 11/6/2018 11:37:35 PM
Rack:Tube: 2:37
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001392	ppm	0.000196	14.11	-406.143000	Y 377.433
Al (167.019 nm)	0.073019	ppm	0.001204	1.65	43.114400	Y_R 377.433
Al H (396.152 nm)	0.059729 u	ppm	0.005418	9.07	244.733757	Y_R 377.433
As (188.980 nm)	0.000773	ppm	0.000937	> 100.00	-0.764027	Y 242.219
B (249.678 nm)	0.261462	ppm	0.000526	0.20	6588.400000	Y 242.219
Ba (493.408 nm)	0.011100	ppm	0.000175	1.58	1892.930000	Y_R 488.368
Be (234.861 nm)	0.000041	ppm	0.000017	43.02	-32.486800	Y_R 488.368
Bi (223.061 nm)	-0.001171 u	ppm	0.000957	81.70	9.805680	Y 377.433
Ca (315.887 nm)	34.094424 o	ppm	0.152483	0.45	26972.357367	Y_R 377.433
Cd (214.439 nm)	0.000077	ppm	0.000025	32.69	5.578640	Y 377.433
Co (228.615 nm)	-0.000686 u	ppm	0.000177	25.80	-48.733200	Y 242.219
Cr (205.560 nm)	0.008102	ppm	0.000119	1.46	119.338000	Y 377.433
Cu (324.754 nm)	0.002920	ppm	0.000325	11.14	-148.564000	Y 377.433
Fe (238.204 nm)	0.073314	ppm	0.001689	2.30	295.993106	Y_R 377.433
Fe H (259.940 nm)	0.068151 u	ppm	0.000499	0.73	132.162000	Y_R 377.433
K (766.491 nm)	32.753500	ppm	0.131701	0.40	36958.300000	Y_R2 488.368
Li (670.783 nm)	0.026792	ppm	0.000866	3.23	-460.178000	Y_R2 488.368
Mg (279.078 nm)	81.373000 o	ppm	0.656241	0.81	470093.000000	Y 377.433
Mn (257.610 nm)	0.003195	ppm	0.000047	1.47	809.050000	Y 377.433
Mo (202.032 nm)	0.008131	ppm	0.000107	1.32	69.997500	Y 377.433
Na (589.592 nm)	565.144000 o	ppm	1.645870	0.29	3721420.000000	Y_R2 488.368
Na H (589.593 nm)	594.841787	ppm	3.283855	0.55	2181665.537542	Y_R 488.368
Ni (231.604 nm)	0.001313	ppm	0.000498	37.91	4.862820	Y 377.433
P (213.618 nm)	0.051885	ppm	0.002230	4.30	137.302000	Y 242.219
Pb (220.353 nm)	0.000349	ppm	0.000169	48.48	4.388620	Y 242.219
S (181.972 nm)	69.092937 o	ppm	0.040613	0.06	35400.041843	Y 377.433
Sb (206.834 nm)	-0.000726 u	ppm	0.000266	36.63	-25.058600	Y 377.433
Se (196.026 nm)	0.000157 u	ppm	0.001335	> 100.00	13.136900	Y 242.219
Si (288.158 nm)	23.716700 o	ppm	0.026353	0.11	204768.000000	Y 377.433
Sn (189.925 nm)	-0.001346 u	ppm	0.000526	39.08	6.922680	Y 377.433
Sr (421.552 nm)	0.438967	ppm	0.003002	0.68	92258.651217	Y_R 488.368
Th (288.505 nm)	0.012199	ppm	0.001822	14.94	110.060000	Y 377.433
Ti (336.122 nm)	0.004155	ppm	0.000003	0.06	470.264000	Y 377.433
Tl (190.794 nm)	0.000460 u	ppm	0.001952	> 100.00	-4.372320	Y 377.433
U (409.013 nm)	-0.009516 u	ppm	0.004274	44.91	-257.031000	Y 377.433
V (292.401 nm)	0.149458	ppm	0.000564	0.38	5457.450000	Y 377.433
Zn (206.200 nm)	-0.000427 u	ppm	0.000577	> 100.00	25.510500	Y 377.433
Zr (343.823 nm)	-0.000113 u	ppm	0.000016	13.90	11.999900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064249	20306.102414	0.005859	0.55
Y 377.433	1.053741	1066583.525228	0.007984	0.76
Y_R 377.433	1.138060	85915.400000	0.000741	0.07
Y_R 488.368	1.113940	48769.200000	0.001951	0.18
Y_R2 488.368	1.107458	96106.895063	0.016251	1.47

Sample Name: 280-116419-E-4-A

Date: 11/6/2018 11:40:58 PM Rack:Tube: 2:38

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001416	ppm	0.000232	16.36	-458.021000	Y 377.433
Al (167.019 nm)	0.173541	ppm	0.001683	0.97	114.715000	Y_R 377.433
Al H (396.152 nm)	0.165789 u	ppm	0.007546	4.55	516.907377	Y_R 377.433
As (188.980 nm)	0.009067	ppm	0.000204	2.25	9.474910	Y 242.219
B (249.678 nm)	0.262053	ppm	0.000372	0.14	6568.950000	Y 242.219
Ba (493.408 nm)	0.013612	ppm	0.000005	0.04	2205.560000	Y_R 488.368
Be (234.861 nm)	-0.000091 u	ppm	0.000021	23.31	644.636000	Y_R 488.368
Bi (223.061 nm)	0.002713	ppm	0.000338	12.46	23.391500	Y 377.433
Ca (315.887 nm)	34.661832 o	ppm	0.080458	0.23	27422.262743	Y_R 377.433
Cd (214.439 nm)	-0.000046 u	ppm	0.000011	23.39	20.474800	Y 377.433
Co (228.615 nm)	0.013343	ppm	0.000003	0.02	205.462000	Y 242.219
Cr (205.560 nm)	7.217710 o	ppm	0.048450	0.67	109861.000000	Y 377.433
Cu (324.754 nm)	0.065267	ppm	0.000205	0.31	3347.190000	Y 377.433
Fe (238.204 nm)	22.925892 o	ppm	0.086929	0.38	84817.052947	Y_R 377.433
Fe H (259.940 nm)	23.613000	ppm	0.058735	0.25	44674.300000	Y_R 377.433
K (766.491 nm)	32.366400	ppm	0.326640	1.01	36512.600000	Y_R2 488.368
Li (670.783 nm)	0.027683	ppm	0.000838	3.03	-430.455000	Y_R2 488.368
Mg (279.078 nm)	82.080100 o	ppm	0.061466	0.07	474138.000000	Y 377.433
Mn (257.610 nm)	0.139984	ppm	0.000179	0.13	32799.100000	Y 377.433
Mo (202.032 nm)	0.072106	ppm	0.000139	0.19	620.942000	Y 377.433
Na (589.592 nm)	558.098000 o	ppm	6.352470	1.14	3675030.000000	Y_R2 488.368
Na H (589.593 nm)	597.564363	ppm	1.012975	0.17	2191642.829986	Y_R 488.368
Ni (231.604 nm)	0.623070	ppm	0.003773	0.61	4247.170000	Y 377.433
P (213.618 nm)	0.165274	ppm	0.001747	1.06	383.696000	Y 242.219
Pb (220.353 nm)	-0.001276 u	ppm	0.000473	37.11	1.395640	Y 242.219
S (181.972 nm)	71.337499 o	ppm	0.181478	0.25	36549.926668	Y 377.433
Sb (206.834 nm)	0.001312	ppm	0.000566	43.10	201.743000	Y 377.433
Se (196.026 nm)	-0.003111 u	ppm	0.000317	10.18	5.486900	Y 242.219
Si (288.158 nm)	25.717900 o	ppm	0.056263	0.22	221966.000000	Y 377.433
Sn (189.925 nm)	0.003593	ppm	0.000102	2.84	16.739500	Y 377.433
Sr (421.552 nm)	0.443050	ppm	0.000817	0.18	93115.264941	Y_R 488.368
Th (288.505 nm)	0.009567	ppm	0.002525	26.39	116.984000	Y 377.433
Ti (336.122 nm)	0.006945	ppm	0.000052	0.74	869.411000	Y 377.433
Tl (190.794 nm)	0.003419	ppm	0.000742	21.71	1.403500	Y 377.433
U (409.013 nm)	-0.017181 u	ppm	0.002715	15.80	-270.447000	Y 377.433
V (292.401 nm)	0.475646	ppm	0.000261	0.05	15498.700000	Y 377.433
Zn (206.200 nm)	-0.003281 u	ppm	0.000392	11.94	10.605400	Y 377.433
Zr (343.823 nm)	-0.000155 u	ppm	0.000063	40.83	73.713400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057479	20176.923072	0.001105	0.10
Y 377.433	1.042047	1054747.295235	0.001483	0.14
Y_R 377.433	1.143460	86323.300000	0.001758	0.15
Y_R 488.368	1.113420	48746.000000	0.000260	0.02
Y_R2 488.368	1.109748	96305.692817	0.006574	0.59

Sample Name: 280-116419-E-5-A

Date: 11/6/2018 11:44:20 PM Rack:Tube: 2:39

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000953	ppm	0.000345	36.21	-401.184000	Y 377.433
Al (167.019 nm)	0.008325	ppm	0.000659	7.92	6.997550	Y_R 377.433
Al H (396.152 nm)	-0.012648 u	ppm	0.010983	86.83	47.284493	Y_R 377.433
As (188.980 nm)	0.000122 u	ppm	0.000362	> 100.00	-1.583310	Y 242.219
B (249.678 nm)	0.002187	ppm	0.000082	3.76	111.780000	Y 242.219
Ba (493.408 nm)	-0.000457 u	ppm	0.000270	59.00	546.565000	Y_R 488.368
Be (234.861 nm)	0.000013	ppm	0.000004	31.75	-42.444900	Y_R 488.368
Bi (223.061 nm)	0.001334	ppm	0.000361	27.05	16.101300	Y 377.433
Ca (315.887 nm)	0.126131	ppm	0.005171	4.10	38.421344	Y_R 377.433
Cd (214.439 nm)	0.000032	ppm	0.000038	> 100.00	2.828380	Y 377.433
Co (228.615 nm)	0.000155	ppm	0.000023	14.67	-33.637900	Y 242.219
Cr (205.560 nm)	0.000651	ppm	0.000193	29.66	5.950020	Y 377.433
Cu (324.754 nm)	0.001603	ppm	0.000006	0.36	-202.414000	Y 377.433
Fe (238.204 nm)	0.003463	ppm	0.001470	42.45	37.645547	Y_R 377.433
Fe H (259.940 nm)	0.010662 u	ppm	0.002803	26.29	23.404100	Y_R 377.433
K (766.491 nm)	0.152211	ppm	0.105596	69.38	-581.323000	Y_R2 488.368
Li (670.783 nm)	0.007200	ppm	0.000242	3.36	-1113.570000	Y_R2 488.368
Mg (279.078 nm)	0.010133	ppm	0.000746	7.37	97.919600	Y 377.433
Mn (257.610 nm)	0.000127	ppm	0.000025	19.63	91.500400	Y 377.433
Mo (202.032 nm)	0.000199	ppm	0.000043	21.88	1.682330	Y 377.433
Na (589.592 nm)	0.589674	ppm	0.013294	2.25	4179.140000	Y_R2 488.368
Na H (589.593 nm)	1.387909 u	ppm	0.043103	3.11	7478.635401	Y_R 488.368
Ni (231.604 nm)	0.000789	ppm	0.000572	72.50	1.280630	Y 377.433
P (213.618 nm)	-0.002315 u	ppm	0.002379	> 100.00	19.526200	Y 242.219
Pb (220.353 nm)	0.000617	ppm	0.000302	48.91	5.197440	Y 242.219
S (181.972 nm)	0.046646	ppm	0.001431	3.07	38.062207	Y 377.433
Sb (206.834 nm)	0.000555	ppm	0.000468	84.45	-21.702600	Y 377.433
Se (196.026 nm)	-0.002729 u	ppm	0.002672	97.92	10.274500	Y 242.219
Si (288.158 nm)	0.371306	ppm	0.002309	0.62	4120.910000	Y 377.433
Sn (189.925 nm)	-0.002056 u	ppm	0.000087	4.24	5.510920	Y 377.433
Sr (421.552 nm)	0.000143	ppm	0.000101	70.82	186.035990	Y_R 488.368
Th (288.505 nm)	0.005206	ppm	0.001035	19.88	86.298700	Y 377.433
Ti (336.122 nm)	-0.000067 u	ppm	0.000003	4.01	-237.415000	Y 377.433
Tl (190.794 nm)	-0.001358 u	ppm	0.000955	70.35	-8.327190	Y 377.433
U (409.013 nm)	0.007059	ppm	0.005100	72.25	-175.657000	Y 377.433
V (292.401 nm)	-0.000222 u	ppm	0.000170	76.86	26.979100	Y 377.433
Zn (206.200 nm)	-0.003962 u	ppm	0.000133	3.36	7.046180	Y 377.433
Zr (343.823 nm)	-0.000252 u	ppm	0.000038	15.09	-6.433670	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122215	21412.097651	0.001422	0.13
Y 377.433	1.109484	1123006.476142	0.001417	0.13
Y_R 377.433	1.168560	88218.100000	0.002056	0.18
Y_R 488.368	1.141260	49964.800000	0.002318	0.20
Y_R2 488.368	1.125700	97689.979012	0.005095	0.45

Sample Name: 280-116419-E-6-A

Date: 11/6/2018 11:47:43 PM Rack:Tube: 2:40

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001890	ppm	0.000278	14.69	-432.740000	Y 377.433
Al (167.019 nm)	0.164071	ppm	0.007675	4.68	108.652000	Y_R 377.433
Al H (396.152 nm)	0.158462 u	ppm	0.001039	0.66	497.764469	Y_R 377.433
As (188.980 nm)	0.007133	ppm	0.001708	23.95	7.049790	Y 242.219
B (249.678 nm)	0.256958	ppm	0.000125	0.05	6443.450000	Y 242.219
Ba (493.408 nm)	0.013417	ppm	0.000263	1.96	2181.710000	Y_R 488.368
Be (234.861 nm)	-0.000113 u	ppm	0.000080	70.23	602.104000	Y_R 488.368
Bi (223.061 nm)	0.003220	ppm	0.002032	63.11	24.476000	Y 377.433
Ca (315.887 nm)	34.050320 o	ppm	0.042517	0.12	26937.386309	Y_R 377.433
Cd (214.439 nm)	0.000048	ppm	0.000040	82.31	24.983900	Y 377.433
Co (228.615 nm)	0.013324	ppm	0.000203	1.52	205.095000	Y 242.219
Cr (205.560 nm)	6.809980 o	ppm	0.034786	0.51	103655.000000	Y 377.433
Cu (324.754 nm)	0.063671	ppm	0.000329	0.52	3257.260000	Y 377.433
Fe (238.204 nm)	21.761028 o	ppm	0.013986	0.06	80508.763456	Y_R 377.433
Fe H (259.940 nm)	22.366200	ppm	0.054180	0.24	42315.600000	Y_R 377.433
K (766.491 nm)	32.052700	ppm	0.031416	0.10	36151.300000	Y_R2 488.368
Li (670.783 nm)	0.027138	ppm	0.001649	6.08	-448.639000	Y_R2 488.368
Mg (279.078 nm)	81.021200 o	ppm	0.141878	0.18	468023.000000	Y 377.433
Mn (257.610 nm)	0.136940	ppm	0.000270	0.20	32087.200000	Y 377.433
Mo (202.032 nm)	0.067694	ppm	0.000100	0.15	582.952000	Y 377.433
Na (589.592 nm)	552.379000 o	ppm	2.506070	0.45	3637370.000000	Y_R2 488.368
Na H (589.593 nm)	586.248626	ppm	2.963270	0.51	2150186.312650	Y_R 488.368
Ni (231.604 nm)	0.613424	ppm	0.000268	0.04	4181.320000	Y 377.433
P (213.618 nm)	0.157975	ppm	0.001150	0.73	367.837000	Y 242.219
Pb (220.353 nm)	-0.003313 u	ppm	0.000574	17.33	-4.519600	Y 242.219
S (181.972 nm)	69.656991 o	ppm	0.041769	0.06	35689.248866	Y 377.433
Sb (206.834 nm)	-0.000084 u	ppm	0.000003	3.85	185.350000	Y 377.433
Se (196.026 nm)	-0.001046 u	ppm	0.000977	93.40	7.766070	Y 242.219
Si (288.158 nm)	25.379800 o	ppm	0.171647	0.68	219061.000000	Y 377.433
Sn (189.925 nm)	0.000741	ppm	0.000499	67.37	11.070900	Y 377.433
Sr (421.552 nm)	0.433238	ppm	0.001431	0.33	91056.672562	Y_R 488.368
Th (288.505 nm)	0.008491	ppm	0.004381	51.60	113.406000	Y 377.433
Ti (336.122 nm)	0.006421	ppm	0.000028	0.44	792.142000	Y 377.433
Tl (190.794 nm)	0.002355	ppm	0.000472	20.03	-0.889021	Y 377.433
U (409.013 nm)	-0.018802 u	ppm	0.003915	20.82	-278.681000	Y 377.433
V (292.401 nm)	0.453478	ppm	0.000878	0.19	14795.900000	Y 377.433
Zn (206.200 nm)	0.002766	ppm	0.000426	15.39	42.186500	Y 377.433
Zr (343.823 nm)	-0.000259 u	ppm	0.000053	20.45	56.667200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053674	20104.317425	0.001024	0.10
Y 377.433	1.037899	1050549.004973	0.000111	0.01
Y_R 377.433	1.130060	85311.300000	0.003006	0.27
Y_R 488.368	1.105990	48420.700000	0.003909	0.35
Y_R2 488.368	1.116806	96918.155912	0.001999	0.18

Sample Name: CCVH-5408055

Date: 11/6/2018 11:51:05 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000556 u	ppm	0.000434	78.00	-717.167000	Y 377.433
Al (167.019 nm)	45.062000 o	ppm	0.351672	0.78	25159.000000	Y_R 377.433
Al H (396.152 nm)	48.819910	ppm	0.123510	0.25	122868.221608	Y_R 377.433
As (188.980 nm)	-0.000928 u	ppm	0.003942	> 100.00	-3.343870	Y 242.219
B (249.678 nm)	0.000575	ppm	0.000434	75.49	-2.813100	Y 242.219
Ba (493.408 nm)	-0.000316 u	ppm	0.000235	74.40	608.878000	Y_R 488.368
Be (234.861 nm)	-0.000154 u	ppm	0.000053	34.29	1451.230000	Y_R 488.368
Bi (223.061 nm)	0.996741	ppm	0.000611	0.06	2530.760000	Y 377.433
Ca (315.887 nm)	-0.001265 u	ppm	0.001731	> 100.00	-62.591782	Y_R 377.433
Cd (214.439 nm)	-0.000259 u	ppm	0.000004	1.39	32.869800	Y 377.433
Co (228.615 nm)	0.002807	ppm	0.000258	9.19	14.406600	Y 242.219
Cr (205.560 nm)	0.000300	ppm	0.000125	41.66	-12.990200	Y 377.433
Cu (324.754 nm)	-0.002880 u	ppm	0.000360	12.49	-120.741000	Y 377.433
Fe (238.204 nm)	48.710986 o	ppm	0.195995	0.40	180184.126104	Y_R 377.433
Fe H (259.940 nm)	49.701300	ppm	0.175636	0.35	94028.100000	Y_R 377.433
K (766.491 nm)	0.185903	ppm	0.044062	23.70	-542.527000	Y_R2 488.368
Li (670.783 nm)	0.007908	ppm	0.000785	9.93	-1089.980000	Y_R2 488.368
Mg (279.078 nm)	-0.017913 u	ppm	0.001817	10.14	-421.836000	Y 377.433
Mn (257.610 nm)	0.001395	ppm	0.000002	0.17	387.965000	Y 377.433
Mo (202.032 nm)	-0.000054 u	ppm	0.000004	7.27	-0.496788	Y 377.433
Na (589.592 nm)	245.110000 o	ppm	1.114190	0.45	1614180.000000	Y_R2 488.368
Na H (589.593 nm)	256.158229	ppm	2.112026	0.82	940853.517839	Y_R 488.368
Ni (231.604 nm)	0.004810	ppm	0.000137	2.84	30.741500	Y 377.433
P (213.618 nm)	-0.006850 u	ppm	0.000654	9.55	9.671250	Y 242.219
Pb (220.353 nm)	-0.003899 u	ppm	0.000677	17.37	9.612010	Y 242.219
S (181.972 nm)	5.051047	ppm	0.009915	0.20	2601.063357	Y 377.433
Sb (206.834 nm)	-0.001177 u	ppm	0.001500	> 100.00	-72.307500	Y 377.433
Se (196.026 nm)	0.000970 u	ppm	0.003101	> 100.00	5.057270	Y 242.219
Si (288.158 nm)	0.065075	ppm	0.003933	6.04	1488.950000	Y 377.433
Sn (189.925 nm)	-0.000663 u	ppm	0.000394	59.41	8.279220	Y 377.433
Sr (421.552 nm)	0.000216	ppm	0.000010	4.50	201.304925	Y_R 488.368
Th (288.505 nm)	4.975630	ppm	0.004964	0.10	13007.500000	Y 377.433
Ti (336.122 nm)	0.001022	ppm	0.000049	4.80	-82.455400	Y 377.433
Tl (190.794 nm)	-0.003252 u	ppm	0.002461	75.68	-13.792700	Y 377.433
U (409.013 nm)	9.978720	ppm	0.000712	0.01	44977.500000	Y 377.433
V (292.401 nm)	0.004189	ppm	0.000072	1.72	19.683300	Y 377.433
Zn (206.200 nm)	-0.004669 u	ppm	0.000431	9.23	3.352440	Y 377.433
Zr (343.823 nm)	-0.004419 u	ppm	0.000171	3.88	-410.687000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.096636	20924.056306	0.000225	0.02
Y 377.433	1.075161	1088264.312967	0.000775	0.07
Y_R 377.433	1.150320	86841.100000	0.005628	0.49
Y_R 488.368	1.125070	49256.000000	0.010985	0.98
Y_R2 488.368	1.107247	96088.659948	0.001985	0.18

Sample Name: CCV-5407546

Date: 11/6/2018 11:54:27 PM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.494879	ppm	0.001189	0.24	22231.600000	Y 377.433
Al (167.019 nm)	0.516335	ppm	0.001166	0.23	291.911000	Y_R 377.433
Al H (396.152 nm)	0.488225 u	ppm	0.003377	0.69	1350.074807	Y_R 377.433
As (188.980 nm)	0.985637	ppm	0.000953	0.10	1239.460000	Y 242.219
B (249.678 nm)	0.491326	ppm	0.000538	0.11	12348.800000	Y 242.219
Ba (493.408 nm)	0.490723	ppm	0.000419	0.09	57446.200000	Y_R 488.368
Be (234.861 nm)	0.480756	ppm	0.001752	0.36	143269.000000	Y_R 488.368
Bi (223.061 nm)	-0.004423 u	ppm	0.000166	3.75	2.016580	Y 377.433
Ca (315.887 nm)	5.098845	ppm	0.014790	0.29	3981.641952	Y_R 377.433
Cd (214.439 nm)	0.499814	ppm	0.000502	0.10	29875.800000	Y 377.433
Co (228.615 nm)	0.494165	ppm	0.001196	0.24	8931.710000	Y 242.219
Cr (205.560 nm)	0.498347	ppm	0.003439	0.69	7576.290000	Y 377.433
Cu (324.754 nm)	0.503453	ppm	0.000971	0.19	27763.600000	Y 377.433
Fe (238.204 nm)	2.463058	ppm	0.001720	0.07	9134.543866	Y_R 377.433
Fe H (259.940 nm)	2.536760 u	ppm	0.002623	0.10	4802.280000	Y_R 377.433
K (766.491 nm)	49.805800	ppm	0.300677	0.60	56593.700000	Y_R2 488.368
Li (670.783 nm)	0.988299	ppm	0.006721	0.68	31606.800000	Y_R2 488.368
Mg (279.078 nm)	19.913000	ppm	0.013492	0.07	115063.000000	Y 377.433
Mn (257.610 nm)	0.500847	ppm	0.000459	0.09	117192.000000	Y 377.433
Mo (202.032 nm)	0.505226	ppm	0.000285	0.06	4350.950000	Y 377.433
Na (589.592 nm)	5.102670	ppm	0.006286	0.12	34887.200000	Y_R2 488.368
Na H (589.593 nm)	6.142749 u	ppm	0.004346	0.07	25361.091322	Y_R 488.368
Ni (231.604 nm)	0.513426	ppm	0.000804	0.16	3499.600000	Y 377.433
P (213.618 nm)	0.946866	ppm	0.004478	0.47	2082.090000	Y 242.219
Pb (220.353 nm)	0.991823	ppm	0.000857	0.09	2846.150000	Y 242.219
S (181.972 nm)	0.039311	ppm	0.000851	2.16	35.539956	Y 377.433
Sb (206.834 nm)	1.007910	ppm	0.000481	0.05	2744.780000	Y 377.433
Se (196.026 nm)	0.982833	ppm	0.003386	0.34	991.164000	Y 242.219
Si (288.158 nm)	4.978420	ppm	0.001431	0.03	43717.600000	Y 377.433
Sn (189.925 nm)	1.024720	ppm	0.007106	0.69	2046.520000	Y 377.433
Sr (421.552 nm)	0.499389	ppm	0.000188	0.04	104936.249437	Y_R 488.368
Th (288.505 nm)	0.005032	ppm	0.000171	3.40	102.343000	Y 377.433
Ti (336.122 nm)	0.496778	ppm	0.000049	0.01	70535.500000	Y 377.433
Tl (190.794 nm)	1.008030	ppm	0.002006	0.20	2208.340000	Y 377.433
U (409.013 nm)	0.000959	ppm	0.001101	> 100.00	-241.055000	Y 377.433
V (292.401 nm)	0.494387	ppm	0.000573	0.12	17854.200000	Y 377.433
Zn (206.200 nm)	0.497504	ppm	0.001553	0.31	2626.040000	Y 377.433
Zr (343.823 nm)	0.499746	ppm	0.000405	0.08	65742.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122489	21417.327836	0.000097	0.01
Y 377.433	1.108065	1121569.572889	0.001131	0.10
Y_R 377.433	1.173670	88604.100000	0.005095	0.43
Y_R 488.368	1.146960	50214.500000	0.004910	0.43
Y_R2 488.368	1.138416	98793.478339	0.002988	0.26

Sample Name: CCB

Date: 11/6/2018 11:57:49 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001015	ppm	0.000108	10.68	-398.323000	Y 377.433
Al (167.019 nm)	-0.004479 u	ppm	0.000199	4.44	-0.144417	Y_R 377.433
Al H (396.152 nm)	-0.029696 u	ppm	0.003140	10.58	4.357319	Y_R 377.433
As (188.980 nm)	0.000176 u	ppm	0.000282	> 100.00	-1.515940	Y 242.219
B (249.678 nm)	0.001305	ppm	0.000153	11.74	89.747800	Y 242.219
Ba (493.408 nm)	-0.000612 u	ppm	0.000266	43.46	528.573000	Y_R 488.368
Be (234.861 nm)	0.000066	ppm	0.000008	11.75	-26.884700	Y_R 488.368
Bi (223.061 nm)	0.001190	ppm	0.000111	9.36	15.738600	Y 377.433
Ca (315.887 nm)	0.006354	ppm	0.003713	58.43	-56.551166	Y_R 377.433
Cd (214.439 nm)	0.000121	ppm	0.000021	16.93	8.133810	Y 377.433
Co (228.615 nm)	0.000321	ppm	0.000015	4.74	-30.635300	Y 242.219
Cr (205.560 nm)	0.000411	ppm	0.000122	29.75	2.304500	Y 377.433
Cu (324.754 nm)	0.001581	ppm	0.000037	2.31	-202.858000	Y 377.433
Fe (238.204 nm)	-0.002343 u	ppm	0.001038	44.31	16.170255	Y_R 377.433
Fe H (259.940 nm)	0.002930 u	ppm	0.000792	27.05	8.775730	Y_R 377.433
K (766.491 nm)	0.122839	ppm	0.004179	3.40	-615.143000	Y_R2 488.368
Li (670.783 nm)	0.007830	ppm	0.001413	18.05	-1092.580000	Y_R2 488.368
Mg (279.078 nm)	0.002736	ppm	0.000075	2.75	55.181800	Y 377.433
Mn (257.610 nm)	0.000039	ppm	0.000001	1.64	70.940600	Y 377.433
Mo (202.032 nm)	0.000051 u	ppm	0.000119	> 100.00	0.411534	Y 377.433
Na (589.592 nm)	0.087829	ppm	0.010540	12.00	875.446000	Y_R2 488.368
Na H (589.593 nm)	0.501284 u	ppm	0.000221	0.04	4230.687614	Y_R 488.368
Ni (231.604 nm)	0.000035 u	ppm	0.000308	> 100.00	-3.864550	Y 377.433
P (213.618 nm)	-0.004432 u	ppm	0.001238	27.93	14.925600	Y 242.219
Pb (220.353 nm)	0.000331	ppm	0.000367	> 100.00	4.378860	Y 242.219
S (181.972 nm)	0.029148	ppm	0.000546	1.87	29.100063	Y 377.433
Sb (206.834 nm)	-0.000144 u	ppm	0.000706	> 100.00	-23.619700	Y 377.433
Se (196.026 nm)	-0.003010 u	ppm	0.000541	17.97	9.995590	Y 242.219
Si (288.158 nm)	0.011207	ppm	0.002543	22.69	1025.970000	Y 377.433
Sn (189.925 nm)	-0.000640 u	ppm	0.000688	> 100.00	8.324680	Y 377.433
Sr (421.552 nm)	0.000024	ppm	0.000030	> 100.00	161.036725	Y_R 488.368
Th (288.505 nm)	0.005299	ppm	0.000105	1.98	86.548200	Y 377.433
Ti (336.122 nm)	0.000020 u	ppm	0.000030	> 100.00	-225.323000	Y 377.433
Tl (190.794 nm)	0.000107 u	ppm	0.000545	> 100.00	-5.108100	Y 377.433
U (409.013 nm)	0.002485	ppm	0.002879	> 100.00	-196.349000	Y 377.433
V (292.401 nm)	-0.000280 u	ppm	0.000166	59.50	25.225300	Y 377.433
Zn (206.200 nm)	-0.005491 u	ppm	0.000150	2.74	-0.937057	Y 377.433
Zr (343.823 nm)	-0.000131 u	ppm	0.000066	50.53	9.451910	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113327	21242.518961	0.005409	0.49
Y 377.433	1.100311	1113721.303929	0.004367	0.40
Y_R 377.433	1.151180	86905.700000	0.000972	0.08
Y_R 488.368	1.129530	49451.400000	0.013839	1.23
Y_R2 488.368	1.107135	96078.871111	0.001412	0.13

Sample Name: CCVL-5413446

Date: 11/7/2018 12:01:12 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010663	ppm	0.000017	0.16	44.083000	Y 377.433
Al (167.019 nm)	0.098568	ppm	0.002693	2.73	57.376900	Y_R 377.433
Al H (396.152 nm)	0.075351 u	ppm	0.001228	1.63	270.225776	Y_R 377.433
As (188.980 nm)	0.015009	ppm	0.001156	7.70	17.162700	Y 242.219
B (249.678 nm)	0.101972	ppm	0.000294	0.29	2604.680000	Y 242.219
Ba (493.408 nm)	0.009474	ppm	0.000193	2.04	1696.830000	Y_R 488.368
Be (234.861 nm)	0.000982	ppm	0.000004	0.41	248.492000	Y_R 488.368
Bi (223.061 nm)	0.101310	ppm	0.000698	0.69	267.869000	Y 377.433
Ca (315.887 nm)	0.220425	ppm	0.004329	1.96	113.191754	Y_R 377.433
Cd (214.439 nm)	0.005320	ppm	0.000050	0.94	318.938000	Y 377.433
Co (228.615 nm)	0.010439	ppm	0.000025	0.24	152.968000	Y 242.219
Cr (205.560 nm)	0.010595	ppm	0.000063	0.59	157.248000	Y 377.433
Cu (324.754 nm)	0.017327	ppm	0.000446	2.57	672.440000	Y 377.433
Fe (238.204 nm)	0.098856	ppm	0.000491	0.50	390.461711	Y_R 377.433
Fe H (259.940 nm)	0.104143 u	ppm	0.000831	0.80	200.251000	Y_R 377.433
K (766.491 nm)	3.279140	ppm	0.107761	3.29	3019.270000	Y_R2 488.368
Li (670.783 nm)	0.029016 Q	ppm	0.000098	0.34	-386.004000 Q	Y_R2 488.368
Mg (279.078 nm)	0.204881	ppm	0.000469	0.23	1221.820000	Y 377.433
Mn (257.610 nm)	0.010495	ppm	0.000032	0.31	2516.190000	Y 377.433
Mo (202.032 nm)	0.019460	ppm	0.000103	0.53	167.561000	Y 377.433
Na (589.592 nm)	1.164870	ppm	0.006392	0.55	7986.820000	Y_R2 488.368
Na H (589.593 nm)	1.569311 u	ppm	0.021598	1.38	8152.728018	Y_R 488.368
Ni (231.604 nm)	0.043295	ppm	0.000825	1.91	291.260000	Y 377.433
P (213.618 nm)	2.870980 o	ppm	0.017784	0.62	6263.190000	Y 242.219
Pb (220.353 nm)	0.010080	ppm	0.000591	5.87	32.323800	Y 242.219
S (181.972 nm)	0.122797	ppm	0.012205	9.94	77.088071	Y 377.433
Sb (206.834 nm)	0.019859	ppm	0.000499	2.51	31.212400	Y 377.433
Se (196.026 nm)	0.018343	ppm	0.002534	13.81	31.237700	Y 242.219
Si (288.158 nm)	0.514379	ppm	0.000385	0.07	5350.570000	Y 377.433
Sn (189.925 nm)	0.103789	ppm	0.000607	0.58	215.907000	Y 377.433
Sr (421.552 nm)	0.010208	ppm	0.000087	0.85	2297.847044	Y_R 488.368
Th (288.505 nm)	0.018090	ppm	0.002326	12.86	120.496000	Y 377.433
Ti (336.122 nm)	0.009944	ppm	0.000010	0.10	1188.590000	Y 377.433
Tl (190.794 nm)	0.016561	ppm	0.000194	1.17	30.992000	Y 377.433
U (409.013 nm)	0.062618	ppm	0.000707	1.13	74.543400	Y 377.433
V (292.401 nm)	0.010076	ppm	0.000119	1.18	396.412000	Y 377.433
Zn (206.200 nm)	0.016614	ppm	0.000236	1.42	114.507000	Y 377.433
Zr (343.823 nm)	0.015282	ppm	0.000070	0.46	2036.270000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.108387	21148.253966	0.004203	0.38
Y 377.433	1.094462	1107801.100461	0.003112	0.28
Y_R 377.433	1.149630	86788.900000	0.012605	1.10
Y_R 488.368	1.126880	49335.300000	0.008700	0.77
Y_R2 488.368	1.106677	96039.179565	0.001347	0.12

Sample Name: MB 280-436164/1-B

Date: 11/7/2018 12:04:35 AM Rack:Tube: 2:41

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001086	ppm	0.000483	44.47	-395.111000	Y 377.433
Al (167.019 nm)	-0.000397 u	ppm	0.003045	> 100.00	2.138480	Y_R 377.433
Al H (396.152 nm)	-0.024872 u	ppm	0.002728	10.97	16.475064	Y_R 377.433
As (188.980 nm)	0.000146	ppm	0.000137	93.67	-1.552840	Y 242.219
B (249.678 nm)	0.000713	ppm	0.000246	34.45	74.946400	Y 242.219
Ba (493.408 nm)	-0.000655 u	ppm	0.000155	23.70	523.649000	Y_R 488.368
Be (234.861 nm)	0.000037	ppm	0.000008	21.60	-34.936100	Y_R 488.368
Bi (223.061 nm)	0.000211 u	ppm	0.001142	> 100.00	13.275700	Y 377.433
Ca (315.887 nm)	0.007885	ppm	0.009799	> 100.00	-55.337564	Y_R 377.433
Cd (214.439 nm)	0.000027 u	ppm	0.000070	> 100.00	2.512490	Y 377.433
Co (228.615 nm)	0.000374	ppm	0.000275	73.38	-29.672000	Y 242.219
Cr (205.560 nm)	0.000362	ppm	0.000017	4.63	1.551260	Y 377.433
Cu (324.754 nm)	0.001499	ppm	0.000030	1.99	-208.946000	Y 377.433
Fe (238.204 nm)	0.008335	ppm	0.000059	0.71	55.663857	Y_R 377.433
Fe H (259.940 nm)	0.012823 u	ppm	0.001943	15.15	27.491900	Y_R 377.433
K (766.491 nm)	0.172517	ppm	0.069264	40.15	-557.941000	Y_R2 488.368
Li (670.783 nm)	0.009191	ppm	0.001950	21.21	-1047.180000	Y_R2 488.368
Mg (279.078 nm)	0.000766	ppm	0.000570	74.42	43.754700	Y 377.433
Mn (257.610 nm)	0.000205	ppm	0.000046	22.37	109.757000	Y 377.433
Mo (202.032 nm)	-0.000026 u	ppm	0.000095	> 100.00	-0.248622	Y 377.433
Na (589.592 nm)	0.099094	ppm	0.013253	13.37	948.576000	Y_R2 488.368
Na H (589.593 nm)	0.266393 u	ppm	0.028550	10.72	3369.656376	Y_R 488.368
Ni (231.604 nm)	0.000892	ppm	0.000360	40.33	1.982800	Y 377.433
P (213.618 nm)	-0.003987 u	ppm	0.003059	76.73	15.893700	Y 242.219
Pb (220.353 nm)	0.001172	ppm	0.000830	70.80	6.799220	Y 242.219
S (181.972 nm)	0.013589	ppm	0.006498	47.82	21.132072	Y 377.433
Sb (206.834 nm)	0.000150 u	ppm	0.000729	> 100.00	-22.822500	Y 377.433
Se (196.026 nm)	-0.001769 u	ppm	0.003676	> 100.00	11.228700	Y 242.219
Si (288.158 nm)	0.007551	ppm	0.001953	25.87	994.549000	Y 377.433
Sn (189.925 nm)	-0.001492 u	ppm	0.001627	> 100.00	6.632890	Y 377.433
Sr (421.552 nm)	-0.000021 u	ppm	0.000139	> 100.00	151.651783	Y_R 488.368
Th (288.505 nm)	0.004880	ppm	0.002202	45.12	85.495500	Y 377.433
Ti (336.122 nm)	-0.000094 u	ppm	0.000110	> 100.00	-241.526000	Y 377.433
Tl (190.794 nm)	-0.000308 u	ppm	0.001631	> 100.00	-6.019390	Y 377.433
U (409.013 nm)	0.004989	ppm	0.002053	41.15	-185.006000	Y 377.433
V (292.401 nm)	-0.000298 u	ppm	0.000107	35.96	23.926100	Y 377.433
Zn (206.200 nm)	-0.004503 u	ppm	0.000326	7.23	4.222790	Y 377.433
Zr (343.823 nm)	-0.000263 u	ppm	0.000037	14.11	-7.937820	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.129316	21547.592889	0.003009	0.27
Y 377.433	1.115226	1128818.456219	0.000860	0.08
Y_R 377.433	1.177570	88898.300000	0.011261	0.96
Y_R 488.368	1.142250	50008.200000	0.012934	1.13
Y_R2 488.368	1.136919	98663.573058	0.003259	0.29

Sample Name: LCS 280-436164/2-B

Date: 11/7/2018 12:07:57 AM
Rack:Tube: 2:42

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053600	ppm	0.000130	0.24	1982.420000	Y 377.433
Al (167.019 nm)	2.037820	ppm	0.012264	0.60	1139.210000	Y_R 377.433
Al H (396.152 nm)	2.028850	ppm	0.000026	0.00	5289.101745	Y_R 377.433
As (188.980 nm)	1.013340	ppm	0.000539	0.05	1274.370000	Y 242.219
B (249.678 nm)	1.021430	ppm	0.000461	0.05	25593.100000	Y 242.219
Ba (493.408 nm)	2.035670 o	ppm	0.007228	0.36	236374.000000	Y_R 488.368
Be (234.861 nm)	0.050709	ppm	0.000018	0.04	15037.200000	Y_R 488.368
Bi (223.061 nm)	2.018960	ppm	0.006080	0.30	5096.860000	Y 377.433
Ca (315.887 nm)	52.121906 o	ppm	0.134835	0.26	41266.658823	Y_R 377.433
Cd (214.439 nm)	0.102080	ppm	0.000353	0.35	6103.300000	Y 377.433
Co (228.615 nm)	0.494668	ppm	0.001043	0.21	8959.560000	Y 242.219
Cr (205.560 nm)	0.207028	ppm	0.000970	0.47	3144.810000	Y 377.433
Cu (324.754 nm)	0.255665	ppm	0.000303	0.12	13981.200000	Y 377.433
Fe (238.204 nm)	1.040511	ppm	0.002480	0.24	3873.202727	Y_R 377.433
Fe H (259.940 nm)	1.061050 u	ppm	0.005870	0.55	2010.530000	Y_R 377.433
K (766.491 nm)	52.694700	ppm	0.073119	0.14	59920.100000	Y_R2 488.368
Li (670.783 nm)	1.025050	ppm	0.002330	0.23	32832.500000	Y_R2 488.368
Mg (279.078 nm)	51.574600 o	ppm	0.115575	0.22	297904.000000	Y 377.433
Mn (257.610 nm)	0.513913	ppm	0.001396	0.27	120248.000000	Y 377.433
Mo (202.032 nm)	1.045170	ppm	0.003307	0.32	9000.950000	Y 377.433
Na (589.592 nm)	51.426300 o	ppm	0.091576	0.18	343017.000000	Y_R2 488.368
Na H (589.593 nm)	54.266451	ppm	0.131597	0.24	203120.311421	Y_R 488.368
Ni (231.604 nm)	0.508410	ppm	0.001363	0.27	3466.640000	Y 377.433
P (213.618 nm)	10.497500 o	ppm	0.006566	0.06	22835.500000	Y 242.219
Pb (220.353 nm)	0.511552	ppm	0.002300	0.45	1471.350000	Y 242.219
S (181.972 nm)	2.001953	ppm	0.012837	0.64	1040.735934	Y 377.433
Sb (206.834 nm)	0.507617	ppm	0.000839	0.17	1358.990000	Y 377.433
Se (196.026 nm)	2.072110	ppm	0.004964	0.24	2075.660000	Y 242.219
Si (288.158 nm)	7.931430	ppm	0.008165	0.10	69097.800000	Y 377.433
Sn (189.925 nm)	2.097030	ppm	0.017275	0.82	4178.050000	Y 377.433
Sr (421.552 nm)	1.035071	ppm	0.002248	0.22	217331.211401	Y_R 488.368
Th (288.505 nm)	1.039690	ppm	0.001580	0.15	2804.160000	Y 377.433
Ti (336.122 nm)	1.018790	ppm	0.002241	0.22	145025.000000	Y 377.433
Tl (190.794 nm)	2.089730	ppm	0.014417	0.69	4581.810000	Y 377.433
U (409.013 nm)	2.106000	ppm	0.002166	0.10	9270.420000	Y 377.433
V (292.401 nm)	0.522056	ppm	0.001763	0.34	18895.000000	Y 377.433
Zn (206.200 nm)	0.509619	ppm	0.001571	0.31	2689.310000	Y 377.433
Zr (343.823 nm)	0.506605	ppm	0.001351	0.27	66640.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090189	20801.047095	0.003958	0.36
Y 377.433	1.077454	1090585.304819	0.006271	0.58
Y_R 377.433	1.141700	86190.000000	0.004899	0.43
Y_R 488.368	1.116190	48867.600000	0.004958	0.44
Y_R2 488.368	1.094801	95008.572631	0.002910	0.27

Sample Name: 280-116192-R-2-B

Date: 11/7/2018 12:11:19 AM
Rack:Tube: 2:43

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002280	ppm	0.000101	4.44	-356.163000	Y 377.433
Al (167.019 nm)	0.082837	ppm	0.001718	2.07	54.507500	Y_R 377.433
Al H (396.152 nm)	0.130231 u	ppm	0.003345	2.57	540.800536	Y_R 377.433
As (188.980 nm)	0.282060	ppm	0.003295	1.17	353.385000	Y 242.219
B (249.678 nm)	11.249400 o	ppm	0.016882	0.15	281058.000000	Y 242.219
Ba (493.408 nm)	1.944590 o	ppm	0.017270	0.89	225895.000000	Y_R 488.368
Be (234.861 nm)	-0.000037 u	ppm	0.000050	> 100.00	218.020000	Y_R 488.368
Bi (223.061 nm)	-0.002941 u	ppm	0.001366	46.46	6.798050	Y 377.433
Ca (315.887 nm)	305.762880 o	ppm	1.619010	0.53	242382.082682	Y_R 377.433
Cd (214.439 nm)	0.000085	ppm	0.000037	43.84	14.504200	Y 377.433
Co (228.615 nm)	0.035129	ppm	0.000237	0.67	610.371000	Y 242.219
Cr (205.560 nm)	0.115383	ppm	0.000198	0.17	1749.980000	Y 377.433
Cu (324.754 nm)	-0.000399 u	ppm	0.000088	22.08	-493.852000	Y 377.433
Fe (238.204 nm)	8.732708 o	ppm	0.045084	0.52	32323.064506	Y_R 377.433
Fe H (259.940 nm)	9.021320	ppm	0.040063	0.44	17069.800000	Y_R 377.433
K (766.491 nm)	478.824000 o	ppm	0.328501	0.07	550598.000000	Y_R2 488.368
Li (670.783 nm)	0.069102	ppm	0.000273	0.39	950.913000	Y_R2 488.368
Mg (279.078 nm)	174.292000 o	ppm	0.069796	0.04	1006830.000000	Y 377.433
Mn (257.610 nm)	2.080910 o	ppm	0.003901	0.19	486714.000000	Y 377.433
Mo (202.032 nm)	0.016487	ppm	0.000263	1.59	141.956000	Y 377.433
Na (589.592 nm)	1523.050000 o	ppm	2.987900	0.20	10032500.000000	Y_R2 488.368
Na H (589.593 nm)	1532.950297	ppm	2.031755	0.13	5620339.264540	Y_R 488.368
Ni (231.604 nm)	0.092390	ppm	0.000408	0.44	626.511000	Y 377.433
P (213.618 nm)	4.022300 o	ppm	0.026492	0.66	8765.000000	Y 242.219
Pb (220.353 nm)	0.002076 u	ppm	0.003283	> 100.00	10.011300	Y 242.219
S (181.972 nm)	40.396451 o	ppm	0.045258	0.11	20708.279557	Y 377.433
Sb (206.834 nm)	0.009124	ppm	0.000921	10.09	3.075510	Y 377.433
Se (196.026 nm)	0.007602	ppm	0.006690	88.00	20.624100	Y 242.219
Si (288.158 nm)	2.664360	ppm	0.002387	0.09	23829.000000	Y 377.433
Sn (189.925 nm)	0.032556	ppm	0.000228	0.70	74.312300	Y 377.433
Sr (421.552 nm)	3.773826 o	ppm	0.024244	0.64	791967.931971	Y_R 488.368
Th (288.505 nm)	0.022443	ppm	0.003254	14.50	176.961000	Y 377.433
Ti (336.122 nm)	0.298473	ppm	0.000293	0.10	43235.300000	Y 377.433
Tl (190.794 nm)	0.002690	ppm	0.001822	67.74	-0.886844	Y 377.433
U (409.013 nm)	-0.032500 u	ppm	0.001389	4.27	-406.206000	Y 377.433
V (292.401 nm)	0.123668	ppm	0.000116	0.09	4503.140000	Y 377.433
Zn (206.200 nm)	-0.000131 u	ppm	0.000569	> 100.00	27.057400	Y 377.433
Zr (343.823 nm)	0.022841	ppm	0.000039	0.17	3055.660000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949266	18112.192207	0.001517	0.16
Y 377.433	0.956718	968377.836716	0.001529	0.16
Y_R 377.433	1.121140	84638.200000	0.000925	0.08
Y_R 488.368	1.090250	47731.800000	0.004563	0.42
Y_R2 488.368	1.070453	92895.611359	0.011904	1.11

Sample Name: 280-116192-R-3-B

Date: 11/7/2018 12:14:42 AM
Rack:Tube: 2:44

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002252	ppm	0.000080	3.55	-356.282000	Y 377.433
Al (167.019 nm)	0.025728	ppm	0.000998	3.88	22.736400	Y_R 377.433
Al H (396.152 nm)	0.060118 u	ppm	0.006782	11.28	372.966041	Y_R 377.433
As (188.980 nm)	0.172754	ppm	0.000571	0.33	215.734000	Y 242.219
B (249.678 nm)	13.029800 o	ppm	0.008248	0.06	325533.000000	Y 242.219
Ba (493.408 nm)	2.520730 o	ppm	0.010991	0.44	292626.000000	Y_R 488.368
Be (234.861 nm)	-0.000040 u	ppm	0.000007	16.25	219.787000	Y_R 488.368
Bi (223.061 nm)	-0.002118 u	ppm	0.001612	76.12	8.885330	Y 377.433
Ca (315.887 nm)	324.116930 o	ppm	1.849956	0.57	256935.266508	Y_R 377.433
Cd (214.439 nm)	0.000080	ppm	0.000025	31.04	14.312600	Y 377.433
Co (228.615 nm)	0.044484	ppm	0.000301	0.68	775.660000	Y 242.219
Cr (205.560 nm)	0.064950	ppm	0.000121	0.19	982.230000	Y 377.433
Cu (324.754 nm)	-0.000361 u	ppm	0.000254	70.33	-499.998000	Y 377.433
Fe (238.204 nm)	8.839876 o	ppm	0.072303	0.82	32719.429172	Y_R 377.433
Fe H (259.940 nm)	9.099020	ppm	0.088345	0.97	17216.700000	Y_R 377.433
K (766.491 nm)	364.611000 o	ppm	0.316001	0.09	419084.000000	Y_R2 488.368
Li (670.783 nm)	0.062180	ppm	0.001751	2.82	720.042000	Y_R2 488.368
Mg (279.078 nm)	195.660000 o	ppm	0.242835	0.12	1130260.000000	Y 377.433
Mn (257.610 nm)	1.315180 o	ppm	0.000712	0.05	307636.000000	Y 377.433
Mo (202.032 nm)	0.022677	ppm	0.000405	1.79	195.266000	Y 377.433
Na (589.592 nm)	1446.280000 o	ppm	3.750970	0.26	9528160.000000	Y_R2 488.368
Na H (589.593 nm)	1485.197285	ppm	2.404943	0.16	5445931.862897	Y_R 488.368
Ni (231.604 nm)	0.131505	ppm	0.000342	0.26	893.341000	Y 377.433
P (213.618 nm)	3.104240 o	ppm	0.000749	0.02	6770.060000	Y 242.219
Pb (220.353 nm)	-0.000032 u	ppm	0.000654	> 100.00	3.980330	Y 242.219
S (181.972 nm)	38.623064 o	ppm	0.012681	0.03	19798.159011	Y 377.433
Sb (206.834 nm)	0.001940	ppm	0.002141	> 100.00	-18.191300	Y 377.433
Se (196.026 nm)	0.001508	ppm	0.000523	34.68	13.875300	Y 242.219
Si (288.158 nm)	3.332810	ppm	0.046904	1.41	29574.100000	Y 377.433
Sn (189.925 nm)	0.015933	ppm	0.000812	5.09	41.268500	Y 377.433
Sr (421.552 nm)	5.929836 o	ppm	0.049885	0.84	1244334.961696	Y_R 488.368
Th (288.505 nm)	0.017990	ppm	0.004431	24.63	149.160000	Y 377.433
Ti (336.122 nm)	0.182732	ppm	0.000067	0.04	26809.700000	Y 377.433
Tl (190.794 nm)	0.000367	ppm	0.000092	25.03	-5.456870	Y 377.433
U (409.013 nm)	-0.034848 u	ppm	0.007592	21.79	-419.231000	Y 377.433
V (292.401 nm)	0.099279	ppm	0.000285	0.29	3627.780000	Y 377.433
Zn (206.200 nm)	0.001081	ppm	0.001014	93.86	33.383500	Y 377.433
Zr (343.823 nm)	0.009994	ppm	0.000025	0.25	1366.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.948341	18094.539791	0.002550	0.27
Y 377.433	0.955943	967594.091224	0.002508	0.26
Y_R 377.433	1.094520	82628.200000	0.000736	0.07
Y_R 488.368	1.063560	46563.400000	0.006380	0.60
Y_R2 488.368	1.045068	90692.670332	0.008338	0.80

Sample Name: 280-116296-D-1-B

Date: 11/7/2018 12:18:04 AM Rack:Tube: 2:45

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001414	ppm	0.000160	11.34	-380.664000	Y 377.433
Al (167.019 nm)	-0.004037 u	ppm	0.000320	7.92	0.153241	Y_R 377.433
Al H (396.152 nm)	-0.001776 u	ppm	0.005384	> 100.00	117.950094	Y_R 377.433
As (188.980 nm)	0.002557	ppm	0.000426	16.68	1.482350	Y 242.219
B (249.678 nm)	0.280855	ppm	0.000231	0.08	7072.850000	Y 242.219
Ba (493.408 nm)	0.075798	ppm	0.000665	0.88	9401.220000	Y_R 488.368
Be (234.861 nm)	0.000024	ppm	0.000009	37.74	-37.114500	Y_R 488.368
Bi (223.061 nm)	-0.002563 u	ppm	0.000815	31.80	6.299320	Y 377.433
Ca (315.887 nm)	99.392858 o	ppm	0.155979	0.16	78748.400240	Y_R 377.433
Cd (214.439 nm)	0.000036 u	ppm	0.000063	> 100.00	3.121190	Y 377.433
Co (228.615 nm)	0.000056 u	ppm	0.000212	> 100.00	-35.437200	Y 242.219
Cr (205.560 nm)	0.000497	ppm	0.000160	32.15	3.575780	Y 377.433
Cu (324.754 nm)	0.001410	ppm	0.000053	3.78	-272.476000	Y 377.433
Fe (238.204 nm)	0.073274	ppm	0.002207	3.01	295.843363	Y_R 377.433
Fe H (259.940 nm)	0.072398 u	ppm	0.001073	1.48	140.196000	Y_R 377.433
K (766.491 nm)	3.429870	ppm	0.065533	1.91	3192.830000	Y_R2 488.368
Li (670.783 nm)	0.046260	ppm	0.000408	0.88	189.115000	Y_R2 488.368
Mg (279.078 nm)	18.084700	ppm	0.005804	0.03	104506.000000	Y 377.433
Mn (257.610 nm)	0.015863	ppm	0.000002	0.01	3771.660000	Y 377.433
Mo (202.032 nm)	0.001978	ppm	0.000032	1.61	17.008100	Y 377.433
Na (589.592 nm)	74.380200 o	ppm	0.068912	0.09	490195.000000	Y_R2 488.368
Na H (589.593 nm)	80.303318	ppm	0.562565	0.70	296665.160086	Y_R 488.368
Ni (231.604 nm)	-0.000107 u	ppm	0.000284	> 100.00	-4.825380	Y 377.433
P (213.618 nm)	-0.002057 u	ppm	0.000272	13.20	20.087800	Y 242.219
Pb (220.353 nm)	-0.001412 u	ppm	0.000123	8.70	-0.609464	Y 242.219
S (181.972 nm)	36.289599 o	ppm	0.045861	0.13	18599.883919	Y 377.433
Sb (206.834 nm)	-0.000638 u	ppm	0.000670	> 100.00	-25.027100	Y 377.433
Se (196.026 nm)	-0.001908 u	ppm	0.000434	22.75	11.090800	Y 242.219
Si (288.158 nm)	26.637600 o	ppm	0.013371	0.05	229871.000000	Y 377.433
Sn (189.925 nm)	-0.000907 u	ppm	0.000070	7.77	7.794570	Y 377.433
Sr (421.552 nm)	0.976261	ppm	0.006799	0.70	204992.001929	Y_R 488.368
Th (288.505 nm)	0.003582	ppm	0.000275	7.68	82.727000	Y 377.433
Ti (336.122 nm)	-0.000346 u	ppm	0.000001	0.31	33.709100	Y 377.433
Tl (190.794 nm)	0.000758 u	ppm	0.001190	> 100.00	-3.683460	Y 377.433
U (409.013 nm)	0.022671	ppm	0.001982	8.74	-123.828000	Y 377.433
V (292.401 nm)	0.001320	ppm	0.000209	15.83	83.224800	Y 377.433
Zn (206.200 nm)	-0.004138 u	ppm	0.000147	3.54	6.126850	Y 377.433
Zr (343.823 nm)	-0.000246 u	ppm	0.000011	4.58	-5.500520	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.101522	21017.270756	0.001508	0.14
Y 377.433	1.092726	1106043.632446	0.001641	0.15
Y_R 377.433	1.164840	87937.000000	0.007322	0.63
Y_R 488.368	1.134730	49679.300000	0.001665	0.15
Y_R2 488.368	1.133231	98343.589085	0.003178	0.28

Sample Name: 280-116296-D-2-B

Date: 11/7/2018 12:21:26 AM
Rack:Tube: 2:46

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001489	ppm	0.000170	11.43	-383.776000	Y 377.433
Al (167.019 nm)	-0.000303 u	ppm	0.001157	> 100.00	2.188990	Y_R 377.433
Al H (396.152 nm)	0.004362 u	ppm	0.002978	68.28	142.952690	Y_R 377.433
As (188.980 nm)	0.005168	ppm	0.000081	1.56	4.770590	Y 242.219
B (249.678 nm)	0.205889	ppm	0.000104	0.05	5200.270000	Y 242.219
Ba (493.408 nm)	0.105142	ppm	0.000451	0.43	12804.900000	Y_R 488.368
Be (234.861 nm)	0.000047	ppm	0.000020	42.89	-32.278000	Y_R 488.368
Bi (223.061 nm)	-0.002230 u	ppm	0.000265	11.88	7.128130	Y 377.433
Ca (315.887 nm)	121.682335 o	ppm	0.385032	0.32	96422.039035	Y_R 377.433
Cd (214.439 nm)	0.000091	ppm	0.000010	10.77	6.351800	Y 377.433
Co (228.615 nm)	-0.000190 u	ppm	0.000163	85.78	-39.890800	Y 242.219
Cr (205.560 nm)	0.000735	ppm	0.000232	31.59	7.224360	Y 377.433
Cu (324.754 nm)	0.001898	ppm	0.000077	4.07	-259.854000	Y 377.433
Fe (238.204 nm)	0.005071	ppm	0.001781	35.13	43.591972	Y_R 377.433
Fe H (259.940 nm)	0.008564 u	ppm	0.000499	5.82	19.434300	Y_R 377.433
K (766.491 nm)	3.515020	ppm	0.004007	0.11	3290.870000	Y_R2 488.368
Li (670.783 nm)	0.052319	ppm	0.000235	0.45	391.158000	Y_R2 488.368
Mg (279.078 nm)	24.436900	ppm	0.023726	0.10	141200.000000	Y 377.433
Mn (257.610 nm)	0.000880	ppm	0.000029	3.25	267.630000	Y 377.433
Mo (202.032 nm)	0.000256	ppm	0.000001	0.50	2.174200	Y 377.433
Na (589.592 nm)	59.583900 o	ppm	0.002587	0.00	392831.000000	Y_R2 488.368
Na H (589.593 nm)	63.994867	ppm	0.286385	0.45	236945.308048	Y_R 488.368
Ni (231.604 nm)	0.000019 u	ppm	0.000387	> 100.00	-3.966070	Y 377.433
P (213.618 nm)	0.006379	ppm	0.001744	27.33	38.418300	Y 242.219
Pb (220.353 nm)	-0.000689 u	ppm	0.000267	38.83	1.440780	Y 242.219
S (181.972 nm)	24.343545 o	ppm	0.000293	0.00	12481.690465	Y 377.433
Sb (206.834 nm)	-0.002318 u	ppm	0.000071	3.06	-29.560500	Y 377.433
Se (196.026 nm)	0.005315	ppm	0.000064	1.20	18.279800	Y 242.219
Si (288.158 nm)	33.316200 o	ppm	0.210565	0.63	287272.000000	Y 377.433
Sn (189.925 nm)	-0.001377 u	ppm	0.000021	1.50	6.860930	Y 377.433
Sr (421.552 nm)	1.154122 o	ppm	0.006946	0.60	242310.240586	Y_R 488.368
Th (288.505 nm)	0.000997 u	ppm	0.001789	> 100.00	77.208400	Y 377.433
Ti (336.122 nm)	-0.000373 u	ppm	0.000096	25.76	99.763700	Y 377.433
Tl (190.794 nm)	0.001064	ppm	0.001372	> 100.00	-3.006940	Y 377.433
U (409.013 nm)	0.006986	ppm	0.002194	31.41	-199.083000	Y 377.433
V (292.401 nm)	0.042102	ppm	0.000062	0.15	1563.060000	Y 377.433
Zn (206.200 nm)	-0.000748 u	ppm	0.000137	18.33	23.831700	Y 377.433
Zr (343.823 nm)	-0.000213 u	ppm	0.000052	24.30	-1.385870	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093427	20862.825122	0.001491	0.14
Y 377.433	1.084096	1097308.214503	0.000072	0.01
Y_R 377.433	1.148370	86693.800000	0.000891	0.08
Y_R 488.368	1.117860	48940.500000	0.007733	0.69
Y_R2 488.368	1.101525	95592.024299	0.007199	0.65

Sample Name: 280-116296-D-3-B

Date: 11/7/2018 12:24:47 AM Rack:Tube: 2:47

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001294	ppm	0.000264	20.40	-391.746000	Y 377.433
Al (167.019 nm)	0.002267	ppm	0.000567	25.01	3.620210	Y_R 377.433
Al H (396.152 nm)	-0.000938 u	ppm	0.006177	> 100.00	123.071581	Y_R 377.433
As (188.980 nm)	0.006684	ppm	0.000681	10.18	6.680730	Y 242.219
B (249.678 nm)	0.200230	ppm	0.000298	0.15	5058.920000	Y 242.219
Ba (493.408 nm)	0.069131	ppm	0.000767	1.11	8630.600000	Y_R 488.368
Be (234.861 nm)	0.000004 u	ppm	0.000007	> 100.00	-45.053500	Y_R 488.368
Bi (223.061 nm)	-0.003341 u	ppm	0.001650	49.39	4.329320	Y 377.433
Ca (315.887 nm)	106.562569 o	ppm	0.384482	0.36	84433.364568	Y_R 377.433
Cd (214.439 nm)	0.000092	ppm	0.000011	11.79	6.412310	Y 377.433
Co (228.615 nm)	-0.000207 u	ppm	0.000253	> 100.00	-40.198800	Y 242.219
Cr (205.560 nm)	0.000891	ppm	0.000283	31.82	9.593910	Y 377.433
Cu (324.754 nm)	0.000576	ppm	0.000343	59.66	-324.977000	Y 377.433
Fe (238.204 nm)	0.003354	ppm	0.001181	35.21	37.242911	Y_R 377.433
Fe H (259.940 nm)	0.004357 u	ppm	0.000250	5.74	11.475100	Y_R 377.433
K (766.491 nm)	3.172720	ppm	0.007730	0.24	2896.720000	Y_R2 488.368
Li (670.783 nm)	0.048082	ppm	0.000011	0.02	249.867000	Y_R2 488.368
Mg (279.078 nm)	20.632500	ppm	0.027760	0.13	119223.000000	Y 377.433
Mn (257.610 nm)	0.000314	ppm	0.000026	8.17	135.225000	Y 377.433
Mo (202.032 nm)	0.001359	ppm	0.000068	5.00	11.678000	Y 377.433
Na (589.592 nm)	51.435600 o	ppm	0.129622	0.25	339108.000000	Y_R2 488.368
Na H (589.593 nm)	54.730561	ppm	0.652062	1.19	202970.780536	Y_R 488.368
Ni (231.604 nm)	-0.000942 u	ppm	0.000440	46.74	-10.521800	Y 377.433
P (213.618 nm)	0.000884 u	ppm	0.001624	> 100.00	26.478800	Y 242.219
Pb (220.353 nm)	-0.000049 u	ppm	0.000188	> 100.00	3.283500	Y 242.219
S (181.972 nm)	30.294821 o	ppm	0.073613	0.24	15529.627709	Y 377.433
Sb (206.834 nm)	-0.002208 u	ppm	0.001190	53.90	-29.268700	Y 377.433
Se (196.026 nm)	0.003929	ppm	0.001212	30.86	16.900900	Y 242.219
Si (288.158 nm)	29.459400 o	ppm	0.029277	0.10	254123.000000	Y 377.433
Sn (189.925 nm)	-0.002630 u	ppm	0.001190	45.25	4.369760	Y 377.433
Sr (421.552 nm)	1.091143	ppm	0.010189	0.93	229096.070807	Y_R 488.368
Th (288.505 nm)	0.003576	ppm	0.000619	17.32	83.602300	Y 377.433
Ti (336.122 nm)	-0.000495 u	ppm	0.000019	3.90	34.522500	Y 377.433
Tl (190.794 nm)	0.001813	ppm	0.000940	51.83	-1.362520	Y 377.433
U (409.013 nm)	0.009755	ppm	0.004529	46.43	-183.665000	Y 377.433
V (292.401 nm)	0.035983	ppm	0.000350	0.97	1340.580000	Y 377.433
Zn (206.200 nm)	0.008957	ppm	0.000006	0.07	74.517200	Y 377.433
Zr (343.823 nm)	-0.000272 u	ppm	0.000079	28.90	-9.065360	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090959	20815.737585	0.000121	0.01
Y 377.433	1.079675	1092834.057964	0.001616	0.15
Y_R 377.433	1.144650	86412.800000	0.008346	0.73
Y_R 488.368	1.122000	49121.600000	0.015488	1.38
Y_R2 488.368	1.108571	96203.517618	0.004661	0.42

Sample Name: 280-116296-D-4-B

Date: 11/7/2018 12:28:09 AM
Rack:Tube: 2:48

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001205	ppm	0.000113	9.37	-399.237000	Y 377.433
Al (167.019 nm)	-0.001399 u	ppm	0.001062	75.92	1.581160	Y_R 377.433
Al H (396.152 nm)	-0.010130 u	ppm	0.002516	24.84	82.224285	Y_R 377.433
As (188.980 nm)	0.009740	ppm	0.000874	8.98	10.528000	Y 242.219
B (249.678 nm)	0.119417	ppm	0.000072	0.06	3040.190000	Y 242.219
Ba (493.408 nm)	0.054393	ppm	0.000340	0.62	6914.210000	Y_R 488.368
Be (234.861 nm)	0.000009 u	ppm	0.000014	> 100.00	-43.601100	Y_R 488.368
Bi (223.061 nm)	-0.000709 u	ppm	0.000331	46.72	10.957700	Y 377.433
Ca (315.887 nm)	65.529441 o	ppm	0.148324	0.23	51897.622824	Y_R 377.433
Cd (214.439 nm)	0.000016 u	ppm	0.000094	> 100.00	1.854900	Y 377.433
Co (228.615 nm)	-0.000251 u	ppm	0.000101	40.25	-41.000800	Y 242.219
Cr (205.560 nm)	0.001145	ppm	0.000372	32.48	13.459800	Y 377.433
Cu (324.754 nm)	0.001518	ppm	0.000516	33.98	-248.651000	Y 377.433
Fe (238.204 nm)	0.010549	ppm	0.000202	1.92	63.855254	Y_R 377.433
Fe H (259.940 nm)	0.015321 u	ppm	0.000654	4.27	32.216800	Y_R 377.433
K (766.491 nm)	2.391140	ppm	0.022570	0.94	1996.750000	Y_R2 488.368
Li (670.783 nm)	0.036135	ppm	0.001864	5.16	-148.593000	Y_R2 488.368
Mg (279.078 nm)	13.147900	ppm	0.010573	0.08	75988.400000	Y 377.433
Mn (257.610 nm)	0.000213	ppm	0.000030	14.01	111.717000	Y 377.433
Mo (202.032 nm)	0.002324	ppm	0.000368	15.83	19.989500	Y 377.433
Na (589.592 nm)	40.195700 o	ppm	0.043666	0.11	265070.000000	Y_R2 488.368
Na H (589.593 nm)	42.490194	ppm	0.215897	0.51	158112.718301	Y_R 488.368
Ni (231.604 nm)	-0.000365 u	ppm	0.000018	4.80	-6.590220	Y 377.433
P (213.618 nm)	0.005062	ppm	0.001068	21.10	35.555800	Y 242.219
Pb (220.353 nm)	0.000354 u	ppm	0.001320	> 100.00	4.440190	Y 242.219
S (181.972 nm)	21.122940 o	ppm	0.002204	0.01	10832.259873	Y 377.433
Sb (206.834 nm)	-0.001894 u	ppm	0.001225	64.68	-28.409700	Y 377.433
Se (196.026 nm)	0.002141	ppm	0.000415	19.37	15.119400	Y 242.219
Si (288.158 nm)	27.648400 o	ppm	0.207226	0.75	238559.000000	Y 377.433
Sn (189.925 nm)	-0.001514 u	ppm	0.000282	18.63	6.588220	Y 377.433
Sr (421.552 nm)	0.685347	ppm	0.002288	0.33	143953.285798	Y_R 488.368
Th (288.505 nm)	0.001578 u	ppm	0.002351	> 100.00	79.255200	Y 377.433
Ti (336.122 nm)	-0.000336 u	ppm	0.000042	12.60	-70.943000	Y 377.433
Tl (190.794 nm)	-0.000820 u	ppm	0.001280	> 100.00	-7.151260	Y 377.433
U (409.013 nm)	0.000889 u	ppm	0.004305	> 100.00	-215.983000	Y 377.433
V (292.401 nm)	0.056743	ppm	0.000211	0.37	2093.390000	Y 377.433
Zn (206.200 nm)	-0.002377 u	ppm	0.000563	23.67	15.323800	Y 377.433
Zr (343.823 nm)	-0.000247 u	ppm	0.000104	42.12	-5.778800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.116710	21307.057100	0.000099	0.01
Y 377.433	1.104001	1117456.255307	0.000688	0.06
Y_R 377.433	1.176190	88794.000000	0.004299	0.37
Y_R 488.368	1.144250	50095.800000	0.007234	0.63
Y_R2 488.368	1.129779	98043.949350	0.002977	0.26

Sample Name: 280-116399-B-3-E

Date: 11/7/2018 12:31:31 AM Rack:Tube: 2:49

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001331	ppm	0.000123	9.25	-384.207000	Y 377.433
Al (167.019 nm)	0.009766	ppm	0.003417	34.98	7.813960	Y_R 377.433
Al H (396.152 nm)	0.021676 u	ppm	0.001837	8.47	240.239338	Y_R 377.433
As (188.980 nm)	0.000465 u	ppm	0.001231	> 100.00	-1.151090	Y 242.219
B (249.678 nm)	0.056466	ppm	0.000115	0.20	1467.650000	Y 242.219
Ba (493.408 nm)	0.078400	ppm	0.000252	0.32	9736.310000	Y_R 488.368
Be (234.861 nm)	0.000010 u	ppm	0.000027	> 100.00	-42.712900	Y_R 488.368
Bi (223.061 nm)	-0.001512 u	ppm	0.000302	19.94	8.937680	Y 377.433
Ca (315.887 nm)	245.238810 o	ppm	1.005059	0.41	194391.699415	Y_R 377.433
Cd (214.439 nm)	0.000009 u	ppm	0.000027	> 100.00	1.427120	Y 377.433
Co (228.615 nm)	-0.000115 u	ppm	0.000033	28.36	-38.529400	Y 242.219
Cr (205.560 nm)	0.001150	ppm	0.000200	17.37	13.535500	Y 377.433
Cu (324.754 nm)	-0.000040 u	ppm	0.000115	> 100.00	-441.056000	Y 377.433
Fe (238.204 nm)	0.021735	ppm	0.000450	2.07	105.225382	Y_R 377.433
Fe H (259.940 nm)	0.022057 u	ppm	0.003041	13.79	44.960000	Y_R 377.433
K (766.491 nm)	3.269150	ppm	0.061164	1.87	3007.760000	Y_R2 488.368
Li (670.783 nm)	0.010865	ppm	0.001774	16.33	-991.356000	Y_R2 488.368
Mg (279.078 nm)	38.699300	ppm	0.000846	0.00	223587.000000	Y 377.433
Mn (257.610 nm)	0.008438	ppm	0.000024	0.28	2035.170000	Y 377.433
Mo (202.032 nm)	0.000543	ppm	0.000432	79.53	4.646080	Y 377.433
Na (589.592 nm)	4.588700	ppm	0.008815	0.19	30670.900000	Y_R2 488.368
Na H (589.593 nm)	5.475794 u	ppm	0.021937	0.40	22529.958009	Y_R 488.368
Ni (231.604 nm)	0.000697	ppm	0.000447	64.12	0.657600	Y 377.433
P (213.618 nm)	0.213075	ppm	0.002140	1.00	487.568000	Y 242.219
Pb (220.353 nm)	0.001774	ppm	0.000485	27.33	8.490410	Y 242.219
S (181.972 nm)	138.466479 bo	ppm	0.484383	0.35	70929.627993	Y 377.433
Sb (206.834 nm)	-0.002658 u	ppm	0.002420	91.06	-30.483900	Y 377.433
Se (196.026 nm)	0.000071 u	ppm	0.002054	> 100.00	13.065600	Y 242.219
Si (288.158 nm)	4.501410	ppm	0.006453	0.14	39617.800000	Y 377.433
Sn (189.925 nm)	0.001048	ppm	0.000496	47.37	11.680500	Y 377.433
Sr (421.552 nm)	1.522651 o	ppm	0.004701	0.31	319633.671645	Y_R 488.368
Th (288.505 nm)	0.004967	ppm	0.002092	42.12	85.966300	Y 377.433
Ti (336.122 nm)	-0.000607 u	ppm	0.000025	4.16	453.186000	Y 377.433
Tl (190.794 nm)	0.001991	ppm	0.000708	35.57	-0.969928	Y 377.433
U (409.013 nm)	-0.001697 u	ppm	0.003283	> 100.00	-261.790000	Y 377.433
V (292.401 nm)	0.000705	ppm	0.000236	33.54	61.606700	Y 377.433
Zn (206.200 nm)	-0.000980 u	ppm	0.000010	1.04	22.622800	Y 377.433
Zr (343.823 nm)	-0.000351 u	ppm	0.000014	3.97	-19.366900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099038	20969.878130	0.002156	0.20
Y 377.433	1.097912	1111293.287206	0.002247	0.20
Y_R 377.433	1.172600	88523.300000	0.006572	0.56
Y_R 488.368	1.138330	49836.700000	0.000215	0.02
Y_R2 488.368	1.123031	97458.426822	0.001725	0.15

Sample Name: 280-116399-B-3-E SD@5

Date: 11/7/2018 12:34:54 AM Rack:Tube: 2:50

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001304	ppm	0.000109	8.32	-385.207000	Y 377.433
Al (167.019 nm)	0.003378	ppm	0.000589	17.43	4.241080	Y_R 377.433
Al H (396.152 nm)	-0.003638 u	ppm	0.001297	35.66	91.319263	Y_R 377.433
As (188.980 nm)	0.000929 u	ppm	0.001897	> 100.00	-0.567519	Y 242.219
B (249.678 nm)	0.013816	ppm	0.000056	0.41	402.263000	Y 242.219
Ba (493.408 nm)	0.015057	ppm	0.000178	1.18	2354.770000	Y_R 488.368
Be (234.861 nm)	0.000020	ppm	0.000013	64.99	-40.094400	Y_R 488.368
Bi (223.061 nm)	-0.000993 u	ppm	0.001294	> 100.00	10.243700	Y 377.433
Ca (315.887 nm)	49.340345 o	ppm	0.186476	0.38	39061.061651	Y_R 377.433
Cd (214.439 nm)	-0.000013 u	ppm	0.000005	41.17	0.098615	Y 377.433
Co (228.615 nm)	-0.000064 u	ppm	0.000188	> 100.00	-37.606500	Y 242.219
Cr (205.560 nm)	0.000480	ppm	0.000026	5.48	3.342130	Y 377.433
Cu (324.754 nm)	0.001270	ppm	0.000071	5.62	-250.047000	Y 377.433
Fe (238.204 nm)	0.005613	ppm	0.000049	0.87	45.598301	Y_R 377.433
Fe H (259.940 nm)	0.010285 u	ppm	0.000666	6.48	22.689400	Y_R 377.433
K (766.491 nm)	0.770277	ppm	0.032262	4.19	130.366000	Y_R2 488.368
Li (670.783 nm)	0.008535	ppm	0.000534	6.25	-1069.060000	Y_R2 488.368
Mg (279.078 nm)	7.752480	ppm	0.008788	0.11	44821.700000	Y 377.433
Mn (257.610 nm)	0.001795	ppm	0.000029	1.63	481.628000	Y 377.433
Mo (202.032 nm)	-0.000050 u	ppm	0.000204	> 100.00	-0.459755	Y 377.433
Na (589.592 nm)	0.996818	ppm	0.010745	1.08	6891.120000	Y_R2 488.368
Na H (589.593 nm)	1.613509 u	ppm	0.056106	3.48	8319.679554	Y_R 488.368
Ni (231.604 nm)	-0.000336 u	ppm	0.000097	28.73	-6.392120	Y 377.433
P (213.618 nm)	0.039492	ppm	0.001311	3.32	110.373000	Y 242.219
Pb (220.353 nm)	0.000306	ppm	0.000013	4.10	4.303290	Y 242.219
S (181.972 nm)	27.121973 o	ppm	0.061048	0.23	13904.660959	Y 377.433
Sb (206.834 nm)	-0.001223 u	ppm	0.000210	17.14	-26.573000	Y 377.433
Se (196.026 nm)	-0.001401 u	ppm	0.001607	> 100.00	11.596600	Y 242.219
Si (288.158 nm)	0.878452	ppm	0.001145	0.13	8479.670000	Y 377.433
Sn (189.925 nm)	0.000174 u	ppm	0.001691	> 100.00	9.943060	Y 377.433
Sr (421.552 nm)	0.296988	ppm	0.002026	0.68	62469.051347	Y_R 488.368
Th (288.505 nm)	0.000659 u	ppm	0.001947	> 100.00	74.744900	Y 377.433
Ti (336.122 nm)	-0.000208 u	ppm	0.000094	45.28	-103.519000	Y 377.433
Tl (190.794 nm)	0.000811 u	ppm	0.002416	> 100.00	-3.561250	Y 377.433
U (409.013 nm)	0.006002	ppm	0.001671	27.84	-189.784000	Y 377.433
V (292.401 nm)	-0.000280 u	ppm	0.000011	3.86	25.294200	Y 377.433
Zn (206.200 nm)	-0.004487 u	ppm	0.000491	10.94	4.304280	Y 377.433
Zr (343.823 nm)	-0.000204 u	ppm	0.000021	10.47	-0.129919	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119371	21357.841039	0.000238	0.02
Y 377.433	1.107631	1121130.116775	0.003550	0.32
Y_R 377.433	1.168510	88214.600000	0.002695	0.23
Y_R 488.368	1.144500	50106.900000	0.008160	0.71
Y_R2 488.368	1.127466	97843.227853	0.002985	0.26

Sample Name: CCVH-5408055

Date: 11/7/2018 12:38:16 AM
Rack:Tube: S1:1
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000685 u	ppm	0.000031	4.53	-723.830000	Y 377.433
Al (167.019 nm)	45.150100 o	ppm	0.036713	0.08	25208.100000	Y_R 377.433
Al H (396.152 nm)	48.748146	ppm	0.009772	0.02	122687.709067	Y_R 377.433
As (188.980 nm)	0.000474 u	ppm	0.001879	> 100.00	-1.577690	Y 242.219
B (249.678 nm)	0.002155	ppm	0.000011	0.53	36.603000	Y 242.219
Ba (493.408 nm)	-0.000454 u	ppm	0.000205	45.02	592.878000	Y_R 488.368
Be (234.861 nm)	-0.000184 u	ppm	0.000068	36.99	1442.880000	Y_R 488.368
Bi (223.061 nm)	0.993525	ppm	0.000876	0.09	2522.670000	Y 377.433
Ca (315.887 nm)	0.000876 u	ppm	0.003985	> 100.00	-60.894514	Y_R 377.433
Cd (214.439 nm)	-0.000230 u	ppm	0.000054	23.71	34.660600	Y 377.433
Co (228.615 nm)	0.002700	ppm	0.000074	2.74	12.466700	Y 242.219
Cr (205.560 nm)	0.000046 u	ppm	0.000221	> 100.00	-16.868200	Y 377.433
Cu (324.754 nm)	-0.002848 u	ppm	0.000309	10.85	-119.773000	Y 377.433
Fe (238.204 nm)	48.597763 o	ppm	0.015165	0.03	179765.367376	Y_R 377.433
Fe H (259.940 nm)	49.701400	ppm	0.122064	0.25	94028.400000	Y_R 377.433
K (766.491 nm)	0.152109	ppm	0.050854	33.43	-581.441000	Y_R2 488.368
Li (670.783 nm)	0.008344	ppm	0.000961	11.52	-1075.410000	Y_R2 488.368
Mg (279.078 nm)	-0.018842 u	ppm	0.000751	3.99	-428.073000	Y 377.433
Mn (257.610 nm)	0.001419	ppm	0.000017	1.17	393.638000	Y 377.433
Mo (202.032 nm)	-0.000379 u	ppm	0.000389	> 100.00	-3.288390	Y 377.433
Na (589.592 nm)	244.871000 o	ppm	0.438289	0.18	1612610.000000	Y_R2 488.368
Na H (589.593 nm)	253.869097	ppm	4.481550	1.77	932466.991784	Y_R 488.368
Ni (231.604 nm)	0.003751	ppm	0.000340	9.06	23.519000	Y 377.433
P (213.618 nm)	-0.004242 u	ppm	0.000784	18.48	15.339100	Y 242.219
Pb (220.353 nm)	-0.003097 u	ppm	0.001882	60.76	12.010000	Y 242.219
S (181.972 nm)	5.029727	ppm	0.006117	0.12	2590.144369	Y 377.433
Sb (206.834 nm)	-0.001825 u	ppm	0.001200	65.74	-74.181600	Y 377.433
Se (196.026 nm)	-0.001071 u	ppm	0.000712	66.43	3.021490	Y 242.219
Si (288.158 nm)	0.029891	ppm	0.001116	3.73	1186.560000	Y 377.433
Sn (189.925 nm)	-0.001424 u	ppm	0.001016	71.34	6.766250	Y 377.433
Sr (421.552 nm)	0.000172	ppm	0.000010	5.88	192.055138	Y_R 488.368
Th (288.505 nm)	4.973130	ppm	0.007970	0.16	13001.800000	Y 377.433
Ti (336.122 nm)	0.001150	ppm	0.000120	10.45	-64.304600	Y 377.433
Tl (190.794 nm)	-0.004087 u	ppm	0.000472	11.56	-15.626900	Y 377.433
U (409.013 nm)	9.985160	ppm	0.006573	0.07	45006.600000	Y 377.433
V (292.401 nm)	0.004278	ppm	0.000201	4.69	21.798700	Y 377.433
Zn (206.200 nm)	-0.004772 u	ppm	0.000375	7.87	2.816790	Y 377.433
Zr (343.823 nm)	-0.004422 u	ppm	0.000033	0.75	-411.034000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.112008	21217.355054	0.000360	0.03
Y 377.433	1.089781	1103062.792598	0.003038	0.28
Y_R 377.433	1.167010	88101.200000	0.001179	0.10
Y_R 488.368	1.147140	50222.400000	0.009863	0.86
Y_R2 488.368	1.126864	97791.024227	0.005209	0.46

Sample Name: CCV-5407546

Date: 11/7/2018 12:41:39 AM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.496623	ppm	0.000604	0.12	22311.700000	Y 377.433
Al (167.019 nm)	0.519507	ppm	0.002811	0.54	293.690000	Y_R 377.433
Al H (396.152 nm)	0.493828 u	ppm	0.001477	0.30	1364.398073	Y_R 377.433
As (188.980 nm)	0.990989	ppm	0.003005	0.30	1246.200000	Y 242.219
B (249.678 nm)	0.492971	ppm	0.000629	0.13	12389.800000	Y 242.219
Ba (493.408 nm)	0.491683	ppm	0.002318	0.47	57557.400000	Y_R 488.368
Be (234.861 nm)	0.482184	ppm	0.001918	0.40	143695.000000	Y_R 488.368
Bi (223.061 nm)	-0.003593 u	ppm	0.000075	2.09	4.108610	Y 377.433
Ca (315.887 nm)	5.116760	ppm	0.004043	0.08	3995.848680	Y_R 377.433
Cd (214.439 nm)	0.503063	ppm	0.000126	0.02	30070.000000	Y 377.433
Co (228.615 nm)	0.493067	ppm	0.000486	0.10	8911.910000	Y 242.219
Cr (205.560 nm)	0.501341	ppm	0.000761	0.15	7621.860000	Y 377.433
Cu (324.754 nm)	0.503610	ppm	0.000644	0.13	27772.100000	Y 377.433
Fe (238.204 nm)	2.478295	ppm	0.005638	0.23	9190.897456	Y_R 377.433
Fe H (259.940 nm)	2.541370 u	ppm	0.006379	0.25	4810.990000	Y_R 377.433
K (766.491 nm)	50.354000	ppm	0.234903	0.47	57224.800000	Y_R2 488.368
Li (670.783 nm)	0.994086	ppm	0.003435	0.35	31799.800000	Y_R2 488.368
Mg (279.078 nm)	20.011000	ppm	0.023237	0.12	115629.000000	Y 377.433
Mn (257.610 nm)	0.502376	ppm	0.000038	0.01	117550.000000	Y 377.433
Mo (202.032 nm)	0.507682	ppm	0.000565	0.11	4372.100000	Y 377.433
Na (589.592 nm)	5.115390	ppm	0.030721	0.60	34973.200000	Y_R2 488.368
Na H (589.593 nm)	5.900280 u	ppm	0.046552	0.79	24473.815742	Y_R 488.368
Ni (231.604 nm)	0.516900	ppm	0.000756	0.15	3523.300000	Y 377.433
P (213.618 nm)	0.993636	ppm	0.002768	0.28	2183.720000	Y 242.219
Pb (220.353 nm)	0.995915	ppm	0.000790	0.08	2857.880000	Y 242.219
S (181.972 nm)	0.024320	ppm	0.002816	11.58	27.866524	Y 377.433
Sb (206.834 nm)	1.011220	ppm	0.003053	0.30	2753.900000	Y 377.433
Se (196.026 nm)	0.985218	ppm	0.001932	0.20	993.536000	Y 242.219
Si (288.158 nm)	4.965860	ppm	0.012503	0.25	43609.600000	Y 377.433
Sn (189.925 nm)	1.031870	ppm	0.000684	0.07	2060.740000	Y 377.433
Sr (421.552 nm)	0.500711	ppm	0.001758	0.35	105213.566683	Y_R 488.368
Th (288.505 nm)	0.010747	ppm	0.000421	3.91	117.041000	Y 377.433
Ti (336.122 nm)	0.498862	ppm	0.000440	0.09	70832.400000	Y 377.433
Tl (190.794 nm)	1.012110	ppm	0.000576	0.06	2217.280000	Y 377.433
U (409.013 nm)	0.002816	ppm	0.000346	12.27	-232.817000	Y 377.433
V (292.401 nm)	0.495641	ppm	0.000378	0.08	17898.800000	Y 377.433
Zn (206.200 nm)	0.501631	ppm	0.001115	0.22	2647.590000	Y 377.433
Zr (343.823 nm)	0.501800	ppm	0.000490	0.10	66012.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119601	21362.216590	0.000209	0.02
Y 377.433	1.103770	1117221.832750	0.000483	0.04
Y_R 377.433	1.168130	88185.200000	0.004651	0.40
Y_R 488.368	1.142060	50000.000000	0.004020	0.35
Y_R2 488.368	1.120718	97257.672052	0.014413	1.29

Sample Name: CCB

Date: 11/7/2018 12:45:01 AM
Rack:Tube: S1:4
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001083	ppm	0.000184	17.00	-395.218000	Y 377.433
Al (167.019 nm)	-0.002156 u	ppm	0.001286	59.68	1.151130	Y_R 377.433
Al H (396.152 nm)	-0.021997 u	ppm	0.002625	11.93	23.697878	Y_R 377.433
As (188.980 nm)	-0.000234 u	ppm	0.001513	> 100.00	-2.031300	Y 242.219
B (249.678 nm)	0.002225	ppm	0.000257	11.55	112.730000	Y 242.219
Ba (493.408 nm)	-0.000490 u	ppm	0.000189	38.66	542.761000	Y_R 488.368
Be (234.861 nm)	0.000063	ppm	0.000002	3.69	-27.534000	Y_R 488.368
Bi (223.061 nm)	-0.001434 u	ppm	0.000711	49.58	9.131320	Y 377.433
Ca (315.887 nm)	0.006785	ppm	0.000618	9.10	-56.209254	Y_R 377.433
Cd (214.439 nm)	0.000132	ppm	0.000035	26.79	8.795300	Y 377.433
Co (228.615 nm)	0.000272	ppm	0.000077	28.26	-31.523000	Y 242.219
Cr (205.560 nm)	0.000278	ppm	0.000383	> 100.00	0.276400	Y 377.433
Cu (324.754 nm)	0.001473	ppm	0.000254	17.23	-209.901000	Y 377.433
Fe (238.204 nm)	-0.001684 u	ppm	0.000222	13.16	18.609627	Y_R 377.433
Fe H (259.940 nm)	0.003874 u	ppm	0.001177	30.38	10.561700	Y_R 377.433
K (766.491 nm)	0.157087	ppm	0.020651	13.15	-575.707000	Y_R2 488.368
Li (670.783 nm)	0.006954	ppm	0.001317	18.94	-1121.800000	Y_R2 488.368
Mg (279.078 nm)	0.000428 u	ppm	0.000818	> 100.00	41.833600	Y 377.433
Mn (257.610 nm)	0.000067	ppm	0.000042	62.64	77.383000	Y 377.433
Mo (202.032 nm)	-0.000189 u	ppm	0.000178	94.12	-1.657790	Y 377.433
Na (589.592 nm)	0.058192	ppm	0.013300	22.85	679.931000	Y_R2 488.368
Na H (589.593 nm)	0.364846 u	ppm	0.030611	8.39	3730.657690	Y_R 488.368
Ni (231.604 nm)	0.000174	ppm	0.000015	8.85	-2.911640	Y 377.433
P (213.618 nm)	-0.002503 u	ppm	0.001087	43.44	19.119000	Y 242.219
Pb (220.353 nm)	0.000541 u	ppm	0.001633	> 100.00	4.986600	Y 242.219
S (181.972 nm)	0.017075	ppm	0.003021	17.69	22.917353	Y 377.433
Sb (206.834 nm)	0.002086	ppm	0.001024	49.10	-17.524100	Y 377.433
Se (196.026 nm)	-0.002883 u	ppm	0.001221	42.36	10.121500	Y 242.219
Si (288.158 nm)	0.006147	ppm	0.000951	15.47	982.486000	Y 377.433
Sn (189.925 nm)	-0.001434 u	ppm	0.000398	27.79	6.747670	Y 377.433
Sr (421.552 nm)	0.000014 u	ppm	0.000100	> 100.00	159.025409	Y_R 488.368
Th (288.505 nm)	0.002139	ppm	0.000848	39.66	78.469000	Y 377.433
Ti (336.122 nm)	-0.000015 u	ppm	0.000057	> 100.00	-230.273000	Y 377.433
Tl (190.794 nm)	-0.000532 u	ppm	0.000675	> 100.00	-6.511460	Y 377.433
U (409.013 nm)	0.004932	ppm	0.002347	47.59	-185.283000	Y 377.433
V (292.401 nm)	-0.000016 u	ppm	0.000169	> 100.00	34.393600	Y 377.433
Zn (206.200 nm)	-0.005220 u	ppm	0.000195	3.73	0.475822	Y 377.433
Zr (343.823 nm)	-0.000101 u	ppm	0.000102	> 100.00	13.436100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115164	21277.557521	0.000217	0.02
Y 377.433	1.100717	1114132.153773	0.000812	0.07
Y_R 377.433	1.159130	87506.100000	0.003270	0.28
Y_R 488.368	1.127800	49375.500000	0.009165	0.81
Y_R2 488.368	1.116587	96899.144955	0.001699	0.15

Sample Name: CCVL-5413446

Date: 11/7/2018 12:48:24 AM
Rack:Tube: S1:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010930	ppm	0.000114	1.04	56.153600	Y 377.433
Al (167.019 nm)	0.105089	ppm	0.002047	1.95	61.013300	Y_R 377.433
Al H (396.152 nm)	0.077690 u	ppm	0.002338	3.01	276.114273	Y_R 377.433
As (188.980 nm)	0.015398	ppm	0.003655	23.74	17.652300	Y 242.219
B (249.678 nm)	0.103010	ppm	0.000088	0.09	2630.610000	Y 242.219
Ba (493.408 nm)	0.009442	ppm	0.000178	1.89	1693.130000	Y_R 488.368
Be (234.861 nm)	0.000994	ppm	0.000023	2.34	252.192000	Y_R 488.368
Bi (223.061 nm)	0.102571	ppm	0.000759	0.74	271.044000	Y 377.433
Ca (315.887 nm)	0.213359	ppm	0.004997	2.34	107.589166	Y_R 377.433
Cd (214.439 nm)	0.005342	ppm	0.000001	0.02	320.284000	Y 377.433
Co (228.615 nm)	0.010469	ppm	0.000027	0.26	153.507000	Y 242.219
Cr (205.560 nm)	0.010438	ppm	0.000189	1.81	154.867000	Y 377.433
Cu (324.754 nm)	0.017636	ppm	0.000182	1.03	688.960000	Y 377.433
Fe (238.204 nm)	0.100357	ppm	0.000652	0.65	396.010037	Y_R 377.433
Fe H (259.940 nm)	0.105407 u	ppm	0.001593	1.51	202.642000	Y_R 377.433
K (766.491 nm)	3.325470	ppm	0.028652	0.86	3072.620000	Y_R2 488.368
Li (670.783 nm)	0.030884 Q	ppm	0.000013	0.04	-323.690000 Q	Y_R2 488.368
Mg (279.078 nm)	0.203710	ppm	0.000771	0.38	1214.820000	Y 377.433
Mn (257.610 nm)	0.010505	ppm	0.000019	0.18	2518.530000	Y 377.433
Mo (202.032 nm)	0.019539	ppm	0.000381	1.95	168.242000	Y 377.433
Na (589.592 nm)	1.136130	ppm	0.001652	0.15	7797.460000	Y_R2 488.368
Na H (589.593 nm)	1.439293 u	ppm	0.022322	1.55	7676.340660	Y_R 488.368
Ni (231.604 nm)	0.043053	ppm	0.000515	1.20	289.610000	Y 377.433
P (213.618 nm)	2.875700 o	ppm	0.004302	0.15	6273.440000	Y 242.219
Pb (220.353 nm)	0.010115	ppm	0.000536	5.30	32.452700	Y 242.219
S (181.972 nm)	0.111065	ppm	0.003553	3.20	71.079313	Y 377.433
Sb (206.834 nm)	0.021336	ppm	0.000238	1.12	35.221300	Y 377.433
Se (196.026 nm)	0.018968	ppm	0.003592	18.94	31.859700	Y 242.219
Si (288.158 nm)	0.509958	ppm	0.004529	0.89	5312.580000	Y 377.433
Sn (189.925 nm)	0.103687	ppm	0.000745	0.72	215.706000	Y 377.433
Sr (421.552 nm)	0.010271	ppm	0.000065	0.63	2311.105917	Y_R 488.368
Th (288.505 nm)	0.021194 Q	ppm	0.002184	10.30	128.614000 Q	Y 377.433
Ti (336.122 nm)	0.010039	ppm	0.000031	0.31	1202.050000	Y 377.433
Tl (190.794 nm)	0.015928	ppm	0.000156	0.98	29.602400	Y 377.433
U (409.013 nm)	0.067390	ppm	0.003768	5.59	96.121800	Y 377.433
V (292.401 nm)	0.009874	ppm	0.000166	1.68	388.517000	Y 377.433
Zn (206.200 nm)	0.016642	ppm	0.000589	3.54	114.656000	Y 377.433
Zr (343.823 nm)	0.015295	ppm	0.000026	0.17	2038.040000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131681	21592.719965	0.002823	0.25
Y 377.433	1.117082	1130696.802790	0.002268	0.20
Y_R 377.433	1.178630	88978.000000	0.000014	0.00
Y_R 488.368	1.148070	50263.200000	0.003320	0.29
Y_R2 488.368	1.133897	98401.374877	0.011295	1.00

Sample Name: 280-116399-B-3-G MS

Date: 11/7/2018 12:51:46 AM
Rack:Tube: 2:51

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055124	ppm	0.000414	0.75	2052.720000	Y 377.433
Al (167.019 nm)	2.000440	ppm	0.001015	0.05	1118.360000	Y_R 377.433
Al H (396.152 nm)	2.104653	ppm	0.000030	0.00	5586.972681	Y_R 377.433
As (188.980 nm)	1.050130	ppm	0.005366	0.51	1320.700000	Y 242.219
B (249.678 nm)	1.117770 o	ppm	0.000348	0.03	27999.400000	Y 242.219
Ba (493.408 nm)	2.128760 o	ppm	0.002148	0.10	247212.000000	Y_R 488.368
Be (234.861 nm)	0.050781	ppm	0.000087	0.17	15057.900000	Y_R 488.368
Bi (223.061 nm)	2.037020	ppm	0.004051	0.20	5142.350000	Y 377.433
Ca (315.887 nm)	297.423775 o	ppm	0.814357	0.27	235769.946333	Y_R 377.433
Cd (214.439 nm)	0.099051	ppm	0.000210	0.21	5922.260000	Y 377.433
Co (228.615 nm)	0.487528	ppm	0.000473	0.10	8830.600000	Y 242.219
Cr (205.560 nm)	0.205407	ppm	0.001038	0.51	3120.130000	Y 377.433
Cu (324.754 nm)	0.259272	ppm	0.000723	0.28	14029.200000	Y 377.433
Fe (238.204 nm)	1.021636	ppm	0.002538	0.25	3803.393366	Y_R 377.433
Fe H (259.940 nm)	1.036600 u	ppm	0.000849	0.08	1964.280000	Y_R 377.433
K (766.491 nm)	56.827700	ppm	0.013806	0.02	64679.200000	Y_R2 488.368
Li (670.783 nm)	1.048480	ppm	0.001768	0.17	33614.000000	Y_R2 488.368
Mg (279.078 nm)	89.729000 o	ppm	0.035588	0.04	518303.000000	Y 377.433
Mn (257.610 nm)	0.518706	ppm	0.001311	0.25	121369.000000	Y 377.433
Mo (202.032 nm)	1.051870	ppm	0.000277	0.03	9058.590000	Y 377.433
Na (589.592 nm)	56.795000 o	ppm	0.009048	0.02	378555.000000	Y_R2 488.368
Na H (589.593 nm)	60.291413	ppm	0.036570	0.06	225281.294571	Y_R 488.368
Ni (231.604 nm)	0.497755	ppm	0.002595	0.52	3393.900000	Y 377.433
P (213.618 nm)	10.984600 o	ppm	0.006687	0.06	23894.000000	Y 242.219
Pb (220.353 nm)	0.506199	ppm	0.002575	0.51	1455.970000	Y 242.219
S (181.972 nm)	144.191581 bo	ppm	0.378688	0.26	73862.988482	Y 377.433
Sb (206.834 nm)	0.524505	ppm	0.002206	0.42	1405.020000	Y 377.433
Se (196.026 nm)	2.096560	ppm	0.002613	0.12	2100.010000	Y 242.219
Si (288.158 nm)	11.592700 o	ppm	0.023567	0.20	100565.000000	Y 377.433
Sn (189.925 nm)	2.115260	ppm	0.011352	0.54	4214.280000	Y 377.433
Sr (421.552 nm)	2.549112 o	ppm	0.010617	0.42	535002.329190	Y_R 488.368
Th (288.505 nm)	1.032990	ppm	0.001056	0.10	2787.520000	Y 377.433
Ti (336.122 nm)	1.031430	ppm	0.002683	0.26	147592.000000	Y 377.433
Tl (190.794 nm)	2.045150	ppm	0.005443	0.27	4483.740000	Y 377.433
U (409.013 nm)	2.136020	ppm	0.005442	0.25	9359.230000	Y 377.433
V (292.401 nm)	0.522781	ppm	0.000529	0.10	18920.100000	Y 377.433
Zn (206.200 nm)	0.495352	ppm	0.002202	0.44	2614.800000	Y 377.433
Zr (343.823 nm)	0.510889	ppm	0.000049	0.01	67203.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064907	20318.659560	0.001761	0.17
Y 377.433	1.064595	1077569.761126	0.002668	0.25
Y_R 377.433	1.139680	86037.700000	0.001036	0.09
Y_R 488.368	1.113210	48737.000000	0.000584	0.05
Y_R2 488.368	1.096681	95171.657772	0.008221	0.75

Sample Name: 280-116399-B-3-H MSD

Date: 11/7/2018 12:55:08 AM
Rack:Tube: 2:52

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054542	ppm	0.000203	0.37	2026.770000	Y 377.433
Al (167.019 nm)	1.964000	ppm	0.002449	0.12	1098.030000	Y_R 377.433
Al H (396.152 nm)	2.081933	ppm	0.005800	0.28	5526.787035	Y_R 377.433
As (188.980 nm)	1.040520	ppm	0.009774	0.94	1308.590000	Y 242.219
B (249.678 nm)	1.093990	ppm	0.001972	0.18	27405.100000	Y 242.219
Ba (493.408 nm)	2.105130 o	ppm	0.000299	0.01	244474.000000	Y_R 488.368
Be (234.861 nm)	0.050081	ppm	0.000417	0.83	14849.400000	Y_R 488.368
Bi (223.061 nm)	2.015210	ppm	0.003114	0.15	5087.420000	Y 377.433
Ca (315.887 nm)	292.490763 o	ppm	1.100126	0.38	231858.491161	Y_R 377.433
Cd (214.439 nm)	0.097846	ppm	0.000150	0.15	5850.200000	Y 377.433
Co (228.615 nm)	0.482111	ppm	0.000437	0.09	8732.040000	Y 242.219
Cr (205.560 nm)	0.201385	ppm	0.000534	0.27	3058.920000	Y 377.433
Cu (324.754 nm)	0.256224	ppm	0.000369	0.14	13862.200000	Y 377.433
Fe (238.204 nm)	1.011839	ppm	0.004169	0.41	3767.159679	Y_R 377.433
Fe H (259.940 nm)	1.029050 u	ppm	0.004412	0.43	1949.990000	Y_R 377.433
K (766.491 nm)	56.275600	ppm	0.553241	0.98	64043.500000	Y_R2 488.368
Li (670.783 nm)	1.039730	ppm	0.006010	0.58	33322.200000	Y_R2 488.368
Mg (279.078 nm)	88.016700 o	ppm	0.160864	0.18	508413.000000	Y 377.433
Mn (257.610 nm)	0.512424	ppm	0.000016	0.00	119900.000000	Y 377.433
Mo (202.032 nm)	1.040510	ppm	0.003071	0.30	8960.800000	Y 377.433
Na (589.592 nm)	56.315700 o	ppm	0.089700	0.16	375354.000000	Y_R2 488.368
Na H (589.593 nm)	59.563951	ppm	0.054100	0.09	222595.167808	Y_R 488.368
Ni (231.604 nm)	0.491008	ppm	0.000225	0.05	3347.840000	Y 377.433
P (213.618 nm)	10.855100 o	ppm	0.012035	0.11	23612.700000	Y 242.219
Pb (220.353 nm)	0.501569	ppm	0.002202	0.44	1442.670000	Y 242.219
S (181.972 nm)	141.932331 bo	ppm	0.174110	0.12	72705.901152	Y 377.433
Sb (206.834 nm)	0.520932	ppm	0.004655	0.89	1395.260000	Y 377.433
Se (196.026 nm)	2.070660	ppm	0.008293	0.40	2074.230000	Y 242.219
Si (288.158 nm)	9.195120	ppm	0.038098	0.41	79958.800000	Y 377.433
Sn (189.925 nm)	2.089730	ppm	0.001995	0.10	4163.540000	Y 377.433
Sr (421.552 nm)	2.505321 o	ppm	0.015939	0.64	525814.399507	Y_R 488.368
Th (288.505 nm)	1.023680	ppm	0.005608	0.55	2762.780000	Y 377.433
Ti (336.122 nm)	1.018770	ppm	0.001067	0.10	145773.000000	Y 377.433
Tl (190.794 nm)	2.018460	ppm	0.008093	0.40	4425.160000	Y 377.433
U (409.013 nm)	2.108380	ppm	0.008795	0.42	9235.540000	Y 377.433
V (292.401 nm)	0.515425	ppm	0.001188	0.23	18654.700000	Y 377.433
Zn (206.200 nm)	0.487397	ppm	0.000873	0.18	2573.250000	Y 377.433
Zr (343.823 nm)	0.505645	ppm	0.001077	0.21	66513.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072689	20467.128991	0.004764	0.44
Y 377.433	1.074717	1087815.712440	0.004666	0.43
Y_R 377.433	1.151640	86940.500000	0.007163	0.62
Y_R 488.368	1.123220	49175.400000	0.006047	0.54
Y_R2 488.368	1.115172	96776.395280	0.006096	0.55

Sample Name: MB 280-436145/1-A

Date: 11/7/2018 12:58:30 AM
Rack:Tube: 2:53

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000877	ppm	0.000269	30.73	-404.704000	Y 377.433
Al (167.019 nm)	0.003186	ppm	0.000867	27.21	4.134400	Y_R 377.433
Al H (396.152 nm)	-0.016978 u	ppm	0.000795	4.68	36.334903	Y_R 377.433
As (188.980 nm)	0.000461	ppm	0.000083	17.97	-1.157010	Y 242.219
B (249.678 nm)	0.002380	ppm	0.000315	13.25	116.590000	Y 242.219
Ba (493.408 nm)	-0.000466 u	ppm	0.000136	29.13	545.490000	Y_R 488.368
Be (234.861 nm)	0.000021	ppm	0.000009	40.41	-39.848100	Y_R 488.368
Bi (223.061 nm)	0.000395 u	ppm	0.000631	> 100.00	13.738300	Y 377.433
Ca (315.887 nm)	0.030628	ppm	0.004579	14.95	-37.303961	Y_R 377.433
Cd (214.439 nm)	0.000081	ppm	0.000012	14.19	5.754360	Y 377.433
Co (228.615 nm)	0.000443	ppm	0.000156	35.11	-28.412000	Y 242.219
Cr (205.560 nm)	0.000364	ppm	0.000249	68.35	1.586510	Y 377.433
Cu (324.754 nm)	0.001660	ppm	0.000213	12.81	-199.014000	Y 377.433
Fe (238.204 nm)	0.005430	ppm	0.000852	15.69	44.919921	Y_R 377.433
Fe H (259.940 nm)	0.011339 u	ppm	0.000076	0.67	24.684500	Y_R 377.433
K (766.491 nm)	0.116468	ppm	0.006127	5.26	-622.480000	Y_R2 488.368
Li (670.783 nm)	0.008027	ppm	0.001215	15.13	-1086.010000	Y_R2 488.368
Mg (279.078 nm)	0.004722	ppm	0.000816	17.28	66.631100	Y 377.433
Mn (257.610 nm)	0.000189	ppm	0.000003	1.61	105.918000	Y 377.433
Mo (202.032 nm)	-0.000089 u	ppm	0.000077	86.21	-0.797080	Y 377.433
Na (589.592 nm)	0.054101	ppm	0.007839	14.49	652.805000	Y_R2 488.368
Na H (589.593 nm)	0.154634 u	ppm	0.001090	0.71	2960.438112	Y_R 488.368
Ni (231.604 nm)	0.007361	ppm	0.000120	1.63	46.117300	Y 377.433
P (213.618 nm)	-0.003368 u	ppm	0.001698	50.43	17.239300	Y 242.219
Pb (220.353 nm)	-0.000665 u	ppm	0.000400	60.21	1.525300	Y 242.219
S (181.972 nm)	0.045911	ppm	0.002651	5.77	37.685674	Y 377.433
Sb (206.834 nm)	0.003680	ppm	0.002322	63.09	-13.164400	Y 377.433
Se (196.026 nm)	-0.000424 u	ppm	0.000680	> 100.00	12.568100	Y 242.219
Si (288.158 nm)	0.015709	ppm	0.000209	1.33	1064.660000	Y 377.433
Sn (189.925 nm)	-0.000800 u	ppm	0.001125	> 100.00	8.006820	Y 377.433
Sr (421.552 nm)	-0.000023 u	ppm	0.000086	> 100.00	151.120894	Y_R 488.368
Th (288.505 nm)	0.004789	ppm	0.002283	47.67	85.256600	Y 377.433
Ti (336.122 nm)	0.000104	ppm	0.000016	15.07	-213.358000	Y 377.433
Tl (190.794 nm)	0.002606	ppm	0.001629	62.52	0.382379	Y 377.433
U (409.013 nm)	0.008013	ppm	0.005841	72.90	-171.326000	Y 377.433
V (292.401 nm)	-0.000077 u	ppm	0.000074	96.29	32.378000	Y 377.433
Zn (206.200 nm)	-0.004176 u	ppm	0.000575	13.77	5.931700	Y 377.433
Zr (343.823 nm)	-0.000131 u	ppm	0.000082	62.62	9.423730	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131700	21593.081847	0.004173	0.37
Y 377.433	1.118896	1132533.006933	0.006408	0.57
Y_R 377.433	1.195050	90218.100000	0.007398	0.62
Y_R 488.368	1.170090	51227.300000	0.009818	0.84
Y_R2 488.368	1.155623	100286.769260	0.011264	0.97

Sample Name: LCS 280-436145/2-A

Date: 11/7/2018 1:01:52 AM Rack:Tube: 2:54

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053084	ppm	0.000270	0.51	1961.190000	Y 377.433
Al (167.019 nm)	2.024290	ppm	0.001700	0.08	1131.650000	Y_R 377.433
Al H (396.152 nm)	2.002103	ppm	0.005639	0.28	5221.506422	Y_R 377.433
As (188.980 nm)	0.996751	ppm	0.001627	0.16	1253.470000	Y 242.219
B (249.678 nm)	1.025400	ppm	0.000846	0.08	25692.000000	Y 242.219
Ba (493.408 nm)	2.014600 o	ppm	0.004251	0.21	233934.000000	Y_R 488.368
Be (234.861 nm)	0.049639	ppm	0.000049	0.10	14717.500000	Y_R 488.368
Bi (223.061 nm)	1.988840	ppm	0.008588	0.43	5021.010000	Y 377.433
Ca (315.887 nm)	51.583691 o	ppm	0.110364	0.21	40839.899270	Y_R 377.433
Cd (214.439 nm)	0.100189	ppm	0.000303	0.30	5990.290000	Y 377.433
Co (228.615 nm)	0.488085	ppm	0.002472	0.51	8840.470000	Y 242.219
Cr (205.560 nm)	0.203465	ppm	0.000675	0.33	3090.580000	Y 377.433
Cu (324.754 nm)	0.252893	ppm	0.000616	0.24	13824.800000	Y 377.433
Fe (238.204 nm)	1.016519	ppm	0.003099	0.30	3784.469836	Y_R 377.433
Fe H (259.940 nm)	1.031410 u	ppm	0.001469	0.14	1954.460000	Y_R 377.433
K (766.491 nm)	51.680700	ppm	0.232438	0.45	58752.500000	Y_R2 488.368
Li (670.783 nm)	1.006810	ppm	0.008245	0.82	32224.100000	Y_R2 488.368
Mg (279.078 nm)	50.667400 o	ppm	0.104071	0.21	292663.000000	Y 377.433
Mn (257.610 nm)	0.505493	ppm	0.000811	0.16	118279.000000	Y 377.433
Mo (202.032 nm)	1.043880	ppm	0.001750	0.17	8989.790000	Y 377.433
Na (589.592 nm)	50.308900 o	ppm	0.163895	0.33	335617.000000	Y_R2 488.368
Na H (589.593 nm)	53.490382	ppm	0.121298	0.23	200257.647805	Y_R 488.368
Ni (231.604 nm)	0.502509	ppm	0.000127	0.03	3426.340000	Y 377.433
P (213.618 nm)	10.331700 o	ppm	0.005957	0.06	22475.400000	Y 242.219
Pb (220.353 nm)	0.503733	ppm	0.000100	0.02	1448.900000	Y 242.219
S (181.972 nm)	2.013403	ppm	0.004463	0.22	1046.580014	Y 377.433
Sb (206.834 nm)	0.516914	ppm	0.005907	1.14	1384.360000	Y 377.433
Se (196.026 nm)	2.038920	ppm	0.000932	0.05	2042.630000	Y 242.219
Si (288.158 nm)	8.196670	ppm	0.038530	0.47	71377.500000	Y 377.433
Sn (189.925 nm)	2.097620	ppm	0.006692	0.32	4179.230000	Y 377.433
Sr (421.552 nm)	1.025573	ppm	0.004595	0.45	215338.319512	Y_R 488.368
Th (288.505 nm)	1.024350	ppm	0.001907	0.19	2764.130000	Y 377.433
Ti (336.122 nm)	1.021590	ppm	0.000962	0.09	145421.000000	Y 377.433
Tl (190.794 nm)	2.056210	ppm	0.006992	0.34	4508.100000	Y 377.433
U (409.013 nm)	2.090100	ppm	0.009351	0.45	9198.420000	Y 377.433
V (292.401 nm)	0.512772	ppm	0.000845	0.16	18558.500000	Y 377.433
Zn (206.200 nm)	0.498654	ppm	0.001405	0.28	2632.050000	Y 377.433
Zr (343.823 nm)	0.508184	ppm	0.000341	0.07	66847.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102960	21044.713270	0.000436	0.04
Y 377.433	1.093740	1107070.114798	0.000816	0.07
Y_R 377.433	1.163040	87801.000000	0.003640	0.31
Y_R 488.368	1.137870	49816.800000	0.003183	0.28
Y_R2 488.368	1.133241	98344.402200	0.002203	0.19

Sample Name: 280-116481-D-1-B

Date: 11/7/2018 1:05:14 AM
Rack:Tube: 2:55

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002021	ppm	0.000176	8.72	-352.724000	Y 377.433
Al (167.019 nm)	0.010522	ppm	0.000936	8.89	9.913060	Y_R 377.433
Al H (396.152 nm)	0.050542 u	ppm	0.005907	11.69	408.142789	Y_R 377.433
As (188.980 nm)	0.003940	ppm	0.000126	3.20	3.202680	Y 242.219
B (249.678 nm)	0.635506	ppm	0.001240	0.20	15928.800000	Y 242.219
Ba (493.408 nm)	0.007008	ppm	0.000261	3.72	1520.840000	Y_R 488.368
Be (234.861 nm)	0.000016 u	ppm	0.000028	> 100.00	36.798700	Y_R 488.368
Bi (223.061 nm)	-0.001775 u	ppm	0.000523	29.46	8.687880	Y 377.433
Ca (315.887 nm)	464.257428 o	ppm	2.161031	0.47	368054.630476	Y_R 377.433
Cd (214.439 nm)	-0.000022 u	ppm	0.000025	> 100.00	2.008650	Y 377.433
Co (228.615 nm)	0.009185	ppm	0.000052	0.57	129.912000	Y 242.219
Cr (205.560 nm)	0.000852	ppm	0.000213	24.99	8.305430	Y 377.433
Cu (324.754 nm)	-0.001477 u	ppm	0.000098	6.65	-650.507000	Y 377.433
Fe (238.204 nm)	2.473846	ppm	0.010675	0.43	9174.444516	Y_R 377.433
Fe H (259.940 nm)	2.540990 u	ppm	0.015808	0.62	4810.270000	Y_R 377.433
K (766.491 nm)	6.967860	ppm	0.093034	1.34	7266.740000	Y_R2 488.368
Li (670.783 nm)	0.331473	ppm	0.000275	0.08	9701.160000	Y_R2 488.368
Mg (279.078 nm)	198.569000 o	ppm	0.106836	0.05	1147080.000000	Y 377.433
Mn (257.610 nm)	1.865370 o	ppm	0.000524	0.03	436308.000000	Y 377.433
Mo (202.032 nm)	0.002224	ppm	0.000714	32.11	19.126300	Y 377.433
Na (589.592 nm)	525.650000 o	ppm	1.348770	0.26	3461370.000000	Y_R2 488.368
Na H (589.593 nm)	562.355569	ppm	2.033722	0.36	2062646.201504	Y_R 488.368
Ni (231.604 nm)	0.029467	ppm	0.000178	0.60	197.021000	Y 377.433
P (213.618 nm)	0.019111	ppm	0.001180	6.18	66.085100	Y 242.219
Pb (220.353 nm)	0.000024 u	ppm	0.001245	> 100.00	3.662060	Y 242.219
S (181.972 nm)	673.813058 bo	ppm	0.387069	0.06	345111.283116	Y 377.433
Sb (206.834 nm)	-0.000827 u	ppm	0.002022	> 100.00	-26.104300	Y 377.433
Se (196.026 nm)	0.000149 u	ppm	0.003458	> 100.00	14.186700	Y 242.219
Si (288.158 nm)	7.483860	ppm	0.081557	1.09	65251.000000	Y 377.433
Sn (189.925 nm)	-0.000282 u	ppm	0.001709	> 100.00	9.037990	Y 377.433
Sr (421.552 nm)	6.108597 o	ppm	0.007567	0.12	1281842.061348	Y_R 488.368
Th (288.505 nm)	0.015917	ppm	0.000200	1.26	151.646000	Y 377.433
Ti (336.122 nm)	-0.000464 u	ppm	0.000051	10.89	1158.760000	Y 377.433
Tl (190.794 nm)	0.005457	ppm	0.000326	5.97	6.609360	Y 377.433
U (409.013 nm)	0.002134 u	ppm	0.003255	> 100.00	-283.711000	Y 377.433
V (292.401 nm)	0.000540	ppm	0.000442	81.88	56.581500	Y 377.433
Zn (206.200 nm)	-0.002295 u	ppm	0.000320	13.94	15.751800	Y 377.433
Zr (343.823 nm)	-0.000182 u	ppm	0.000107	58.57	10.048100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028164	19617.596502	0.004264	0.41
Y 377.433	1.035242	1047858.883054	0.002764	0.27
Y_R 377.433	1.147210	86606.200000	0.005854	0.51
Y_R 488.368	1.121180	49086.000000	0.002794	0.25
Y_R2 488.368	1.115793	96830.225460	0.006303	0.56

Sample Name: 280-116481-D-1-B SD@5

Date: 11/7/2018 1:08:36 AM Rack:Tube: 2:56

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001593	ppm	0.000386	24.22	-372.090000	Y 377.433
Al (167.019 nm)	0.001410	ppm	0.000857	60.76	3.491340	Y_R 377.433
Al H (396.152 nm)	0.002487 u	ppm	0.006761	> 100.00	126.774848	Y_R 377.433
As (188.980 nm)	0.001121 u	ppm	0.001700	> 100.00	-0.330612	Y 242.219
B (249.678 nm)	0.124078	ppm	0.000867	0.70	3155.890000	Y 242.219
Ba (493.408 nm)	0.000784	ppm	0.000080	10.16	712.851000	Y_R 488.368
Be (234.861 nm)	0.000005	ppm	0.000006	> 100.00	-28.533300	Y_R 488.368
Bi (223.061 nm)	-0.002266 u	ppm	0.000529	23.33	7.122270	Y 377.433
Ca (315.887 nm)	95.364438 o	ppm	0.116538	0.12	75554.209832	Y_R 377.433
Cd (214.439 nm)	0.000040	ppm	0.000013	33.36	3.751380	Y 377.433
Co (228.615 nm)	0.001714	ppm	0.000144	8.39	-5.404770	Y 242.219
Cr (205.560 nm)	0.000218	ppm	0.000154	70.65	-0.786613	Y 377.433
Cu (324.754 nm)	0.001258	ppm	0.000403	32.02	-276.596000	Y 377.433
Fe (238.204 nm)	0.511941	ppm	0.000982	0.19	1918.270392	Y_R 377.433
Fe H (259.940 nm)	0.517237 u	ppm	0.000078	0.02	981.742000	Y_R 377.433
K (766.491 nm)	1.421930	ppm	0.068321	4.80	880.730000	Y_R2 488.368
Li (670.783 nm)	0.071919	ppm	0.000661	0.92	1044.830000	Y_R2 488.368
Mg (279.078 nm)	39.705900	ppm	0.108048	0.27	229401.000000	Y 377.433
Mn (257.610 nm)	0.378996	ppm	0.001599	0.42	88695.800000	Y 377.433
Mo (202.032 nm)	0.000120 u	ppm	0.000214	> 100.00	1.004280	Y 377.433
Na (589.592 nm)	112.436000 o	ppm	0.074229	0.07	740619.000000	Y_R2 488.368
Na H (589.593 nm)	117.292518	ppm	0.822871	0.70	432108.110270	Y_R 488.368
Ni (231.604 nm)	0.005139	ppm	0.000142	2.77	30.979500	Y 377.433
P (213.618 nm)	0.000348	ppm	0.000056	16.08	25.312700	Y 242.219
Pb (220.353 nm)	-0.000260 u	ppm	0.000047	17.88	2.725640	Y 242.219
S (181.972 nm)	137.281343 bo	ppm	0.326549	0.24	70323.575722	Y 377.433
Sb (206.834 nm)	0.000720	ppm	0.001003	> 100.00	-21.395400	Y 377.433
Se (196.026 nm)	-0.003768 u	ppm	0.007044	> 100.00	9.452190	Y 242.219
Si (288.158 nm)	1.487000	ppm	0.007407	0.50	13709.900000	Y 377.433
Sn (189.925 nm)	0.001096	ppm	0.000722	65.86	11.776600	Y 377.433
Sr (421.552 nm)	1.252254 o	ppm	0.005920	0.47	262899.909914	Y_R 488.368
Th (288.505 nm)	0.005751	ppm	0.000656	11.41	95.491400	Y 377.433
Ti (336.122 nm)	-0.000362 u	ppm	0.000132	36.50	18.890600	Y 377.433
Tl (190.794 nm)	0.001518	ppm	0.000687	45.27	-2.018400	Y 377.433
U (409.013 nm)	0.002356	ppm	0.001791	76.02	-214.549000	Y 377.433
V (292.401 nm)	-0.000255 u	ppm	0.000075	29.25	26.956100	Y 377.433
Zn (206.200 nm)	-0.005515 u	ppm	0.000168	3.05	-1.060800	Y 377.433
Zr (343.823 nm)	-0.000148 u	ppm	0.000007	4.56	8.755400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.096936	20929.763333	0.002972	0.27
Y 377.433	1.087524	1100777.962024	0.002856	0.26
Y_R 377.433	1.166290	88046.800000	0.003012	0.26
Y_R 488.368	1.129910	49468.300000	0.007285	0.64
Y_R2 488.368	1.130602	98115.376513	0.006152	0.54

Sample Name: 280-116481-D-1-C MS

Date: 11/7/2018 1:11:58 AM
Rack:Tube: 2:57

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.057980	ppm	0.000123	0.21	2183.490000	Y 377.433
Al (167.019 nm)	1.934720	ppm	0.017756	0.92	1083.370000	Y_R 377.433
Al H (396.152 nm)	2.136968	ppm	0.009454	0.44	5755.849532	Y_R 377.433
As (188.980 nm)	1.078730	ppm	0.014700	1.36	1356.690000	Y 242.219
B (249.678 nm)	1.693900 o	ppm	0.000958	0.06	42388.400000	Y 242.219
Ba (493.408 nm)	2.084580 o	ppm	0.004977	0.24	242145.000000	Y_R 488.368
Be (234.861 nm)	0.049546	ppm	0.000036	0.07	14767.200000	Y_R 488.368
Bi (223.061 nm)	2.107700	ppm	0.002765	0.13	5320.720000	Y 377.433
Ca (315.887 nm)	501.095107 o	ppm	5.839812	1.17	397263.798361	Y_R 377.433
Cd (214.439 nm)	0.096835	ppm	0.000121	0.13	5792.210000	Y 377.433
Co (228.615 nm)	0.512347	ppm	0.000250	0.05	9279.850000	Y 242.219
Cr (205.560 nm)	0.201343	ppm	0.000603	0.30	3057.610000	Y 377.433
Cu (324.754 nm)	0.272373	ppm	0.000175	0.06	14640.100000	Y 377.433
Fe (238.204 nm)	3.431806	ppm	0.020019	0.58	12717.491828	Y_R 377.433
Fe H (259.940 nm)	3.513810 u	ppm	0.026794	0.76	6650.650000	Y_R 377.433
K (766.491 nm)	63.399900	ppm	0.056276	0.09	72246.900000	Y_R2 488.368
Li (670.783 nm)	1.411300	ppm	0.003388	0.24	45714.100000	Y_R2 488.368
Mg (279.078 nm)	245.208000 o	ppm	0.084325	0.03	1416430.000000	Y 377.433
Mn (257.610 nm)	2.311420 o	ppm	0.004823	0.21	540621.000000	Y 377.433
Mo (202.032 nm)	1.040030	ppm	0.001032	0.10	8956.680000	Y 377.433
Na (589.592 nm)	564.910000 o	ppm	1.158200	0.21	3724070.000000	Y_R2 488.368
Na H (589.593 nm)	600.493508	ppm	5.627065	0.94	2204324.756208	Y_R 488.368
Ni (231.604 nm)	0.533152	ppm	0.000325	0.06	3635.350000	Y 377.433
P (213.618 nm)	11.174200 o	ppm	0.008327	0.07	24306.100000	Y 242.219
Pb (220.353 nm)	0.497890	ppm	0.001599	0.32	1432.360000	Y 242.219
S (181.972 nm)	665.410332 bo	ppm	0.458341	0.07	340808.941179	Y 377.433
Sb (206.834 nm)	0.536870	ppm	0.001969	0.37	1438.150000	Y 377.433
Se (196.026 nm)	2.168930	ppm	0.008384	0.39	2173.030000	Y 242.219
Si (288.158 nm)	12.475700 o	ppm	0.000401	0.00	108155.000000	Y 377.433
Sn (189.925 nm)	2.052420	ppm	0.001160	0.06	4089.370000	Y 377.433
Sr (421.552 nm)	7.094102 o	ppm	0.006753	0.10	1488617.445952	Y_R 488.368
Th (288.505 nm)	1.045960	ppm	0.003488	0.33	2857.020000	Y 377.433
Ti (336.122 nm)	1.024580	ppm	0.000853	0.08	147254.000000	Y 377.433
Tl (190.794 nm)	1.955960	ppm	0.000182	0.01	4287.840000	Y 377.433
U (409.013 nm)	2.144220	ppm	0.001779	0.08	9360.010000	Y 377.433
V (292.401 nm)	0.522631	ppm	0.000335	0.06	18917.100000	Y 377.433
Zn (206.200 nm)	0.480696	ppm	0.001458	0.30	2538.250000	Y 377.433
Zr (343.823 nm)	0.508586	ppm	0.000104	0.02	66907.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027700	19608.725842	0.000393	0.04
Y 377.433	1.037898	1050547.984091	0.002310	0.22
Y_R 377.433	1.155160	87206.200000	0.002118	0.18
Y_R 488.368	1.124790	49243.800000	0.000808	0.07
Y_R2 488.368	1.105480	95935.317772	0.005542	0.50

Sample Name: 280-116481-D-1-D MSD

Date: 11/7/2018 1:15:20 AM
Rack:Tube: 2:58

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.057335	ppm	0.000296	0.52	2154.450000	Y 377.433
Al (167.019 nm)	1.916310	ppm	0.014827	0.77	1073.170000	Y_R 377.433
Al H (396.152 nm)	2.121154	ppm	0.000768	0.04	5718.894804	Y_R 377.433
As (188.980 nm)	1.073580	ppm	0.006299	0.59	1350.200000	Y 242.219
B (249.678 nm)	1.724490 o	ppm	0.002868	0.17	43152.400000	Y 242.219
Ba (493.408 nm)	2.074410 o	ppm	0.000505	0.02	240969.000000	Y_R 488.368
Be (234.861 nm)	0.048472	ppm	0.000011	0.02	14450.500000	Y_R 488.368
Bi (223.061 nm)	2.084690	ppm	0.004581	0.22	5262.790000	Y 377.433
Ca (315.887 nm)	508.388898 o	ppm	0.610358	0.12	403047.146589	Y_R 377.433
Cd (214.439 nm)	0.095812	ppm	0.000055	0.06	5731.130000	Y 377.433
Co (228.615 nm)	0.508706	ppm	0.002077	0.41	9213.740000	Y 242.219
Cr (205.560 nm)	0.200175	ppm	0.001312	0.66	3039.820000	Y 377.433
Cu (324.754 nm)	0.270199	ppm	0.000233	0.09	14515.500000	Y 377.433
Fe (238.204 nm)	3.526858	ppm	0.001765	0.05	13069.046581	Y_R 377.433
Fe H (259.940 nm)	3.602380 u	ppm	0.000463	0.01	6818.220000	Y_R 377.433
K (766.491 nm)	63.401600	ppm	0.081273	0.13	72248.900000	Y_R2 488.368
Li (670.783 nm)	1.421210	ppm	0.000426	0.03	46044.600000	Y_R2 488.368
Mg (279.078 nm)	248.340000 o	ppm	0.081633	0.03	1434520.000000	Y 377.433
Mn (257.610 nm)	2.333460 o	ppm	0.003994	0.17	545777.000000	Y 377.433
Mo (202.032 nm)	1.035810	ppm	0.000796	0.08	8920.340000	Y 377.433
Na (589.592 nm)	572.854000 o	ppm	1.997060	0.35	3776360.000000	Y_R2 488.368
Na H (589.593 nm)	612.457052	ppm	0.912107	0.15	2248144.568963	Y_R 488.368
Ni (231.604 nm)	0.526898	ppm	0.000971	0.18	3592.670000	Y 377.433
P (213.618 nm)	11.102700 o	ppm	0.018319	0.16	24150.600000	Y 242.219
Pb (220.353 nm)	0.492486	ppm	0.000398	0.08	1416.820000	Y 242.219
S (181.972 nm)	675.758424 bo	ppm	1.489705	0.22	346108.757149	Y 377.433
Sb (206.834 nm)	0.535952	ppm	0.000023	0.00	1435.680000	Y 377.433
Se (196.026 nm)	2.154820	ppm	0.001021	0.05	2158.980000	Y 242.219
Si (288.158 nm)	14.067400 o	ppm	0.028894	0.21	121834.000000	Y 377.433
Sn (189.925 nm)	2.043940	ppm	0.005977	0.29	4072.510000	Y 377.433
Sr (421.552 nm)	7.212454 o	ppm	0.016893	0.23	1513449.736674	Y_R 488.368
Th (288.505 nm)	1.037110	ppm	0.000646	0.06	2834.210000	Y 377.433
Ti (336.122 nm)	1.019760	ppm	0.000155	0.02	146590.000000	Y 377.433
Tl (190.794 nm)	1.934770	ppm	0.000715	0.04	4241.270000	Y 377.433
U (409.013 nm)	2.119410	ppm	0.007032	0.33	9246.710000	Y 377.433
V (292.401 nm)	0.519728	ppm	0.000651	0.13	18813.000000	Y 377.433
Zn (206.200 nm)	0.474586	ppm	0.000329	0.07	2506.340000	Y 377.433
Zr (343.823 nm)	0.505932	ppm	0.000081	0.02	66558.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028271	19619.621332	0.001118	0.11
Y 377.433	1.039638	1052308.816082	0.001712	0.16
Y_R 377.433	1.169310	88274.500000	0.006404	0.55
Y_R 488.368	1.139350	49881.600000	0.002545	0.22
Y_R2 488.368	1.129448	98015.277644	0.002248	0.20

Sample Name: 280-116481-D-2-B

Date: 11/7/2018 1:18:43 AM
Rack:Tube: 2:59

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001839	ppm	0.000183	9.93	-360.805000	Y 377.433
Al (167.019 nm)	0.007154	ppm	0.000592	8.27	6.875680	Y_R 377.433
Al H (396.152 nm)	0.034897 u	ppm	0.000055	0.16	388.912845	Y_R 377.433
As (188.980 nm)	0.004352	ppm	0.002056	47.24	3.736670	Y 242.219
B (249.678 nm)	0.443511	ppm	0.001616	0.36	11135.100000	Y 242.219
Ba (493.408 nm)	0.008253	ppm	0.000336	4.07	1674.220000	Y_R 488.368
Be (234.861 nm)	0.000005 u	ppm	0.000015	> 100.00	-20.106300	Y_R 488.368
Bi (223.061 nm)	-0.000662 u	ppm	0.000708	> 100.00	11.206700	Y 377.433
Ca (315.887 nm)	510.942252 o	ppm	0.965297	0.19	405071.681849	Y_R 377.433
Cd (214.439 nm)	0.000521	ppm	0.000018	3.44	32.772700	Y 377.433
Co (228.615 nm)	0.004433	ppm	0.000122	2.76	43.841900	Y 242.219
Cr (205.560 nm)	0.000551	ppm	0.000123	22.39	4.201110	Y 377.433
Cu (324.754 nm)	-0.001637 u	ppm	0.000072	4.41	-693.053000	Y 377.433
Fe (238.204 nm)	0.778603	ppm	0.000881	0.11	2904.528526	Y_R 377.433
Fe H (259.940 nm)	0.774809 u	ppm	0.002266	0.29	1469.020000	Y_R 377.433
K (766.491 nm)	5.998000	ppm	0.031256	0.52	6149.970000	Y_R2 488.368
Li (670.783 nm)	0.564116	ppm	0.000394	0.07	17460.000000	Y_R2 488.368
Mg (279.078 nm)	369.417000 o	ppm	1.678870	0.45	2133990.000000	Y 377.433
Mn (257.610 nm)	1.758090 o	ppm	0.006666	0.38	411217.000000	Y 377.433
Mo (202.032 nm)	0.000632	ppm	0.000230	36.33	5.417470	Y 377.433
Na (589.592 nm)	287.500000 o	ppm	1.289460	0.45	1893310.000000	Y_R2 488.368
Na H (589.593 nm)	302.868285	ppm	2.541879	0.84	1111990.496398	Y_R 488.368
Ni (231.604 nm)	0.017129	ppm	0.001048	6.12	112.787000	Y 377.433
P (213.618 nm)	0.005152	ppm	0.000515	9.99	35.752000	Y 242.219
Pb (220.353 nm)	0.001843	ppm	0.000630	34.20	8.710300	Y 242.219
S (181.972 nm)	813.237555 bo	ppm	2.333168	0.29	416517.103968	Y 377.433
Sb (206.834 nm)	-0.001607 u	ppm	0.001266	78.81	-27.796300	Y 377.433
Se (196.026 nm)	-0.000858 u	ppm	0.006749	> 100.00	13.432800	Y 242.219
Si (288.158 nm)	7.400610	ppm	0.060211	0.81	64535.500000	Y 377.433
Sn (189.925 nm)	-0.000504 u	ppm	0.000073	14.51	8.595140	Y 377.433
Sr (421.552 nm)	7.045229 o	ppm	0.078721	1.12	1478363.021683	Y_R 488.368
Th (288.505 nm)	0.011921	ppm	0.000495	4.15	139.144000	Y 377.433
Ti (336.122 nm)	-0.000605 u	ppm	0.000015	2.55	1284.450000	Y 377.433
Tl (190.794 nm)	0.004916	ppm	0.001082	22.01	5.454120	Y 377.433
U (409.013 nm)	0.039603	ppm	0.001016	2.57	-124.647000	Y 377.433
V (292.401 nm)	0.001099	ppm	0.000110	9.98	75.775800	Y 377.433
Zn (206.200 nm)	-0.001311 u	ppm	0.000466	35.56	20.893900	Y 377.433
Zr (343.823 nm)	-0.000286 u	ppm	0.000090	31.64	-8.574260	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037685	19799.255730	0.007783	0.75
Y 377.433	1.053225	1066060.880111	0.007549	0.72
Y_R 377.433	1.176010	88780.300000	0.003330	0.28
Y_R 488.368	1.146660	50201.300000	0.011761	1.03
Y_R2 488.368	1.129430	98013.696992	0.016124	1.43

Sample Name: 280-116481-D-3-B

Date: 11/7/2018 1:22:06 AM Rack:Tube: 2:60

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001670	ppm	0.000016	0.96	-368.980000	Y 377.433
Al (167.019 nm)	0.071271	ppm	0.002031	2.85	42.488300	Y_R 377.433
Al H (396.152 nm)	0.113133 u	ppm	0.003148	2.78	577.927428	Y_R 377.433
As (188.980 nm)	-0.000216 u	ppm	0.000244	> 100.00	-2.014680	Y 242.219
B (249.678 nm)	0.408466	ppm	0.001146	0.28	10259.800000	Y 242.219
Ba (493.408 nm)	0.006553	ppm	0.000181	2.77	1473.140000	Y_R 488.368
Be (234.861 nm)	0.000049	ppm	0.000002	4.02	-13.291200	Y_R 488.368
Bi (223.061 nm)	-0.001809 u	ppm	0.000888	49.11	8.284490	Y 377.433
Ca (315.887 nm)	493.143785 o	ppm	0.962399	0.20	390959.028027	Y_R 377.433
Cd (214.439 nm)	0.000349	ppm	0.000103	29.52	22.296200	Y 377.433
Co (228.615 nm)	-0.000126 u	ppm	0.000160	> 100.00	-38.696500	Y 242.219
Cr (205.560 nm)	0.000126	ppm	0.000115	91.36	-2.207830	Y 377.433
Cu (324.754 nm)	-0.001395 u	ppm	0.000458	32.86	-666.422000	Y 377.433
Fe (238.204 nm)	0.581213	ppm	0.001996	0.34	2174.476205	Y_R 377.433
Fe H (259.940 nm)	0.581111 u	ppm	0.004411	0.76	1102.580000	Y_R 377.433
K (766.491 nm)	11.092800	ppm	0.012527	0.11	12016.500000	Y_R2 488.368
Li (670.783 nm)	0.445143	ppm	0.003627	0.81	13492.200000	Y_R2 488.368
Mg (279.078 nm)	208.017000 o	ppm	0.760737	0.37	1201650.000000	Y 377.433
Mn (257.610 nm)	0.334634	ppm	0.000666	0.20	78320.900000	Y 377.433
Mo (202.032 nm)	-0.000031 u	ppm	0.000327	> 100.00	-0.290994	Y 377.433
Na (589.592 nm)	430.866000 o	ppm	1.081700	0.25	2837280.000000	Y_R2 488.368
Na H (589.593 nm)	450.841040	ppm	3.809183	0.84	1654101.409807	Y_R 488.368
Ni (231.604 nm)	0.002924	ppm	0.000067	2.29	15.876100	Y 377.433
P (213.618 nm)	0.007286	ppm	0.000314	4.31	40.390200	Y 242.219
Pb (220.353 nm)	0.001580 u	ppm	0.002321	> 100.00	7.964570	Y 242.219
S (181.972 nm)	797.107149 bo	ppm	0.374804	0.05	408252.432049	Y 377.433
Sb (206.834 nm)	-0.001469 u	ppm	0.000803	54.65	-27.433000	Y 377.433
Se (196.026 nm)	0.002504	ppm	0.000029	1.16	15.646500	Y 242.219
Si (288.158 nm)	5.037320	ppm	0.023413	0.46	44223.800000	Y 377.433
Sn (189.925 nm)	-0.001165 u	ppm	0.001528	> 100.00	7.281860	Y 377.433
Sr (421.552 nm)	7.267673 o	ppm	0.046172	0.64	1525035.656893	Y_R 488.368
Th (288.505 nm)	0.010525	ppm	0.003407	32.37	106.974000	Y 377.433
Ti (336.122 nm)	0.000753	ppm	0.000048	6.44	1422.410000	Y 377.433
Tl (190.794 nm)	0.002667	ppm	0.001106	41.48	0.496774	Y 377.433
U (409.013 nm)	-0.000003 u	ppm	0.003654	> 100.00	-300.623000	Y 377.433
V (292.401 nm)	0.000938	ppm	0.000076	8.08	70.644400	Y 377.433
Zn (206.200 nm)	-0.002309 u	ppm	0.000317	13.72	15.679300	Y 377.433
Zr (343.823 nm)	-0.000364 u	ppm	0.000173	47.69	-19.407800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046999	19976.962731	0.003562	0.34
Y 377.433	1.057937	1070831.237809	0.003305	0.31
Y_R 377.433	1.172900	88545.600000	0.006371	0.54
Y_R 488.368	1.140460	49929.900000	0.011598	1.02
Y_R2 488.368	1.119342	97138.218736	0.005095	0.46

Sample Name: CCVH-5408055

Date: 11/7/2018 1:25:29 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000365 u	ppm	0.000074	20.34	-710.459000	Y 377.433
Al (167.019 nm)	45.101300 o	ppm	0.104850	0.23	25180.900000	Y_R 377.433
Al H (396.152 nm)	48.672132	ppm	0.161039	0.33	122496.533986	Y_R 377.433
As (188.980 nm)	0.000232 u	ppm	0.000605	> 100.00	-1.882310	Y 242.219
B (249.678 nm)	0.000897	ppm	0.000084	9.40	5.284710	Y 242.219
Ba (493.408 nm)	-0.000561 u	ppm	0.000091	16.27	580.499000	Y_R 488.368
Be (234.861 nm)	-0.000250 u	ppm	0.000043	17.34	1421.280000	Y_R 488.368
Bi (223.061 nm)	0.995826	ppm	0.000744	0.07	2528.450000	Y 377.433
Ca (315.887 nm)	0.020166	ppm	0.000686	3.40	-45.598753	Y_R 377.433
Cd (214.439 nm)	-0.000231 u	ppm	0.000043	18.65	34.505200	Y 377.433
Co (228.615 nm)	0.003026	ppm	0.000185	6.11	18.363000	Y 242.219
Cr (205.560 nm)	0.000307	ppm	0.000143	46.66	-12.885300	Y 377.433
Cu (324.754 nm)	-0.002707 u	ppm	0.000029	1.07	-118.832000	Y 377.433
Fe (238.204 nm)	48.494781 o	ppm	0.115807	0.24	179384.485788	Y_R 377.433
Fe H (259.940 nm)	49.627700	ppm	0.143778	0.29	93888.800000	Y_R 377.433
K (766.491 nm)	0.150024	ppm	0.068295	45.52	-583.841000	Y_R2 488.368
Li (670.783 nm)	0.010592	ppm	0.000458	4.33	-1000.460000	Y_R2 488.368
Mg (279.078 nm)	-0.009476 u	ppm	0.005906	62.32	-375.349000	Y 377.433
Mn (257.610 nm)	0.001441	ppm	0.000001	0.09	398.892000	Y 377.433
Mo (202.032 nm)	-0.000369 u	ppm	0.000284	76.87	-3.208250	Y 377.433
Na (589.592 nm)	246.684000 o	ppm	1.546240	0.63	1624540.000000	Y_R2 488.368
Na H (589.593 nm)	253.702325	ppm	0.174540	0.07	931855.944660	Y_R 488.368
Ni (231.604 nm)	0.004339	ppm	0.000057	1.31	27.528100	Y 377.433
P (213.618 nm)	-0.006156 u	ppm	0.002914	47.33	11.179800	Y 242.219
Pb (220.353 nm)	-0.002844 u	ppm	0.000191	6.71	12.908400	Y 242.219
S (181.972 nm)	5.284675	ppm	0.007046	0.13	2720.715954	Y 377.433
Sb (206.834 nm)	-0.002671 u	ppm	0.000413	15.47	-76.647100	Y 377.433
Se (196.026 nm)	-0.002359 u	ppm	0.001099	46.60	1.751040	Y 242.219
Si (288.158 nm)	0.028549	ppm	0.001293	4.53	1175.020000	Y 377.433
Sn (189.925 nm)	0.000523	ppm	0.000427	81.51	10.637800	Y 377.433
Sr (421.552 nm)	0.000454	ppm	0.000024	5.35	251.273516	Y_R 488.368
Th (288.505 nm)	4.951340	ppm	0.000636	0.01	12947.100000	Y 377.433
Ti (336.122 nm)	0.001081	ppm	0.000006	0.53	-74.098100	Y 377.433
Tl (190.794 nm)	-0.003854 u	ppm	0.000004	0.09	-15.111700	Y 377.433
U (409.013 nm)	10.013100	ppm	0.012762	0.13	45133.100000	Y 377.433
V (292.401 nm)	0.004047	ppm	0.000203	5.01	9.059610	Y 377.433
Zn (206.200 nm)	-0.004458 u	ppm	0.000013	0.28	4.459380	Y 377.433
Zr (343.823 nm)	-0.004461 u	ppm	0.000126	2.82	-416.374000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.121063	21390.115852	0.002653	0.24
Y 377.433	1.100707	1114121.507576	0.001332	0.12
Y_R 377.433	1.184430	89415.700000	0.007153	0.60
Y_R 488.368	1.165640	51032.500000	0.001390	0.12
Y_R2 488.368	1.155477	100274.098210	0.001291	0.11

Sample Name: CCV-5407546

Date: 11/7/2018 1:28:52 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.496005	ppm	0.001600	0.32	22283.600000	Y 377.433
Al (167.019 nm)	0.515956	ppm	0.002185	0.42	291.704000	Y_R 377.433
Al H (396.152 nm)	0.490018 u	ppm	0.003111	0.63	1354.751142	Y_R 377.433
As (188.980 nm)	0.993742	ppm	0.002677	0.27	1249.670000	Y 242.219
B (249.678 nm)	0.493565	ppm	0.001494	0.30	12404.600000	Y 242.219
Ba (493.408 nm)	0.492936	ppm	0.001039	0.21	57702.400000	Y_R 488.368
Be (234.861 nm)	0.480496	ppm	0.001453	0.30	143192.000000	Y_R 488.368
Bi (223.061 nm)	-0.002554 u	ppm	0.001025	40.12	6.724160	Y 377.433
Ca (315.887 nm)	5.133696	ppm	0.016444	0.32	4009.275887	Y_R 377.433
Cd (214.439 nm)	0.500789	ppm	0.002503	0.50	29934.000000	Y 377.433
Co (228.615 nm)	0.493152	ppm	0.002082	0.42	8913.420000	Y 242.219
Cr (205.560 nm)	0.499776	ppm	0.000360	0.07	7598.050000	Y 377.433
Cu (324.754 nm)	0.504466	ppm	0.000739	0.15	27819.900000	Y 377.433
Fe (238.204 nm)	2.466888	ppm	0.002995	0.12	9148.709012	Y_R 377.433
Fe H (259.940 nm)	2.547120 u	ppm	0.000112	0.00	4821.880000	Y_R 377.433
K (766.491 nm)	50.131300	ppm	0.162808	0.32	56968.400000	Y_R2 488.368
Li (670.783 nm)	0.994781	ppm	0.000502	0.05	31823.000000	Y_R2 488.368
Mg (279.078 nm)	19.913400	ppm	0.053270	0.27	115065.000000	Y 377.433
Mn (257.610 nm)	0.501098	ppm	0.000896	0.18	117251.000000	Y 377.433
Mo (202.032 nm)	0.506352	ppm	0.002247	0.44	4360.640000	Y 377.433
Na (589.592 nm)	5.128310	ppm	0.029832	0.58	35060.200000	Y_R2 488.368
Na H (589.593 nm)	5.945487 u	ppm	0.066852	1.12	24640.372866	Y_R 488.368
Ni (231.604 nm)	0.514877	ppm	0.001964	0.38	3509.500000	Y 377.433
P (213.618 nm)	0.996871	ppm	0.002088	0.21	2190.750000	Y 242.219
Pb (220.353 nm)	0.994948	ppm	0.002040	0.21	2855.110000	Y 242.219
S (181.972 nm)	0.207190	ppm	0.005080	2.45	121.520685	Y 377.433
Sb (206.834 nm)	1.009120	ppm	0.004227	0.42	2748.090000	Y 377.433
Se (196.026 nm)	0.989235	ppm	0.005640	0.57	997.535000	Y 242.219
Si (288.158 nm)	4.951200	ppm	0.056221	1.14	43483.600000	Y 377.433
Sn (189.925 nm)	1.026340	ppm	0.004136	0.40	2049.740000	Y 377.433
Sr (421.552 nm)	0.502637	ppm	0.001752	0.35	105617.619957	Y_R 488.368
Th (288.505 nm)	0.007420	ppm	0.001485	20.02	108.509000	Y 377.433
Ti (336.122 nm)	0.498244	ppm	0.001494	0.30	70744.400000	Y 377.433
Tl (190.794 nm)	1.008940	ppm	0.001095	0.11	2210.300000	Y 377.433
U (409.013 nm)	0.008773	ppm	0.000880	10.03	-205.864000	Y 377.433
V (292.401 nm)	0.493618	ppm	0.001126	0.23	17825.900000	Y 377.433
Zn (206.200 nm)	0.497238	ppm	0.000396	0.08	2624.650000	Y 377.433
Zr (343.823 nm)	0.501262	ppm	0.001213	0.24	65941.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.137803	21709.526376	0.001117	0.10
Y 377.433	1.124800	1138508.919072	0.001028	0.09
Y_R 377.433	1.193730	90118.300000	0.002541	0.21
Y_R 488.368	1.165420	51022.900000	0.004777	0.41
Y_R2 488.368	1.154388	100179.589560	0.013630	1.18

Sample Name: CCB

Date: 11/7/2018 1:32:15 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001075	ppm	0.000069	6.38	-395.601000	Y 377.433
Al (167.019 nm)	-0.004402 u	ppm	0.002239	50.86	-0.101691	Y_R 377.433
Al H (396.152 nm)	-0.019640 u	ppm	0.001799	9.16	29.660146	Y_R 377.433
As (188.980 nm)	-0.000134 u	ppm	0.001639	> 100.00	-1.905810	Y 242.219
B (249.678 nm)	0.001481	ppm	0.000334	22.53	94.141400	Y 242.219
Ba (493.408 nm)	-0.000729 u	ppm	0.000022	3.01	514.998000	Y_R 488.368
Be (234.861 nm)	0.000061	ppm	0.000005	7.54	-28.244900	Y_R 488.368
Bi (223.061 nm)	0.000518 u	ppm	0.002193	> 100.00	14.045200	Y 377.433
Ca (315.887 nm)	0.011143	ppm	0.012916	> 100.00	-52.754043	Y_R 377.433
Cd (214.439 nm)	0.000041	ppm	0.000007	18.35	3.307800	Y 377.433
Co (228.615 nm)	0.000225	ppm	0.000085	37.97	-32.381500	Y 242.219
Cr (205.560 nm)	0.000251	ppm	0.000067	26.67	-0.134652	Y 377.433
Cu (324.754 nm)	0.001508	ppm	0.000071	4.73	-208.227000	Y 377.433
Fe (238.204 nm)	-0.002290 u	ppm	0.001647	71.89	16.366320	Y_R 377.433
Fe H (259.940 nm)	0.002208 u	ppm	0.001131	51.23	7.411230	Y_R 377.433
K (766.491 nm)	0.153662	ppm	0.007789	5.07	-579.652000	Y_R2 488.368
Li (670.783 nm)	0.010544 Z	ppm	0.000333	3.16	-1002.070000 Z	Y_R2 488.368
Mg (279.078 nm)	0.002192	ppm	0.000039	1.79	52.024600	Y 377.433
Mn (257.610 nm)	0.000002 u	ppm	0.000020	> 100.00	62.309200	Y 377.433
Mo (202.032 nm)	0.000217	ppm	0.000055	25.50	1.836620	Y 377.433
Na (589.592 nm)	0.066051	ppm	0.010421	15.78	730.981000	Y_R2 488.368
Na H (589.593 nm)	0.327338 u	ppm	0.003034	0.93	3592.919428	Y_R 488.368
Ni (231.604 nm)	0.000594	ppm	0.000484	81.40	-0.044620	Y 377.433
P (213.618 nm)	-0.003252 u	ppm	0.000045	1.39	17.489600	Y 242.219
Pb (220.353 nm)	0.000630	ppm	0.000187	29.71	5.238300	Y 242.219
S (181.972 nm)	0.154578 Z	ppm	0.004934	3.19	93.339240 Z	Y 377.433
Sb (206.834 nm)	0.001700	ppm	0.001752	> 100.00	-18.578500	Y 377.433
Se (196.026 nm)	0.000618 u	ppm	0.001601	> 100.00	13.605900	Y 242.219
Si (288.158 nm)	0.002464	ppm	0.000047	1.89	950.835000	Y 377.433
Sn (189.925 nm)	-0.000706 u	ppm	0.000865	> 100.00	8.195050	Y 377.433
Sr (421.552 nm)	-0.000080 u	ppm	0.000071	88.52	139.203863	Y_R 488.368
Th (288.505 nm)	0.005347	ppm	0.002165	40.50	86.673400	Y 377.433
Ti (336.122 nm)	0.000031	ppm	0.000010	31.48	-223.772000	Y 377.433
Tl (190.794 nm)	0.000366	ppm	0.000113	30.99	-4.540770	Y 377.433
U (409.013 nm)	0.008699	ppm	0.003728	42.85	-168.234000	Y 377.433
V (292.401 nm)	-0.000375 u	ppm	0.000167	44.53	21.232400	Y 377.433
Zn (206.200 nm)	-0.005323 u	ppm	0.000269	5.06	-0.062451	Y 377.433
Zr (343.823 nm)	-0.000254 u	ppm	0.000009	3.52	-6.689600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.133040	21618.647123	0.002554	0.23
Y 377.433	1.120584	1134240.830471	0.000157	0.01
Y_R 377.433	1.186260	89554.400000	0.005223	0.44
Y_R 488.368	1.151050	50393.600000	0.006008	0.52
Y_R2 488.368	1.157601	100458.421583	0.001192	0.10

Sample Name: CCVL-5413446

Date: 11/7/2018 1:35:39 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010909	ppm	0.000043	0.40	55.190500	Y 377.433
Al (167.019 nm)	0.103247	ppm	0.002696	2.61	59.985900	Y_R 377.433
Al H (396.152 nm)	0.081172 u	ppm	0.002190	2.70	284.875990	Y_R 377.433
As (188.980 nm)	0.013864	ppm	0.000819	5.91	15.720400	Y 242.219
B (249.678 nm)	0.102225	ppm	0.000263	0.26	2611.010000	Y 242.219
Ba (493.408 nm)	0.009123	ppm	0.000184	2.02	1656.170000	Y_R 488.368
Be (234.861 nm)	0.000994	ppm	0.000009	0.90	252.172000	Y_R 488.368
Bi (223.061 nm)	0.101860	ppm	0.000633	0.62	269.252000	Y 377.433
Ca (315.887 nm)	0.226407	ppm	0.000005	0.00	117.935112	Y_R 377.433
Cd (214.439 nm)	0.005273	ppm	0.000025	0.47	316.121000	Y 377.433
Co (228.615 nm)	0.010536	ppm	0.000006	0.05	154.730000	Y 242.219
Cr (205.560 nm)	0.010429	ppm	0.000167	1.60	154.728000	Y 377.433
Cu (324.754 nm)	0.017776	ppm	0.000182	1.02	696.778000	Y 377.433
Fe (238.204 nm)	0.100239	ppm	0.000835	0.83	395.575852	Y_R 377.433
Fe H (259.940 nm)	0.106029 u	ppm	0.001005	0.95	203.819000	Y_R 377.433
K (766.491 nm)	3.333180	ppm	0.097372	2.92	3081.490000	Y_R2 488.368
Li (670.783 nm)	0.032632 Q	ppm	0.000636	1.95	-265.392000 Q	Y_R2 488.368
Mg (279.078 nm)	0.206609	ppm	0.000531	0.26	1231.580000	Y 377.433
Mn (257.610 nm)	0.010508	ppm	0.000004	0.03	2519.280000	Y 377.433
Mo (202.032 nm)	0.019476	ppm	0.000099	0.51	167.700000	Y 377.433
Na (589.592 nm)	1.132850	ppm	0.004227	0.37	7774.940000	Y_R2 488.368
Na H (589.593 nm)	1.396355 u	ppm	0.020636	1.48	7518.583347	Y_R 488.368
Ni (231.604 nm)	0.043447	ppm	0.000285	0.66	292.298000	Y 377.433
P (213.618 nm)	2.894630 o	ppm	0.000416	0.01	6314.590000	Y 242.219
Pb (220.353 nm)	0.010058	ppm	0.000428	4.25	32.283200	Y 242.219
S (181.972 nm)	0.241575 Q	ppm	0.001799	0.74	137.920032 Q	Y 377.433
Sb (206.834 nm)	0.021552	ppm	0.000623	2.89	35.810600	Y 377.433
Se (196.026 nm)	0.018343	ppm	0.000433	2.36	31.238300	Y 242.219
Si (288.158 nm)	0.504294	ppm	0.004179	0.83	5263.900000	Y 377.433
Sn (189.925 nm)	0.103309	ppm	0.001043	1.01	214.955000	Y 377.433
Sr (421.552 nm)	0.010254	ppm	0.000111	1.09	2307.534402	Y_R 488.368
Th (288.505 nm)	0.020748 Q	ppm	0.001532	7.39	127.462000 Q	Y 377.433
Ti (336.122 nm)	0.009976	ppm	0.000026	0.26	1193.120000	Y 377.433
Tl (190.794 nm)	0.015888	ppm	0.000017	0.11	29.513700	Y 377.433
U (409.013 nm)	0.069327	ppm	0.001722	2.48	104.876000	Y 377.433
V (292.401 nm)	0.009962	ppm	0.000014	0.14	391.780000	Y 377.433
Zn (206.200 nm)	0.016090	ppm	0.000577	3.58	111.770000	Y 377.433
Zr (343.823 nm)	0.015289	ppm	0.000003	0.02	2037.190000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.136561	21685.825673	0.000089	0.01
Y 377.433	1.122594	1136276.095957	0.000965	0.09
Y_R 377.433	1.185210	89475.000000	0.008185	0.69
Y_R 488.368	1.161500	50851.200000	0.002168	0.19
Y_R2 488.368	1.158041	100496.577628	0.002734	0.24

Sample Name: 280-116481-D-4-B

Date: 11/7/2018 1:39:01 AM Rack:Tube: 2:61

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001883	ppm	0.000184	9.77	-359.613000	Y 377.433
Al (167.019 nm)	0.002683	ppm	0.001588	59.19	3.863270	Y_R 377.433
Al H (396.152 nm)	0.041454 u	ppm	0.010688	25.78	416.859637	Y_R 377.433
As (188.980 nm)	-0.000241 u	ppm	0.000974	> 100.00	-2.040870	Y 242.219
B (249.678 nm)	0.650939	ppm	0.000664	0.10	16317.700000	Y 242.219
Ba (493.408 nm)	0.007482	ppm	0.000058	0.78	1590.030000	Y_R 488.368
Be (234.861 nm)	0.000064	ppm	0.000002	3.87	-27.240200	Y_R 488.368
Bi (223.061 nm)	-0.001437 u	ppm	0.002193	> 100.00	9.126340	Y 377.433
Ca (315.887 nm)	535.885339 o	ppm	2.605312	0.49	424849.405559	Y_R 377.433
Cd (214.439 nm)	0.000339	ppm	0.000070	20.71	21.155300	Y 377.433
Co (228.615 nm)	-0.000225 u	ppm	0.000551	> 100.00	-40.524400	Y 242.219
Cr (205.560 nm)	0.000398	ppm	0.000151	37.87	2.078310	Y 377.433
Cu (324.754 nm)	-0.000820 u	ppm	0.000169	20.57	-660.466000	Y 377.433
Fe (238.204 nm)	0.019839	ppm	0.000206	1.04	98.214175	Y_R 377.433
Fe H (259.940 nm)	0.015365 u	ppm	0.003241	21.09	32.300800	Y_R 377.433
K (766.491 nm)	2.191690	ppm	0.045007	2.05	1767.090000	Y_R2 488.368
Li (670.783 nm)	0.549891	ppm	0.000325	0.06	16985.600000	Y_R2 488.368
Mg (279.078 nm)	369.186000 o	ppm	2.173430	0.59	2132650.000000	Y 377.433
Mn (257.610 nm)	0.327312	ppm	0.000385	0.12	76608.700000	Y 377.433
Mo (202.032 nm)	0.008096	ppm	0.000068	0.84	69.694000	Y 377.433
Na (589.592 nm)	556.839000 o	ppm	1.114400	0.20	3666730.000000	Y_R2 488.368
Na H (589.593 nm)	590.936697	ppm	7.454938	1.26	2167356.485649	Y_R 488.368
Ni (231.604 nm)	0.018498	ppm	0.000010	0.05	122.089000	Y 377.433
P (213.618 nm)	0.022777	ppm	0.000891	3.91	74.052200	Y 242.219
Pb (220.353 nm)	0.000514 u	ppm	0.000997	> 100.00	4.869770	Y 242.219
S (181.972 nm)	960.335951 bo	ppm	2.925330	0.30	491849.842581	Y 377.433
Sb (206.834 nm)	-0.002303 u	ppm	0.003173	> 100.00	-29.653900	Y 377.433
Se (196.026 nm)	0.000292 u	ppm	0.004122	> 100.00	13.550100	Y 242.219
Si (288.158 nm)	7.501320	ppm	0.046789	0.62	65401.100000	Y 377.433
Sn (189.925 nm)	-0.000643 u	ppm	0.000753	> 100.00	8.320440	Y 377.433
Sr (421.552 nm)	7.783694 o	ppm	0.097139	1.25	1633305.396361	Y_R 488.368
Th (288.505 nm)	0.008940	ppm	0.000315	3.52	103.064000	Y 377.433
Ti (336.122 nm)	-0.000804 u	ppm	0.000034	4.24	1334.240000	Y 377.433
Tl (190.794 nm)	0.003328	ppm	0.000945	28.40	1.950150	Y 377.433
U (409.013 nm)	0.039848	ppm	0.000111	0.28	-128.981000	Y 377.433
V (292.401 nm)	0.001557	ppm	0.000275	17.63	92.691400	Y 377.433
Zn (206.200 nm)	-0.002400 u	ppm	0.000823	34.28	15.206900	Y 377.433
Zr (343.823 nm)	-0.000393 u	ppm	0.000057	14.63	-24.929200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021162	19483.986274	0.002351	0.23
Y 377.433	1.035659	1048280.723958	0.002218	0.21
Y_R 377.433	1.157460	87379.900000	0.000424	0.04
Y_R 488.368	1.130110	49477.000000	0.010840	0.96
Y_R2 488.368	1.099294	95398.484394	0.005628	0.51

Sample Name: 280-116481-D-5-B

Date: 11/7/2018 1:42:23 AM
Rack:Tube: 2:62

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002207	ppm	0.000168	7.63	-344.782000	Y 377.433
Al (167.019 nm)	0.004358	ppm	0.000940	21.56	4.804950	Y_R 377.433
Al H (396.152 nm)	0.047731 u	ppm	0.000886	1.86	387.212300	Y_R 377.433
As (188.980 nm)	0.001322	ppm	0.000036	2.76	-0.072987	Y 242.219
B (249.678 nm)	0.680605	ppm	0.000603	0.09	17058.800000	Y 242.219
Ba (493.408 nm)	0.005998	ppm	0.000053	0.89	1394.200000	Y_R 488.368
Be (234.861 nm)	0.000028	ppm	0.000031	> 100.00	-37.079300	Y_R 488.368
Bi (223.061 nm)	-0.001728 u	ppm	0.000321	18.60	8.396650	Y 377.433
Ca (315.887 nm)	432.812816 o	ppm	1.524940	0.35	343121.757746	Y_R 377.433
Cd (214.439 nm)	0.000160	ppm	0.000099	62.02	10.496300	Y 377.433
Co (228.615 nm)	0.000170	ppm	0.000181	> 100.00	-33.375700	Y 242.219
Cr (205.560 nm)	0.000499	ppm	0.000015	3.07	3.624220	Y 377.433
Cu (324.754 nm)	-0.000584 u	ppm	0.000215	36.87	-586.935000	Y 377.433
Fe (238.204 nm)	0.031093	ppm	0.001487	4.78	139.836383	Y_R 377.433
Fe H (259.940 nm)	0.027210 u	ppm	0.001303	4.79	54.708700	Y_R 377.433
K (766.491 nm)	10.485200	ppm	0.066731	0.64	11316.800000	Y_R2 488.368
Li (670.783 nm)	0.679750	ppm	0.001394	0.21	21316.500000	Y_R2 488.368
Mg (279.078 nm)	508.702000 o	ppm	0.029109	0.01	2938570.000000	Y 377.433
Mn (257.610 nm)	1.000600	ppm	0.001291	0.13	234066.000000	Y 377.433
Mo (202.032 nm)	0.001371	ppm	0.000500	36.47	11.776700	Y 377.433
Na (589.592 nm)	848.120000 o	ppm	3.649110	0.43	5584620.000000	Y_R2 488.368
Na H (589.593 nm)	892.164347	ppm	3.487938	0.39	3270931.933772	Y_R 488.368
Ni (231.604 nm)	0.005899	ppm	0.000319	5.41	36.145900	Y 377.433
P (213.618 nm)	0.005377	ppm	0.000686	12.75	36.240800	Y 242.219
Pb (220.353 nm)	0.001268	ppm	0.000486	38.32	7.089070	Y 242.219
S (181.972 nm)	1288.555301 bo	ppm	3.510504	0.27	659948.634864	Y 377.433
Sb (206.834 nm)	-0.001485 u	ppm	0.001466	98.76	-27.388600	Y 377.433
Se (196.026 nm)	0.000722 u	ppm	0.001497	> 100.00	14.530300	Y 242.219
Si (288.158 nm)	6.008520	ppm	0.050211	0.84	52571.000000	Y 377.433
Sn (189.925 nm)	-0.000202 u	ppm	0.000380	> 100.00	9.196720	Y 377.433
Sr (421.552 nm)	7.662074 o	ppm	0.069896	0.91	1607787.562747	Y_R 488.368
Th (288.505 nm)	0.012587	ppm	0.001176	9.34	126.171000	Y 377.433
Ti (336.122 nm)	-0.000463 u	ppm	0.000004	0.85	1059.780000	Y 377.433
Tl (190.794 nm)	0.001962	ppm	0.000247	12.59	-1.035470	Y 377.433
U (409.013 nm)	0.035553	ppm	0.000491	1.38	-128.809000	Y 377.433
V (292.401 nm)	0.001086	ppm	0.000417	38.43	74.523600	Y 377.433
Zn (206.200 nm)	0.005060	ppm	0.000253	4.99	54.164800	Y 377.433
Zr (343.823 nm)	-0.000436 u	ppm	0.000037	8.51	-30.556400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008619	19244.661979	0.002773	0.27
Y 377.433	1.020008	1032439.716288	0.002294	0.22
Y_R 377.433	1.156560	87312.500000	0.004442	0.38
Y_R 488.368	1.128940	49425.500000	0.005038	0.45
Y_R2 488.368	1.093222	94871.558018	0.006678	0.61

Sample Name: 280-116481-D-6-B

Date: 11/7/2018 1:45:45 AM Rack:Tube: 2:63

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.003514	ppm	0.000260	7.40	-284.346000	Y 377.433
Al (167.019 nm)	0.145774	ppm	0.004493	3.08	83.834300	Y_R 377.433
Al H (396.152 nm)	0.194917 u	ppm	0.006493	3.33	659.626356	Y_R 377.433
As (188.980 nm)	-0.002331 u	ppm	0.001720	73.78	-4.675560	Y 242.219
B (249.678 nm)	0.802210	ppm	0.000542	0.07	20096.600000	Y 242.219
Ba (493.408 nm)	0.016378	ppm	0.000055	0.34	2544.600000	Y_R 488.368
Be (234.861 nm)	-0.000028 u	ppm	0.000012	42.08	-45.160800	Y_R 488.368
Bi (223.061 nm)	0.000786 u	ppm	0.003248	> 100.00	14.773200	Y 377.433
Ca (315.887 nm)	207.951743 o	ppm	0.216948	0.10	164826.262418	Y_R 377.433
Cd (214.439 nm)	0.001225	ppm	0.000074	6.04	74.391600	Y 377.433
Co (228.615 nm)	0.012537	ppm	0.000031	0.25	190.749000	Y 242.219
Cr (205.560 nm)	0.000837	ppm	0.000245	29.30	8.701630	Y 377.433
Cu (324.754 nm)	0.002664	ppm	0.000096	3.59	-263.630000	Y 377.433
Fe (238.204 nm)	0.300863	ppm	0.001418	0.47	1137.591195	Y_R 377.433
Fe H (259.940 nm)	0.294701 u	ppm	0.003015	1.02	560.749000	Y_R 377.433
K (766.491 nm)	40.778800	ppm	0.025968	0.06	46199.200000	Y_R2 488.368
Li (670.783 nm)	2.630270 o	ppm	0.003865	0.15	86367.500000	Y_R2 488.368
Mg (279.078 nm)	2611.750000 bo	ppm	21.958800	0.84	15086900.000000	Y 377.433
Mn (257.610 nm)	7.122540 o	ppm	0.037106	0.52	1665770.000000	Y 377.433
Mo (202.032 nm)	0.001039	ppm	0.000875	84.23	8.922070	Y 377.433
Na (589.592 nm)	2589.710000 o	ppm	23.399700	0.90	17051800.000000	Y_R2 488.368
Na H (589.593 nm)	2316.892890	ppm	11.610354	0.50	8490573.408626	Y_R 488.368
Ni (231.604 nm)	0.020086	ppm	0.000380	1.89	132.945000	Y 377.433
P (213.618 nm)	0.051483	ppm	0.001565	3.04	136.430000	Y 242.219
Pb (220.353 nm)	0.000151 u	ppm	0.000518	> 100.00	3.824450	Y 242.219
S (181.972 nm)	3165.217574 bo	ppm	13.975264	0.44	1621093.949312	Y 377.433
Sb (206.834 nm)	-0.002851 u	ppm	0.002745	96.29	-31.131800	Y 377.433
Se (196.026 nm)	-0.003870 u	ppm	0.000345	8.90	14.948800	Y 242.219
Si (288.158 nm)	6.286710	ppm	0.006447	0.10	54961.900000	Y 377.433
Sn (189.925 nm)	0.000526	ppm	0.000615	> 100.00	10.643500	Y 377.433
Sr (421.552 nm)	7.329839 o	ppm	0.019377	0.26	1538079.017027	Y_R 488.368
Th (288.505 nm)	-0.002792 u	ppm	0.007879	> 100.00	210.777000	Y 377.433
Ti (336.122 nm)	0.003193	ppm	0.000059	1.85	876.455000	Y 377.433
Tl (190.794 nm)	0.002758	ppm	0.002716	98.48	0.740912	Y 377.433
U (409.013 nm)	-0.028189 u	ppm	0.008893	31.55	-374.291000	Y 377.433
V (292.401 nm)	0.001636	ppm	0.000273	16.68	96.881200	Y 377.433
Zn (206.200 nm)	0.002101	ppm	0.000104	4.93	38.712800	Y 377.433
Zr (343.823 nm)	0.000696	ppm	0.000039	5.59	119.079000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.851225	16241.549924	0.001997	0.23
Y 377.433	0.874218	884872.661635	0.003594	0.41
Y_R 377.433	1.072720	80982.600000	0.004744	0.44
Y_R 488.368	1.038960	45486.200000	0.004186	0.40
Y_R2 488.368	1.015387	88116.881818	0.001963	0.19

Sample Name: 280-116481-D-7-B

Date: 11/7/2018 1:49:07 AM Rack:Tube: 2:64

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002189	ppm	0.000244	11.16	-345.357000	Y 377.433
Al (167.019 nm)	0.014445	ppm	0.002880	19.94	10.427700	Y_R 377.433
Al H (396.152 nm)	0.057898 u	ppm	0.001423	2.46	373.348545	Y_R 377.433
As (188.980 nm)	-0.001423 u	ppm	0.001408	98.92	-3.529580	Y 242.219
B (249.678 nm)	0.607943	ppm	0.000583	0.10	15243.700000	Y 242.219
Ba (493.408 nm)	0.014941	ppm	0.000075	0.50	2408.980000	Y_R 488.368
Be (234.861 nm)	0.000072	ppm	0.000003	4.73	-23.896600	Y_R 488.368
Bi (223.061 nm)	-0.000888 u	ppm	0.000614	69.23	10.512000	Y 377.433
Ca (315.887 nm)	342.628710 o	ppm	0.229362	0.07	271613.516417	Y_R 377.433
Cd (214.439 nm)	0.000234	ppm	0.000068	29.03	14.886700	Y 377.433
Co (228.615 nm)	0.000305	ppm	0.000044	14.44	-30.900900	Y 242.219
Cr (205.560 nm)	0.000381	ppm	0.000028	7.25	1.825850	Y 377.433
Cu (324.754 nm)	0.000368	ppm	0.000208	56.41	-477.462000	Y 377.433
Fe (238.204 nm)	0.029670	ppm	0.001010	3.40	134.573891	Y_R 377.433
Fe H (259.940 nm)	0.021528 u	ppm	0.001968	9.14	43.959600	Y_R 377.433
K (766.491 nm)	19.436300	ppm	0.026292	0.14	21623.900000	Y_R2 488.368
Li (670.783 nm)	2.291140 o	ppm	0.000249	0.01	75057.400000	Y_R2 488.368
Mg (279.078 nm)	1230.850000 bo	ppm	0.355588	0.03	7110060.000000	Y 377.433
Mn (257.610 nm)	0.512019	ppm	0.000282	0.06	119805.000000	Y 377.433
Mo (202.032 nm)	0.000492	ppm	0.000295	60.05	4.208430	Y 377.433
Na (589.592 nm)	1166.250000 o	ppm	3.942940	0.34	7679290.000000	Y_R2 488.368
Na H (589.593 nm)	1228.917874	ppm	0.030492	0.00	4504669.349545	Y_R 488.368
Ni (231.604 nm)	0.016487	ppm	0.000679	4.12	108.369000	Y 377.433
P (213.618 nm)	0.039073	ppm	0.002561	6.56	109.462000	Y 242.219
Pb (220.353 nm)	-0.000326 u	ppm	0.001321	> 100.00	2.488320	Y 242.219
S (181.972 nm)	1945.521640 bo	ppm	6.685787	0.34	996411.923443	Y 377.433
Sb (206.834 nm)	-0.004067 u	ppm	0.001389	34.15	-34.416400	Y 377.433
Se (196.026 nm)	0.025671	ppm	0.002014	7.85	38.956800	Y 242.219
Si (288.158 nm)	5.814110	ppm	0.007243	0.12	50900.100000	Y 377.433
Sn (189.925 nm)	0.001696	ppm	0.001207	71.18	12.969000	Y 377.433
Sr (421.552 nm)	6.450007 o	ppm	0.032452	0.50	1353475.603360	Y_R 488.368
Th (288.505 nm)	-0.001009 u	ppm	0.000702	69.61	81.218100	Y 377.433
Ti (336.122 nm)	-0.000025 u	ppm	0.000079	> 100.00	838.519000	Y 377.433
Tl (190.794 nm)	0.002171	ppm	0.000634	29.22	-0.574984	Y 377.433
U (409.013 nm)	0.015164	ppm	0.001933	12.75	-203.871000	Y 377.433
V (292.401 nm)	0.001855	ppm	0.000026	1.42	103.232000	Y 377.433
Zn (206.200 nm)	-0.002437 u	ppm	0.000311	12.74	15.011300	Y 377.433
Zr (343.823 nm)	-0.000123 u	ppm	0.000108	88.02	10.592700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.956160	18243.729807	0.000157	0.02
Y 377.433	0.966448	978226.254991	0.001448	0.15
Y_R 377.433	1.101230	83135.000000	0.001616	0.15
Y_R 488.368	1.070960	46887.500000	0.002377	0.22
Y_R2 488.368	1.077665	93521.464158	0.003468	0.32

Sample Name: 280-116481-D-8-B

Date: 11/7/2018 1:52:29 AM Rack:Tube: 2:65

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.004087	ppm	0.000233	5.69	-258.747000	Y 377.433
Al (167.019 nm)	0.738749	ppm	0.004213	0.57	414.950000	Y_R 377.433
Al H (396.152 nm)	0.946341	ppm	0.014419	1.52	2533.926040	Y_R 377.433
As (188.980 nm)	0.003108	ppm	0.000593	19.07	2.166930	Y 242.219
B (249.678 nm)	0.980006	ppm	0.001466	0.15	24536.900000	Y 242.219
Ba (493.408 nm)	0.026429	ppm	0.000600	2.27	3701.100000	Y_R 488.368
Be (234.861 nm)	0.000038	ppm	0.000018	48.27	-1.615310	Y_R 488.368
Bi (223.061 nm)	0.005936	ppm	0.004510	75.98	27.866500	Y 377.433
Ca (315.887 nm)	172.003596 o	ppm	0.496884	0.29	136322.473099	Y_R 377.433
Cd (214.439 nm)	0.001276	ppm	0.000031	2.46	78.201700	Y 377.433
Co (228.615 nm)	0.014292	ppm	0.000100	0.70	222.932000	Y 242.219
Cr (205.560 nm)	0.001759	ppm	0.000166	9.42	22.523500	Y 377.433
Cu (324.754 nm)	0.004899	ppm	0.000231	4.72	-117.789000	Y 377.433
Fe (238.204 nm)	1.048303	ppm	0.002838	0.27	3902.021826	Y_R 377.433
Fe H (259.940 nm)	1.052710 u	ppm	0.008024	0.76	1994.760000	Y_R 377.433
K (766.491 nm)	56.126200	ppm	0.107868	0.19	63871.400000	Y_R2 488.368
Li (670.783 nm)	4.931420 o	ppm	0.006282	0.13	163113.000000	Y_R2 488.368
Mg (279.078 nm)	4138.080000 bo	ppm	13.685100	0.33	23903700.000000	Y 377.433
Mn (257.610 nm)	5.810530 o	ppm	0.013398	0.23	1358940.000000	Y 377.433
Mo (202.032 nm)	0.000869	ppm	0.000268	30.81	7.451840	Y 377.433
Na (589.592 nm)	2773.810000 o	ppm	12.238400	0.44	18264100.000000	Y_R2 488.368
Na H (589.593 nm)	2480.859619	ppm	24.267400	0.98	9091290.790185	Y_R 488.368
Ni (231.604 nm)	0.033466	ppm	0.001808	5.40	224.247000	Y 377.433
P (213.618 nm)	0.133675	ppm	0.000012	0.01	315.033000	Y 242.219
Pb (220.353 nm)	0.003360	ppm	0.000918	27.33	12.893300	Y 242.219
S (181.972 nm)	3668.813070 bo	ppm	12.274781	0.33	1879006.519530	Y 377.433
Sb (206.834 nm)	-0.002920 u	ppm	0.001987	68.06	-31.583200	Y 377.433
Se (196.026 nm)	-0.000736 u	ppm	0.002287	> 100.00	16.850900	Y 242.219
Si (288.158 nm)	6.163720	ppm	0.031708	0.51	53904.900000	Y 377.433
Sn (189.925 nm)	-0.001096 u	ppm	0.004053	> 100.00	7.418820	Y 377.433
Sr (421.552 nm)	5.960544 o	ppm	0.102905	1.73	1250778.110642	Y_R 488.368
Th (288.505 nm)	-0.042671 u	ppm	0.000911	2.13	82.406900	Y 377.433
Ti (336.122 nm)	0.014485	ppm	0.000261	1.80	2372.010000	Y 377.433
Tl (190.794 nm)	0.003536	ppm	0.002765	78.21	2.389670	Y 377.433
U (409.013 nm)	0.030933	ppm	0.002405	7.77	-99.391600	Y 377.433
V (292.401 nm)	0.004406	ppm	0.000382	8.67	196.312000	Y 377.433
Zn (206.200 nm)	0.014833	ppm	0.001071	7.22	105.208000	Y 377.433
Zr (343.823 nm)	0.001755	ppm	0.000086	4.92	260.529000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.805876	15376.282921	0.002036	0.25
Y 377.433	0.835895	846082.708149	0.002092	0.25
Y_R 377.433	1.048670	79167.200000	0.002903	0.28
Y_R 488.368	1.014420	44411.900000	0.008844	0.87
Y_R2 488.368	0.996762	86500.557849	0.000132	0.01

Sample Name: 280-116481-D-9-B

Date: 11/7/2018 1:55:50 AM
Rack:Tube: 2:66

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002195	ppm	0.000049	2.22	-345.223000	Y 377.433
Al (167.019 nm)	0.011321	ppm	0.000273	2.42	8.709900	Y_R 377.433
Al H (396.152 nm)	0.055752 u	ppm	0.001046	1.88	409.334569	Y_R 377.433
As (188.980 nm)	-0.001183 u	ppm	0.003931	> 100.00	-3.227910	Y 242.219
B (249.678 nm)	0.668863	ppm	0.000837	0.13	16765.400000	Y 242.219
Ba (493.408 nm)	0.007971	ppm	0.000015	0.18	1623.790000	Y_R 488.368
Be (234.861 nm)	0.000040	ppm	0.000018	46.50	-32.606000	Y_R 488.368
Bi (223.061 nm)	0.001196	ppm	0.000090	7.53	15.765000	Y 377.433
Ca (315.887 nm)	437.307638 o	ppm	0.880233	0.20	346685.764514	Y_R 377.433
Cd (214.439 nm)	0.000174	ppm	0.000021	12.12	11.350400	Y 377.433
Co (228.615 nm)	0.000826	ppm	0.000288	34.80	-21.479800	Y 242.219
Cr (205.560 nm)	0.000568	ppm	0.000016	2.76	4.668960	Y 377.433
Cu (324.754 nm)	-0.000517 u	ppm	0.000050	9.67	-585.548000	Y 377.433
Fe (238.204 nm)	0.063707	ppm	0.000548	0.86	260.461003	Y_R 377.433
Fe H (259.940 nm)	0.060888 u	ppm	0.001033	1.70	118.421000	Y_R 377.433
K (766.491 nm)	10.766600	ppm	0.007063	0.07	11640.900000	Y_R2 488.368
Li (670.783 nm)	0.672832	ppm	0.004877	0.72	21085.700000	Y_R2 488.368
Mg (279.078 nm)	506.926000 o	ppm	1.261830	0.25	2928310.000000	Y 377.433
Mn (257.610 nm)	1.353540 o	ppm	0.001342	0.10	316608.000000	Y 377.433
Mo (202.032 nm)	0.001355	ppm	0.000026	1.91	11.641900	Y 377.433
Na (589.592 nm)	853.676000 o	ppm	1.246510	0.15	5621210.000000	Y_R2 488.368
Na H (589.593 nm)	903.977890	ppm	5.404457	0.60	3314213.777172	Y_R 488.368
Ni (231.604 nm)	0.005563	ppm	0.000211	3.80	33.857900	Y 377.433
P (213.618 nm)	0.006410	ppm	0.001031	16.08	38.485700	Y 242.219
Pb (220.353 nm)	-0.000266 u	ppm	0.000907	> 100.00	2.680360	Y 242.219
S (181.972 nm)	1283.665430 bo	ppm	3.829009	0.30	657445.163946	Y 377.433
Sb (206.834 nm)	-0.003922 u	ppm	0.002049	52.24	-34.056700	Y 377.433
Se (196.026 nm)	-0.003562 u	ppm	0.001089	30.57	10.551900	Y 242.219
Si (288.158 nm)	6.098100	ppm	0.038329	0.63	53340.900000	Y 377.433
Sn (189.925 nm)	-0.000524 u	ppm	0.000903	> 100.00	8.555850	Y 377.433
Sr (421.552 nm)	7.837912 o	ppm	0.002985	0.04	1644681.250802	Y_R 488.368
Th (288.505 nm)	0.013689	ppm	0.003869	28.26	136.133000	Y 377.433
Ti (336.122 nm)	-0.000629 u	ppm	0.000007	1.07	1050.040000	Y 377.433
Tl (190.794 nm)	0.002141	ppm	0.000026	1.24	-0.640105	Y 377.433
U (409.013 nm)	0.038489	ppm	0.000660	1.71	-116.362000	Y 377.433
V (292.401 nm)	0.000737	ppm	0.000175	23.74	62.044900	Y 377.433
Zn (206.200 nm)	0.005421	ppm	0.000029	0.53	56.050500	Y 377.433
Zr (343.823 nm)	-0.000329 u	ppm	0.000046	13.87	-16.437700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991135	18911.064603	0.002240	0.23
Y 377.433	0.999427	1011608.122840	0.000369	0.04
Y_R 377.433	1.101020	83119.200000	0.001579	0.14
Y_R 488.368	1.066710	46701.000000	0.003520	0.33
Y_R2 488.368	1.057356	91759.035669	0.001982	0.19

Sample Name: CCVH-5408055

Date: 11/7/2018 1:59:13 AM
Rack:Tube: S1:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000072 u	ppm	0.000191	> 100.00	-697.318000	Y 377.433
Al (167.019 nm)	45.349600 o	ppm	0.042642	0.09	25319.600000	Y_R 377.433
Al H (396.152 nm)	48.969821	ppm	0.082874	0.17	123245.274344	Y_R 377.433
As (188.980 nm)	0.001407 u	ppm	0.003751	> 100.00	-0.406015	Y 242.219
B (249.678 nm)	0.000916	ppm	0.000106	11.53	5.104650	Y 242.219
Ba (493.408 nm)	-0.000474 u	ppm	0.000098	20.56	590.901000	Y_R 488.368
Be (234.861 nm)	-0.000122 u	ppm	0.000074	60.46	1472.840000	Y_R 488.368
Bi (223.061 nm)	0.997120	ppm	0.000039	0.00	2531.780000	Y 377.433
Ca (315.887 nm)	0.013725	ppm	0.000139	1.01	-50.706302	Y_R 377.433
Cd (214.439 nm)	-0.000342 u	ppm	0.000085	24.88	28.302800	Y 377.433
Co (228.615 nm)	0.002760	ppm	0.000198	7.18	13.550600	Y 242.219
Cr (205.560 nm)	-0.000021 u	ppm	0.000037	> 100.00	-17.985600	Y 377.433
Cu (324.754 nm)	-0.002528 u	ppm	0.000137	5.41	-95.947500	Y 377.433
Fe (238.204 nm)	48.784403 o	ppm	0.166290	0.34	180455.660015	Y_R 377.433
Fe H (259.940 nm)	50.067200	ppm	0.108989	0.22	94720.300000	Y_R 377.433
K (766.491 nm)	0.120248	ppm	0.013615	11.32	-618.127000	Y_R2 488.368
Li (670.783 nm)	0.008096	ppm	0.000184	2.27	-1083.690000	Y_R2 488.368
Mg (279.078 nm)	0.022592	ppm	0.010217	45.22	-191.096000	Y 377.433
Mn (257.610 nm)	0.001566	ppm	0.000018	1.13	427.989000	Y 377.433
Mo (202.032 nm)	-0.000293 u	ppm	0.000811	> 100.00	-2.549460	Y 377.433
Na (589.592 nm)	246.214000 o	ppm	0.114849	0.05	1621450.000000	Y_R2 488.368
Na H (589.593 nm)	258.532162	ppm	0.895090	0.35	949551.021511	Y_R 488.368
Ni (231.604 nm)	0.003929	ppm	0.001181	30.07	24.749600	Y 377.433
P (213.618 nm)	-0.003002 u	ppm	0.001339	44.60	18.034100	Y 242.219
Pb (220.353 nm)	-0.003317 u	ppm	0.000507	15.28	11.503900	Y 242.219
S (181.972 nm)	6.027584 Q	ppm	0.047352	0.79	3101.195981 Q	Y 377.433
Sb (206.834 nm)	-0.001863 u	ppm	0.002563	> 100.00	-74.597100	Y 377.433
Se (196.026 nm)	-0.003562 u	ppm	0.000765	21.47	0.475736	Y 242.219
Si (288.158 nm)	0.035702	ppm	0.003097	8.67	1236.500000	Y 377.433
Sn (189.925 nm)	0.000459	ppm	0.000039	8.44	10.510500	Y 377.433
Sr (421.552 nm)	0.000539	ppm	0.000005	0.87	269.095886	Y_R 488.368
Th (288.505 nm)	5.004140	ppm	0.038371	0.77	13082.400000	Y 377.433
Ti (336.122 nm)	0.000992	ppm	0.000044	4.40	-86.735200	Y 377.433
Tl (190.794 nm)	-0.004086 u	ppm	0.000524	12.82	-15.634800	Y 377.433
U (409.013 nm)	10.000800	ppm	0.021111	0.21	45077.600000	Y 377.433
V (292.401 nm)	0.004364	ppm	0.000090	2.05	25.510900	Y 377.433
Zn (206.200 nm)	-0.004564 u	ppm	0.000733	16.06	3.901170	Y 377.433
Zr (343.823 nm)	-0.004460 u	ppm	0.000061	1.37	-415.015000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115421	21282.468204	0.000322	0.03
Y 377.433	1.091884	1105191.656647	0.000812	0.07
Y_R 377.433	1.148600	86711.200000	0.004239	0.37
Y_R 488.368	1.120690	49064.400000	0.006006	0.54
Y_R2 488.368	1.105414	95929.590463	0.000423	0.04

Sample Name: CCV-5407546

Date: 11/7/2018 2:02:35 AM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.495747	ppm	0.000552	0.11	22271.400000	Y 377.433
Al (167.019 nm)	0.513534	ppm	0.005162	1.01	290.364000	Y_R 377.433
Al H (396.152 nm)	0.494978 u	ppm	0.006703	1.35	1367.386574	Y_R 377.433
As (188.980 nm)	0.989018	ppm	0.001084	0.11	1243.720000	Y 242.219
B (249.678 nm)	0.490210	ppm	0.000891	0.18	12320.800000	Y 242.219
Ba (493.408 nm)	0.494818	ppm	0.002759	0.56	57920.600000	Y_R 488.368
Be (234.861 nm)	0.484445	ppm	0.001356	0.28	144369.000000	Y_R 488.368
Bi (223.061 nm)	-0.004669 u	ppm	0.000036	0.77	1.400270	Y 377.433
Ca (315.887 nm)	5.152698	ppm	0.039205	0.76	4024.344066	Y_R 377.433
Cd (214.439 nm)	0.501176	ppm	0.000298	0.06	29957.200000	Y 377.433
Co (228.615 nm)	0.493161	ppm	0.001051	0.21	8913.570000	Y 242.219
Cr (205.560 nm)	0.499505	ppm	0.000445	0.09	7593.890000	Y 377.433
Cu (324.754 nm)	0.503597	ppm	0.000420	0.08	27772.100000	Y 377.433
Fe (238.204 nm)	2.476184	ppm	0.015106	0.61	9183.092017	Y_R 377.433
Fe H (259.940 nm)	2.548330 u	ppm	0.021591	0.85	4824.170000	Y_R 377.433
K (766.491 nm)	50.376600	ppm	0.051060	0.10	57250.900000	Y_R2 488.368
Li (670.783 nm)	0.998672	ppm	0.002271	0.23	31952.700000	Y_R2 488.368
Mg (279.078 nm)	20.075000	ppm	0.018126	0.09	115998.000000	Y 377.433
Mn (257.610 nm)	0.501536	ppm	0.000505	0.10	117353.000000	Y 377.433
Mo (202.032 nm)	0.507725	ppm	0.000281	0.06	4372.470000	Y 377.433
Na (589.592 nm)	5.257330	ppm	0.011049	0.21	35914.800000	Y_R2 488.368
Na H (589.593 nm)	7.139137 u	ppm	0.164204	2.30	29015.791007	Y_R 488.368
Ni (231.604 nm)	0.516900	ppm	0.001226	0.24	3523.300000	Y 377.433
P (213.618 nm)	0.951557	ppm	0.004137	0.43	2092.290000	Y 242.219
Pb (220.353 nm)	0.992732	ppm	0.002464	0.25	2848.750000	Y 242.219
S (181.972 nm)	0.749941	ppm	0.009887	1.32	399.493208	Y 377.433
Sb (206.834 nm)	1.004540	ppm	0.001176	0.12	2735.580000	Y 377.433
Se (196.026 nm)	0.982792	ppm	0.009462	0.96	991.121000	Y 242.219
Si (288.158 nm)	4.964810	ppm	0.047296	0.95	43600.600000	Y 377.433
Sn (189.925 nm)	1.033230	ppm	0.003133	0.30	2063.450000	Y 377.433
Sr (421.552 nm)	0.505754	ppm	0.002834	0.56	106271.756958	Y_R 488.368
Th (288.505 nm)	0.008566	ppm	0.001074	12.54	111.443000	Y 377.433
Ti (336.122 nm)	0.496674	ppm	0.000062	0.01	70520.900000	Y 377.433
Tl (190.794 nm)	1.009320	ppm	0.002020	0.20	2211.130000	Y 377.433
U (409.013 nm)	0.003251	ppm	0.003974	> 100.00	-230.794000	Y 377.433
V (292.401 nm)	0.494332	ppm	0.000416	0.08	17851.800000	Y 377.433
Zn (206.200 nm)	0.500168	ppm	0.002610	0.52	2639.950000	Y 377.433
Zr (343.823 nm)	0.500073	ppm	0.001501	0.30	65785.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125629	21477.247571	0.003408	0.30
Y 377.433	1.107928	1121430.509952	0.005038	0.45
Y_R 377.433	1.169410	88282.500000	0.008000	0.68
Y_R 488.368	1.138730	49854.100000	0.007456	0.65
Y_R2 488.368	1.131041	98153.544611	0.005250	0.46

Sample Name: CCB

Date: 11/7/2018 2:05:58 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001341	ppm	0.000171	12.77	-383.436000	Y 377.433
Al (167.019 nm)	-0.004439 u	ppm	0.002237	50.40	-0.122010	Y_R 377.433
Al H (396.152 nm)	-0.022735 u	ppm	0.000610	2.68	21.831042	Y_R 377.433
As (188.980 nm)	-0.001174 u	ppm	0.001990	> 100.00	-3.215070	Y 242.219
B (249.678 nm)	0.001152	ppm	0.000111	9.64	85.913400	Y 242.219
Ba (493.408 nm)	-0.000462 u	ppm	0.000068	14.69	545.991000	Y_R 488.368
Be (234.861 nm)	0.000082	ppm	0.000000	0.37	-21.853500	Y_R 488.368
Bi (223.061 nm)	-0.001746 u	ppm	0.000050	2.86	8.344220	Y 377.433
Ca (315.887 nm)	0.014191	ppm	0.004896	34.50	-50.337074	Y_R 377.433
Cd (214.439 nm)	0.000062	ppm	0.000048	76.41	4.617700	Y 377.433
Co (228.615 nm)	0.000483	ppm	0.000132	27.41	-27.708100	Y 242.219
Cr (205.560 nm)	0.000395	ppm	0.000044	11.22	2.061560	Y 377.433
Cu (324.754 nm)	0.001591	ppm	0.000314	19.77	-203.871000	Y 377.433
Fe (238.204 nm)	-0.001778 u	ppm	0.000160	9.01	18.261116	Y_R 377.433
Fe H (259.940 nm)	0.003318 u	ppm	0.002128	64.14	9.511170	Y_R 377.433
K (766.491 nm)	0.143226	ppm	0.053228	37.16	-591.669000	Y_R2 488.368
Li (670.783 nm)	0.009200	ppm	0.001333	14.49	-1046.870000	Y_R2 488.368
Mg (279.078 nm)	0.014057	ppm	0.005543	39.43	120.563000	Y 377.433
Mn (257.610 nm)	0.000069	ppm	0.000020	28.69	77.884000	Y 377.433
Mo (202.032 nm)	-0.000301 u	ppm	0.000065	21.53	-2.619100	Y 377.433
Na (589.592 nm)	0.194675	ppm	0.000206	0.11	1578.370000	Y_R2 488.368
Na H (589.593 nm)	1.296323 u	ppm	0.066792	5.15	7143.118834	Y_R 488.368
Ni (231.604 nm)	0.000358	ppm	0.000060	16.83	-1.654030	Y 377.433
P (213.618 nm)	-0.002911 u	ppm	0.001130	38.80	18.231400	Y 242.219
Pb (220.353 nm)	0.001452	ppm	0.000368	25.37	7.600900	Y 242.219
S (181.972 nm)	0.598155 Z	ppm	0.027644	4.62	320.516603 Z	Y 377.433
Sb (206.834 nm)	0.000465	ppm	0.000629	> 100.00	-21.952700	Y 377.433
Se (196.026 nm)	-0.002834 u	ppm	0.001452	51.24	10.170000	Y 242.219
Si (288.158 nm)	0.002569	ppm	0.001235	48.09	951.731000	Y 377.433
Sn (189.925 nm)	-0.000027 u	ppm	0.000049	> 100.00	9.543630	Y 377.433
Sr (421.552 nm)	-0.000003 u	ppm	0.000082	> 100.00	155.386542	Y_R 488.368
Th (288.505 nm)	0.007113	ppm	0.000767	10.79	91.200900	Y 377.433
Ti (336.122 nm)	-0.000115 u	ppm	0.000011	9.34	-244.542000	Y 377.433
Tl (190.794 nm)	0.001960	ppm	0.000710	36.22	-1.035840	Y 377.433
U (409.013 nm)	0.005638	ppm	0.002592	45.97	-182.076000	Y 377.433
V (292.401 nm)	-0.000058 u	ppm	0.000018	30.55	32.629900	Y 377.433
Zn (206.200 nm)	-0.005229 u	ppm	0.000070	1.34	0.428147	Y 377.433
Zr (343.823 nm)	-0.000147 u	ppm	0.000027	18.70	7.381520	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127872	21520.045624	0.002310	0.20
Y 377.433	1.112877	1126440.149984	0.002073	0.19
Y_R 377.433	1.167120	88109.500000	0.004968	0.43
Y_R 488.368	1.138420	49840.600000	0.009404	0.83
Y_R2 488.368	1.132130	98248.018644	0.006889	0.61

Sample Name: CCVL-5413446

Date: 11/7/2018 2:09:21 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011107	ppm	0.000001	0.01	64.237800	Y 377.433
Al (167.019 nm)	0.102787	ppm	0.000182	0.18	59.728300	Y_R 377.433
Al H (396.152 nm)	0.079206 u	ppm	0.002505	3.16	279.951213	Y_R 377.433
As (188.980 nm)	0.011407	ppm	0.000184	1.61	12.627000	Y 242.219
B (249.678 nm)	0.101708	ppm	0.000273	0.27	2598.100000	Y 242.219
Ba (493.408 nm)	0.009640	ppm	0.000266	2.76	1716.100000	Y_R 488.368
Be (234.861 nm)	0.001006	ppm	0.000003	0.32	255.602000	Y_R 488.368
Bi (223.061 nm)	0.103593	ppm	0.000339	0.33	273.616000	Y 377.433
Ca (315.887 nm)	0.223672	ppm	0.006010	2.69	115.766572	Y_R 377.433
Cd (214.439 nm)	0.005305	ppm	0.000002	0.04	318.073000	Y 377.433
Co (228.615 nm)	0.010573	ppm	0.000043	0.40	155.392000	Y 242.219
Cr (205.560 nm)	0.010259	ppm	0.000214	2.08	152.132000	Y 377.433
Cu (324.754 nm)	0.017933	ppm	0.000001	0.00	705.444000	Y 377.433
Fe (238.204 nm)	0.097959	ppm	0.001237	1.26	387.141241	Y_R 377.433
Fe H (259.940 nm)	0.106889 u	ppm	0.000507	0.47	205.446000	Y_R 377.433
K (766.491 nm)	3.339220	ppm	0.048968	1.47	3088.450000	Y_R2 488.368
Li (670.783 nm)	0.030285 Q	ppm	0.001331	4.39	-343.680000 Q	Y_R2 488.368
Mg (279.078 nm)	0.222394	ppm	0.002698	1.21	1322.810000	Y 377.433
Mn (257.610 nm)	0.010527	ppm	0.000030	0.29	2523.720000	Y 377.433
Mo (202.032 nm)	0.019828	ppm	0.000193	0.97	170.725000	Y 377.433
Na (589.592 nm)	1.262620	ppm	0.010784	0.85	8630.750000	Y_R2 488.368
Na H (589.593 nm)	2.301779 u	ppm	0.089355	3.88	10836.329280	Y_R 488.368
Ni (231.604 nm)	0.042856	ppm	0.000003	0.01	288.265000	Y 377.433
P (213.618 nm)	2.893280 o	ppm	0.036776	1.27	6311.630000	Y 242.219
Pb (220.353 nm)	0.008830	ppm	0.000511	5.78	28.760500	Y 242.219
S (181.972 nm)	0.659521 Q	ppm	0.002052	0.31	351.970738 Q	Y 377.433
Sb (206.834 nm)	0.020528	ppm	0.000504	2.46	33.006000	Y 377.433
Se (196.026 nm)	0.017169	ppm	0.002082	12.13	30.070000	Y 242.219
Si (288.158 nm)	0.497437	ppm	0.002603	0.52	5204.970000	Y 377.433
Sn (189.925 nm)	0.103536	ppm	0.000111	0.11	215.405000	Y 377.433
Sr (421.552 nm)	0.010398	ppm	0.000042	0.41	2337.685092	Y_R 488.368
Th (288.505 nm)	0.020197 Q	ppm	0.002719	13.46	126.023000 Q	Y 377.433
Ti (336.122 nm)	0.009948	ppm	0.000041	0.42	1189.240000	Y 377.433
Tl (190.794 nm)	0.016419	ppm	0.000662	4.03	30.681900	Y 377.433
U (409.013 nm)	0.065587	ppm	0.005328	8.12	87.973200	Y 377.433
V (292.401 nm)	0.009833	ppm	0.000354	3.60	387.161000	Y 377.433
Zn (206.200 nm)	0.016033	ppm	0.000218	1.36	111.476000	Y 377.433
Zr (343.823 nm)	0.015217	ppm	0.000085	0.56	2027.760000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.139804	21747.703722	0.000827	0.07
Y 377.433	1.125136	1138848.789007	0.001652	0.15
Y_R 377.433	1.163430	87830.800000	0.008818	0.76
Y_R 488.368	1.128500	49406.500000	0.000525	0.05
Y_R2 488.368	1.131188	98166.230085	0.001136	0.10

Sample Name: MB 280-436429/1-A

Date: 11/7/2018 2:12:44 AM Rack:Tube: 2:67

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001108	ppm	0.000080	7.19	-394.114000	Y 377.433
Al (167.019 nm)	-0.000764 u	ppm	0.000324	42.43	1.937170	Y_R 377.433
Al H (396.152 nm)	-0.015765 u	ppm	0.000117	0.74	39.400847	Y_R 377.433
As (188.980 nm)	-0.001429 u	ppm	0.000184	12.86	-3.536260	Y 242.219
B (249.678 nm)	0.000760	ppm	0.000057	7.49	76.101600	Y 242.219
Ba (493.408 nm)	-0.000727 u	ppm	0.000296	40.72	515.285000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000001	2.64	-37.429700	Y_R 488.368
Bi (223.061 nm)	0.001059 u	ppm	0.002913	> 100.00	15.412200	Y 377.433
Ca (315.887 nm)	0.019875	ppm	0.002166	10.90	-45.830358	Y_R 377.433
Cd (214.439 nm)	0.000058	ppm	0.000033	56.38	4.355170	Y 377.433
Co (228.615 nm)	0.000124 u	ppm	0.000216	> 100.00	-34.203100	Y 242.219
Cr (205.560 nm)	0.000519	ppm	0.000100	19.23	3.935810	Y 377.433
Cu (324.754 nm)	0.001557	ppm	0.000011	0.71	-205.665000	Y 377.433
Fe (238.204 nm)	0.012977	ppm	0.001887	14.54	72.832106	Y_R 377.433
Fe H (259.940 nm)	0.017386 u	ppm	0.000731	4.20	36.124800	Y_R 377.433
K (766.491 nm)	0.104274	ppm	0.065609	62.92	-636.521000	Y_R2 488.368
Li (670.783 nm)	0.010204	ppm	0.000175	1.72	-1013.390000	Y_R2 488.368
Mg (279.078 nm)	0.010195	ppm	0.005090	49.93	98.231200	Y 377.433
Mn (257.610 nm)	0.000354	ppm	0.000021	5.97	144.686000	Y 377.433
Mo (202.032 nm)	0.000146	ppm	0.000034	23.28	1.231670	Y 377.433
Na (589.592 nm)	0.168242	ppm	0.008468	5.03	1403.590000	Y_R2 488.368
Na H (589.593 nm)	0.875834 u	ppm	0.061129	6.98	5602.273974	Y_R 488.368
Ni (231.604 nm)	0.000431	ppm	0.000503	> 100.00	-1.156790	Y 377.433
P (213.618 nm)	-0.002597 u	ppm	0.001850	71.23	18.913100	Y 242.219
Pb (220.353 nm)	0.000180 u	ppm	0.000301	> 100.00	3.947380	Y 242.219
S (181.972 nm)	0.435239	ppm	0.014051	3.23	237.080056	Y 377.433
Sb (206.834 nm)	0.000823	ppm	0.001154	> 100.00	-20.974200	Y 377.433
Se (196.026 nm)	-0.001296 u	ppm	0.002942	> 100.00	11.698200	Y 242.219
Si (288.158 nm)	0.001407	ppm	0.000030	2.10	941.748000	Y 377.433
Sn (189.925 nm)	-0.000512 u	ppm	0.000200	39.13	8.579450	Y 377.433
Sr (421.552 nm)	0.000018	ppm	0.000002	9.58	159.807111	Y_R 488.368
Th (288.505 nm)	0.002714	ppm	0.002431	89.55	79.941600	Y 377.433
Ti (336.122 nm)	0.000013 u	ppm	0.000096	> 100.00	-226.259000	Y 377.433
Tl (190.794 nm)	0.000688 u	ppm	0.001306	> 100.00	-3.833710	Y 377.433
U (409.013 nm)	0.003562	ppm	0.002968	83.32	-191.452000	Y 377.433
V (292.401 nm)	-0.000458 u	ppm	0.000369	80.52	18.085700	Y 377.433
Zn (206.200 nm)	-0.004452 u	ppm	0.000103	2.31	4.487060	Y 377.433
Zr (343.823 nm)	-0.000298 u	ppm	0.000037	12.52	-12.444300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131003	21579.787190	0.004773	0.42
Y 377.433	1.118090	1131716.815383	0.000942	0.08
Y_R 377.433	1.188300	89708.300000	0.008064	0.68
Y_R 488.368	1.162910	50913.000000	0.012825	1.10
Y_R2 488.368	1.169922	101527.664397	0.000965	0.08

Sample Name: LCS 280-436429/2-A

Date: 11/7/2018 2:16:05 AM Rack:Tube: 2:68

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.047797	ppm	0.000127	0.27	1720.720000	Y 377.433
Al (167.019 nm)	2.002240	ppm	0.010164	0.51	1119.380000	Y_R 377.433
Al H (396.152 nm)	1.981811	ppm	0.005247	0.26	5171.666555	Y_R 377.433
As (188.980 nm)	0.997868	ppm	0.005698	0.57	1254.880000	Y 242.219
B (249.678 nm)	1.054980	ppm	0.001741	0.17	26430.900000	Y 242.219
Ba (493.408 nm)	2.017890 o	ppm	0.008507	0.42	234315.000000	Y_R 488.368
Be (234.861 nm)	0.049264	ppm	0.000034	0.07	14605.700000	Y_R 488.368
Bi (223.061 nm)	1.976270	ppm	0.005075	0.26	4989.360000	Y 377.433
Ca (315.887 nm)	51.522662 o	ppm	0.238293	0.46	40791.508594	Y_R 377.433
Cd (214.439 nm)	0.099754	ppm	0.000078	0.08	5964.300000	Y 377.433
Co (228.615 nm)	0.486969	ppm	0.000131	0.03	8820.700000	Y 242.219
Cr (205.560 nm)	0.203310	ppm	0.000439	0.22	3088.190000	Y 377.433
Cu (324.754 nm)	0.254754	ppm	0.000734	0.29	13928.300000	Y 377.433
Fe (238.204 nm)	1.034964	ppm	0.000916	0.09	3852.688498	Y_R 377.433
Fe H (259.940 nm)	1.057880 u	ppm	0.000425	0.04	2004.520000	Y_R 377.433
K (766.491 nm)	52.225700	ppm	0.186501	0.36	59380.100000	Y_R2 488.368
Li (670.783 nm)	1.026830	ppm	0.002844	0.28	32891.900000	Y_R2 488.368
Mg (279.078 nm)	50.498800 o	ppm	0.053724	0.11	291689.000000	Y 377.433
Mn (257.610 nm)	0.505161	ppm	0.000656	0.13	118201.000000	Y 377.433
Mo (202.032 nm)	1.055530	ppm	0.002009	0.19	9090.130000	Y 377.433
Na (589.592 nm)	50.752300 o	ppm	0.315658	0.62	338548.000000	Y_R2 488.368
Na H (589.593 nm)	54.287534	ppm	0.198636	0.37	203183.004533	Y_R 488.368
Ni (231.604 nm)	0.502298	ppm	0.000341	0.07	3424.900000	Y 377.433
P (213.618 nm)	10.324000 o	ppm	0.020363	0.20	22458.500000	Y 242.219
Pb (220.353 nm)	0.501226	ppm	0.000601	0.12	1441.660000	Y 242.219
S (181.972 nm)	2.388395	ppm	0.019590	0.82	1238.634284	Y 377.433
Sb (206.834 nm)	0.526431	ppm	0.002260	0.43	1410.270000	Y 377.433
Se (196.026 nm)	2.042730	ppm	0.009732	0.48	2046.420000	Y 242.219
Si (288.158 nm)	10.281900	ppm	0.033050	0.32	89298.900000	Y 377.433
Sn (189.925 nm)	2.116990	ppm	0.005011	0.24	4217.730000	Y 377.433
Sr (421.552 nm)	1.030933	ppm	0.002153	0.21	216463.111788	Y_R 488.368
Th (288.505 nm)	1.018490	ppm	0.000690	0.07	2749.250000	Y 377.433
Ti (336.122 nm)	1.030270	ppm	0.000191	0.02	146658.000000	Y 377.433
Tl (190.794 nm)	2.048200	ppm	0.001764	0.09	4490.410000	Y 377.433
U (409.013 nm)	2.084170	ppm	0.002271	0.11	9171.090000	Y 377.433
V (292.401 nm)	0.510832	ppm	0.000070	0.01	18487.600000	Y 377.433
Zn (206.200 nm)	0.495848	ppm	0.002446	0.49	2617.390000	Y 377.433
Zr (343.823 nm)	0.513361	ppm	0.000256	0.05	67528.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120910	21387.210590	0.001520	0.14
Y 377.433	1.111286	1124829.848553	0.001442	0.13
Y_R 377.433	1.193230	90080.300000	0.001558	0.13
Y_R 488.368	1.161440	50848.600000	0.000307	0.03
Y_R2 488.368	1.150309	99825.574329	0.009007	0.78

Sample Name: 280-116576-A-1-A

Date: 11/7/2018 2:19:27 AM
Rack:Tube: 2:69

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001182 u	ppm	0.000227	19.19	-559.340000	Y 377.433
Al (167.019 nm)	123.266000 o	ppm	0.386541	0.31	68921.600000	Y_R 377.433
Al H (396.152 nm)	225.466991 o	ppm	0.093929	0.04	567231.649845	Y_R 377.433
As (188.980 nm)	0.097946	ppm	0.002415	2.47	119.043000	Y 242.219
B (249.678 nm)	0.244723	ppm	0.000226	0.09	5737.910000	Y 242.219
Ba (493.408 nm)	1.116260 o	ppm	0.003309	0.30	130189.000000	Y_R 488.368
Be (234.861 nm)	0.034308	ppm	0.000065	0.19	19192.900000	Y_R 488.368
Bi (223.061 nm)	-0.014566 u	ppm	0.000984	6.75	23.674400	Y 377.433
Ca (315.887 nm)	160.777421 o	ppm	0.118538	0.07	127421.083544	Y_R 377.433
Cd (214.439 nm)	0.000073	ppm	0.000095	> 100.00	283.494000	Y 377.433
Co (228.615 nm)	0.074762	ppm	0.000182	0.24	1400.060000	Y 242.219
Cr (205.560 nm)	0.175231	ppm	0.001193	0.68	2583.610000	Y 377.433
Cu (324.754 nm)	0.167638	ppm	0.000148	0.09	9294.910000	Y 377.433
Fe (238.204 nm)	283.490721 o	ppm	2.155891	0.76	1048525.199710	Y_R 377.433
Fe H (259.940 nm)	294.437000	ppm	0.820954	0.28	557019.000000	Y_R 377.433
K (766.491 nm)	44.476200	ppm	0.265695	0.60	50456.700000	Y_R2 488.368
Li (670.783 nm)	0.170166	ppm	0.001261	0.74	4321.450000	Y_R2 488.368
Mg (279.078 nm)	58.810900 o	ppm	0.083444	0.14	339272.000000	Y 377.433
Mn (257.610 nm)	1.518580 o	ppm	0.000086	0.01	355205.000000	Y 377.433
Mo (202.032 nm)	0.005250	ppm	0.000360	6.85	45.184700	Y 377.433
Na (589.592 nm)	134.331000 o	ppm	0.131735	0.10	887039.000000	Y_R2 488.368
Na H (589.593 nm)	140.985133	ppm	0.103222	0.07	519960.460366	Y_R 488.368
Ni (231.604 nm)	0.111005	ppm	0.000228	0.21	765.034000	Y 377.433
P (213.618 nm)	5.789250 o	ppm	0.026133	0.45	12604.600000	Y 242.219
Pb (220.353 nm)	0.219186	ppm	0.000127	0.06	583.279000	Y 242.219
S (181.972 nm)	70.065829 o	ppm	0.166558	0.24	35902.038885	Y 377.433
Sb (206.834 nm)	-0.009593 u	ppm	0.000421	4.39	-129.489000	Y 377.433
Se (196.026 nm)	0.025047	ppm	0.002287	9.13	-13.206400	Y 242.219
Si (288.158 nm)	96.344200 o	ppm	0.284420	0.30	828977.000000	Y 377.433
Sn (189.925 nm)	0.023898	ppm	0.002066	8.65	57.102400	Y 377.433
Sr (421.552 nm)	1.602270 o	ppm	0.014996	0.94	336339.030415	Y_R 488.368
Th (288.505 nm)	0.239258	ppm	0.002975	1.24	718.899000	Y 377.433
Ti (336.122 nm)	2.285560 o	ppm	0.000942	0.04	325769.000000	Y 377.433
Tl (190.794 nm)	0.000376 u	ppm	0.002117	> 100.00	-22.146400	Y 377.433
U (409.013 nm)	-0.258354 u	ppm	0.003995	1.55	-1145.520000	Y 377.433
V (292.401 nm)	0.444096	ppm	0.000325	0.07	16181.000000	Y 377.433
Zn (206.200 nm)	0.791500	ppm	0.002789	0.35	4161.480000	Y 377.433
Zr (343.823 nm)	0.066992	ppm	0.000017	0.03	9676.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.316098	25111.427412	0.000347	0.03
Y 377.433	1.302931	1318811.117846	0.003231	0.25
Y_R 377.433	1.438890	108626.000000	0.006572	0.46
Y_R 488.368	1.399030	61250.200000	0.003693	0.26
Y_R2 488.368	1.396094	121155.259411	0.002197	0.16

Sample Name: 280-116576-A-1-A SD@5

Date: 11/7/2018 2:22:49 AM
Rack:Tube: 2:70

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000669	ppm	0.000126	18.85	-428.249000	Y 377.433
Al (167.019 nm)	48.111500 o	ppm	0.369179	0.77	26874.300000	Y_R 377.433
Al H (396.152 nm)	53.185343	ppm	0.354363	0.67	133864.844272	Y_R 377.433
As (188.980 nm)	0.021605	ppm	0.000537	2.48	24.833000	Y 242.219
B (249.678 nm)	0.057348	ppm	0.000235	0.41	1382.280000	Y 242.219
Ba (493.408 nm)	0.265224	ppm	0.000765	0.29	31392.900000	Y_R 488.368
Be (234.861 nm)	0.008327	ppm	0.000019	0.22	4673.700000	Y_R 488.368
Bi (223.061 nm)	-0.008385 u	ppm	0.001141	13.61	3.449980	Y 377.433
Ca (315.887 nm)	38.792021 o	ppm	0.241379	0.62	30697.148743	Y_R 377.433
Cd (214.439 nm)	-0.000009 u	ppm	0.000067	> 100.00	69.419700	Y 377.433
Co (228.615 nm)	0.017968	ppm	0.000002	0.01	308.726000	Y 242.219
Cr (205.560 nm)	0.042597	ppm	0.000356	0.83	624.640000	Y 377.433
Cu (324.754 nm)	0.039640	ppm	0.000142	0.36	1976.370000	Y 377.433
Fe (238.204 nm)	70.417365 o	ppm	0.480458	0.68	260465.930556	Y_R 377.433
Fe H (259.940 nm)	72.275200	ppm	0.505219	0.70	136733.000000	Y_R 377.433
K (766.491 nm)	10.499700	ppm	0.024513	0.23	11333.600000	Y_R2 488.368
Li (670.783 nm)	0.047314	ppm	0.000583	1.23	224.262000	Y_R2 488.368
Mg (279.078 nm)	13.785700	ppm	0.025737	0.19	79551.300000	Y 377.433
Mn (257.610 nm)	0.365363	ppm	0.000186	0.05	85507.500000	Y 377.433
Mo (202.032 nm)	0.000750	ppm	0.000223	29.69	6.432170	Y 377.433
Na (589.592 nm)	32.211500 o	ppm	0.059439	0.18	212926.000000	Y_R2 488.368
Na H (589.593 nm)	33.730773	ppm	0.133805	0.40	126220.669267	Y_R 488.368
Ni (231.604 nm)	0.026754	ppm	0.000637	2.38	181.363000	Y 377.433
P (213.618 nm)	1.337300	ppm	0.000788	0.06	2930.510000	Y 242.219
Pb (220.353 nm)	0.053680	ppm	0.000634	1.18	146.184000	Y 242.219
S (181.972 nm)	16.450182 o	ppm	0.020139	0.12	8440.012749	Y 377.433
Sb (206.834 nm)	-0.000484 u	ppm	0.000847	> 100.00	-44.246600	Y 377.433
Se (196.026 nm)	0.003815	ppm	0.001789	46.90	4.035130	Y 242.219
Si (288.158 nm)	23.217800 o	ppm	0.090646	0.39	200479.000000	Y 377.433
Sn (189.925 nm)	0.004590	ppm	0.001625	35.39	18.721700	Y 377.433
Sr (421.552 nm)	0.377752	ppm	0.001984	0.53	79414.736022	Y_R 488.368
Th (288.505 nm)	0.056861	ppm	0.003316	5.83	226.319000	Y 377.433
Ti (336.122 nm)	0.548873	ppm	0.000485	0.09	78060.000000	Y 377.433
Tl (190.794 nm)	0.000391	ppm	0.000391	99.91	-8.773280	Y 377.433
U (409.013 nm)	-0.058023 u	ppm	0.001646	2.84	-412.463000	Y 377.433
V (292.401 nm)	0.104041	ppm	0.000094	0.09	3817.330000	Y 377.433
Zn (206.200 nm)	0.188052	ppm	0.001157	0.62	1009.870000	Y 377.433
Zr (343.823 nm)	0.016166	ppm	0.000149	0.92	2361.110000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.188004	22667.366803	0.001714	0.14
Y 377.433	1.175687	1190016.337970	0.000696	0.06
Y_R 377.433	1.265910	95566.900000	0.005328	0.42
Y_R 488.368	1.229740	53838.900000	0.000837	0.07
Y_R2 488.368	1.217635	105668.277772	0.001028	0.08

Sample Name: 280-116576-A-1-B MS

Date: 11/7/2018 2:26:12 AM
Rack:Tube: 2:71

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.040076	ppm	0.000167	0.42	1288.480000	Y 377.433
Al (167.019 nm)	141.180000 o	ppm	1.669480	1.18	78921.300000	Y_R 377.433
Al H (396.152 nm)	315.113932 o	ppm	1.543636	0.49	792786.303464	Y_R 377.433
As (188.980 nm)	0.933700	ppm	0.005167	0.55	1171.350000	Y 242.219
B (249.678 nm)	1.134580 o	ppm	0.000073	0.01	27956.800000	Y 242.219
Ba (493.408 nm)	2.861970 o	ppm	0.009727	0.34	332395.000000	Y_R 488.368
Be (234.861 nm)	0.074067	ppm	0.000465	0.63	31569.500000	Y_R 488.368
Bi (223.061 nm)	1.682900	ppm	0.002650	0.16	4301.080000	Y 377.433
Ca (315.887 nm)	200.590063 o	ppm	1.388338	0.69	158989.131836	Y_R 377.433
Cd (214.439 nm)	0.079767	ppm	0.000033	0.04	5064.550000	Y 377.433
Co (228.615 nm)	0.475357	ppm	0.002709	0.57	8724.310000	Y 242.219
Cr (205.560 nm)	0.369666	ppm	0.000702	0.19	5536.580000	Y 377.433
Cu (324.754 nm)	0.398363	ppm	0.001027	0.26	22196.500000	Y 377.433
Fe (238.204 nm)	301.573219 o	ppm	1.479925	0.49	1115403.953423	Y_R 377.433
Fe H (259.940 nm)	315.024000	ppm	0.788332	0.25	595965.000000	Y_R 377.433
K (766.491 nm)	92.263200	ppm	0.390466	0.42	105482.000000	Y_R2 488.368
Li (670.783 nm)	1.084320	ppm	0.003530	0.33	34809.000000	Y_R2 488.368
Mg (279.078 nm)	105.308000 o	ppm	0.297815	0.28	607788.000000	Y 377.433
Mn (257.610 nm)	1.971510 o	ppm	0.005266	0.27	461129.000000	Y 377.433
Mo (202.032 nm)	0.773086	ppm	0.001867	0.24	6657.740000	Y 377.433
Na (589.592 nm)	173.205000 o	ppm	0.315561	0.18	1146530.000000	Y_R2 488.368
Na H (589.593 nm)	184.018028	ppm	0.449846	0.24	679259.743613	Y_R 488.368
Ni (231.604 nm)	0.531985	ppm	0.001680	0.32	3639.470000	Y 377.433
P (213.618 nm)	14.304900 o	ppm	0.016258	0.11	31109.000000	Y 242.219
Pb (220.353 nm)	0.624694	ppm	0.003311	0.53	1720.030000	Y 242.219
S (181.972 nm)	72.023088 o	ppm	0.031619	0.04	36905.562507	Y 377.433
Sb (206.834 nm)	0.136019	ppm	0.000432	0.32	254.330000	Y 377.433
Se (196.026 nm)	1.718850	ppm	0.001212	0.07	1671.140000	Y 242.219
Si (288.158 nm)	117.630000 o	ppm	0.302088	0.26	1011920.000000	Y 377.433
Sn (189.925 nm)	1.713080	ppm	0.001919	0.11	3414.840000	Y 377.433
Sr (421.552 nm)	2.485297 o	ppm	0.016412	0.66	521613.045511	Y_R 488.368
Th (288.505 nm)	1.070800	ppm	0.004290	0.40	2907.370000	Y 377.433
Ti (336.122 nm)	4.183280 o	ppm	0.002097	0.05	596155.000000	Y 377.433
Tl (190.794 nm)	1.612110	ppm	0.005474	0.34	3510.430000	Y 377.433
U (409.013 nm)	1.487170	ppm	0.000106	0.01	6730.360000	Y 377.433
V (292.401 nm)	0.933549	ppm	0.000552	0.06	33892.700000	Y 377.433
Zn (206.200 nm)	1.242180 o	ppm	0.001615	0.13	6515.260000	Y 377.433
Zr (343.823 nm)	0.440932	ppm	0.000255	0.06	58896.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.277763	24379.983575	0.001782	0.14
Y 377.433	1.262491	1277878.096113	0.002112	0.17
Y_R 377.433	1.421720	107330.000000	0.006764	0.48
Y_R 488.368	1.389000	60811.300000	0.008933	0.64
Y_R2 488.368	1.390197	120643.501304	0.003296	0.24

Sample Name: 280-116576-A-1-C MSD

Date: 11/7/2018 2:29:34 AM
Rack:Tube: 2:72

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.040036	ppm	0.000009	0.02	1286.200000	Y 377.433
Al (167.019 nm)	144.487000 o	ppm	0.973804	0.67	80768.900000	Y_R 377.433
Al H (396.152 nm)	316.716247 o	ppm	2.023254	0.64	796817.817697	Y_R 377.433
As (188.980 nm)	0.928732	ppm	0.005811	0.63	1165.050000	Y 242.219
B (249.678 nm)	1.141090 o	ppm	0.000587	0.05	28111.700000	Y 242.219
Ba (493.408 nm)	2.920440 o	ppm	0.034875	1.19	339172.000000	Y_R 488.368
Be (234.861 nm)	0.075958	ppm	0.000718	0.95	32296.300000	Y_R 488.368
Bi (223.061 nm)	1.684240	ppm	0.004716	0.28	4305.320000	Y 377.433
Ca (315.887 nm)	203.304337 o	ppm	0.335513	0.17	161141.317946	Y_R 377.433
Cd (214.439 nm)	0.079507	ppm	0.000154	0.19	5054.070000	Y 377.433
Co (228.615 nm)	0.477813	ppm	0.000761	0.16	8775.680000	Y 242.219
Cr (205.560 nm)	0.371227	ppm	0.000290	0.08	5558.870000	Y 377.433
Cu (324.754 nm)	0.403045	ppm	0.000426	0.11	22457.300000	Y 377.433
Fe (238.204 nm)	306.705514 o	ppm	2.396313	0.78	1134385.924850	Y_R 377.433
Fe H (259.940 nm)	317.609000	ppm	0.773547	0.24	600855.000000	Y_R 377.433
K (766.491 nm)	94.452400	ppm	0.203158	0.22	108003.000000	Y_R2 488.368
Li (670.783 nm)	1.095330	ppm	0.003145	0.29	35176.300000	Y_R2 488.368
Mg (279.078 nm)	105.917000 o	ppm	0.150304	0.14	611292.000000	Y 377.433
Mn (257.610 nm)	1.987130 o	ppm	0.003591	0.18	464781.000000	Y 377.433
Mo (202.032 nm)	0.776567	ppm	0.000422	0.05	6687.720000	Y 377.433
Na (589.592 nm)	176.291000 o	ppm	0.862160	0.49	1166970.000000	Y_R2 488.368
Na H (589.593 nm)	187.692894	ppm	2.743752	1.46	692778.179703	Y_R 488.368
Ni (231.604 nm)	0.531012	ppm	0.002453	0.46	3633.050000	Y 377.433
P (213.618 nm)	14.381400 o	ppm	0.006271	0.04	31275.200000	Y 242.219
Pb (220.353 nm)	0.626387	ppm	0.000234	0.04	1724.810000	Y 242.219
S (181.972 nm)	72.542209 o	ppm	0.024476	0.03	37171.469586	Y 377.433
Sb (206.834 nm)	0.137118	ppm	0.004865	3.55	255.984000	Y 377.433
Se (196.026 nm)	1.708580	ppm	0.004141	0.24	1659.980000	Y 242.219
Si (288.158 nm)	133.804000 o	ppm	0.505588	0.38	1150930.000000	Y 377.433
Sn (189.925 nm)	1.717710	ppm	0.001042	0.06	3424.050000	Y 377.433
Sr (421.552 nm)	2.505121 o	ppm	0.015857	0.63	525772.481843	Y_R 488.368
Th (288.505 nm)	1.069150	ppm	0.001880	0.18	2903.460000	Y 377.433
Ti (336.122 nm)	4.373540 o	ppm	0.009946	0.23	623258.000000	Y 377.433
Tl (190.794 nm)	1.611540	ppm	0.004586	0.28	3508.190000	Y 377.433
U (409.013 nm)	1.492300	ppm	0.002005	0.13	6757.730000	Y 377.433
V (292.401 nm)	0.938557	ppm	0.001214	0.13	34078.500000	Y 377.433
Zn (206.200 nm)	1.245600 o	ppm	0.003099	0.25	6533.080000	Y 377.433
Zr (343.823 nm)	0.443052	ppm	0.001225	0.28	59190.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.280979	24441.357631	0.000127	0.01
Y 377.433	1.265624	1281048.552267	0.000211	0.02
Y_R 377.433	1.408480	106330.000000	0.005411	0.38
Y_R 488.368	1.369230	59945.600000	0.003668	0.27
Y_R2 488.368	1.362718	118258.817829	0.004104	0.30

Sample Name: 280-116576-A-2-A

Date: 11/7/2018 2:32:56 AM
Rack:Tube: 2:73

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000846	ppm	0.000345	40.84	-425.666000	Y 377.433
Al (167.019 nm)	49.982200 o	ppm	0.399014	0.80	27916.600000	Y_R 377.433
Al H (396.152 nm)	56.862983	ppm	0.311255	0.55	143151.696265	Y_R 377.433
As (188.980 nm)	0.030447	ppm	0.002046	6.72	35.976600	Y 242.219
B (249.678 nm)	0.178020	ppm	0.000940	0.53	4398.290000	Y 242.219
Ba (493.408 nm)	0.335861	ppm	0.003131	0.93	39592.500000	Y_R 488.368
Be (234.861 nm)	0.005770	ppm	0.000174	3.01	3882.520000	Y_R 488.368
Bi (223.061 nm)	-0.007818 u	ppm	0.002106	26.94	4.725510	Y 377.433
Ca (315.887 nm)	123.524624 o	ppm	0.763507	0.62	97882.816845	Y_R 377.433
Cd (214.439 nm)	0.000220	ppm	0.000115	52.22	82.241800	Y 377.433
Co (228.615 nm)	0.021320	ppm	0.000457	2.14	386.685000	Y 242.219
Cr (205.560 nm)	0.047495	ppm	0.000103	0.22	699.467000	Y 377.433
Cu (324.754 nm)	0.048558	ppm	0.000139	0.29	2415.110000	Y 377.433
Fe (238.204 nm)	69.509090 o	ppm	0.590309	0.85	257106.643599	Y_R 377.433
Fe H (259.940 nm)	71.540700	ppm	0.512637	0.72	135344.000000	Y_R 377.433
K (766.491 nm)	16.812000	ppm	0.054691	0.33	18602.100000	Y_R2 488.368
Li (670.783 nm)	0.073852	ppm	0.000408	0.55	1109.320000	Y_R2 488.368
Mg (279.078 nm)	29.707300	ppm	0.057358	0.19	171524.000000	Y 377.433
Mn (257.610 nm)	0.379602	ppm	0.000619	0.16	88837.400000	Y 377.433
Mo (202.032 nm)	0.003582	ppm	0.000175	4.89	30.818500	Y 377.433
Na (589.592 nm)	149.243000 o	ppm	0.480272	0.32	983647.000000	Y_R2 488.368
Na H (589.593 nm)	156.402937	ppm	1.725472	1.10	575708.971025	Y_R 488.368
Ni (231.604 nm)	0.029990	ppm	0.000665	2.22	203.397000	Y 377.433
P (213.618 nm)	2.539280 o	ppm	0.003429	0.14	5542.390000	Y 242.219
Pb (220.353 nm)	0.066100	ppm	0.000678	1.03	180.499000	Y 242.219
S (181.972 nm)	65.451626 o	ppm	0.037964	0.06	33536.076114	Y 377.433
Sb (206.834 nm)	-0.002398 u	ppm	0.000988	41.22	-49.433300	Y 377.433
Se (196.026 nm)	0.008433	ppm	0.000659	7.82	9.019750	Y 242.219
Si (288.158 nm)	81.139100 o	ppm	0.401737	0.50	698295.000000	Y 377.433
Sn (189.925 nm)	0.004754	ppm	0.001665	35.03	19.046700	Y 377.433
Sr (421.552 nm)	1.150590 o	ppm	0.012556	1.09	241569.116350	Y_R 488.368
Th (288.505 nm)	0.064766	ppm	0.002883	4.45	248.832000	Y 377.433
Ti (336.122 nm)	1.026740	ppm	0.002120	0.21	146380.000000	Y 377.433
Tl (190.794 nm)	0.000960	ppm	0.000271	28.28	-9.635290	Y 377.433
U (409.013 nm)	-0.056515 u	ppm	0.000448	0.79	-423.648000	Y 377.433
V (292.401 nm)	0.154618	ppm	0.000151	0.10	5664.320000	Y 377.433
Zn (206.200 nm)	0.191518	ppm	0.000105	0.05	1027.980000	Y 377.433
Zr (343.823 nm)	0.029740	ppm	0.000025	0.08	4143.250000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.147855	21901.324494	0.003133	0.27
Y 377.433	1.135094	1148927.914149	0.003026	0.27
Y_R 377.433	1.241530	93727.100000	0.008520	0.69
Y_R 488.368	1.205480	52776.400000	0.012910	1.07
Y_R2 488.368	1.196628	103845.213587	0.012798	1.07

Sample Name: 280-116576-A-3-A

Date: 11/7/2018 2:36:18 AM
Rack:Tube: 2:74

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000050 u	ppm	0.000163	> 100.00	-506.073000	Y 377.433
Al (167.019 nm)	101.446000 o	ppm	0.445791	0.44	56668.900000	Y_R 377.433
Al H (396.152 nm)	148.001188 o	ppm	0.351911	0.24	372385.608402	Y_R 377.433
As (188.980 nm)	0.052708	ppm	0.002493	4.73	63.221200	Y 242.219
B (249.678 nm)	0.181703	ppm	0.000350	0.19	4358.420000	Y 242.219
Ba (493.408 nm)	0.749146	ppm	0.002132	0.28	87545.200000	Y_R 488.368
Be (234.861 nm)	0.012522	ppm	0.000163	1.30	8666.820000	Y_R 488.368
Bi (223.061 nm)	-0.010937 u	ppm	0.000129	1.18	11.510400	Y 377.433
Ca (315.887 nm)	141.797245 o	ppm	0.210163	0.15	112371.434310	Y_R 377.433
Cd (214.439 nm)	0.000107	ppm	0.000015	14.42	161.059000	Y 377.433
Co (228.615 nm)	0.069135	ppm	0.000161	0.23	1288.730000	Y 242.219
Cr (205.560 nm)	0.130458	ppm	0.000029	0.02	1937.850000	Y 377.433
Cu (324.754 nm)	0.125337	ppm	0.000217	0.17	6797.180000	Y 377.433
Fe (238.204 nm)	156.678194 o	ppm	0.370384	0.24	579504.628824	Y_R 377.433
Fe H (259.940 nm)	164.340000	ppm	0.150223	0.09	310902.000000	Y_R 377.433
K (766.491 nm)	30.511100	ppm	0.087946	0.29	34376.300000	Y_R2 488.368
Li (670.783 nm)	0.119902	ppm	0.000216	0.18	2645.130000	Y_R2 488.368
Mg (279.078 nm)	45.670100 o	ppm	0.038871	0.09	263583.000000	Y 377.433
Mn (257.610 nm)	0.889662	ppm	0.000662	0.07	208123.000000	Y 377.433
Mo (202.032 nm)	0.004986	ppm	0.000343	6.89	42.908800	Y 377.433
Na (589.592 nm)	122.953000 o	ppm	0.659183	0.54	811377.000000	Y_R2 488.368
Na H (589.593 nm)	128.985876	ppm	0.021620	0.02	475653.912419	Y_R 488.368
Ni (231.604 nm)	0.083789	ppm	0.000936	1.12	574.053000	Y 377.433
P (213.618 nm)	3.300260 o	ppm	0.009083	0.28	7196.010000	Y 242.219
Pb (220.353 nm)	0.174394	ppm	0.000195	0.11	468.955000	Y 242.219
S (181.972 nm)	50.470944 o	ppm	0.036044	0.07	25864.994643	Y 377.433
Sb (206.834 nm)	-0.008009 u	ppm	0.002262	28.24	-90.099400	Y 377.433
Se (196.026 nm)	0.007945	ppm	0.001371	17.26	-6.735370	Y 242.219
Si (288.158 nm)	88.700200 o	ppm	0.633328	0.71	763279.000000	Y 377.433
Sn (189.925 nm)	0.013076	ppm	0.000399	3.05	35.589300	Y 377.433
Sr (421.552 nm)	1.368928 o	ppm	0.005055	0.37	287380.116403	Y_R 488.368
Th (288.505 nm)	0.173860	ppm	0.002188	1.26	544.142000	Y 377.433
Ti (336.122 nm)	2.025000 o	ppm	0.001545	0.08	288602.000000	Y 377.433
Tl (190.794 nm)	0.000557	ppm	0.000258	46.30	-17.168700	Y 377.433
U (409.013 nm)	-0.176143 u	ppm	0.000050	0.03	-888.037000	Y 377.433
V (292.401 nm)	0.417808	ppm	0.000576	0.14	15227.700000	Y 377.433
Zn (206.200 nm)	0.537029	ppm	0.001077	0.20	2832.470000	Y 377.433
Zr (343.823 nm)	0.051471	ppm	0.000128	0.25	7259.190000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.232954	23525.018998	0.003902	0.32
Y 377.433	1.216546	1231373.159566	0.003595	0.30
Y_R 377.433	1.331420	100513.000000	0.002317	0.17
Y_R 488.368	1.292310	56578.100000	0.002000	0.15
Y_R2 488.368	1.271697	110359.854403	0.001580	0.12

Sample Name: 280-116575-B-1-A

Date: 11/7/2018 2:39:41 AM Rack:Tube: 2:75

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001699	ppm	0.000190	11.18	-367.959000	Y 377.433
Al (167.019 nm)	0.018181	ppm	0.005281	29.05	12.540600	Y_R 377.433
Al H (396.152 nm)	0.027393 u	ppm	0.005456	19.92	216.007513	Y_R 377.433
As (188.980 nm)	0.003186	ppm	0.000572	17.95	2.274150	Y 242.219
B (249.678 nm)	0.249565	ppm	0.001122	0.45	6291.200000	Y 242.219
Ba (493.408 nm)	0.230833	ppm	0.000430	0.19	27370.000000	Y_R 488.368
Be (234.861 nm)	0.000021	ppm	0.000014	65.58	-38.009900	Y_R 488.368
Bi (223.061 nm)	0.000161 u	ppm	0.001350	> 100.00	13.159400	Y 377.433
Ca (315.887 nm)	156.079142 o	ppm	0.153458	0.10	123695.749272	Y_R 377.433
Cd (214.439 nm)	0.000053	ppm	0.000013	24.53	4.147200	Y 377.433
Co (228.615 nm)	-0.000134 u	ppm	0.000233	> 100.00	-38.878800	Y 242.219
Cr (205.560 nm)	0.000779	ppm	0.000046	5.95	7.865170	Y 377.433
Cu (324.754 nm)	0.003742	ppm	0.000152	4.05	-177.293000	Y 377.433
Fe (238.204 nm)	0.071908	ppm	0.002138	2.97	290.790609	Y_R 377.433
Fe H (259.940 nm)	0.071235 u	ppm	0.002456	3.45	137.995000	Y_R 377.433
K (766.491 nm)	10.018100	ppm	0.022449	0.22	10779.100000	Y_R2 488.368
Li (670.783 nm)	0.051924	ppm	0.001828	3.52	377.992000	Y_R2 488.368
Mg (279.078 nm)	23.015300	ppm	0.042735	0.19	132988.000000	Y 377.433
Mn (257.610 nm)	0.001623	ppm	0.000003	0.18	441.294000	Y 377.433
Mo (202.032 nm)	0.003098	ppm	0.000039	1.27	26.650800	Y 377.433
Na (589.592 nm)	135.310000 o	ppm	0.627708	0.46	891694.000000	Y_R2 488.368
Na H (589.593 nm)	142.418006	ppm	0.701908	0.49	524374.672597	Y_R 488.368
Ni (231.604 nm)	0.000643	ppm	0.000610	94.80	0.292270	Y 377.433
P (213.618 nm)	0.174603	ppm	0.000466	0.27	403.968000	Y 242.219
Pb (220.353 nm)	0.000850	ppm	0.000307	36.05	5.859010	Y 242.219
S (181.972 nm)	80.729557 o	ppm	0.082392	0.10	41359.718415	Y 377.433
Sb (206.834 nm)	-0.003269 u	ppm	0.000253	7.75	-32.212600	Y 377.433
Se (196.026 nm)	0.008741	ppm	0.001915	21.91	21.676900	Y 242.219
Si (288.158 nm)	12.803100 o	ppm	0.068416	0.53	110968.000000	Y 377.433
Sn (189.925 nm)	-0.000684 u	ppm	0.000274	39.97	8.237230	Y 377.433
Sr (421.552 nm)	1.224600 o	ppm	0.002288	0.19	257097.699211	Y_R 488.368
Th (288.505 nm)	0.004458	ppm	0.000735	16.49	84.755700	Y 377.433
Ti (336.122 nm)	0.000048	ppm	0.000024	49.85	266.940000	Y 377.433
Tl (190.794 nm)	0.002474	ppm	0.001174	47.44	0.082065	Y 377.433
U (409.013 nm)	0.012993	ppm	0.001685	12.97	-178.385000	Y 377.433
V (292.401 nm)	0.004199	ppm	0.000163	3.87	187.578000	Y 377.433
Zn (206.200 nm)	0.000534	ppm	0.000326	61.12	30.528700	Y 377.433
Zr (343.823 nm)	0.000134	ppm	0.000032	23.98	44.488300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093746	20868.912839	0.000290	0.03
Y 377.433	1.090111	1103397.008061	0.000350	0.03
Y_R 377.433	1.174780	88687.400000	0.000648	0.06
Y_R 488.368	1.144140	50091.100000	0.002765	0.24
Y_R2 488.368	1.146166	99466.107876	0.001899	0.17

Sample Name: 280-116351-E-1-A

Date: 11/7/2018 2:43:02 AM
Rack:Tube: 2:76

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001157	ppm	0.000037	3.22	-391.944000	Y 377.433
Al (167.019 nm)	0.013535	ppm	0.003553	26.25	9.987240	Y_R 377.433
Al H (396.152 nm)	-0.006807 u	ppm	0.004878	71.66	62.929983	Y_R 377.433
As (188.980 nm)	0.000654 u	ppm	0.001274	> 100.00	-0.914289	Y 242.219
B (249.678 nm)	0.123845	ppm	0.000059	0.05	3150.620000	Y 242.219
Ba (493.408 nm)	0.454056	ppm	0.000490	0.11	53187.600000	Y_R 488.368
Be (234.861 nm)	0.000062	ppm	0.000006	9.53	-23.866400	Y_R 488.368
Bi (223.061 nm)	0.000411	ppm	0.000127	30.92	13.798300	Y 377.433
Ca (315.887 nm)	2.351227	ppm	0.003858	0.16	1802.731127	Y_R 377.433
Cd (214.439 nm)	0.000105	ppm	0.000057	54.12	7.300130	Y 377.433
Co (228.615 nm)	0.000090 u	ppm	0.000149	> 100.00	-34.812300	Y 242.219
Cr (205.560 nm)	0.000523	ppm	0.000030	5.83	3.960500	Y 377.433
Cu (324.754 nm)	0.001777	ppm	0.000276	15.51	-193.190000	Y 377.433
Fe (238.204 nm)	0.125744	ppm	0.000146	0.12	489.906281	Y_R 377.433
Fe H (259.940 nm)	0.130530 u	ppm	0.001305	1.00	250.170000	Y_R 377.433
K (766.491 nm)	2.142000	ppm	0.006061	0.28	1709.870000	Y_R2 488.368
Li (670.783 nm)	0.099348	ppm	0.003106	3.13	1959.620000	Y_R2 488.368
Mg (279.078 nm)	0.347662	ppm	0.001636	0.47	2047.330000	Y 377.433
Mn (257.610 nm)	0.004963	ppm	0.000037	0.75	1222.520000	Y 377.433
Mo (202.032 nm)	0.000025	ppm	0.000012	46.88	0.190947	Y 377.433
Na (589.592 nm)	531.227000 o	ppm	0.734626	0.14	3498990.000000	Y_R2 488.368
Na H (589.593 nm)	554.094146	ppm	2.775258	0.50	2032800.208329	Y_R 488.368
Ni (231.604 nm)	0.001195	ppm	0.000181	15.16	4.056550	Y 377.433
P (213.618 nm)	0.026082	ppm	0.000096	0.37	81.232100	Y 242.219
Pb (220.353 nm)	0.000057 u	ppm	0.000457	> 100.00	3.611620	Y 242.219
S (181.972 nm)	0.217483	ppm	0.016027	7.37	125.568005	Y 377.433
Sb (206.834 nm)	-0.001144 u	ppm	0.000358	31.26	-26.401000	Y 377.433
Se (196.026 nm)	-0.004845 u	ppm	0.004656	96.10	8.147930	Y 242.219
Si (288.158 nm)	9.566900	ppm	0.066011	0.69	83154.100000	Y 377.433
Sn (189.925 nm)	-0.001076 u	ppm	0.001289	> 100.00	7.458230	Y 377.433
Sr (421.552 nm)	0.485074	ppm	0.000176	0.04	101932.726522	Y_R 488.368
Th (288.505 nm)	0.007996	ppm	0.000855	10.69	93.626800	Y 377.433
Ti (336.122 nm)	0.000289	ppm	0.000011	3.80	-179.730000	Y 377.433
Tl (190.794 nm)	0.002089	ppm	0.001537	73.61	-0.759032	Y 377.433
U (409.013 nm)	-0.005000 u	ppm	0.002747	54.94	-230.530000	Y 377.433
V (292.401 nm)	0.000089	ppm	0.000063	70.54	38.535800	Y 377.433
Zn (206.200 nm)	-0.000929 u	ppm	0.000109	11.76	22.887500	Y 377.433
Zr (343.823 nm)	-0.000056 u	ppm	0.000001	2.65	19.709300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.081379	20632.937916	0.005538	0.51
Y 377.433	1.065976	1078967.348366	0.005988	0.56
Y_R 377.433	1.180450	89115.600000	0.001964	0.17
Y_R 488.368	1.150910	50387.600000	0.003595	0.31
Y_R2 488.368	1.113971	96672.182628	0.002134	0.19

Sample Name: CCVH-5408055

Date: 11/7/2018 2:46:25 AM
Rack:Tube: S1:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000177 u	ppm	0.000308	> 100.00	-703.034000	Y 377.433
Al (167.019 nm)	44.733100 o	ppm	0.242482	0.54	24975.800000	Y_R 377.433
Al H (396.152 nm)	48.654919	ppm	0.041804	0.09	122453.239392	Y_R 377.433
As (188.980 nm)	-0.000391 u	ppm	0.000870	> 100.00	-2.669690	Y 242.219
B (249.678 nm)	-0.000871 u	ppm	0.000260	29.87	-39.345900	Y 242.219
Ba (493.408 nm)	-0.000501 u	ppm	0.000166	33.17	587.685000	Y_R 488.368
Be (234.861 nm)	-0.000310 u	ppm	0.000041	13.14	1412.810000	Y_R 488.368
Bi (223.061 nm)	0.995246	ppm	0.003915	0.39	2527.040000	Y 377.433
Ca (315.887 nm)	0.007992	ppm	0.005899	73.81	-55.251743	Y_R 377.433
Cd (214.439 nm)	-0.000197 u	ppm	0.000049	24.91	36.857600	Y 377.433
Co (228.615 nm)	0.002840	ppm	0.000029	1.02	15.001200	Y 242.219
Cr (205.560 nm)	-0.000124 u	ppm	0.000204	> 100.00	-19.531600	Y 377.433
Cu (324.754 nm)	-0.002596 u	ppm	0.000159	6.12	-105.109000	Y 377.433
Fe (238.204 nm)	48.601392 o	ppm	0.124298	0.26	179778.787183	Y_R 377.433
Fe H (259.940 nm)	49.871600	ppm	0.018726	0.04	94350.200000	Y_R 377.433
K (766.491 nm)	0.178577	ppm	0.028040	15.70	-550.963000	Y_R2 488.368
Li (670.783 nm)	0.011316	ppm	0.000659	5.82	-976.294000	Y_R2 488.368
Mg (279.078 nm)	-0.013592 u	ppm	0.004052	29.81	-400.895000	Y 377.433
Mn (257.610 nm)	0.001454	ppm	0.000023	1.58	401.794000	Y 377.433
Mo (202.032 nm)	-0.000236 u	ppm	0.000109	46.02	-2.062850	Y 377.433
Na (589.592 nm)	245.409000 o	ppm	0.619557	0.25	1616150.000000	Y_R2 488.368
Na H (589.593 nm)	254.812768	ppm	0.312427	0.12	935924.911662	Y_R 488.368
Ni (231.604 nm)	0.003564	ppm	0.000106	2.98	22.253900	Y 377.433
P (213.618 nm)	-0.006735 u	ppm	0.001343	19.94	9.921660	Y 242.219
Pb (220.353 nm)	-0.004231 u	ppm	0.002479	58.60	9.069590	Y 242.219
S (181.972 nm)	5.144130	ppm	0.028190	0.55	2648.736063	Y 377.433
Sb (206.834 nm)	-0.002334 u	ppm	0.001396	59.81	-75.946900	Y 377.433
Se (196.026 nm)	-0.002114 u	ppm	0.001961	92.72	1.935960	Y 242.219
Si (288.158 nm)	0.028383	ppm	0.002704	9.53	1173.590000	Y 377.433
Sn (189.925 nm)	0.000968 u	ppm	0.001659	> 100.00	11.522100	Y 377.433
Sr (421.552 nm)	0.000297	ppm	0.000055	18.55	218.245187	Y_R 488.368
Th (288.505 nm)	4.985820	ppm	0.029407	0.59	13036.300000	Y 377.433
Ti (336.122 nm)	0.001063	ppm	0.000009	0.86	-76.699200	Y 377.433
Tl (190.794 nm)	-0.002460 u	ppm	0.001205	48.98	-12.057200	Y 377.433
U (409.013 nm)	10.019100	ppm	0.041837	0.42	45160.400000	Y 377.433
V (292.401 nm)	0.004473	ppm	0.000005	0.10	26.309600	Y 377.433
Zn (206.200 nm)	-0.004495 u	ppm	0.000726	16.15	4.265800	Y 377.433
Zr (343.823 nm)	-0.004376 u	ppm	0.000059	1.35	-404.263000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.117740	21326.723644	0.004845	0.43
Y 377.433	1.096102	1109461.066440	0.005436	0.50
Y_R 377.433	1.190080	89842.300000	0.005199	0.44
Y_R 488.368	1.169050	51181.600000	0.000729	0.06
Y_R2 488.368	1.155225	100252.220782	0.000303	0.03

Sample Name: CCV-5407546

Date: 11/7/2018 2:49:48 AM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.496001	ppm	0.000022	0.00	22283.500000	Y 377.433
Al (167.019 nm)	0.515056	ppm	0.002520	0.49	291.210000	Y_R 377.433
Al H (396.152 nm)	0.487869 u	ppm	0.003648	0.75	1349.463699	Y_R 377.433
As (188.980 nm)	0.990579	ppm	0.003084	0.31	1245.690000	Y 242.219
B (249.678 nm)	0.491486	ppm	0.001205	0.25	12352.800000	Y 242.219
Ba (493.408 nm)	0.491978	ppm	0.001224	0.25	57591.500000	Y_R 488.368
Be (234.861 nm)	0.479237	ppm	0.002381	0.50	142817.000000	Y_R 488.368
Bi (223.061 nm)	-0.003068 u	ppm	0.000782	25.50	5.431450	Y 377.433
Ca (315.887 nm)	5.118446	ppm	0.002884	0.06	3997.184536	Y_R 377.433
Cd (214.439 nm)	0.500507	ppm	0.000167	0.03	29917.200000	Y 377.433
Co (228.615 nm)	0.493666	ppm	0.001806	0.37	8922.770000	Y 242.219
Cr (205.560 nm)	0.498509	ppm	0.000851	0.17	7578.760000	Y 377.433
Cu (324.754 nm)	0.504679	ppm	0.000563	0.11	27831.700000	Y 377.433
Fe (238.204 nm)	2.465097	ppm	0.005675	0.23	9142.083976	Y_R 377.433
Fe H (259.940 nm)	2.548440 u	ppm	0.004255	0.17	4824.370000	Y_R 377.433
K (766.491 nm)	50.245500	ppm	0.055672	0.11	57100.000000	Y_R2 488.368
Li (670.783 nm)	0.992874	ppm	0.001793	0.18	31759.400000	Y_R2 488.368
Mg (279.078 nm)	19.939700	ppm	0.003171	0.02	115217.000000	Y 377.433
Mn (257.610 nm)	0.500268	ppm	0.000514	0.10	117057.000000	Y 377.433
Mo (202.032 nm)	0.506738	ppm	0.000126	0.02	4363.970000	Y 377.433
Na (589.592 nm)	5.119000	ppm	0.010126	0.20	34998.500000	Y_R2 488.368
Na H (589.593 nm)	6.082939 u	ppm	0.006704	0.11	25143.739293	Y_R 488.368
Ni (231.604 nm)	0.514701	ppm	0.000421	0.08	3508.300000	Y 377.433
P (213.618 nm)	0.993316	ppm	0.003713	0.37	2183.030000	Y 242.219
Pb (220.353 nm)	0.988046	ppm	0.000657	0.07	2835.310000	Y 242.219
S (181.972 nm)	0.156660	ppm	0.005067	3.23	95.643462	Y 377.433
Sb (206.834 nm)	1.007170	ppm	0.003116	0.31	2742.750000	Y 377.433
Se (196.026 nm)	0.981437	ppm	0.000834	0.08	989.773000	Y 242.219
Si (288.158 nm)	5.011800	ppm	0.011810	0.24	44004.500000	Y 377.433
Sn (189.925 nm)	1.030350	ppm	0.000151	0.01	2057.710000	Y 377.433
Sr (421.552 nm)	0.502498	ppm	0.000470	0.09	105588.504605	Y_R 488.368
Th (288.505 nm)	0.005039	ppm	0.001207	23.95	102.494000	Y 377.433
Ti (336.122 nm)	0.497449	ppm	0.000407	0.08	70631.100000	Y 377.433
Tl (190.794 nm)	1.005830	ppm	0.000740	0.07	2203.480000	Y 377.433
U (409.013 nm)	0.004597	ppm	0.001335	29.05	-224.826000	Y 377.433
V (292.401 nm)	0.493560	ppm	0.000425	0.09	17823.700000	Y 377.433
Zn (206.200 nm)	0.497657	ppm	0.000530	0.11	2626.840000	Y 377.433
Zr (343.823 nm)	0.500928	ppm	0.000186	0.04	65897.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130519	21570.538826	0.001031	0.09
Y 377.433	1.116606	1130214.654549	0.000820	0.07
Y_R 377.433	1.188230	89703.300000	0.003546	0.30
Y_R 488.368	1.158960	50739.900000	0.005416	0.47
Y_R2 488.368	1.156991	100405.483682	0.004943	0.43

Sample Name: CCB

Date: 11/7/2018 2:53:10 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001414	ppm	0.000233	16.46	-380.104000	Y 377.433
Al (167.019 nm)	-0.000850 u	ppm	0.000098	11.52	1.879320	Y_R 377.433
Al H (396.152 nm)	-0.022475 u	ppm	0.000605	2.69	22.523566	Y_R 377.433
As (188.980 nm)	0.000340 u	ppm	0.000767	> 100.00	-1.308880	Y 242.219
B (249.678 nm)	0.001075	ppm	0.000125	11.64	83.986400	Y 242.219
Ba (493.408 nm)	-0.000852 u	ppm	0.000143	16.83	500.770000	Y_R 488.368
Be (234.861 nm)	0.000056	ppm	0.000009	16.86	-29.667800	Y_R 488.368
Bi (223.061 nm)	-0.000455 u	ppm	0.001248	> 100.00	11.595200	Y 377.433
Ca (315.887 nm)	0.011415	ppm	0.010334	90.52	-52.538028	Y_R 377.433
Cd (214.439 nm)	0.000106	ppm	0.000042	39.13	7.224720	Y 377.433
Co (228.615 nm)	0.000505	ppm	0.000049	9.69	-27.304700	Y 242.219
Cr (205.560 nm)	0.000150	ppm	0.000078	52.23	-1.680620	Y 377.433
Cu (324.754 nm)	0.001764	ppm	0.000189	10.74	-193.257000	Y 377.433
Fe (238.204 nm)	-0.001829 u	ppm	0.000784	42.87	18.074416	Y_R 377.433
Fe H (259.940 nm)	0.005188 u	ppm	0.002213	42.65	13.047400	Y_R 377.433
K (766.491 nm)	0.157394	ppm	0.009919	6.30	-575.355000	Y_R2 488.368
Li (670.783 nm)	0.009976	ppm	0.000030	0.30	-1021.010000	Y_R2 488.368
Mg (279.078 nm)	0.004237	ppm	0.002973	70.18	63.837600	Y 377.433
Mn (257.610 nm)	0.000054	ppm	0.000014	25.63	74.361300	Y 377.433
Mo (202.032 nm)	0.000212	ppm	0.000112	52.73	1.802040	Y 377.433
Na (589.592 nm)	0.074230	ppm	0.012508	16.85	784.859000	Y_R2 488.368
Na H (589.593 nm)	0.444347 u	ppm	0.009607	2.16	4021.604499	Y_R 488.368
Ni (231.604 nm)	0.000640	ppm	0.000264	41.20	0.263336	Y 377.433
P (213.618 nm)	-0.002481 u	ppm	0.003235	> 100.00	19.165000	Y 242.219
Pb (220.353 nm)	0.002162	ppm	0.000823	38.07	9.633800	Y 242.219
S (181.972 nm)	0.134723 Z	ppm	0.019138	14.21	83.170181 Z	Y 377.433
Sb (206.834 nm)	0.001801	ppm	0.000185	10.30	-18.302700	Y 377.433
Se (196.026 nm)	-0.001902 u	ppm	0.000249	13.08	11.097800	Y 242.219
Si (288.158 nm)	0.003681	ppm	0.000461	12.51	961.292000	Y 377.433
Sn (189.925 nm)	-0.001065 u	ppm	0.000838	78.62	7.480040	Y 377.433
Sr (421.552 nm)	-0.000034 u	ppm	0.000040	> 100.00	148.779415	Y_R 488.368
Th (288.505 nm)	0.007059	ppm	0.000755	10.69	91.059700	Y 377.433
Ti (336.122 nm)	-0.000041 u	ppm	0.000005	12.43	-233.981000	Y 377.433
Tl (190.794 nm)	0.000739	ppm	0.000755	> 100.00	-3.721000	Y 377.433
U (409.013 nm)	0.005727	ppm	0.000528	9.23	-181.675000	Y 377.433
V (292.401 nm)	-0.000236 u	ppm	0.000123	52.15	26.559800	Y 377.433
Zn (206.200 nm)	-0.005098 u	ppm	0.000106	2.07	1.116390	Y 377.433
Zr (343.823 nm)	-0.000165 u	ppm	0.000083	50.05	4.964270	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130541	21570.966773	0.004775	0.42
Y 377.433	1.117254	1130871.007527	0.004330	0.39
Y_R 377.433	1.183020	89309.800000	0.019509	1.65
Y_R 488.368	1.151150	50397.900000	0.009528	0.83
Y_R2 488.368	1.162795	100909.162130	0.007356	0.63

Sample Name: CCVL-5413446

Date: 11/7/2018 2:56:32 AM
Rack:Tube: S1:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011184	ppm	0.000295	2.63	67.892700	Y 377.433
Al (167.019 nm)	0.098823	ppm	0.004095	4.14	57.521100	Y_R 377.433
Al H (396.152 nm)	0.083781 u	ppm	0.006328	7.55	291.449294	Y_R 377.433
As (188.980 nm)	0.014181	ppm	0.000777	5.48	16.120000	Y 242.219
B (249.678 nm)	0.101451	ppm	0.000059	0.06	2591.660000	Y 242.219
Ba (493.408 nm)	0.009585	ppm	0.000366	3.82	1709.670000	Y_R 488.368
Be (234.861 nm)	0.000975	ppm	0.000017	1.78	246.640000	Y_R 488.368
Bi (223.061 nm)	0.101787	ppm	0.002946	2.89	269.068000	Y 377.433
Ca (315.887 nm)	0.227137	ppm	0.002414	1.06	118.513433	Y_R 377.433
Cd (214.439 nm)	0.005183	ppm	0.000009	0.17	310.761000	Y 377.433
Co (228.615 nm)	0.010492	ppm	0.000223	2.13	153.924000	Y 242.219
Cr (205.560 nm)	0.010175	ppm	0.000071	0.70	150.857000	Y 377.433
Cu (324.754 nm)	0.017718	ppm	0.000461	2.60	693.748000	Y 377.433
Fe (238.204 nm)	0.101917	ppm	0.001106	1.09	401.781553	Y_R 377.433
Fe H (259.940 nm)	0.105670 u	ppm	0.001435	1.36	203.140000	Y_R 377.433
K (766.491 nm)	3.341750	ppm	0.010022	0.30	3091.350000	Y_R2 488.368
Li (670.783 nm)	0.031270 Q	ppm	0.000828	2.65	-310.818000 Q	Y_R2 488.368
Mg (279.078 nm)	0.212913	ppm	0.001555	0.73	1268.070000	Y 377.433
Mn (257.610 nm)	0.010461	ppm	0.000012	0.11	2508.260000	Y 377.433
Mo (202.032 nm)	0.019703	ppm	0.000209	1.06	169.654000	Y 377.433
Na (589.592 nm)	1.144800	ppm	0.000994	0.09	7854.220000	Y_R2 488.368
Na H (589.593 nm)	1.468919 u	ppm	0.030928	2.11	7784.718481	Y_R 488.368
Ni (231.604 nm)	0.043209	ppm	0.000498	1.15	290.677000	Y 377.433
P (213.618 nm)	2.898270 o	ppm	0.026946	0.93	6322.500000	Y 242.219
Pb (220.353 nm)	0.010306	ppm	0.002790	27.07	32.986300	Y 242.219
S (181.972 nm)	0.247852 Q	ppm	0.012679	5.12	141.134906 Q	Y 377.433
Sb (206.834 nm)	0.020614	ppm	0.000929	4.51	33.240000	Y 377.433
Se (196.026 nm)	0.019192	ppm	0.003465	18.05	32.082300	Y 242.219
Si (288.158 nm)	0.503971	ppm	0.002617	0.52	5261.130000	Y 377.433
Sn (189.925 nm)	0.102590	ppm	0.000727	0.71	213.524000	Y 377.433
Sr (421.552 nm)	0.010271	ppm	0.000099	0.96	2311.148017	Y_R 488.368
Th (288.505 nm)	0.018156	ppm	0.003508	19.32	120.765000	Y 377.433
Ti (336.122 nm)	0.009928	ppm	0.000015	0.15	1186.380000	Y 377.433
Tl (190.794 nm)	0.016060	ppm	0.000331	2.06	29.892000	Y 377.433
U (409.013 nm)	0.064716	ppm	0.001151	1.78	84.020400	Y 377.433
V (292.401 nm)	0.009682	ppm	0.000069	0.71	381.851000	Y 377.433
Zn (206.200 nm)	0.015870	ppm	0.000027	0.17	110.626000	Y 377.433
Zr (343.823 nm)	0.015211	ppm	0.000015	0.10	2026.960000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.149891	21940.171560	0.005031	0.44
Y 377.433	1.138101	1151971.841007	0.003504	0.31
Y_R 377.433	1.209040	91274.100000	0.002658	0.22
Y_R 488.368	1.170050	51225.700000	0.015371	1.31
Y_R2 488.368	1.159764	100646.103467	0.010650	0.92

Sample Name: 280-116352-C-1-C

Date: 11/7/2018 2:59:55 AM
Rack:Tube: 2:77

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001447	ppm	0.000121	8.40	-380.922000	Y 377.433
Al (167.019 nm)	8.262810 o	ppm	0.047988	0.58	4614.660000	Y_R 377.433
Al H (396.152 nm)	8.243628	ppm	0.041310	0.50	20823.324015	Y_R 377.433
As (188.980 nm)	0.002308	ppm	0.000377	16.35	1.096200	Y 242.219
B (249.678 nm)	0.019173	ppm	0.000181	0.94	523.800000	Y 242.219
Ba (493.408 nm)	0.798353	ppm	0.004131	0.52	93075.400000	Y_R 488.368
Be (234.861 nm)	0.000477	ppm	0.000004	0.76	351.951000	Y_R 488.368
Bi (223.061 nm)	-0.003697 u	ppm	0.000442	11.94	4.787260	Y 377.433
Ca (315.887 nm)	22.230489 o	ppm	0.032025	0.14	17565.276817	Y_R 377.433
Cd (214.439 nm)	0.000059	ppm	0.000026	44.13	12.342200	Y 377.433
Co (228.615 nm)	0.003849	ppm	0.000053	1.37	41.074000	Y 242.219
Cr (205.560 nm)	0.011181	ppm	0.000251	2.25	163.961000	Y 377.433
Cu (324.754 nm)	0.024743	ppm	0.000479	1.93	1078.950000	Y 377.433
Fe (238.204 nm)	8.059477 o	ppm	0.031228	0.39	29833.094268	Y_R 377.433
Fe H (259.940 nm)	8.310430	ppm	0.021373	0.26	15724.900000	Y_R 377.433
K (766.491 nm)	2.643250	ppm	0.034144	1.29	2287.050000	Y_R2 488.368
Li (670.783 nm)	0.028942	ppm	0.001533	5.30	-388.473000	Y_R2 488.368
Mg (279.078 nm)	2.226130	ppm	0.000887	0.04	12884.700000	Y 377.433
Mn (257.610 nm)	0.162798	ppm	0.000012	0.01	38134.500000	Y 377.433
Mo (202.032 nm)	0.008769	ppm	0.000063	0.71	75.492100	Y 377.433
Na (589.592 nm)	226.033000 o	ppm	0.747174	0.33	1490190.000000	Y_R2 488.368
Na H (589.593 nm)	237.297290	ppm	0.593747	0.25	872508.584402	Y_R 488.368
Ni (231.604 nm)	0.007211	ppm	0.000652	9.04	45.428500	Y 377.433
P (213.618 nm)	0.051575	ppm	0.000159	0.31	136.628000	Y 242.219
Pb (220.353 nm)	0.004414	ppm	0.002625	59.48	14.060200	Y 242.219
S (181.972 nm)	1.333334	ppm	0.005094	0.38	697.439574	Y 377.433
Sb (206.834 nm)	-0.000518 u	ppm	0.001350	> 100.00	-26.927200	Y 377.433
Se (196.026 nm)	-0.002334 u	ppm	0.001849	79.19	9.382410	Y 242.219
Si (288.158 nm)	17.446600 o	ppm	0.098462	0.56	150878.000000	Y 377.433
Sn (189.925 nm)	-0.001124 u	ppm	0.000485	43.20	7.364020	Y 377.433
Sr (421.552 nm)	0.761542	ppm	0.003045	0.40	159940.377307	Y_R 488.368
Th (288.505 nm)	0.006727	ppm	0.000211	3.14	93.786200	Y 377.433
Ti (336.122 nm)	0.217426	ppm	0.000088	0.04	30805.700000	Y 377.433
Tl (190.794 nm)	-0.000658 u	ppm	0.000060	9.16	-7.991550	Y 377.433
U (409.013 nm)	-0.006321 u	ppm	0.002220	35.12	-232.972000	Y 377.433
V (292.401 nm)	0.016409	ppm	0.000071	0.43	632.502000	Y 377.433
Zn (206.200 nm)	0.024474	ppm	0.000001	0.01	155.559000	Y 377.433
Zr (343.823 nm)	0.002180	ppm	0.000042	1.93	337.251000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.114135	21257.927296	0.000955	0.09
Y 377.433	1.097708	1111086.604508	0.000191	0.02
Y_R 377.433	1.191960	89984.300000	0.002855	0.24
Y_R 488.368	1.159530	50764.800000	0.001980	0.17
Y_R2 488.368	1.142218	99123.499020	0.003462	0.30

Sample Name: 280-116529-B-1-A

Date: 11/7/2018 3:03:17 AM Rack:Tube: 2:78

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001442	ppm	0.000187	12.99	-378.929000	Y 377.433
Al (167.019 nm)	0.017982	ppm	0.000076	0.42	13.730900	Y_R 377.433
Al H (396.152 nm)	0.002584 u	ppm	0.007165	> 100.00	87.147606	Y_R 377.433
As (188.980 nm)	0.001050 u	ppm	0.001742	> 100.00	-0.432432	Y 242.219
B (249.678 nm)	0.225412	ppm	0.000153	0.07	5684.950000	Y 242.219
Ba (493.408 nm)	0.745826	ppm	0.000696	0.09	86981.700000	Y_R 488.368
Be (234.861 nm)	0.000068	ppm	0.000007	10.69	36.500800	Y_R 488.368
Bi (223.061 nm)	-0.000893 u	ppm	0.001788	> 100.00	10.824100	Y 377.433
Ca (315.887 nm)	3.601403	ppm	0.007775	0.22	2794.013690	Y_R 377.433
Cd (214.439 nm)	0.000090	ppm	0.000041	45.30	8.179700	Y 377.433
Co (228.615 nm)	0.000364	ppm	0.000202	55.61	-29.831400	Y 242.219
Cr (205.560 nm)	0.002666	ppm	0.000166	6.23	36.074200	Y 377.433
Cu (324.754 nm)	0.003347	ppm	0.000038	1.14	-106.754000	Y 377.433
Fe (238.204 nm)	1.964158	ppm	0.004088	0.21	7289.345812	Y_R 377.433
Fe H (259.940 nm)	2.029180 u	ppm	0.004614	0.23	3842.030000	Y_R 377.433
K (766.491 nm)	3.373120	ppm	0.098815	2.93	3127.480000	Y_R2 488.368
Li (670.783 nm)	0.147038	ppm	0.000454	0.31	3550.120000	Y_R2 488.368
Mg (279.078 nm)	0.636262	ppm	0.005453	0.86	3711.240000	Y 377.433
Mn (257.610 nm)	0.025429	ppm	0.000093	0.37	6008.700000	Y 377.433
Mo (202.032 nm)	0.000641	ppm	0.000258	40.19	5.495990	Y 377.433
Na (589.592 nm)	563.031000 o	ppm	6.611120	1.17	3708990.000000	Y_R2 488.368
Na H (589.593 nm)	588.255615	ppm	1.516015	0.26	2158229.647823	Y_R 488.368
Ni (231.604 nm)	0.001956	ppm	0.000000	0.01	9.325050	Y 377.433
P (213.618 nm)	0.022798	ppm	0.002055	9.01	74.097400	Y 242.219
Pb (220.353 nm)	-0.001527 u	ppm	0.000303	19.82	-0.771011	Y 242.219
S (181.972 nm)	0.255310	ppm	0.012575	4.93	144.991160	Y 377.433
Sb (206.834 nm)	-0.000799 u	ppm	0.000158	19.73	-25.837800	Y 377.433
Se (196.026 nm)	-0.002005 u	ppm	0.001993	99.39	10.624200	Y 242.219
Si (288.158 nm)	10.664300	ppm	0.005459	0.05	92585.600000	Y 377.433
Sn (189.925 nm)	-0.001280 u	ppm	0.000423	33.03	7.052710	Y 377.433
Sr (421.552 nm)	0.596735	ppm	0.000845	0.14	125360.927312	Y_R 488.368
Th (288.505 nm)	0.007150	ppm	0.000455	6.36	91.790100	Y 377.433
Ti (336.122 nm)	0.000640	ppm	0.000124	19.43	-125.827000	Y 377.433
Tl (190.794 nm)	0.001419	ppm	0.000564	39.75	-2.282950	Y 377.433
U (409.013 nm)	-0.007486 u	ppm	0.000891	11.90	-240.270000	Y 377.433
V (292.401 nm)	-0.000091 u	ppm	0.000078	85.01	30.580800	Y 377.433
Zn (206.200 nm)	-0.004250 u	ppm	0.000285	6.72	5.543310	Y 377.433
Zr (343.823 nm)	-0.000189 u	ppm	0.000025	12.96	7.646830	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.086086	20722.746316	0.006280	0.58
Y 377.433	1.069455	1082489.588678	0.007475	0.70
Y_R 377.433	1.174770	88686.800000	0.002327	0.20
Y_R 488.368	1.144020	50085.700000	0.003233	0.28
Y_R2 488.368	1.125056	97634.151820	0.001081	0.10

Sample Name: 280-116529-B-2-A

Date: 11/7/2018 3:06:38 AM
Rack:Tube: 2:79

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001325	ppm	0.000016	1.24	-384.358000	Y 377.433
Al (167.019 nm)	0.016849	ppm	0.003507	20.82	13.109000	Y_R 377.433
Al H (396.152 nm)	-0.002456 u	ppm	0.004621	> 100.00	74.434743	Y_R 377.433
As (188.980 nm)	0.001505	ppm	0.000179	11.89	0.140326	Y 242.219
B (249.678 nm)	0.226071	ppm	0.000178	0.08	5701.380000	Y 242.219
Ba (493.408 nm)	0.752391	ppm	0.002977	0.40	87742.000000	Y_R 488.368
Be (234.861 nm)	0.000067	ppm	0.000008	11.42	36.637000	Y_R 488.368
Bi (223.061 nm)	-0.001372 u	ppm	0.000380	27.73	9.620760	Y 377.433
Ca (315.887 nm)	3.603945	ppm	0.006861	0.19	2796.029386	Y_R 377.433
Cd (214.439 nm)	0.000075	ppm	0.000072	95.23	7.318760	Y 377.433
Co (228.615 nm)	0.000435	ppm	0.000063	14.42	-28.548800	Y 242.219
Cr (205.560 nm)	0.002235	ppm	0.000171	7.65	29.506200	Y 377.433
Cu (324.754 nm)	0.003509	ppm	0.000048	1.36	-97.365200	Y 377.433
Fe (238.204 nm)	1.978819	ppm	0.008687	0.44	7343.568156	Y_R 377.433
Fe H (259.940 nm)	2.049410 u	ppm	0.005795	0.28	3880.300000	Y_R 377.433
K (766.491 nm)	3.422490	ppm	0.000017	0.00	3184.320000	Y_R2 488.368
Li (670.783 nm)	0.147866	ppm	0.000297	0.20	3577.750000	Y_R2 488.368
Mg (279.078 nm)	0.639167	ppm	0.000985	0.15	3727.940000	Y 377.433
Mn (257.610 nm)	0.025368	ppm	0.000023	0.09	5994.520000	Y 377.433
Mo (202.032 nm)	0.000173	ppm	0.000020	11.56	1.460320	Y 377.433
Na (589.592 nm)	561.265000 o	ppm	1.966010	0.35	3697380.000000	Y_R2 488.368
Na H (589.593 nm)	588.969994	ppm	4.828384	0.82	2160852.646885	Y_R 488.368
Ni (231.604 nm)	0.001233	ppm	0.000146	11.85	4.396810	Y 377.433
P (213.618 nm)	0.022402	ppm	0.001030	4.60	73.235900	Y 242.219
Pb (220.353 nm)	0.000950	ppm	0.000486	51.20	6.344490	Y 242.219
S (181.972 nm)	0.255765	ppm	0.012585	4.92	145.224171	Y 377.433
Sb (206.834 nm)	-0.000565 u	ppm	0.000575	> 100.00	-25.218100	Y 377.433
Se (196.026 nm)	0.000419 u	ppm	0.001778	> 100.00	13.034100	Y 242.219
Si (288.158 nm)	10.619000	ppm	0.036931	0.35	92196.800000	Y 377.433
Sn (189.925 nm)	-0.001392 u	ppm	0.000011	0.82	6.830750	Y 377.433
Sr (421.552 nm)	0.602011	ppm	0.003720	0.62	126467.975978	Y_R 488.368
Th (288.505 nm)	0.008431	ppm	0.002928	34.73	95.113000	Y 377.433
Ti (336.122 nm)	0.000466	ppm	0.000016	3.33	-150.674000	Y 377.433
Tl (190.794 nm)	0.000757 u	ppm	0.001529	> 100.00	-3.738120	Y 377.433
U (409.013 nm)	-0.005721 u	ppm	0.005219	91.21	-232.269000	Y 377.433
V (292.401 nm)	-0.000144 u	ppm	0.000165	> 100.00	28.845200	Y 377.433
Zn (206.200 nm)	-0.004432 u	ppm	0.000128	2.88	4.593670	Y 377.433
Zr (343.823 nm)	-0.000132 u	ppm	0.000021	15.70	15.148900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079835	20603.483028	0.001263	0.12
Y 377.433	1.063257	1076215.440128	0.002649	0.25
Y_R 377.433	1.175620	88750.800000	0.001386	0.12
Y_R 488.368	1.146500	50194.400000	0.003640	0.32
Y_R2 488.368	1.140246	98952.313292	0.000035	0.00

Sample Name: 280-116437-C-1-A

Date: 11/7/2018 3:10:00 AM Rack:Tube: 2:80

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001311	ppm	0.000140	10.67	-384.970000	Y 377.433
Al (167.019 nm)	0.538707	ppm	0.005721	1.06	310.017000	Y_R 377.433
Al H (396.152 nm)	0.512540 u	ppm	0.006248	1.22	1370.923292	Y_R 377.433
As (188.980 nm)	0.139028	ppm	0.002995	2.15	173.246000	Y 242.219
B (249.678 nm)	0.020967	ppm	0.000208	0.99	564.574000	Y 242.219
Ba (493.408 nm)	0.025240	ppm	0.000024	0.09	3533.560000	Y_R 488.368
Be (234.861 nm)	0.000214	ppm	0.000001	0.30	356.444000	Y_R 488.368
Bi (223.061 nm)	-0.002277 u	ppm	0.002022	88.79	8.798960	Y 377.433
Ca (315.887 nm)	6.433333	ppm	0.025948	0.40	5039.490915	Y_R 377.433
Cd (214.439 nm)	0.000020 u	ppm	0.000039	> 100.00	12.512900	Y 377.433
Co (228.615 nm)	0.002352	ppm	0.000263	11.18	6.160330	Y 242.219
Cr (205.560 nm)	0.166042	ppm	0.000225	0.14	2520.630000	Y 377.433
Cu (324.754 nm)	0.002178	ppm	0.000190	8.74	-165.937000	Y 377.433
Fe (238.204 nm)	10.636944 o	ppm	0.018902	0.18	39365.946433	Y_R 377.433
Fe H (259.940 nm)	10.951900	ppm	0.028381	0.26	20722.100000	Y_R 377.433
K (766.491 nm)	2.032270	ppm	0.061004	3.00	1583.530000	Y_R2 488.368
Li (670.783 nm)	0.017790	ppm	0.001044	5.87	-760.390000	Y_R2 488.368
Mg (279.078 nm)	2.223870	ppm	0.002991	0.13	12867.200000	Y 377.433
Mn (257.610 nm)	0.289941	ppm	0.000764	0.26	67868.900000	Y 377.433
Mo (202.032 nm)	-0.000151 u	ppm	0.000171	> 100.00	-1.331370	Y 377.433
Na (589.592 nm)	444.455000 o	ppm	1.020970	0.23	2926790.000000	Y_R2 488.368
Na H (589.593 nm)	467.091950	ppm	1.908295	0.41	1713655.288572	Y_R 488.368
Ni (231.604 nm)	0.056706	ppm	0.000667	1.18	383.169000	Y 377.433
P (213.618 nm)	0.030066	ppm	0.001510	5.02	89.890900	Y 242.219
Pb (220.353 nm)	0.003896	ppm	0.000452	11.60	15.382200	Y 242.219
S (181.972 nm)	47.617634 o	ppm	0.233109	0.49	24402.200559	Y 377.433
Sb (206.834 nm)	0.182744	ppm	0.000111	0.06	479.237000	Y 377.433
Se (196.026 nm)	0.001004 u	ppm	0.001681	> 100.00	12.114700	Y 242.219
Si (288.158 nm)	3.178830	ppm	0.004778	0.15	28250.700000	Y 377.433
Sn (189.925 nm)	0.002087	ppm	0.000400	19.16	13.746900	Y 377.433
Sr (421.552 nm)	0.064030	ppm	0.000254	0.40	13590.487572	Y_R 488.368
Th (288.505 nm)	0.009594	ppm	0.004313	44.95	102.971000	Y 377.433
Ti (336.122 nm)	0.000320	ppm	0.000010	3.27	-162.549000	Y 377.433
Tl (190.794 nm)	-0.000405 u	ppm	0.000443	> 100.00	-6.516750	Y 377.433
U (409.013 nm)	-0.003152 u	ppm	0.004866	> 100.00	-213.007000	Y 377.433
V (292.401 nm)	0.000634	ppm	0.000001	0.22	16.040300	Y 377.433
Zn (206.200 nm)	0.001046	ppm	0.000863	82.56	33.200200	Y 377.433
Zr (343.823 nm)	-0.000210 u	ppm	0.000021	10.02	30.717500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090542	20807.766629	0.000094	0.01
Y 377.433	1.073507	1086590.985235	0.001176	0.11
Y_R 377.433	1.162360	87750.000000	0.000089	0.01
Y_R 488.368	1.124240	49219.900000	0.003177	0.28
Y_R2 488.368	1.119658	97165.642057	0.009417	0.84

Sample Name: 490-162305-A-1-A

Date: 11/7/2018 3:13:22 AM
Rack:Tube: 2:81

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001111	ppm	0.000014	1.28	-395.122000	Y 377.433
Al (167.019 nm)	11.856800 o	ppm	0.042588	0.36	6730.960000	Y_R 377.433
Al H (396.152 nm)	12.105451	ppm	0.044055	0.36	30545.027356	Y_R 377.433
As (188.980 nm)	0.010206	ppm	0.004717	46.22	9.559940	Y 242.219
B (249.678 nm)	6.302170 o	ppm	0.004686	0.07	157222.000000	Y 242.219
Ba (493.408 nm)	0.012737	ppm	0.000165	1.30	2248.110000	Y_R 488.368
Be (234.861 nm)	-0.001121 u	ppm	0.000030	2.68	5089.780000	Y_R 488.368
Bi (223.061 nm)	-0.008417 u	ppm	0.002488	29.56	20.435200	Y 377.433
Ca (315.887 nm)	43.268397 o	ppm	0.189762	0.44	34246.530306	Y_R 377.433
Cd (214.439 nm)	-0.000716 u	ppm	0.000091	12.69	126.853000	Y 377.433
Co (228.615 nm)	0.011112	ppm	0.000154	1.38	165.494000	Y 242.219
Cr (205.560 nm)	0.114059	ppm	0.000933	0.82	1683.940000	Y 377.433
Cu (324.754 nm)	0.044217	ppm	0.000021	0.05	2304.770000	Y 377.433
Fe (238.204 nm)	171.704649 o	ppm	0.495318	0.29	635080.498954	Y_R 377.433
Fe H (259.940 nm)	179.236000	ppm	0.378254	0.21	339082.000000	Y_R 377.433
K (766.491 nm)	17.856700	ppm	0.143095	0.80	19805.000000	Y_R2 488.368
Li (670.783 nm)	0.010348	ppm	0.000276	2.66	-1008.580000	Y_R2 488.368
Mg (279.078 nm)	6.274510	ppm	0.002324	0.04	35986.800000	Y 377.433
Mn (257.610 nm)	1.037940	ppm	0.000734	0.07	242799.000000	Y 377.433
Mo (202.032 nm)	0.002838	ppm	0.000194	6.85	24.416100	Y 377.433
Na (589.592 nm)	40.825800 o	ppm	0.003896	0.01	269136.000000	Y_R2 488.368
Na H (589.593 nm)	42.476076	ppm	0.309683	0.73	158022.675637	Y_R 488.368
Ni (231.604 nm)	0.058746	ppm	0.000071	0.12	403.859000	Y 377.433
P (213.618 nm)	5.275890 o	ppm	0.025301	0.48	11489.000000	Y 242.219
Pb (220.353 nm)	0.006164	ppm	0.000294	4.77	32.385800	Y 242.219
S (181.972 nm)	2.453075	ppm	0.000560	0.02	1273.073703	Y 377.433
Sb (206.834 nm)	0.001004	ppm	0.000799	79.60	-59.493700	Y 377.433
Se (196.026 nm)	0.006910	ppm	0.003568	51.64	-13.338300	Y 242.219
Si (288.158 nm)	8.710350	ppm	0.033858	0.39	75792.400000	Y 377.433
Sn (189.925 nm)	0.004261	ppm	0.001328	31.18	18.068000	Y 377.433
Sr (421.552 nm)	0.284212	ppm	0.000756	0.27	59788.382320	Y_R 488.368
Th (288.505 nm)	0.007136	ppm	0.001325	18.57	104.255000	Y 377.433
Ti (336.122 nm)	0.019917	ppm	0.000046	0.23	2743.620000	Y 377.433
Tl (190.794 nm)	-0.000978 u	ppm	0.000761	77.82	-12.194000	Y 377.433
U (409.013 nm)	0.002940 u	ppm	0.006059	> 100.00	-40.730000	Y 377.433
V (292.401 nm)	0.006347	ppm	0.000200	3.15	236.088000	Y 377.433
Zn (206.200 nm)	0.021191	ppm	0.000498	2.35	138.411000	Y 377.433
Zr (343.823 nm)	0.000635	ppm	0.000062	9.84	620.719000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.094905	20891.023778	0.002415	0.22
Y 377.433	1.082880	1096077.571043	0.001731	0.16
Y_R 377.433	1.157650	87394.200000	0.007301	0.63
Y_R 488.368	1.146020	50173.500000	0.001598	0.14
Y_R2 488.368	1.102649	95689.580292	0.004446	0.40

Sample Name: MB 280-436164/1-C

Date: 11/7/2018 3:16:45 AM Rack:Tube: 2:82

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001314	ppm	0.000123	9.37	-384.656000	Y 377.433
Al (167.019 nm)	-0.001271 u	ppm	0.001037	81.62	1.647340	Y_R 377.433
Al H (396.152 nm)	-0.022501 u	ppm	0.000062	0.28	22.428678	Y_R 377.433
As (188.980 nm)	-0.000265 u	ppm	0.000720	> 100.00	-2.070450	Y 242.219
B (249.678 nm)	0.004690	ppm	0.000496	10.57	174.299000	Y 242.219
Ba (493.408 nm)	-0.000697 u	ppm	0.000248	35.52	518.780000	Y_R 488.368
Be (234.861 nm)	0.000042	ppm	0.000001	1.25	-33.607600	Y_R 488.368
Bi (223.061 nm)	-0.000464 u	ppm	0.000798	> 100.00	11.573400	Y 377.433
Ca (315.887 nm)	0.013324	ppm	0.002446	18.36	-51.024649	Y_R 377.433
Cd (214.439 nm)	0.000043	ppm	0.000007	15.83	3.443770	Y 377.433
Co (228.615 nm)	0.000216	ppm	0.000127	58.89	-32.538700	Y 242.219
Cr (205.560 nm)	0.000121	ppm	0.000024	19.44	-2.113530	Y 377.433
Cu (324.754 nm)	0.001719	ppm	0.000058	3.40	-196.877000	Y 377.433
Fe (238.204 nm)	0.002207	ppm	0.000231	10.46	33.000137	Y_R 377.433
Fe H (259.940 nm)	0.007955 u	ppm	0.000054	0.68	18.282400	Y_R 377.433
K (766.491 nm)	0.146226	ppm	0.024314	16.63	-588.214000	Y_R2 488.368
Li (670.783 nm)	0.008749	ppm	0.001102	12.60	-1061.920000	Y_R2 488.368
Mg (279.078 nm)	0.002174	ppm	0.001495	68.78	51.955600	Y 377.433
Mn (257.610 nm)	0.000172	ppm	0.000002	1.12	102.078000	Y 377.433
Mo (202.032 nm)	-0.000174 u	ppm	0.000048	27.78	-1.527650	Y 377.433
Na (589.592 nm)	0.125267	ppm	0.016179	12.92	1120.710000	Y_R2 488.368
Na H (589.593 nm)	0.636826 u	ppm	0.026582	4.17	4726.677022	Y_R 488.368
Ni (231.604 nm)	0.000826	ppm	0.000732	88.54	1.536650	Y 377.433
P (213.618 nm)	-0.002262 u	ppm	0.001442	63.75	19.641600	Y 242.219
Pb (220.353 nm)	-0.000151 u	ppm	0.000914	> 100.00	2.996000	Y 242.219
S (181.972 nm)	0.099921	ppm	0.009649	9.66	65.346838	Y 377.433
Sb (206.834 nm)	0.000145 u	ppm	0.000511	> 100.00	-22.835900	Y 377.433
Se (196.026 nm)	-0.001989 u	ppm	0.000234	11.76	11.010500	Y 242.219
Si (288.158 nm)	-0.000643 u	ppm	0.000157	24.36	924.123000	Y 377.433
Sn (189.925 nm)	-0.001825 u	ppm	0.001191	65.27	5.970250	Y 377.433
Sr (421.552 nm)	-0.000055 u	ppm	0.000066	> 100.00	144.448280	Y_R 488.368
Th (288.505 nm)	0.005922	ppm	0.000738	12.46	88.128900	Y 377.433
Ti (336.122 nm)	-0.000046 u	ppm	0.000010	22.66	-234.725000	Y 377.433
Tl (190.794 nm)	-0.000091 u	ppm	0.000946	> 100.00	-5.541860	Y 377.433
U (409.013 nm)	0.005068	ppm	0.002444	48.22	-184.649000	Y 377.433
V (292.401 nm)	-0.000091 u	ppm	0.000120	> 100.00	31.475800	Y 377.433
Zn (206.200 nm)	-0.004480 u	ppm	0.000101	2.25	4.343700	Y 377.433
Zr (343.823 nm)	-0.000266 u	ppm	0.000147	55.43	-8.240530	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.128157	21525.467845	0.002514	0.22
Y 377.433	1.113040	1126605.136993	0.003978	0.36
Y_R 377.433	1.186780	89593.600000	0.007818	0.66
Y_R 488.368	1.165180	51012.100000	0.011999	1.03
Y_R2 488.368	1.144214	99296.712018	0.003853	0.34

Sample Name: LCS 280-436164/2-C

Date: 11/7/2018 3:20:07 AM Rack:Tube: 2:83

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048112	ppm	0.000161	0.34	1734.620000	Y 377.433
Al (167.019 nm)	2.011250	ppm	0.018588	0.92	1124.380000	Y_R 377.433
Al H (396.152 nm)	2.001911	ppm	0.005088	0.25	5223.340184	Y_R 377.433
As (188.980 nm)	1.011290	ppm	0.004896	0.48	1271.770000	Y 242.219
B (249.678 nm)	1.066500	ppm	0.001469	0.14	26718.800000	Y 242.219
Ba (493.408 nm)	2.027630 o	ppm	0.005787	0.29	235444.000000	Y_R 488.368
Be (234.861 nm)	0.049848	ppm	0.000518	1.04	14778.300000	Y_R 488.368
Bi (223.061 nm)	2.001790	ppm	0.003089	0.15	5053.630000	Y 377.433
Ca (315.887 nm)	52.033614 o	ppm	0.056419	0.11	41196.650079	Y_R 377.433
Cd (214.439 nm)	0.101012	ppm	0.000130	0.13	6039.490000	Y 377.433
Co (228.615 nm)	0.490230	ppm	0.000932	0.19	8880.170000	Y 242.219
Cr (205.560 nm)	0.206096	ppm	0.000474	0.23	3130.580000	Y 377.433
Cu (324.754 nm)	0.258134	ppm	0.000274	0.11	14117.000000	Y 377.433
Fe (238.204 nm)	1.008588	ppm	0.001790	0.18	3755.136262	Y_R 377.433
Fe H (259.940 nm)	1.036340 u	ppm	0.002983	0.29	1963.770000	Y_R 377.433
K (766.491 nm)	52.625200	ppm	0.332040	0.63	59840.100000	Y_R2 488.368
Li (670.783 nm)	1.026470	ppm	0.003658	0.36	32879.700000	Y_R2 488.368
Mg (279.078 nm)	51.185100 o	ppm	0.007033	0.01	295653.000000	Y 377.433
Mn (257.610 nm)	0.509826	ppm	0.000810	0.16	119292.000000	Y 377.433
Mo (202.032 nm)	1.066270	ppm	0.002627	0.25	9182.610000	Y 377.433
Na (589.592 nm)	51.018200 o	ppm	0.140503	0.28	340320.000000	Y_R2 488.368
Na H (589.593 nm)	54.399454	ppm	0.281997	0.52	203602.890681	Y_R 488.368
Ni (231.604 nm)	0.509079	ppm	0.000588	0.12	3471.170000	Y 377.433
P (213.618 nm)	10.501300 o	ppm	0.013600	0.13	22843.900000	Y 242.219
Pb (220.353 nm)	0.505123	ppm	0.001437	0.28	1452.840000	Y 242.219
S (181.972 nm)	2.122633	ppm	0.019793	0.93	1102.538100	Y 377.433
Sb (206.834 nm)	0.532836	ppm	0.001694	0.32	1427.750000	Y 377.433
Se (196.026 nm)	2.067220	ppm	0.002618	0.13	2070.800000	Y 242.219
Si (288.158 nm)	10.410900	ppm	0.019015	0.18	90408.200000	Y 377.433
Sn (189.925 nm)	2.143930	ppm	0.005859	0.27	4271.270000	Y 377.433
Sr (421.552 nm)	1.035262	ppm	0.003334	0.32	217371.254630	Y_R 488.368
Th (288.505 nm)	1.031620	ppm	0.004287	0.42	2783.620000	Y 377.433
Ti (336.122 nm)	1.041270	ppm	0.001603	0.15	148226.000000	Y 377.433
Tl (190.794 nm)	2.056980	ppm	0.008477	0.41	4509.630000	Y 377.433
U (409.013 nm)	2.104570	ppm	0.011981	0.57	9262.860000	Y 377.433
V (292.401 nm)	0.516132	ppm	0.000820	0.16	18679.000000	Y 377.433
Zn (206.200 nm)	0.501707	ppm	0.001198	0.24	2647.990000	Y 377.433
Zr (343.823 nm)	0.517918	ppm	0.000375	0.07	68127.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102191	21030.044192	0.001035	0.09
Y 377.433	1.090801	1104095.014081	0.000082	0.01
Y_R 377.433	1.171210	88418.100000	0.008930	0.76
Y_R 488.368	1.144610	50111.500000	0.012799	1.12
Y_R2 488.368	1.132074	98243.159354	0.001152	0.10

Sample Name: 280-116352-A-1-C

Date: 11/7/2018 3:23:28 AM
Rack:Tube: 2:84

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001379	ppm	0.000018	1.27	-381.696000	Y 377.433
Al (167.019 nm)	0.007353	ppm	0.004266	58.02	6.458710	Y_R 377.433
Al H (396.152 nm)	-0.008839 u	ppm	0.004743	53.66	66.722149	Y_R 377.433
As (188.980 nm)	0.002738	ppm	0.000939	34.30	1.710930	Y 242.219
B (249.678 nm)	0.019316	ppm	0.000408	2.11	539.622000	Y 242.219
Ba (493.408 nm)	0.655875	ppm	0.003490	0.53	76566.000000	Y_R 488.368
Be (234.861 nm)	0.000055	ppm	0.000018	32.99	-30.268300	Y_R 488.368
Bi (223.061 nm)	0.000993 u	ppm	0.002824	> 100.00	15.244000	Y 377.433
Ca (315.887 nm)	21.014238 o	ppm	0.100262	0.48	16600.894392	Y_R 377.433
Cd (214.439 nm)	0.000035	ppm	0.000027	77.83	2.994060	Y 377.433
Co (228.615 nm)	0.000088 u	ppm	0.000145	> 100.00	-34.850500	Y 242.219
Cr (205.560 nm)	0.000346	ppm	0.000149	43.20	1.284080	Y 377.433
Cu (324.754 nm)	0.002006	ppm	0.000249	12.43	-191.649000	Y 377.433
Fe (238.204 nm)	0.007194	ppm	0.002442	33.94	51.446496	Y_R 377.433
Fe H (259.940 nm)	0.010593 u	ppm	0.000979	9.24	23.273700	Y_R 377.433
K (766.491 nm)	1.034670	ppm	0.064023	6.19	434.812000	Y_R2 488.368
Li (670.783 nm)	0.022848	ppm	0.001399	6.12	-591.720000	Y_R2 488.368
Mg (279.078 nm)	0.528130	ppm	0.003709	0.70	3090.030000	Y 377.433
Mn (257.610 nm)	0.050935	ppm	0.000061	0.12	11973.700000	Y 377.433
Mo (202.032 nm)	0.009811	ppm	0.000227	2.31	84.463300	Y 377.433
Na (589.592 nm)	226.196000 o	ppm	0.721794	0.32	1490980.000000	Y_R2 488.368
Na H (589.593 nm)	238.310878	ppm	1.170133	0.49	876087.838754	Y_R 488.368
Ni (231.604 nm)	0.000021 u	ppm	0.000482	> 100.00	-3.954550	Y 377.433
P (213.618 nm)	-0.002583 u	ppm	0.002063	79.86	18.944900	Y 242.219
Pb (220.353 nm)	0.000164 u	ppm	0.000262	> 100.00	3.859010	Y 242.219
S (181.972 nm)	0.998399	ppm	0.004003	0.40	525.626549	Y 377.433
Sb (206.834 nm)	-0.000746 u	ppm	0.000795	> 100.00	-25.335800	Y 377.433
Se (196.026 nm)	-0.001960 u	ppm	0.000365	18.62	11.080900	Y 242.219
Si (288.158 nm)	3.885360	ppm	0.003467	0.09	34323.100000	Y 377.433
Sn (189.925 nm)	0.000935	ppm	0.000421	45.04	11.456800	Y 377.433
Sr (421.552 nm)	0.714700	ppm	0.002446	0.34	150112.025764	Y_R 488.368
Th (288.505 nm)	0.008547	ppm	0.003081	36.05	95.957400	Y 377.433
Ti (336.122 nm)	0.000128	ppm	0.000039	30.72	-144.272000	Y 377.433
Tl (190.794 nm)	0.004811	ppm	0.002048	42.58	5.201990	Y 377.433
U (409.013 nm)	-0.003025 u	ppm	0.004951	> 100.00	-225.249000	Y 377.433
V (292.401 nm)	-0.000032 u	ppm	0.000214	> 100.00	33.965600	Y 377.433
Zn (206.200 nm)	-0.002969 u	ppm	0.000169	5.69	12.232200	Y 377.433
Zr (343.823 nm)	-0.000086 u	ppm	0.000049	57.29	15.431900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099125	20971.537979	0.002258	0.21
Y 377.433	1.085528	1098757.917375	0.004360	0.40
Y_R 377.433	1.162050	87726.700000	0.008922	0.77
Y_R 488.368	1.129860	49465.900000	0.011311	1.00
Y_R2 488.368	1.133641	98379.147682	0.002327	0.21

Sample Name: 280-116352-A-1-C SD@5

Date: 11/7/2018 3:26:50 AM
Rack:Tube: 2:85

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001106	ppm	0.000138	12.49	-394.156000	Y 377.433
Al (167.019 nm)	-0.000158 u	ppm	0.001468	> 100.00	2.270050	Y_R 377.433
Al H (396.152 nm)	-0.020821 u	ppm	0.003524	16.92	28.657797	Y_R 377.433
As (188.980 nm)	-0.000743 u	ppm	0.001665	> 100.00	-2.672930	Y 242.219
B (249.678 nm)	0.004750	ppm	0.000108	2.27	175.775000	Y 242.219
Ba (493.408 nm)	0.132596	ppm	0.000487	0.37	15957.300000	Y_R 488.368
Be (234.861 nm)	0.000022	ppm	0.000005	24.26	-39.782700	Y_R 488.368
Bi (223.061 nm)	-0.000086 u	ppm	0.001643	> 100.00	12.527700	Y 377.433
Ca (315.887 nm)	4.284033	ppm	0.004417	0.10	3335.280100	Y_R 377.433
Cd (214.439 nm)	0.000060	ppm	0.000008	14.09	4.491040	Y 377.433
Co (228.615 nm)	0.000265	ppm	0.000158	59.57	-31.663200	Y 242.219
Cr (205.560 nm)	0.000229	ppm	0.000057	24.72	-0.474663	Y 377.433
Cu (324.754 nm)	0.001946	ppm	0.000252	12.95	-185.978000	Y 377.433
Fe (238.204 nm)	0.005706	ppm	0.001317	23.08	45.943348	Y_R 377.433
Fe H (259.940 nm)	0.009984 u	ppm	0.000590	5.91	22.120500	Y_R 377.433
K (766.491 nm)	0.296774	ppm	0.018625	6.28	-414.862000	Y_R2 488.368
Li (670.783 nm)	0.012251	ppm	0.001014	8.28	-945.137000	Y_R2 488.368
Mg (279.078 nm)	0.109090	ppm	0.000577	0.53	669.550000	Y 377.433
Mn (257.610 nm)	0.010528	ppm	0.000003	0.03	2523.890000	Y 377.433
Mo (202.032 nm)	0.001694	ppm	0.000106	6.26	14.565000	Y 377.433
Na (589.592 nm)	47.085800 o	ppm	0.272672	0.58	310595.000000	Y_R2 488.368
Na H (589.593 nm)	49.737256	ppm	0.073019	0.15	184736.719713	Y_R 488.368
Ni (231.604 nm)	0.000520	ppm	0.000429	82.48	-0.555295	Y 377.433
P (213.618 nm)	-0.005138 u	ppm	0.002139	41.64	13.392800	Y 242.219
Pb (220.353 nm)	0.001155	ppm	0.000272	23.57	6.731230	Y 242.219
S (181.972 nm)	0.247578	ppm	0.002306	0.93	140.994684	Y 377.433
Sb (206.834 nm)	0.001455	ppm	0.000365	25.10	-19.258800	Y 377.433
Se (196.026 nm)	-0.004161 u	ppm	0.003252	78.15	8.856620	Y 242.219
Si (288.158 nm)	0.768690	ppm	0.001478	0.19	7536.300000	Y 377.433
Sn (189.925 nm)	-0.001010 u	ppm	0.000731	72.36	7.589360	Y 377.433
Sr (421.552 nm)	0.144901	ppm	0.000192	0.13	30558.577880	Y_R 488.368
Th (288.505 nm)	0.005892	ppm	0.000882	14.97	88.255600	Y 377.433
Ti (336.122 nm)	-0.000063 u	ppm	0.000135	> 100.00	-223.897000	Y 377.433
Tl (190.794 nm)	0.001100	ppm	0.001106	> 100.00	-2.929670	Y 377.433
U (409.013 nm)	0.003101	ppm	0.003133	> 100.00	-194.349000	Y 377.433
V (292.401 nm)	-0.000285 u	ppm	0.000227	79.60	24.645500	Y 377.433
Zn (206.200 nm)	-0.004425 u	ppm	0.000017	0.39	4.631260	Y 377.433
Zr (343.823 nm)	-0.000326 u	ppm	0.000059	18.01	-16.153600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125331	21471.546571	0.003353	0.30
Y 377.433	1.110683	1124219.130793	0.002462	0.22
Y_R 377.433	1.177020	88856.300000	0.002629	0.22
Y_R 488.368	1.152680	50464.900000	0.004284	0.37
Y_R2 488.368	1.140928	99011.511005	0.000296	0.03

Sample Name: 280-116352-A-1-D MS

Date: 11/7/2018 3:30:12 AM
Rack:Tube: 2:86

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048785	ppm	0.000145	0.30	1764.940000	Y 377.433
Al (167.019 nm)	1.973040	ppm	0.012930	0.66	1103.070000	Y_R 377.433
Al H (396.152 nm)	1.994866	ppm	0.012680	0.64	5213.328936	Y_R 377.433
As (188.980 nm)	1.010930	ppm	0.017813	1.76	1271.330000	Y 242.219
B (249.678 nm)	1.077780	ppm	0.000596	0.06	27000.700000	Y 242.219
Ba (493.408 nm)	2.650060 o	ppm	0.009520	0.36	307535.000000	Y_R 488.368
Be (234.861 nm)	0.049260	ppm	0.000078	0.16	14603.300000	Y_R 488.368
Bi (223.061 nm)	2.020940	ppm	0.014039	0.69	5101.850000	Y 377.433
Ca (315.887 nm)	71.730937 o	ppm	0.693040	0.97	56814.932249	Y_R 377.433
Cd (214.439 nm)	0.098992	ppm	0.000406	0.41	5918.720000	Y 377.433
Co (228.615 nm)	0.492320	ppm	0.001219	0.25	8917.320000	Y 242.219
Cr (205.560 nm)	0.202485	ppm	0.000190	0.09	3075.650000	Y 377.433
Cu (324.754 nm)	0.261265	ppm	0.000152	0.06	14280.000000	Y 377.433
Fe (238.204 nm)	0.998327	ppm	0.004082	0.41	3717.185890	Y_R 377.433
Fe H (259.940 nm)	1.022890 u	ppm	0.004573	0.45	1938.330000	Y_R 377.433
K (766.491 nm)	53.988300	ppm	0.136822	0.25	61409.700000	Y_R2 488.368
Li (670.783 nm)	1.043270	ppm	0.003192	0.31	33440.000000	Y_R2 488.368
Mg (279.078 nm)	50.679100 o	ppm	0.148643	0.29	292731.000000	Y 377.433
Mn (257.610 nm)	0.549924	ppm	0.001365	0.25	128670.000000	Y 377.433
Mo (202.032 nm)	1.056290	ppm	0.003829	0.36	9096.700000	Y 377.433
Na (589.592 nm)	271.259000 o	ppm	0.119125	0.04	1791720.000000	Y_R2 488.368
Na H (589.593 nm)	284.559274	ppm	0.853232	0.30	1047402.055868	Y_R 488.368
Ni (231.604 nm)	0.504085	ppm	0.001959	0.39	3437.040000	Y 377.433
P (213.618 nm)	10.525200 o	ppm	0.016602	0.16	22895.800000	Y 242.219
Pb (220.353 nm)	0.497027	ppm	0.002288	0.46	1429.580000	Y 242.219
S (181.972 nm)	3.036590	ppm	0.010213	0.34	1570.717271	Y 377.433
Sb (206.834 nm)	0.525563	ppm	0.003378	0.64	1407.910000	Y 377.433
Se (196.026 nm)	2.060390	ppm	0.001822	0.09	2064.030000	Y 242.219
Si (288.158 nm)	14.245100 o	ppm	0.017347	0.12	123362.000000	Y 377.433
Sn (189.925 nm)	2.101980	ppm	0.010529	0.50	4187.880000	Y 377.433
Sr (421.552 nm)	1.740233 o	ppm	0.011395	0.65	365286.081310	Y_R 488.368
Th (288.505 nm)	1.022910	ppm	0.001378	0.13	2761.370000	Y 377.433
Ti (336.122 nm)	1.022150	ppm	0.000962	0.09	145564.000000	Y 377.433
Tl (190.794 nm)	2.008290	ppm	0.004463	0.22	4402.770000	Y 377.433
U (409.013 nm)	2.077820	ppm	0.003341	0.16	9138.820000	Y 377.433
V (292.401 nm)	0.511954	ppm	0.001925	0.38	18529.000000	Y 377.433
Zn (206.200 nm)	0.496117	ppm	0.001840	0.37	2618.790000	Y 377.433
Zr (343.823 nm)	0.508550	ppm	0.000802	0.16	66895.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.088929	20777.003507	0.007911	0.73
Y 377.433	1.080552	1093721.757386	0.008381	0.78
Y_R 377.433	1.171530	88441.900000	0.005051	0.43
Y_R 488.368	1.143470	50062.000000	0.005933	0.52
Y_R2 488.368	1.121963	97365.720164	0.010129	0.90

Sample Name: CCVH-5408055

Date: 11/7/2018 3:33:35 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000279 u	ppm	0.000278	99.54	-707.474000	Y 377.433
Al (167.019 nm)	45.053400 o	ppm	0.011553	0.03	25154.300000	Y_R 377.433
Al H (396.152 nm)	48.594585	ppm	0.095914	0.20	122301.479522	Y_R 377.433
As (188.980 nm)	0.000030 u	ppm	0.000946	> 100.00	-2.137370	Y 242.219
B (249.678 nm)	0.000873	ppm	0.000107	12.19	4.472650	Y 242.219
Ba (493.408 nm)	-0.000497 u	ppm	0.000002	0.38	587.980000	Y_R 488.368
Be (234.861 nm)	-0.000276 u	ppm	0.000043	15.45	1418.400000	Y_R 488.368
Bi (223.061 nm)	0.994838	ppm	0.000868	0.09	2525.990000	Y 377.433
Ca (315.887 nm)	0.001306 u	ppm	0.012633	> 100.00	-60.553150	Y_R 377.433
Cd (214.439 nm)	-0.000272 u	ppm	0.000014	5.29	32.189300	Y 377.433
Co (228.615 nm)	0.002888	ppm	0.000179	6.20	15.867000	Y 242.219
Cr (205.560 nm)	0.000054	ppm	0.000020	36.92	-16.766900	Y 377.433
Cu (324.754 nm)	-0.002168 u	ppm	0.000509	23.48	-86.224600	Y 377.433
Fe (238.204 nm)	48.449258 o	ppm	0.172476	0.36	179216.117308	Y_R 377.433
Fe H (259.940 nm)	49.741700	ppm	0.094401	0.19	94104.500000	Y_R 377.433
K (766.491 nm)	0.200937	ppm	0.101749	50.64	-525.216000	Y_R2 488.368
Li (670.783 nm)	0.010287	ppm	0.000081	0.79	-1010.620000	Y_R2 488.368
Mg (279.078 nm)	-0.015552 u	ppm	0.002197	14.13	-411.783000	Y 377.433
Mn (257.610 nm)	0.001430	ppm	0.000035	2.46	396.243000	Y 377.433
Mo (202.032 nm)	-0.000342 u	ppm	0.000228	66.72	-2.974900	Y 377.433
Na (589.592 nm)	244.107000 o	ppm	0.777985	0.32	1607580.000000	Y_R2 488.368
Na H (589.593 nm)	253.837440	ppm	1.412967	0.56	932351.307734	Y_R 488.368
Ni (231.604 nm)	0.003823	ppm	0.000180	4.71	24.014600	Y 377.433
P (213.618 nm)	-0.004858 u	ppm	0.000524	10.79	13.999900	Y 242.219
Pb (220.353 nm)	-0.003428 u	ppm	0.000028	0.82	11.364600	Y 242.219
S (181.972 nm)	5.041888	ppm	0.004180	0.08	2596.372473	Y 377.433
Sb (206.834 nm)	-0.000210 u	ppm	0.001835	> 100.00	-70.065200	Y 377.433
Se (196.026 nm)	-0.002033 u	ppm	0.002149	> 100.00	2.045670	Y 242.219
Si (288.158 nm)	0.021843	ppm	0.000455	2.08	1117.390000	Y 377.433
Sn (189.925 nm)	0.000827	ppm	0.000598	72.33	11.241600	Y 377.433
Sr (421.552 nm)	0.000393	ppm	0.000008	2.11	238.398400	Y_R 488.368
Th (288.505 nm)	4.952230	ppm	0.016941	0.34	12950.100000	Y 377.433
Ti (336.122 nm)	0.001162	ppm	0.000004	0.31	-62.637300	Y 377.433
Tl (190.794 nm)	-0.001006 u	ppm	0.000465	46.18	-8.858000	Y 377.433
U (409.013 nm)	10.014700	ppm	0.007632	0.08	45140.500000	Y 377.433
V (292.401 nm)	0.004236	ppm	0.000075	1.77	15.780200	Y 377.433
Zn (206.200 nm)	-0.004321 u	ppm	0.000012	0.28	5.173230	Y 377.433
Zr (343.823 nm)	-0.004353 u	ppm	0.000043	1.00	-401.783000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.114333	21261.715211	0.003753	0.34
Y 377.433	1.092998	1106319.490240	0.002175	0.20
Y_R 377.433	1.180660	89131.800000	0.004560	0.39
Y_R 488.368	1.163390	50934.000000	0.001983	0.17
Y_R2 488.368	1.144203	99295.749415	0.003781	0.33

Sample Name: CCV-5407546

Date: 11/7/2018 3:36:58 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.496194	ppm	0.000975	0.20	22292.100000	Y 377.433
Al (167.019 nm)	0.512154	ppm	0.001759	0.34	289.596000	Y_R 377.433
Al H (396.152 nm)	0.496908 u	ppm	0.001205	0.24	1372.156920	Y_R 377.433
As (188.980 nm)	0.987653	ppm	0.007759	0.79	1242.000000	Y 242.219
B (249.678 nm)	0.492683	ppm	0.000240	0.05	12382.600000	Y 242.219
Ba (493.408 nm)	0.492464	ppm	0.000906	0.18	57647.700000	Y_R 488.368
Be (234.861 nm)	0.476828	ppm	0.002341	0.49	142099.000000	Y_R 488.368
Bi (223.061 nm)	-0.003639 u	ppm	0.000428	11.77	3.994850	Y 377.433
Ca (315.887 nm)	5.128654	ppm	0.020585	0.40	4005.277315	Y_R 377.433
Cd (214.439 nm)	0.498763	ppm	0.000314	0.06	29813.000000	Y 377.433
Co (228.615 nm)	0.491176	ppm	0.001098	0.22	8877.650000	Y 242.219
Cr (205.560 nm)	0.498824	ppm	0.000314	0.06	7583.580000	Y 377.433
Cu (324.754 nm)	0.504334	ppm	0.000494	0.10	27813.100000	Y 377.433
Fe (238.204 nm)	2.475245	ppm	0.005225	0.21	9179.618128	Y_R 377.433
Fe H (259.940 nm)	2.554950 u	ppm	0.001242	0.05	4836.680000	Y_R 377.433
K (766.491 nm)	50.223500	ppm	0.318525	0.63	57074.600000	Y_R2 488.368
Li (670.783 nm)	0.996983	ppm	0.002890	0.29	31896.400000	Y_R2 488.368
Mg (279.078 nm)	19.860800	ppm	0.034692	0.17	114761.000000	Y 377.433
Mn (257.610 nm)	0.499653	ppm	0.000243	0.05	116913.000000	Y 377.433
Mo (202.032 nm)	0.506469	ppm	0.000168	0.03	4361.650000	Y 377.433
Na (589.592 nm)	5.123440	ppm	0.019145	0.37	35028.900000	Y_R2 488.368
Na H (589.593 nm)	6.095137 u	ppm	0.013732	0.23	25188.988761	Y_R 488.368
Ni (231.604 nm)	0.517256	ppm	0.001201	0.23	3525.720000	Y 377.433
P (213.618 nm)	0.998114	ppm	0.000275	0.03	2193.460000	Y 242.219
Pb (220.353 nm)	0.988108	ppm	0.004363	0.44	2835.490000	Y 242.219
S (181.972 nm)	0.069802	ppm	0.002952	4.23	51.156879	Y 377.433
Sb (206.834 nm)	1.006160	ppm	0.004900	0.49	2739.970000	Y 377.433
Se (196.026 nm)	0.979101	ppm	0.000936	0.10	987.446000	Y 242.219
Si (288.158 nm)	4.941130	ppm	0.042579	0.86	43397.100000	Y 377.433
Sn (189.925 nm)	1.029760	ppm	0.004098	0.40	2056.540000	Y 377.433
Sr (421.552 nm)	0.501923	ppm	0.001468	0.29	105467.789163	Y_R 488.368
Th (288.505 nm)	0.012289	ppm	0.000018	0.15	121.095000	Y 377.433
Ti (336.122 nm)	0.497095	ppm	0.000772	0.16	70580.700000	Y 377.433
Tl (190.794 nm)	1.002980	ppm	0.000265	0.03	2197.190000	Y 377.433
U (409.013 nm)	0.003395	ppm	0.002461	72.49	-230.173000	Y 377.433
V (292.401 nm)	0.493385	ppm	0.000647	0.13	17817.600000	Y 377.433
Zn (206.200 nm)	0.497702	ppm	0.001506	0.30	2627.070000	Y 377.433
Zr (343.823 nm)	0.500176	ppm	0.000334	0.07	65798.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.126793	21499.448956	0.000864	0.08
Y 377.433	1.113895	1127470.846565	0.001905	0.17
Y_R 377.433	1.187750	89666.600000	0.003005	0.25
Y_R 488.368	1.161100	50833.800000	0.001837	0.16
Y_R2 488.368	1.144655	99334.928745	0.000596	0.05

Sample Name: CCB

Date: 11/7/2018 3:40:19 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001373	ppm	0.000048	3.48	-381.910000	Y 377.433
Al (167.019 nm)	-0.003808 u	ppm	0.000162	4.24	0.229975	Y_R 377.433
Al H (396.152 nm)	-0.017442 u	ppm	0.002573	14.75	35.147475	Y_R 377.433
As (188.980 nm)	-0.000065 u	ppm	0.001408	> 100.00	-1.818850	Y 242.219
B (249.678 nm)	0.001531	ppm	0.000291	19.00	95.397200	Y 242.219
Ba (493.408 nm)	-0.000564 u	ppm	0.000349	61.98	534.189000	Y_R 488.368
Be (234.861 nm)	0.000068	ppm	0.000008	11.94	-25.985300	Y_R 488.368
Bi (223.061 nm)	-0.000189 u	ppm	0.000937	> 100.00	12.266800	Y 377.433
Ca (315.887 nm)	0.005881	ppm	0.004899	83.31	-56.926214	Y_R 377.433
Cd (214.439 nm)	0.000121	ppm	0.000040	33.07	8.100880	Y 377.433
Co (228.615 nm)	0.000328	ppm	0.000219	66.60	-30.502300	Y 242.219
Cr (205.560 nm)	0.000237	ppm	0.000091	38.37	-0.356445	Y 377.433
Cu (324.754 nm)	0.001753	ppm	0.000074	4.22	-194.465000	Y 377.433
Fe (238.204 nm)	-0.001576 u	ppm	0.000226	14.36	19.007111	Y_R 377.433
Fe H (259.940 nm)	0.006035 u	ppm	0.001264	20.95	14.650500	Y_R 377.433
K (766.491 nm)	0.122129	ppm	0.042769	35.02	-615.962000	Y_R2 488.368
Li (670.783 nm)	0.010305 Z	ppm	0.000562	5.45	-1010.030000 Z	Y_R2 488.368
Mg (279.078 nm)	0.002082	ppm	0.001013	48.64	51.409600	Y 377.433
Mn (257.610 nm)	0.000030	ppm	0.000040	> 100.00	68.730200	Y 377.433
Mo (202.032 nm)	-0.000201 u	ppm	0.000030	15.07	-1.757100	Y 377.433
Na (589.592 nm)	0.068819	ppm	0.001353	1.97	749.445000	Y_R2 488.368
Na H (589.593 nm)	0.397901 u	ppm	0.025844	6.50	3851.547720	Y_R 488.368
Ni (231.604 nm)	0.000542	ppm	0.000139	25.58	-0.401008	Y 377.433
P (213.618 nm)	-0.002010 u	ppm	0.001639	81.55	20.189300	Y 242.219
Pb (220.353 nm)	0.001496	ppm	0.000615	41.14	7.722960	Y 242.219
S (181.972 nm)	0.068029 Z	ppm	0.004591	6.75	49.013013 Z	Y 377.433
Sb (206.834 nm)	0.001315	ppm	0.001130	85.92	-19.628300	Y 377.433
Se (196.026 nm)	-0.003129 u	ppm	0.003498	> 100.00	9.876730	Y 242.219
Si (288.158 nm)	-0.001298 u	ppm	0.000563	43.38	918.498000	Y 377.433
Sn (189.925 nm)	-0.001080 u	ppm	0.000516	47.76	7.450350	Y 377.433
Sr (421.552 nm)	-0.000024 u	ppm	0.000065	> 100.00	150.914472	Y_R 488.368
Th (288.505 nm)	0.007876 Z	ppm	0.000755	9.58	93.130200 Z	Y 377.433
Ti (336.122 nm)	-0.000094 u	ppm	0.000053	56.87	-241.599000	Y 377.433
Tl (190.794 nm)	0.001981	ppm	0.000585	29.55	-0.989418	Y 377.433
U (409.013 nm)	0.006305	ppm	0.003721	59.02	-179.065000	Y 377.433
V (292.401 nm)	-0.000266 u	ppm	0.000035	13.26	25.261800	Y 377.433
Zn (206.200 nm)	-0.005280 u	ppm	0.000115	2.17	0.163201	Y 377.433
Zr (343.823 nm)	-0.000165 u	ppm	0.000008	4.63	5.030740	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127655	21515.901273	0.001403	0.12
Y 377.433	1.114514	1128097.739983	0.002646	0.24
Y_R 377.433	1.189470	89796.200000	0.002413	0.20
Y_R 488.368	1.153120	50484.300000	0.002038	0.18
Y_R2 488.368	1.142872	99180.218977	0.003239	0.28

Sample Name: CCVL-5413446

Date: 11/7/2018 3:43:41 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011073	ppm	0.000058	0.53	62.817500	Y 377.433
Al (167.019 nm)	0.099442	ppm	0.000363	0.36	57.863900	Y_R 377.433
Al H (396.152 nm)	0.082828 u	ppm	0.002358	2.85	289.050667	Y_R 377.433
As (188.980 nm)	0.014065	ppm	0.000376	2.68	15.974300	Y 242.219
B (249.678 nm)	0.101762	ppm	0.000103	0.10	2599.460000	Y 242.219
Ba (493.408 nm)	0.009216	ppm	0.000117	1.27	1666.910000	Y_R 488.368
Be (234.861 nm)	0.000999	ppm	0.000012	1.18	253.756000	Y_R 488.368
Bi (223.061 nm)	0.100986	ppm	0.000145	0.14	267.052000	Y 377.433
Ca (315.887 nm)	0.220124	ppm	0.008223	3.74	112.953241	Y_R 377.433
Cd (214.439 nm)	0.005248	ppm	0.000074	1.41	314.630000	Y 377.433
Co (228.615 nm)	0.010570	ppm	0.000211	1.99	155.343000	Y 242.219
Cr (205.560 nm)	0.010475	ppm	0.000041	0.39	155.429000	Y 377.433
Cu (324.754 nm)	0.017953	ppm	0.000174	0.97	706.356000	Y 377.433
Fe (238.204 nm)	0.098441	ppm	0.000354	0.36	388.927035	Y_R 377.433
Fe H (259.940 nm)	0.101723 u	ppm	0.000634	0.62	195.673000	Y_R 377.433
K (766.491 nm)	3.275420	ppm	0.000760	0.02	3014.980000	Y_R2 488.368
Li (670.783 nm)	0.030967 Q	ppm	0.000859	2.77	-320.924000 Q	Y_R2 488.368
Mg (279.078 nm)	0.212037	ppm	0.001000	0.47	1263.020000	Y 377.433
Mn (257.610 nm)	0.010461	ppm	0.000009	0.08	2508.140000	Y 377.433
Mo (202.032 nm)	0.019532	ppm	0.000051	0.26	168.179000	Y 377.433
Na (589.592 nm)	1.128890	ppm	0.005814	0.52	7749.570000	Y_R2 488.368
Na H (589.593 nm)	1.455015 u	ppm	0.034153	2.35	7733.822365	Y_R 488.368
Ni (231.604 nm)	0.043497	ppm	0.000397	0.91	292.639000	Y 377.433
P (213.618 nm)	2.869610 o	ppm	0.020143	0.70	6260.210000	Y 242.219
Pb (220.353 nm)	0.009844	ppm	0.001667	16.93	31.661400	Y 242.219
S (181.972 nm)	0.175263 Q	ppm	0.009057	5.17	103.958256 Q	Y 377.433
Sb (206.834 nm)	0.019782	ppm	0.000792	4.00	30.977400	Y 377.433
Se (196.026 nm)	0.018236	ppm	0.001118	6.13	31.131300	Y 242.219
Si (288.158 nm)	0.499702	ppm	0.008680	1.74	5224.440000	Y 377.433
Sn (189.925 nm)	0.102759	ppm	0.000009	0.01	213.861000	Y 377.433
Sr (421.552 nm)	0.010241	ppm	0.000180	1.76	2304.689754	Y_R 488.368
Th (288.505 nm)	0.015877	ppm	0.000244	1.53	114.918000	Y 377.433
Ti (336.122 nm)	0.009800	ppm	0.000122	1.25	1168.050000	Y 377.433
Tl (190.794 nm)	0.015131	ppm	0.001689	11.16	27.850000	Y 377.433
U (409.013 nm)	0.065426	ppm	0.003149	4.81	87.243400	Y 377.433
V (292.401 nm)	0.009716	ppm	0.000129	1.33	382.804000	Y 377.433
Zn (206.200 nm)	0.016461	ppm	0.000299	1.81	113.709000	Y 377.433
Zr (343.823 nm)	0.015101	ppm	0.000085	0.56	2012.490000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.135684	21669.101578	0.001865	0.16
Y 377.433	1.120902	1134563.412924	0.000063	0.01
Y_R 377.433	1.192580	90031.100000	0.006536	0.55
Y_R 488.368	1.158840	50734.800000	0.008475	0.73
Y_R2 488.368	1.157660	100463.535353	0.000097	0.01

Sample Name: 280-116352-A-1-E MSD

Date: 11/7/2018 3:47:04 AM
Rack:Tube: 2:87

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048123	ppm	0.000250	0.52	1735.910000	Y 377.433
Al (167.019 nm)	1.933200	ppm	0.018486	0.96	1080.870000	Y_R 377.433
Al H (396.152 nm)	1.953023	ppm	0.001929	0.10	5107.319650	Y_R 377.433
As (188.980 nm)	0.996902	ppm	0.000191	0.02	1253.660000	Y 242.219
B (249.678 nm)	1.069620	ppm	0.002711	0.25	26796.600000	Y 242.219
Ba (493.408 nm)	2.614670 o	ppm	0.004306	0.16	303437.000000	Y_R 488.368
Be (234.861 nm)	0.048402	ppm	0.000114	0.24	14348.400000	Y_R 488.368
Bi (223.061 nm)	1.999880	ppm	0.003565	0.18	5048.810000	Y 377.433
Ca (315.887 nm)	70.615821 o	ppm	0.252798	0.36	55930.740796	Y_R 377.433
Cd (214.439 nm)	0.097981	ppm	0.000023	0.02	5858.290000	Y 377.433
Co (228.615 nm)	0.485514	ppm	0.002177	0.45	8793.940000	Y 242.219
Cr (205.560 nm)	0.200620	ppm	0.000453	0.23	3047.270000	Y 377.433
Cu (324.754 nm)	0.258416	ppm	0.000415	0.16	14121.700000	Y 377.433
Fe (238.204 nm)	1.010035	ppm	0.000108	0.01	3760.488446	Y_R 377.433
Fe H (259.940 nm)	1.033700 u	ppm	0.001074	0.10	1958.780000	Y_R 377.433
K (766.491 nm)	53.301800	ppm	0.027292	0.05	60619.200000	Y_R2 488.368
Li (670.783 nm)	1.035310	ppm	0.002764	0.27	33174.500000	Y_R2 488.368
Mg (279.078 nm)	50.065200 o	ppm	0.029827	0.06	289186.000000	Y 377.433
Mn (257.610 nm)	0.544525	ppm	0.000622	0.11	127407.000000	Y 377.433
Mo (202.032 nm)	1.052050	ppm	0.000666	0.06	9060.210000	Y 377.433
Na (589.592 nm)	268.146000 o	ppm	0.941428	0.35	1771150.000000	Y_R2 488.368
Na H (589.593 nm)	281.256111	ppm	0.003180	0.00	1035267.259267	Y_R 488.368
Ni (231.604 nm)	0.498901	ppm	0.000719	0.14	3401.650000	Y 377.433
P (213.618 nm)	10.398400 o	ppm	0.015517	0.15	22620.200000	Y 242.219
Pb (220.353 nm)	0.490011	ppm	0.001684	0.34	1409.400000	Y 242.219
S (181.972 nm)	2.998462	ppm	0.009515	0.32	1551.176676	Y 377.433
Sb (206.834 nm)	0.522303	ppm	0.000253	0.05	1399.030000	Y 377.433
Se (196.026 nm)	2.038930	ppm	0.011288	0.55	2042.670000	Y 242.219
Si (288.158 nm)	14.179900 o	ppm	0.023832	0.17	122802.000000	Y 377.433
Sn (189.925 nm)	2.094840	ppm	0.004623	0.22	4173.690000	Y 377.433
Sr (421.552 nm)	1.715662 o	ppm	0.003514	0.20	360130.619478	Y_R 488.368
Th (288.505 nm)	1.009050	ppm	0.002444	0.24	2725.020000	Y 377.433
Ti (336.122 nm)	1.018420	ppm	0.000347	0.03	145030.000000	Y 377.433
Tl (190.794 nm)	1.990790	ppm	0.000477	0.02	4364.290000	Y 377.433
U (409.013 nm)	2.049290	ppm	0.006744	0.33	9010.140000	Y 377.433
V (292.401 nm)	0.506710	ppm	0.000329	0.06	18339.900000	Y 377.433
Zn (206.200 nm)	0.490635	ppm	0.000751	0.15	2590.160000	Y 377.433
Zr (343.823 nm)	0.506873	ppm	0.000572	0.11	66675.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.088754	20773.661964	0.002499	0.23
Y 377.433	1.080012	1093174.836223	0.000942	0.09
Y_R 377.433	1.181800	89217.900000	0.001668	0.14
Y_R 488.368	1.148850	50297.300000	0.000142	0.01
Y_R2 488.368	1.139264	98867.069682	0.004657	0.41

Sample Name: MB 280-436443/1-A

Date: 11/7/2018 3:50:25 AM Rack:Tube: 2:88

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001040	ppm	0.000240	23.09	-397.215000	Y 377.433
Al (167.019 nm)	-0.002333 u	ppm	0.002950	> 100.00	1.056870	Y_R 377.433
Al H (396.152 nm)	-0.017052 u	ppm	0.007620	44.69	36.167029	Y_R 377.433
As (188.980 nm)	-0.000647 u	ppm	0.001014	> 100.00	-2.552150	Y 242.219
B (249.678 nm)	0.001987	ppm	0.000367	18.48	106.762000	Y 242.219
Ba (493.408 nm)	-0.000751 u	ppm	0.000247	32.85	512.526000	Y_R 488.368
Be (234.861 nm)	0.000012	ppm	0.000007	61.35	-42.683400	Y_R 488.368
Bi (223.061 nm)	-0.000388 u	ppm	0.001286	> 100.00	11.767100	Y 377.433
Ca (315.887 nm)	0.018109	ppm	0.002166	11.96	-47.230185	Y_R 377.433
Cd (214.439 nm)	0.000023 u	ppm	0.000037	> 100.00	2.279220	Y 377.433
Co (228.615 nm)	0.000252	ppm	0.000148	58.86	-31.886800	Y 242.219
Cr (205.560 nm)	0.000700	ppm	0.000075	10.71	6.696450	Y 377.433
Cu (324.754 nm)	0.001944	ppm	0.000156	8.04	-184.364000	Y 377.433
Fe (238.204 nm)	0.004537	ppm	0.000039	0.85	41.616872	Y_R 377.433
Fe H (259.940 nm)	0.009615 u	ppm	0.000706	7.34	21.423900	Y_R 377.433
K (766.491 nm)	0.188440	ppm	0.110099	58.43	-539.606000	Y_R2 488.368
Li (670.783 nm)	0.009820	ppm	0.000449	4.57	-1026.190000	Y_R2 488.368
Mg (279.078 nm)	0.006205	ppm	0.001036	16.70	75.175900	Y 377.433
Mn (257.610 nm)	0.000318	ppm	0.000014	4.30	136.123000	Y 377.433
Mo (202.032 nm)	-0.000039 u	ppm	0.000190	> 100.00	-0.364572	Y 377.433
Na (589.592 nm)	0.090763	ppm	0.007524	8.29	893.176000	Y_R2 488.368
Na H (589.593 nm)	0.425961 u	ppm	0.003644	0.86	3953.993148	Y_R 488.368
Ni (231.604 nm)	-0.000153 u	ppm	0.000817	> 100.00	-5.142740	Y 377.433
P (213.618 nm)	-0.001954 u	ppm	0.002410	> 100.00	20.311200	Y 242.219
Pb (220.353 nm)	0.000304 u	ppm	0.000815	> 100.00	4.304590	Y 242.219
S (181.972 nm)	0.059718	ppm	0.008160	13.66	44.757401	Y 377.433
Sb (206.834 nm)	-0.000391 u	ppm	0.000409	> 100.00	-24.286000	Y 377.433
Se (196.026 nm)	-0.001516 u	ppm	0.001433	94.49	11.480700	Y 242.219
Si (288.158 nm)	0.001878	ppm	0.000556	29.62	945.791000	Y 377.433
Sn (189.925 nm)	-0.000522 u	ppm	0.000900	> 100.00	8.560980	Y 377.433
Sr (421.552 nm)	0.000005 u	ppm	0.000145	> 100.00	157.153761	Y_R 488.368
Th (288.505 nm)	0.002807	ppm	0.000137	4.89	80.195200	Y 377.433
Ti (336.122 nm)	-0.000040 u	ppm	0.000001	2.76	-233.862000	Y 377.433
Tl (190.794 nm)	0.003064	ppm	0.000146	4.76	1.388260	Y 377.433
U (409.013 nm)	0.005424	ppm	0.003338	61.54	-183.042000	Y 377.433
V (292.401 nm)	-0.000299 u	ppm	0.000082	27.31	23.655900	Y 377.433
Zn (206.200 nm)	-0.004331 u	ppm	0.000104	2.40	5.120930	Y 377.433
Zr (343.823 nm)	-0.000166 u	ppm	0.000062	37.55	4.802450	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127821	21519.062845	0.000451	0.04
Y 377.433	1.113834	1127409.240804	0.002255	0.20
Y_R 377.433	1.188650	89735.000000	0.004055	0.34
Y_R 488.368	1.161900	50868.700000	0.013937	1.20
Y_R2 488.368	1.162018	100841.775494	0.000092	0.01

Sample Name: LCS 280-436443/2-A

Date: 11/7/2018 3:53:47 AM Rack:Tube: 2:89

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048310	ppm	0.000088	0.18	1742.820000	Y 377.433
Al (167.019 nm)	2.014030	ppm	0.006469	0.32	1125.940000	Y_R 377.433
Al H (396.152 nm)	2.027085	ppm	0.006493	0.32	5286.951644	Y_R 377.433
As (188.980 nm)	1.007660	ppm	0.000142	0.01	1267.200000	Y 242.219
B (249.678 nm)	1.057920	ppm	0.006288	0.59	26504.400000	Y 242.219
Ba (493.408 nm)	2.049280 o	ppm	0.010173	0.50	237951.000000	Y_R 488.368
Be (234.861 nm)	0.049709	ppm	0.000171	0.34	14737.000000	Y_R 488.368
Bi (223.061 nm)	2.007060	ppm	0.009139	0.46	5066.880000	Y 377.433
Ca (315.887 nm)	52.424753 o	ppm	0.153227	0.29	41506.789870	Y_R 377.433
Cd (214.439 nm)	0.101494	ppm	0.000227	0.22	6068.300000	Y 377.433
Co (228.615 nm)	0.490794	ppm	0.000026	0.01	8890.450000	Y 242.219
Cr (205.560 nm)	0.206952	ppm	0.000967	0.47	3143.610000	Y 377.433
Cu (324.754 nm)	0.259769	ppm	0.000904	0.35	14207.000000	Y 377.433
Fe (238.204 nm)	1.016526	ppm	0.000754	0.07	3784.493272	Y_R 377.433
Fe H (259.940 nm)	1.039730 u	ppm	0.004555	0.44	1970.200000	Y_R 377.433
K (766.491 nm)	53.167600	ppm	0.218195	0.41	60464.700000	Y_R2 488.368
Li (670.783 nm)	1.040450	ppm	0.002887	0.28	33345.900000	Y_R2 488.368
Mg (279.078 nm)	51.359400 o	ppm	0.123481	0.24	296659.000000	Y 377.433
Mn (257.610 nm)	0.513311	ppm	0.000884	0.17	120107.000000	Y 377.433
Mo (202.032 nm)	1.068910	ppm	0.002826	0.26	9205.330000	Y 377.433
Na (589.592 nm)	51.570800 o	ppm	0.023762	0.05	344001.000000	Y_R2 488.368
Na H (589.593 nm)	54.791933	ppm	0.224683	0.41	205060.949943	Y_R 488.368
Ni (231.604 nm)	0.510782	ppm	0.003016	0.59	3482.810000	Y 377.433
P (213.618 nm)	10.493300 o	ppm	0.016911	0.16	22826.500000	Y 242.219
Pb (220.353 nm)	0.508955	ppm	0.000792	0.16	1463.880000	Y 242.219
S (181.972 nm)	2.089661	ppm	0.006845	0.33	1085.658809	Y 377.433
Sb (206.834 nm)	0.528900	ppm	0.001741	0.33	1416.940000	Y 377.433
Se (196.026 nm)	2.054530	ppm	0.010432	0.51	2058.180000	Y 242.219
Si (288.158 nm)	10.320600	ppm	0.023901	0.23	89632.300000	Y 377.433
Sn (189.925 nm)	2.154860	ppm	0.001074	0.05	4293.010000	Y 377.433
Sr (421.552 nm)	1.045703	ppm	0.006272	0.60	219561.938181	Y_R 488.368
Th (288.505 nm)	1.035320	ppm	0.004023	0.39	2793.760000	Y 377.433
Ti (336.122 nm)	1.043340	ppm	0.002797	0.27	148522.000000	Y 377.433
Tl (190.794 nm)	2.072790	ppm	0.002707	0.13	4544.370000	Y 377.433
U (409.013 nm)	2.128970	ppm	0.014138	0.66	9373.050000	Y 377.433
V (292.401 nm)	0.519854	ppm	0.000318	0.06	18812.800000	Y 377.433
Zn (206.200 nm)	0.504590	ppm	0.000044	0.01	2663.050000	Y 377.433
Zr (343.823 nm)	0.519741	ppm	0.001087	0.21	68367.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102089	21028.090020	0.003570	0.32
Y 377.433	1.091623	1104927.054591	0.003046	0.28
Y_R 377.433	1.176770	88837.400000	0.001244	0.11
Y_R 488.368	1.148430	50279.100000	0.003609	0.31
Y_R2 488.368	1.137240	98691.426971	0.001345	0.12

Sample Name: 280-116420-C-1-A

Date: 11/7/2018 3:57:09 AM
Rack:Tube: 2:90

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001847	ppm	0.000119	6.46	-361.759000	Y 377.433
Al (167.019 nm)	0.045255	ppm	0.001993	4.40	27.612400	Y_R 377.433
Al H (396.152 nm)	0.074926 u	ppm	0.001403	1.87	517.998154	Y_R 377.433
As (188.980 nm)	0.002814	ppm	0.001204	42.78	1.806620	Y 242.219
B (249.678 nm)	3.362910 o	ppm	0.006179	0.18	84063.300000	Y 242.219
Ba (493.408 nm)	0.022122	ppm	0.000057	0.26	3291.510000	Y_R 488.368
Be (234.861 nm)	0.000084	ppm	0.000043	50.93	-25.442500	Y_R 488.368
Bi (223.061 nm)	-0.001531 u	ppm	0.001341	87.60	8.893530	Y 377.433
Ca (315.887 nm)	562.100705 o	ppm	0.967187	0.17	445635.935998	Y_R 377.433
Cd (214.439 nm)	0.000129	ppm	0.000033	25.43	8.608440	Y 377.433
Co (228.615 nm)	-0.000442 u	ppm	0.000325	73.45	-44.421900	Y 242.219
Cr (205.560 nm)	0.014141	ppm	0.000431	3.05	211.135000	Y 377.433
Cu (324.754 nm)	-0.002781 u	ppm	0.000392	14.08	-784.286000	Y 377.433
Fe (238.204 nm)	0.039955	ppm	0.000460	1.15	172.612335	Y_R 377.433
Fe H (259.940 nm)	0.041024 u	ppm	0.000939	2.29	80.842900	Y_R 377.433
K (766.491 nm)	19.625500	ppm	0.035504	0.18	21841.700000	Y_R2 488.368
Li (670.783 nm)	0.696623	ppm	0.001108	0.16	21879.200000	Y_R2 488.368
Mg (279.078 nm)	63.519000 o	ppm	0.111755	0.18	366958.000000	Y 377.433
Mn (257.610 nm)	0.001086	ppm	0.000006	0.51	315.780000	Y 377.433
Mo (202.032 nm)	0.079990	ppm	0.000024	0.03	688.844000	Y 377.433
Na (589.592 nm)	1342.390000 o	ppm	0.511951	0.04	8839060.000000	Y_R2 488.368
Na H (589.593 nm)	1367.879547	ppm	0.297526	0.02	5013776.546344	Y_R 488.368
Ni (231.604 nm)	0.000570	ppm	0.000194	34.09	-0.203175	Y 377.433
P (213.618 nm)	0.003675	ppm	0.000304	8.27	32.542500	Y 242.219
Pb (220.353 nm)	-0.000878 u	ppm	0.000204	23.19	0.476947	Y 242.219
S (181.972 nm)	381.808429 bo	ppm	0.194261	0.05	195556.887232	Y 377.433
Sb (206.834 nm)	-0.004033 u	ppm	0.000598	14.84	-34.301600	Y 377.433
Se (196.026 nm)	0.051153	ppm	0.003629	7.09	63.893100	Y 242.219
Si (288.158 nm)	7.953400	ppm	0.118422	1.49	69286.600000	Y 377.433
Sn (189.925 nm)	0.000813	ppm	0.001108	> 100.00	11.213800	Y 377.433
Sr (421.552 nm)	16.854923 bo	ppm	0.082129	0.49	3536601.259575	Y_R 488.368
Th (288.505 nm)	0.004432	ppm	0.001119	25.25	84.706100	Y 377.433
Ti (336.122 nm)	0.000465	ppm	0.000050	10.83	1594.980000	Y 377.433
Tl (190.794 nm)	0.005843	ppm	0.000173	2.97	7.291510	Y 377.433
U (409.013 nm)	-0.044467 u	ppm	0.002823	6.35	-515.249000	Y 377.433
V (292.401 nm)	0.008627	ppm	0.000152	1.77	344.481000	Y 377.433
Zn (206.200 nm)	-0.005116 u	ppm	0.000166	3.24	1.020880	Y 377.433
Zr (343.823 nm)	-0.000176 u	ppm	0.000001	0.33	3.648710	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975486	18612.486742	0.002857	0.29
Y 377.433	0.978981	990912.581169	0.002315	0.24
Y_R 377.433	1.113320	84047.400000	0.000623	0.06
Y_R 488.368	1.081850	47363.900000	0.001353	0.13
Y_R2 488.368	1.085662	94215.425237	0.005105	0.47

Sample Name: 280-116420-C-2-A

Date: 11/7/2018 4:00:33 AM
Rack:Tube: 4:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001708	ppm	0.000044	2.60	-369.655000	Y 377.433
Al (167.019 nm)	0.074209	ppm	0.004370	5.89	43.773700	Y_R 377.433
Al H (396.152 nm)	0.088489 u	ppm	0.003379	3.82	403.171912	Y_R 377.433
As (188.980 nm)	0.022527	ppm	0.001955	8.68	26.630600	Y 242.219
B (249.678 nm)	2.455310 o	ppm	0.002385	0.10	61391.200000	Y 242.219
Ba (493.408 nm)	0.016795	ppm	0.000075	0.45	2592.820000	Y_R 488.368
Be (234.861 nm)	0.000042	ppm	0.000020	48.25	-40.775000	Y_R 488.368
Bi (223.061 nm)	-0.001273 u	ppm	0.001398	> 100.00	9.547600	Y 377.433
Ca (315.887 nm)	208.346749 o	ppm	0.831026	0.40	165139.467028	Y_R 377.433
Cd (214.439 nm)	0.000031 u	ppm	0.000055	> 100.00	2.782170	Y 377.433
Co (228.615 nm)	-0.000081 u	ppm	0.000397	> 100.00	-37.850000	Y 242.219
Cr (205.560 nm)	0.007794	ppm	0.000089	1.14	114.411000	Y 377.433
Cu (324.754 nm)	0.000294	ppm	0.000132	44.94	-398.249000	Y 377.433
Fe (238.204 nm)	0.066817	ppm	0.001263	1.89	271.961696	Y_R 377.433
Fe H (259.940 nm)	0.068164 u	ppm	0.000004	0.01	132.185000	Y_R 377.433
K (766.491 nm)	10.238600	ppm	0.042584	0.42	11032.900000	Y_R2 488.368
Li (670.783 nm)	0.382057	ppm	0.002766	0.72	11388.200000	Y_R2 488.368
Mg (279.078 nm)	14.752300	ppm	0.035049	0.24	85256.300000	Y 377.433
Mn (257.610 nm)	0.002213	ppm	0.000017	0.79	579.289000	Y 377.433
Mo (202.032 nm)	0.135455	ppm	0.000306	0.23	1166.500000	Y 377.433
Na (589.592 nm)	717.297000 o	ppm	1.563210	0.22	4723260.000000	Y_R2 488.368
Na H (589.593 nm)	757.891120	ppm	1.813583	0.24	2779018.503578	Y_R 488.368
Ni (231.604 nm)	0.000040 u	ppm	0.000198	> 100.00	-3.826050	Y 377.433
P (213.618 nm)	-0.005544 u	ppm	0.001850	33.37	12.510000	Y 242.219
Pb (220.353 nm)	0.000011 u	ppm	0.000993	> 100.00	2.814340	Y 242.219
S (181.972 nm)	284.082936 bo	ppm	0.668802	0.24	145506.900061	Y 377.433
Sb (206.834 nm)	0.000538	ppm	0.000614	> 100.00	-22.351800	Y 377.433
Se (196.026 nm)	-0.001721 u	ppm	0.002033	> 100.00	11.268600	Y 242.219
Si (288.158 nm)	8.748250	ppm	0.147180	1.68	76118.100000	Y 377.433
Sn (189.925 nm)	-0.000870 u	ppm	0.000442	50.78	7.867720	Y 377.433
Sr (421.552 nm)	4.825821 o	ppm	0.012852	0.27	1012694.078842	Y_R 488.368
Th (288.505 nm)	0.006995	ppm	0.002476	35.40	91.727200	Y 377.433
Ti (336.122 nm)	0.001638	ppm	0.000093	5.66	657.171000	Y 377.433
Tl (190.794 nm)	0.001412	ppm	0.000452	32.02	-2.589730	Y 377.433
U (409.013 nm)	-0.021515 u	ppm	0.006784	31.53	-344.392000	Y 377.433
V (292.401 nm)	0.017423	ppm	0.000196	1.12	662.694000	Y 377.433
Zn (206.200 nm)	-0.002329 u	ppm	0.000153	6.55	15.575800	Y 377.433
Zr (343.823 nm)	-0.000243 u	ppm	0.000063	25.80	-5.052670	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043647	19913.009289	0.003235	0.31
Y 377.433	1.035958	1048583.883767	0.005411	0.52
Y_R 377.433	1.147180	86604.100000	0.000582	0.05
Y_R 488.368	1.112960	48726.000000	0.001869	0.17
Y_R2 488.368	1.110560	96376.141644	0.006481	0.58

Sample Name: 280-116420-C-2-A SD@5

Date: 11/7/2018 4:03:57 AM
Rack:Tube: 4:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001437	ppm	0.000205	14.26	-379.674000	Y 377.433
Al (167.019 nm)	0.016333	ppm	0.002564	15.70	11.513400	Y_R 377.433
Al H (396.152 nm)	0.007569 u	ppm	0.003659	48.35	118.708348	Y_R 377.433
As (188.980 nm)	0.003762	ppm	0.000451	12.00	2.999220	Y 242.219
B (249.678 nm)	0.475197	ppm	0.000831	0.17	11927.500000	Y 242.219
Ba (493.408 nm)	0.002701	ppm	0.000056	2.08	922.144000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000015	50.13	-36.917000	Y_R 488.368
Bi (223.061 nm)	0.000575	ppm	0.000352	61.20	14.204100	Y 377.433
Ca (315.887 nm)	42.497924 o	ppm	0.030180	0.07	33635.609998	Y_R 377.433
Cd (214.439 nm)	0.000114	ppm	0.000028	24.37	7.772490	Y 377.433
Co (228.615 nm)	0.000038 u	ppm	0.000155	> 100.00	-35.751800	Y 242.219
Cr (205.560 nm)	0.001690	ppm	0.000192	11.34	21.699600	Y 377.433
Cu (324.754 nm)	0.001939	ppm	0.000055	2.83	-208.461000	Y 377.433
Fe (238.204 nm)	0.077287	ppm	0.004169	5.39	310.687018	Y_R 377.433
Fe H (259.940 nm)	0.082273 u	ppm	0.003001	3.65	158.877000	Y_R 377.433
K (766.491 nm)	2.072020	ppm	0.011324	0.55	1629.300000	Y_R2 488.368
Li (670.783 nm)	0.083203	ppm	0.001514	1.82	1421.190000	Y_R2 488.368
Mg (279.078 nm)	3.031250	ppm	0.000117	0.00	17549.300000	Y 377.433
Mn (257.610 nm)	0.000710	ppm	0.000016	2.20	227.885000	Y 377.433
Mo (202.032 nm)	0.026735	ppm	0.000035	0.13	230.216000	Y 377.433
Na (589.592 nm)	158.004000 o	ppm	0.828472	0.52	1040650.000000	Y_R2 488.368
Na H (589.593 nm)	163.917719	ppm	0.213993	0.13	602925.446384	Y_R 488.368
Ni (231.604 nm)	0.000150 u	ppm	0.000218	> 100.00	-3.077130	Y 377.433
P (213.618 nm)	-0.004593 u	ppm	0.002815	61.29	14.575700	Y 242.219
Pb (220.353 nm)	-0.000649 u	ppm	0.000378	58.24	1.453810	Y 242.219
S (181.972 nm)	56.500730 o	ppm	0.039933	0.07	28950.952703	Y 377.433
Sb (206.834 nm)	-0.002684 u	ppm	0.000035	1.30	-30.707200	Y 377.433
Se (196.026 nm)	-0.003227 u	ppm	0.001143	35.42	9.764890	Y 242.219
Si (288.158 nm)	1.705140	ppm	0.002974	0.17	15584.800000	Y 377.433
Sn (189.925 nm)	-0.001068 u	ppm	0.000297	27.84	7.475380	Y 377.433
Sr (421.552 nm)	0.966370	ppm	0.000846	0.09	202916.597304	Y_R 488.368
Th (288.505 nm)	0.005744	ppm	0.000959	16.69	87.888100	Y 377.433
Ti (336.122 nm)	0.000265	ppm	0.000080	30.27	-57.507500	Y 377.433
Tl (190.794 nm)	0.001367	ppm	0.000129	9.43	-2.408760	Y 377.433
U (409.013 nm)	-0.001237 u	ppm	0.003071	> 100.00	-221.167000	Y 377.433
V (292.401 nm)	0.003613	ppm	0.000145	4.02	165.361000	Y 377.433
Zn (206.200 nm)	-0.002183 u	ppm	0.000301	13.78	16.339300	Y 377.433
Zr (343.823 nm)	-0.000249 u	ppm	0.000151	60.56	-5.856880	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.109397	21167.540174	0.001087	0.10
Y 377.433	1.095105	1108451.575051	0.000253	0.02
Y_R 377.433	1.182580	89276.700000	0.000001	0.00
Y_R 488.368	1.160120	50790.900000	0.002339	0.20
Y_R2 488.368	1.129400	98011.096791	0.003654	0.32

Sample Name: 280-116420-C-2-B MS

Date: 11/7/2018 4:07:22 AM
Rack:Tube: 4:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050836	ppm	0.000006	0.01	1856.140000	Y 377.433
Al (167.019 nm)	2.003070	ppm	0.020997	1.05	1119.900000	Y_R 377.433
Al H (396.152 nm)	2.134673	ppm	0.008597	0.40	5655.280670	Y_R 377.433
As (188.980 nm)	1.082950	ppm	0.014365	1.33	1362.020000	Y 242.219
B (249.678 nm)	3.535830 o	ppm	0.001877	0.05	88403.300000	Y 242.219
Ba (493.408 nm)	2.048870 o	ppm	0.006781	0.33	237950.000000	Y_R 488.368
Be (234.861 nm)	0.049459	ppm	0.000259	0.52	14658.000000	Y_R 488.368
Bi (223.061 nm)	2.077600	ppm	0.001308	0.06	5244.540000	Y 377.433
Ca (315.887 nm)	254.888501 o	ppm	0.355210	0.14	202043.130753	Y_R 377.433
Cd (214.439 nm)	0.097881	ppm	0.000355	0.36	5852.470000	Y 377.433
Co (228.615 nm)	0.499860	ppm	0.001064	0.21	9054.330000	Y 242.219
Cr (205.560 nm)	0.208156	ppm	0.000118	0.06	3161.680000	Y 377.433
Cu (324.754 nm)	0.272839	ppm	0.000305	0.11	14815.600000	Y 377.433
Fe (238.204 nm)	1.125625	ppm	0.002302	0.20	4188.001042	Y_R 377.433
Fe H (259.940 nm)	1.165570 u	ppm	0.001467	0.13	2208.260000	Y_R 377.433
K (766.491 nm)	65.489000	ppm	0.077458	0.12	74652.500000	Y_R2 488.368
Li (670.783 nm)	1.443880	ppm	0.004011	0.28	46800.600000	Y_R2 488.368
Mg (279.078 nm)	64.693200 o	ppm	0.126452	0.20	373683.000000	Y 377.433
Mn (257.610 nm)	0.508116	ppm	0.000434	0.09	118892.000000	Y 377.433
Mo (202.032 nm)	1.188550 o	ppm	0.000176	0.01	10235.700000	Y 377.433
Na (589.592 nm)	742.881000 o	ppm	0.406104	0.05	4895820.000000	Y_R2 488.368
Na H (589.593 nm)	788.485746	ppm	6.147987	0.78	2893019.727200	Y_R 488.368
Ni (231.604 nm)	0.509662	ppm	0.001011	0.20	3475.020000	Y 377.433
P (213.618 nm)	10.995800 o	ppm	0.043466	0.40	23918.400000	Y 242.219
Pb (220.353 nm)	0.490874	ppm	0.001009	0.21	1411.290000	Y 242.219
S (181.972 nm)	283.763990 bo	ppm	0.013867	0.00	145344.803229	Y 377.433
Sb (206.834 nm)	0.539525	ppm	0.001078	0.20	1445.420000	Y 377.433
Se (196.026 nm)	2.095580	ppm	0.003612	0.17	2099.000000	Y 242.219
Si (288.158 nm)	19.204900 o	ppm	0.037657	0.20	165990.000000	Y 377.433
Sn (189.925 nm)	2.110910	ppm	0.003634	0.17	4205.650000	Y 377.433
Sr (421.552 nm)	5.809697 o	ppm	0.055469	0.95	1219127.823678	Y_R 488.368
Th (288.505 nm)	1.026590	ppm	0.001832	0.18	2770.980000	Y 377.433
Ti (336.122 nm)	1.034560	ppm	0.000936	0.09	147904.000000	Y 377.433
Tl (190.794 nm)	1.953650	ppm	0.000499	0.03	4282.310000	Y 377.433
U (409.013 nm)	2.091640	ppm	0.002109	0.10	9166.310000	Y 377.433
V (292.401 nm)	0.535724	ppm	0.000190	0.04	19386.800000	Y 377.433
Zn (206.200 nm)	0.498378	ppm	0.000941	0.19	2630.600000	Y 377.433
Zr (343.823 nm)	0.513677	ppm	0.000496	0.10	67570.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.049860	20031.551415	0.002114	0.20
Y 377.433	1.048274	1061049.552329	0.002028	0.19
Y_R 377.433	1.164840	87936.800000	0.001195	0.10
Y_R 488.368	1.130800	49507.000000	0.004836	0.43
Y_R2 488.368	1.127990	97888.695904	0.008154	0.72

Sample Name: 280-116420-C-2-C MSD

Date: 11/7/2018 4:10:46 AM
Rack:Tube: 4:4

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051975	ppm	0.000018	0.03	1906.110000	Y 377.433
Al (167.019 nm)	2.051860	ppm	0.018457	0.90	1147.080000	Y_R 377.433
Al H (396.152 nm)	2.176521	ppm	0.004449	0.20	5762.202958	Y_R 377.433
As (188.980 nm)	1.095940	ppm	0.002626	0.24	1378.380000	Y 242.219
B (249.678 nm)	3.562450 o	ppm	0.004012	0.11	89068.900000	Y 242.219
Ba (493.408 nm)	2.096590 o	ppm	0.004885	0.23	243476.000000	Y_R 488.368
Be (234.861 nm)	0.050029	ppm	0.000151	0.30	14825.800000	Y_R 488.368
Bi (223.061 nm)	2.122090	ppm	0.000342	0.02	5356.550000	Y 377.433
Ca (315.887 nm)	256.295615 o	ppm	0.298986	0.12	203158.852621	Y_R 377.433
Cd (214.439 nm)	0.099455	ppm	0.000102	0.10	5946.480000	Y 377.433
Co (228.615 nm)	0.512057	ppm	0.001039	0.20	9275.660000	Y 242.219
Cr (205.560 nm)	0.211938	ppm	0.000618	0.29	3219.230000	Y 377.433
Cu (324.754 nm)	0.280145	ppm	0.000456	0.16	15224.100000	Y 377.433
Fe (238.204 nm)	1.084469	ppm	0.000177	0.02	4035.784226	Y_R 377.433
Fe H (259.940 nm)	1.111510 u	ppm	0.004301	0.39	2105.990000	Y_R 377.433
K (766.491 nm)	66.887200	ppm	0.273437	0.41	76262.500000	Y_R2 488.368
Li (670.783 nm)	1.484420	ppm	0.002572	0.17	48152.700000	Y_R2 488.368
Mg (279.078 nm)	65.797700 o	ppm	0.104659	0.16	380062.000000	Y 377.433
Mn (257.610 nm)	0.520471	ppm	0.000276	0.05	121782.000000	Y 377.433
Mo (202.032 nm)	1.201170 o	ppm	0.000368	0.03	10344.300000	Y 377.433
Na (589.592 nm)	742.457000 o	ppm	3.704640	0.50	4893120.000000	Y_R2 488.368
Na H (589.593 nm)	785.671261	ppm	2.462260	0.31	2882753.375828	Y_R 488.368
Ni (231.604 nm)	0.519714	ppm	0.000071	0.01	3543.650000	Y 377.433
P (213.618 nm)	11.211400 o	ppm	0.021747	0.19	24386.900000	Y 242.219
Pb (220.353 nm)	0.503554	ppm	0.001540	0.31	1447.740000	Y 242.219
S (181.972 nm)	284.094479 bo	ppm	0.093328	0.03	145514.093647	Y 377.433
Sb (206.834 nm)	0.545448	ppm	0.001348	0.25	1461.500000	Y 377.433
Se (196.026 nm)	2.143050	ppm	0.005162	0.24	2146.270000	Y 242.219
Si (288.158 nm)	19.369000 o	ppm	0.084232	0.43	167400.000000	Y 377.433
Sn (189.925 nm)	2.134840	ppm	0.002715	0.13	4253.210000	Y 377.433
Sr (421.552 nm)	5.804693 o	ppm	0.061256	1.06	1218077.848495	Y_R 488.368
Th (288.505 nm)	1.053960	ppm	0.001041	0.10	2842.870000	Y 377.433
Ti (336.122 nm)	1.045740	ppm	0.000825	0.08	149501.000000	Y 377.433
Tl (190.794 nm)	1.998900	ppm	0.000994	0.05	4381.720000	Y 377.433
U (409.013 nm)	2.141500	ppm	0.003282	0.15	9391.080000	Y 377.433
V (292.401 nm)	0.547864	ppm	0.000861	0.16	19825.800000	Y 377.433
Zn (206.200 nm)	0.507448	ppm	0.000009	0.00	2677.970000	Y 377.433
Zr (343.823 nm)	0.519050	ppm	0.000587	0.11	68276.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052255	20077.250540	0.001340	0.13
Y 377.433	1.052411	1065237.482667	0.000053	0.01
Y_R 377.433	1.177800	88915.500000	0.005403	0.46
Y_R 488.368	1.147040	50218.000000	0.002124	0.19
Y_R2 488.368	1.143162	99205.405909	0.007107	0.62

Sample Name: 280-116420-C-3-A

Date: 11/7/2018 4:14:09 AM
Rack:Tube: 4:5

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001859	ppm	0.000224	12.04	-364.775000	Y 377.433
Al (167.019 nm)	0.473264	ppm	0.002479	0.52	266.443000	Y_R 377.433
Al H (396.152 nm)	0.499251 u	ppm	0.005536	1.11	1419.173302	Y_R 377.433
As (188.980 nm)	0.028319	ppm	0.000160	0.56	33.922100	Y 242.219
B (249.678 nm)	2.641900 o	ppm	0.001989	0.08	66051.900000	Y 242.219
Ba (493.408 nm)	0.023855	ppm	0.000167	0.70	3401.290000	Y_R 488.368
Be (234.861 nm)	0.000067	ppm	0.000002	3.12	-25.215800	Y_R 488.368
Bi (223.061 nm)	-0.001976 u	ppm	0.000153	7.77	7.823610	Y 377.433
Ca (315.887 nm)	167.828137 o	ppm	0.851923	0.51	133011.692397	Y_R 377.433
Cd (214.439 nm)	0.000127	ppm	0.000038	29.99	8.792030	Y 377.433
Co (228.615 nm)	0.000131 u	ppm	0.000230	> 100.00	-33.665500	Y 242.219
Cr (205.560 nm)	0.009838	ppm	0.000030	0.31	145.434000	Y 377.433
Cu (324.754 nm)	0.001461	ppm	0.000157	10.72	-308.668000	Y 377.433
Fe (238.204 nm)	0.334619	ppm	0.002813	0.84	1262.437653	Y_R 377.433
Fe H (259.940 nm)	0.340188 u	ppm	0.002943	0.87	646.801000	Y_R 377.433
K (766.491 nm)	10.078400	ppm	0.082927	0.82	10848.500000	Y_R2 488.368
Li (670.783 nm)	0.407816	ppm	0.001968	0.48	12247.300000	Y_R2 488.368
Mg (279.078 nm)	16.172800	ppm	0.021580	0.13	93461.400000	Y 377.433
Mn (257.610 nm)	0.006308	ppm	0.000028	0.44	1537.130000	Y 377.433
Mo (202.032 nm)	0.141469	ppm	0.000709	0.50	1218.290000	Y 377.433
Na (589.592 nm)	779.491000 o	ppm	1.140410	0.15	5132770.000000	Y_R2 488.368
Na H (589.593 nm)	809.711535	ppm	3.993222	0.49	2968874.344444	Y_R 488.368
Ni (231.604 nm)	0.003041	ppm	0.000014	0.47	16.663000	Y 377.433
P (213.618 nm)	0.010889	ppm	0.001676	15.39	48.219300	Y 242.219
Pb (220.353 nm)	0.001074	ppm	0.000804	74.91	5.713180	Y 242.219
S (181.972 nm)	311.404479 bo	ppm	0.589360	0.19	159499.604065	Y 377.433
Sb (206.834 nm)	-0.002721 u	ppm	0.002074	76.22	-31.322600	Y 377.433
Se (196.026 nm)	0.000515	ppm	0.000161	31.20	13.452900	Y 242.219
Si (288.158 nm)	13.804400 o	ppm	0.050205	0.36	119574.000000	Y 377.433
Sn (189.925 nm)	0.000283	ppm	0.000299	> 100.00	10.159600	Y 377.433
Sr (421.552 nm)	3.675522 o	ppm	0.024797	0.67	771342.048920	Y_R 488.368
Th (288.505 nm)	0.006322	ppm	0.000076	1.21	90.528800	Y 377.433
Ti (336.122 nm)	0.011839	ppm	0.000104	0.88	1982.850000	Y 377.433
Tl (190.794 nm)	0.003865	ppm	0.000579	14.98	2.736090	Y 377.433
U (409.013 nm)	-0.014417 u	ppm	0.001537	10.66	-304.365000	Y 377.433
V (292.401 nm)	0.030707	ppm	0.000292	0.95	1144.150000	Y 377.433
Zn (206.200 nm)	-0.000982 u	ppm	0.000746	75.91	22.610200	Y 377.433
Zr (343.823 nm)	0.000285	ppm	0.000077	27.12	65.188500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067691	20371.773133	0.004005	0.38
Y 377.433	1.063443	1076403.493348	0.003827	0.36
Y_R 377.433	1.197940	90436.100000	0.004824	0.40
Y_R 488.368	1.161410	50847.100000	0.010251	0.88
Y_R2 488.368	1.142582	99155.018274	0.006937	0.61

Sample Name: 280-116485-B-1-A

Date: 11/7/2018 4:17:34 AM
Rack:Tube: 4:6

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001448	ppm	0.000129	8.91	-378.780000	Y 377.433
Al (167.019 nm)	0.926156	ppm	0.000279	0.03	519.400000	Y_R 377.433
Al H (396.152 nm)	0.925106	ppm	0.008040	0.87	2449.565236	Y_R 377.433
As (188.980 nm)	0.003656	ppm	0.000374	10.24	2.857910	Y 242.219
B (249.678 nm)	0.234672	ppm	0.000437	0.19	5917.770000	Y 242.219
Ba (493.408 nm)	0.042428	ppm	0.000045	0.11	5537.520000	Y_R 488.368
Be (234.861 nm)	0.000054	ppm	0.000008	15.03	1.596400	Y_R 488.368
Bi (223.061 nm)	-0.001591 u	ppm	0.002092	> 100.00	8.904330	Y 377.433
Ca (315.887 nm)	100.542823 o	ppm	0.017029	0.02	79660.224087	Y_R 377.433
Cd (214.439 nm)	0.000075	ppm	0.000001	0.93	6.328280	Y 377.433
Co (228.615 nm)	0.001321	ppm	0.000135	10.24	-11.358900	Y 242.219
Cr (205.560 nm)	0.001837	ppm	0.000152	8.29	23.725000	Y 377.433
Cu (324.754 nm)	0.004134	ppm	0.000183	4.44	-120.843000	Y 377.433
Fe (238.204 nm)	0.995960	ppm	0.005949	0.60	3708.428933	Y_R 377.433
Fe H (259.940 nm)	1.027980 u	ppm	0.002595	0.25	1947.960000	Y_R 377.433
K (766.491 nm)	9.772650	ppm	0.032709	0.33	10496.400000	Y_R2 488.368
Li (670.783 nm)	0.025883	ppm	0.000881	3.41	-490.496000	Y_R2 488.368
Mg (279.078 nm)	17.141900	ppm	0.033809	0.20	99058.000000	Y 377.433
Mn (257.610 nm)	0.252710	ppm	0.000411	0.16	59161.800000	Y 377.433
Mo (202.032 nm)	0.000773	ppm	0.000706	91.27	6.631200	Y 377.433
Na (589.592 nm)	13.022100 o	ppm	0.006896	0.05	86125.600000	Y_R2 488.368
Na H (589.593 nm)	14.815100	ppm	0.133950	0.90	56711.206158	Y_R 488.368
Ni (231.604 nm)	0.001991	ppm	0.000259	13.02	9.521060	Y 377.433
P (213.618 nm)	0.184271	ppm	0.001472	0.80	424.978000	Y 242.219
Pb (220.353 nm)	0.001783	ppm	0.000833	46.71	8.313510	Y 242.219
S (181.972 nm)	52.940736 o	ppm	0.067076	0.13	27128.329886	Y 377.433
Sb (206.834 nm)	-0.000176 u	ppm	0.000303	> 100.00	-23.987200	Y 377.433
Se (196.026 nm)	-0.001933 u	ppm	0.000737	38.12	11.100800	Y 242.219
Si (288.158 nm)	7.019480	ppm	0.067795	0.97	61259.900000	Y 377.433
Sn (189.925 nm)	0.000369	ppm	0.000096	26.06	10.330400	Y 377.433
Sr (421.552 nm)	1.151504 o	ppm	0.001966	0.17	241760.873640	Y_R 488.368
Th (288.505 nm)	0.006176	ppm	0.001780	28.81	94.028500	Y 377.433
Ti (336.122 nm)	0.033420	ppm	0.000482	1.44	4845.840000	Y 377.433
Tl (190.794 nm)	0.000694 u	ppm	0.000984	> 100.00	-3.990000	Y 377.433
U (409.013 nm)	0.002049	ppm	0.002278	> 100.00	-216.523000	Y 377.433
V (292.401 nm)	0.001576	ppm	0.000320	20.31	93.213000	Y 377.433
Zn (206.200 nm)	0.003411	ppm	0.000056	1.63	45.555300	Y 377.433
Zr (343.823 nm)	0.000724	ppm	0.000113	15.55	124.876000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.153049	22000.413931	0.001216	0.11
Y 377.433	1.151531	1165565.360667	0.000613	0.05
Y_R 377.433	1.230840	92919.500000	0.001207	0.10
Y_R 488.368	1.201510	52603.000000	0.004277	0.36
Y_R2 488.368	1.193667	103588.253701	0.000137	0.01

Sample Name: CCVH-5408055

Date: 11/7/2018 4:20:57 AM
Rack:Tube: S1:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000064 u	ppm	0.000322	> 100.00	-699.425000	Y 377.433
Al (167.019 nm)	44.373900 o	ppm	0.326062	0.73	24775.500000	Y_R 377.433
Al H (396.152 nm)	48.534518	ppm	0.136898	0.28	122150.415318	Y_R 377.433
As (188.980 nm)	0.000851 u	ppm	0.001673	> 100.00	-1.105250	Y 242.219
B (249.678 nm)	0.001686	ppm	0.000134	7.96	24.592500	Y 242.219
Ba (493.408 nm)	-0.000686 u	ppm	0.000014	2.10	566.213000	Y_R 488.368
Be (234.861 nm)	-0.000284 u	ppm	0.000033	11.58	1419.820000	Y_R 488.368
Bi (223.061 nm)	0.998807	ppm	0.002199	0.22	2536.000000	Y 377.433
Ca (315.887 nm)	0.012438	ppm	0.003862	31.05	-51.726753	Y_R 377.433
Cd (214.439 nm)	-0.000333 u	ppm	0.000091	27.49	28.712700	Y 377.433
Co (228.615 nm)	0.003034	ppm	0.000240	7.92	18.517900	Y 242.219
Cr (205.560 nm)	0.000272	ppm	0.000213	78.11	-13.484200	Y 377.433
Cu (324.754 nm)	-0.002025 u	ppm	0.000002	0.12	-81.859200	Y 377.433
Fe (238.204 nm)	48.508492 o	ppm	0.170961	0.35	179435.195301	Y_R 377.433
Fe H (259.940 nm)	49.923700	ppm	0.316080	0.63	94448.900000	Y_R 377.433
K (766.491 nm)	0.171901	ppm	0.035828	20.84	-558.650000	Y_R2 488.368
Li (670.783 nm)	0.012143	ppm	0.000367	3.03	-948.725000	Y_R2 488.368
Mg (279.078 nm)	-0.016305 u	ppm	0.001462	8.97	-418.289000	Y 377.433
Mn (257.610 nm)	0.001410	ppm	0.000014	0.96	391.575000	Y 377.433
Mo (202.032 nm)	-0.000388 u	ppm	0.000300	77.33	-3.368790	Y 377.433
Na (589.592 nm)	246.183000 o	ppm	0.210225	0.09	1621250.000000	Y_R2 488.368
Na H (589.593 nm)	256.413466	ppm	0.163898	0.06	941788.593346	Y_R 488.368
Ni (231.604 nm)	0.004046	ppm	0.000128	3.17	25.542600	Y 377.433
P (213.618 nm)	-0.006077 u	ppm	0.000991	16.31	11.351200	Y 242.219
Pb (220.353 nm)	-0.004102 u	ppm	0.000684	16.68	9.657510	Y 242.219
S (181.972 nm)	5.106029	ppm	0.002669	0.05	2629.222197	Y 377.433
Sb (206.834 nm)	-0.001826 u	ppm	0.000238	13.04	-74.732200	Y 377.433
Se (196.026 nm)	-0.000530 u	ppm	0.001663	> 100.00	3.515620	Y 242.219
Si (288.158 nm)	0.020406	ppm	0.000557	2.73	1105.040000	Y 377.433
Sn (189.925 nm)	0.000394 u	ppm	0.000806	> 100.00	10.380700	Y 377.433
Sr (421.552 nm)	0.000402	ppm	0.000025	6.22	240.423044	Y_R 488.368
Th (288.505 nm)	4.966380	ppm	0.015831	0.32	12987.800000	Y 377.433
Ti (336.122 nm)	0.001078	ppm	0.000031	2.86	-74.487800	Y 377.433
Tl (190.794 nm)	-0.003348 u	ppm	0.002078	62.06	-14.007600	Y 377.433
U (409.013 nm)	10.056300	ppm	0.020924	0.21	45328.500000	Y 377.433
V (292.401 nm)	0.004297	ppm	0.000102	2.37	14.475700	Y 377.433
Zn (206.200 nm)	-0.004195 u	ppm	0.000341	8.13	5.829820	Y 377.433
Zr (343.823 nm)	-0.004467 u	ppm	0.000014	0.31	-416.408000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.144547	21838.205633	0.003317	0.29
Y 377.433	1.126845	1140578.541643	0.003721	0.33
Y_R 377.433	1.228920	92774.400000	0.005505	0.45
Y_R 488.368	1.198640	52477.300000	0.002478	0.21
Y_R2 488.368	1.179652	102372.048377	0.007638	0.65

Sample Name: CCV-5407546

Date: 11/7/2018 4:24:20 AM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.497002	ppm	0.000189	0.04	22329.400000	Y 377.433
Al (167.019 nm)	0.519981	ppm	0.005757	1.11	293.964000	Y_R 377.433
Al H (396.152 nm)	0.497137 u	ppm	0.006110	1.23	1372.698172	Y_R 377.433
As (188.980 nm)	0.987637	ppm	0.002653	0.27	1241.980000	Y 242.219
B (249.678 nm)	0.493780	ppm	0.002042	0.41	12409.900000	Y 242.219
Ba (493.408 nm)	0.494206	ppm	0.000016	0.00	57849.400000	Y_R 488.368
Be (234.861 nm)	0.475253	ppm	0.003580	0.75	141630.000000	Y_R 488.368
Bi (223.061 nm)	-0.002994 u	ppm	0.000653	21.83	5.621240	Y 377.433
Ca (315.887 nm)	5.131395	ppm	0.000246	0.00	4007.450314	Y_R 377.433
Cd (214.439 nm)	0.497626	ppm	0.001041	0.21	29745.100000	Y 377.433
Co (228.615 nm)	0.491119	ppm	0.001079	0.22	8876.620000	Y 242.219
Cr (205.560 nm)	0.498375	ppm	0.001382	0.28	7576.770000	Y 377.433
Cu (324.754 nm)	0.507349	ppm	0.000486	0.10	27980.100000	Y 377.433
Fe (238.204 nm)	2.474015	ppm	0.005403	0.22	9175.067893	Y_R 377.433
Fe H (259.940 nm)	2.558210 u	ppm	0.001809	0.07	4842.850000	Y_R 377.433
K (766.491 nm)	50.534400	ppm	0.130924	0.26	57432.700000	Y_R2 488.368
Li (670.783 nm)	0.998891	ppm	0.002951	0.30	31960.000000	Y_R2 488.368
Mg (279.078 nm)	19.829000	ppm	0.000225	0.00	114578.000000	Y 377.433
Mn (257.610 nm)	0.498821	ppm	0.000419	0.08	116719.000000	Y 377.433
Mo (202.032 nm)	0.505575	ppm	0.001093	0.22	4353.950000	Y 377.433
Na (589.592 nm)	5.164630	ppm	0.027840	0.54	35302.900000	Y_R2 488.368
Na H (589.593 nm)	6.292691 u	ppm	0.043919	0.70	25914.059833	Y_R 488.368
Ni (231.604 nm)	0.515418	ppm	0.000498	0.10	3513.180000	Y 377.433
P (213.618 nm)	0.997248	ppm	0.003883	0.39	2191.570000	Y 242.219
Pb (220.353 nm)	0.987635	ppm	0.003262	0.33	2834.140000	Y 242.219
S (181.972 nm)	0.070893	ppm	0.002614	3.69	51.715080	Y 377.433
Sb (206.834 nm)	1.008510	ppm	0.001619	0.16	2746.400000	Y 377.433
Se (196.026 nm)	0.983980	ppm	0.010914	1.11	992.300000	Y 242.219
Si (288.158 nm)	4.947840	ppm	0.025463	0.51	43454.800000	Y 377.433
Sn (189.925 nm)	1.027500	ppm	0.001321	0.13	2052.050000	Y 377.433
Sr (421.552 nm)	0.504539	ppm	0.000113	0.02	106016.774808	Y_R 488.368
Th (288.505 nm)	0.011671	ppm	0.000991	8.49	119.563000	Y 377.433
Ti (336.122 nm)	0.496947	ppm	0.000114	0.02	70559.600000	Y 377.433
Tl (190.794 nm)	1.001960	ppm	0.000501	0.05	2194.970000	Y 377.433
U (409.013 nm)	0.006888	ppm	0.002471	35.88	-214.470000	Y 377.433
V (292.401 nm)	0.492990	ppm	0.000606	0.12	17802.800000	Y 377.433
Zn (206.200 nm)	0.495630	ppm	0.000338	0.07	2616.250000	Y 377.433
Zr (343.823 nm)	0.500872	ppm	0.000438	0.09	65890.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.153391	22006.944654	0.005822	0.50
Y 377.433	1.139386	1153272.292351	0.001529	0.13
Y_R 377.433	1.220070	92106.500000	0.006884	0.56
Y_R 488.368	1.191270	52154.500000	0.007127	0.60
Y_R2 488.368	1.163331	100955.643973	0.004321	0.37

Sample Name: CCB

Date: 11/7/2018 4:27:42 AM
Rack:Tube: S1:4

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001268	ppm	0.000013	1.00	-386.750000	Y 377.433
Al (167.019 nm)	-0.004110 u	ppm	0.001311	31.89	0.061826	Y_R 377.433
Al H (396.152 nm)	-0.029303 u	ppm	0.001490	5.08	5.353208	Y_R 377.433
As (188.980 nm)	0.000330 u	ppm	0.001382	> 100.00	-1.321010	Y 242.219
B (249.678 nm)	0.002169	ppm	0.000467	21.53	111.321000	Y 242.219
Ba (493.408 nm)	-0.001013 u	ppm	0.000060	5.89	482.171000	Y_R 488.368
Be (234.861 nm)	0.000079	ppm	0.000012	15.06	-22.841700	Y_R 488.368
Bi (223.061 nm)	0.000927	ppm	0.000715	77.13	15.076000	Y 377.433
Ca (315.887 nm)	0.007981	ppm	0.002436	30.53	-55.261492	Y_R 377.433
Cd (214.439 nm)	0.000080	ppm	0.000107	> 100.00	5.668280	Y 377.433
Co (228.615 nm)	0.000427	ppm	0.000076	17.81	-28.715400	Y 242.219
Cr (205.560 nm)	0.000212	ppm	0.000024	11.33	-0.734764	Y 377.433
Cu (324.754 nm)	0.001958	ppm	0.000179	9.15	-183.593000	Y 377.433
Fe (238.204 nm)	-0.001568 u	ppm	0.000567	36.18	19.038421	Y_R 377.433
Fe H (259.940 nm)	0.004133 u	ppm	0.001449	35.06	11.052800	Y_R 377.433
K (766.491 nm)	0.127340	ppm	0.016448	12.92	-609.961000	Y_R2 488.368
Li (670.783 nm)	0.011456 Z	ppm	0.001660	14.49	-971.650000 Z	Y_R2 488.368
Mg (279.078 nm)	0.002645	ppm	0.000549	20.75	54.633800	Y 377.433
Mn (257.610 nm)	0.000010 u	ppm	0.000032	> 100.00	64.040600	Y 377.433
Mo (202.032 nm)	0.000178	ppm	0.000061	34.10	1.504920	Y 377.433
Na (589.592 nm)	0.095383	ppm	0.013348	13.99	923.010000	Y_R2 488.368
Na H (589.593 nm)	0.606100 u	ppm	0.016563	2.73	4613.677011	Y_R 488.368
Ni (231.604 nm)	0.000647	ppm	0.000499	77.16	0.314137	Y 377.433
P (213.618 nm)	-0.003812 u	ppm	0.001092	28.65	16.273300	Y 242.219
Pb (220.353 nm)	0.001464	ppm	0.000978	66.85	7.633190	Y 242.219
S (181.972 nm)	0.058745 Z	ppm	0.002973	5.06	44.258481 Z	Y 377.433
Sb (206.834 nm)	0.001269	ppm	0.000612	48.23	-19.766300	Y 377.433
Se (196.026 nm)	-0.002579 u	ppm	0.001538	59.63	10.423800	Y 242.219
Si (288.158 nm)	-0.002581 u	ppm	0.000519	20.11	907.469000	Y 377.433
Sn (189.925 nm)	-0.002202 u	ppm	0.001498	68.04	5.220330	Y 377.433
Sr (421.552 nm)	-0.000124 u	ppm	0.000012	9.48	130.092326	Y_R 488.368
Th (288.505 nm)	0.004292	ppm	0.002410	56.16	83.978000	Y 377.433
Ti (336.122 nm)	-0.000017 u	ppm	0.000045	> 100.00	-230.641000	Y 377.433
Tl (190.794 nm)	0.001472	ppm	0.000299	20.32	-2.108210	Y 377.433
U (409.013 nm)	0.010998	ppm	0.005984	54.41	-157.829000	Y 377.433
V (292.401 nm)	-0.000164 u	ppm	0.000307	> 100.00	28.733700	Y 377.433
Zn (206.200 nm)	-0.005228 u	ppm	0.000080	1.53	0.436836	Y 377.433
Zr (343.823 nm)	-0.000235 u	ppm	0.000014	6.09	-4.231000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.157080	22077.333252	0.008536	0.74
Y 377.433	1.147186	1161167.892728	0.007928	0.69
Y_R 377.433	1.225600	92523.900000	0.002609	0.21
Y_R 488.368	1.201550	52604.400000	0.003340	0.28
Y_R2 488.368	1.185903	102914.498236	0.009777	0.82

Sample Name: CCVL-5413446

Date: 11/7/2018 4:31:05 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010920	ppm	0.000026	0.24	55.612400	Y 377.433
Al (167.019 nm)	0.100875	ppm	0.002571	2.55	58.664100	Y_R 377.433
Al H (396.152 nm)	0.080800 u	ppm	0.005873	7.27	283.940862	Y_R 377.433
As (188.980 nm)	0.015381	ppm	0.000125	0.81	17.631900	Y 242.219
B (249.678 nm)	0.101952	ppm	0.000035	0.03	2604.190000	Y 242.219
Ba (493.408 nm)	0.009235	ppm	0.000182	1.97	1669.090000	Y_R 488.368
Be (234.861 nm)	0.000976	ppm	0.000015	1.56	246.960000	Y_R 488.368
Bi (223.061 nm)	0.101259	ppm	0.000713	0.70	267.740000	Y 377.433
Ca (315.887 nm)	0.214988	ppm	0.001261	0.59	108.880853	Y_R 377.433
Cd (214.439 nm)	0.005186	ppm	0.000020	0.39	310.914000	Y 377.433
Co (228.615 nm)	0.010502	ppm	0.000143	1.36	154.101000	Y 242.219
Cr (205.560 nm)	0.010375	ppm	0.000034	0.33	153.898000	Y 377.433
Cu (324.754 nm)	0.017930	ppm	0.000183	1.02	704.489000	Y 377.433
Fe (238.204 nm)	0.100205	ppm	0.001007	1.01	395.449005	Y_R 377.433
Fe H (259.940 nm)	0.101750 u	ppm	0.000035	0.03	195.725000	Y_R 377.433
K (766.491 nm)	3.331330	ppm	0.003220	0.10	3079.350000	Y_R2 488.368
Li (670.783 nm)	0.033184 Q	ppm	0.000330	1.00	-247.011000 Q	Y_R2 488.368
Mg (279.078 nm)	0.208548	ppm	0.000342	0.16	1242.670000	Y 377.433
Mn (257.610 nm)	0.010372	ppm	0.000012	0.12	2487.490000	Y 377.433
Mo (202.032 nm)	0.019475	ppm	0.000404	2.08	167.690000	Y 377.433
Na (589.592 nm)	1.146400	ppm	0.004385	0.38	7863.930000	Y_R2 488.368
Na H (589.593 nm)	1.630524 u	ppm	0.017973	1.10	8376.397908	Y_R 488.368
Ni (231.604 nm)	0.043169	ppm	0.000080	0.19	290.401000	Y 377.433
P (213.618 nm)	2.892440 o	ppm	0.010656	0.37	6309.810000	Y 242.219
Pb (220.353 nm)	0.008880	ppm	0.000782	8.81	28.919800	Y 242.219
S (181.972 nm)	0.155857 Q	ppm	0.001393	0.89	94.019189 Q	Y 377.433
Sb (206.834 nm)	0.021176	ppm	0.001971	9.31	34.768900	Y 377.433
Se (196.026 nm)	0.018303	ppm	0.000942	5.15	31.198000	Y 242.219
Si (288.158 nm)	0.498217	ppm	0.005896	1.18	5211.670000	Y 377.433
Sn (189.925 nm)	0.103037	ppm	0.000583	0.57	214.414000	Y 377.433
Sr (421.552 nm)	0.010210	ppm	0.000161	1.58	2298.292918	Y_R 488.368
Th (288.505 nm)	0.017129	ppm	0.000993	5.80	118.276000	Y 377.433
Ti (336.122 nm)	0.009952	ppm	0.000029	0.30	1189.730000	Y 377.433
Tl (190.794 nm)	0.016661	ppm	0.000269	1.61	31.214200	Y 377.433
U (409.013 nm)	0.069491	ppm	0.001108	1.59	105.625000	Y 377.433
V (292.401 nm)	0.009826	ppm	0.000240	2.44	386.359000	Y 377.433
Zn (206.200 nm)	0.015222	ppm	0.000034	0.22	107.240000	Y 377.433
Zr (343.823 nm)	0.015155	ppm	0.000037	0.24	2019.620000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.166330	22253.829030	0.002286	0.20
Y 377.433	1.155440	1169522.237402	0.003751	0.32
Y_R 377.433	1.248920	94284.300000	0.006774	0.54
Y_R 488.368	1.220210	53421.300000	0.000899	0.07
Y_R2 488.368	1.201374	104257.148516	0.005863	0.49

Sample Name: 280-116485-B-2-A

Date: 11/7/2018 4:34:29 AM Rack:Tube: 4:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001612	ppm	0.000097	6.00	-371.387000	Y 377.433
Al (167.019 nm)	0.280812	ppm	0.002253	0.80	159.085000	Y_R 377.433
Al H (396.152 nm)	0.289334 u	ppm	0.009523	3.29	865.653640	Y_R 377.433
As (188.980 nm)	0.001038 u	ppm	0.002017	> 100.00	-0.431842	Y 242.219
B (249.678 nm)	0.634319	ppm	0.002081	0.33	15902.200000	Y 242.219
Ba (493.408 nm)	0.040028	ppm	0.000329	0.82	5267.010000	Y_R 488.368
Be (234.861 nm)	0.000037	ppm	0.000017	44.31	-27.329500	Y_R 488.368
Bi (223.061 nm)	-0.001404 u	ppm	0.001119	79.73	9.248550	Y 377.433
Ca (315.887 nm)	135.535152 o	ppm	0.135933	0.10	107406.131695	Y_R 377.433
Cd (214.439 nm)	-0.000024 u	ppm	0.000078	> 100.00	-0.276681	Y 377.433
Co (228.615 nm)	0.000522	ppm	0.000400	76.68	-26.776900	Y 242.219
Cr (205.560 nm)	0.001585	ppm	0.000015	0.93	20.104200	Y 377.433
Cu (324.754 nm)	0.002227	ppm	0.000182	8.19	-248.054000	Y 377.433
Fe (238.204 nm)	0.247013	ppm	0.000978	0.40	938.424897	Y_R 377.433
Fe H (259.940 nm)	0.249336 u	ppm	0.000573	0.23	474.928000	Y_R 377.433
K (766.491 nm)	9.418770	ppm	0.013170	0.14	10088.900000	Y_R2 488.368
Li (670.783 nm)	0.044640	ppm	0.000050	0.11	135.070000	Y_R2 488.368
Mg (279.078 nm)	28.433200	ppm	0.076410	0.27	164284.000000	Y 377.433
Mn (257.610 nm)	0.061403	ppm	0.000138	0.23	14421.700000	Y 377.433
Mo (202.032 nm)	0.000226	ppm	0.000047	20.67	1.917230	Y 377.433
Na (589.592 nm)	46.509700 o	ppm	0.471180	1.01	306614.000000	Y_R2 488.368
Na H (589.593 nm)	49.161802	ppm	0.134859	0.27	182541.465828	Y_R 488.368
Ni (231.604 nm)	0.000861	ppm	0.000825	95.73	1.787080	Y 377.433
P (213.618 nm)	0.024951	ppm	0.003504	14.05	78.775000	Y 242.219
Pb (220.353 nm)	-0.000383 u	ppm	0.000919	> 100.00	2.254430	Y 242.219
S (181.972 nm)	122.731922 bo	ppm	0.088507	0.07	62871.324951	Y 377.433
Sb (206.834 nm)	-0.001559 u	ppm	0.000441	28.30	-27.546600	Y 377.433
Se (196.026 nm)	0.000185 u	ppm	0.000890	> 100.00	13.183500	Y 242.219
Si (288.158 nm)	3.549920	ppm	0.014213	0.40	31440.100000	Y 377.433
Sn (189.925 nm)	-0.000565 u	ppm	0.000156	27.68	8.475150	Y 377.433
Sr (421.552 nm)	1.929903 o	ppm	0.007950	0.41	405081.923558	Y_R 488.368
Th (288.505 nm)	0.003189	ppm	0.001004	31.47	82.552900	Y 377.433
Ti (336.122 nm)	0.006456	ppm	0.000068	1.05	1115.350000	Y 377.433
Tl (190.794 nm)	0.001238	ppm	0.001037	83.72	-2.656000	Y 377.433
U (409.013 nm)	-0.004072 u	ppm	0.000119	2.93	-251.499000	Y 377.433
V (292.401 nm)	0.000673	ppm	0.000263	39.08	60.105800	Y 377.433
Zn (206.200 nm)	-0.000854 u	ppm	0.000486	56.88	23.278000	Y 377.433
Zr (343.823 nm)	0.000040 u	ppm	0.000088	> 100.00	32.611700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122470	21416.968919	0.006419	0.57
Y 377.433	1.119737	1133383.849627	0.005300	0.47
Y_R 377.433	1.212630	91545.100000	0.001448	0.12
Y_R 488.368	1.172930	51351.400000	0.003750	0.32
Y_R2 488.368	1.156520	100364.637017	0.011140	0.96

Sample Name: 280-116525-B-1-A

Date: 11/7/2018 4:37:52 AM
Rack:Tube: 4:8

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001547	ppm	0.000165	10.65	-378.773000	Y 377.433
Al (167.019 nm)	35.327800 o	ppm	0.072197	0.20	19714.900000	Y_R 377.433
Al H (396.152 nm)	38.043883	ppm	0.113745	0.30	95800.895469	Y_R 377.433
As (188.980 nm)	0.004928	ppm	0.000403	8.18	4.254690	Y 242.219
B (249.678 nm)	0.065339	ppm	0.000345	0.53	1653.340000	Y 242.219
Ba (493.408 nm)	0.122691	ppm	0.000825	0.67	14850.700000	Y_R 488.368
Be (234.861 nm)	0.001374	ppm	0.000004	0.29	1114.870000	Y_R 488.368
Bi (223.061 nm)	-0.001558 u	ppm	0.001178	75.63	12.789900	Y 377.433
Ca (315.887 nm)	82.595025 o	ppm	0.195283	0.24	65429.163670	Y_R 377.433
Cd (214.439 nm)	0.000151	ppm	0.000002	1.02	33.098400	Y 377.433
Co (228.615 nm)	0.008780	ppm	0.000087	0.99	131.010000	Y 242.219
Cr (205.560 nm)	0.026864	ppm	0.000081	0.30	398.321000	Y 377.433
Cu (324.754 nm)	0.023035	ppm	0.000282	1.22	973.939000	Y 377.433
Fe (238.204 nm)	23.591998 o	ppm	0.093601	0.40	87280.668670	Y_R 377.433
Fe H (259.940 nm)	24.526600	ppm	0.077720	0.32	46402.700000	Y_R 377.433
K (766.491 nm)	16.138800	ppm	0.064392	0.40	17826.900000	Y_R2 488.368
Li (670.783 nm)	0.027731	ppm	0.001049	3.78	-428.846000	Y_R2 488.368
Mg (279.078 nm)	14.172100	ppm	0.013744	0.10	81863.700000	Y 377.433
Mn (257.610 nm)	0.360353	ppm	0.000272	0.08	84335.700000	Y 377.433
Mo (202.032 nm)	0.000710	ppm	0.000059	8.30	6.088820	Y 377.433
Na (589.592 nm)	7.977860	ppm	0.014172	0.18	53075.500000	Y_R2 488.368
Na H (589.593 nm)	8.686061 u	ppm	0.080822	0.93	34332.657730	Y_R 488.368
Ni (231.604 nm)	0.022224	ppm	0.000087	0.39	148.495000	Y 377.433
P (213.618 nm)	0.407292	ppm	0.002312	0.57	909.600000	Y 242.219
Pb (220.353 nm)	0.022962	ppm	0.000837	3.65	58.893000	Y 242.219
S (181.972 nm)	16.287729 o	ppm	0.034132	0.21	8356.803521	Y 377.433
Sb (206.834 nm)	-0.001400 u	ppm	0.002409	> 100.00	-34.805000	Y 377.433
Se (196.026 nm)	-0.001625 u	ppm	0.002189	> 100.00	7.607200	Y 242.219
Si (288.158 nm)	48.655200 o	ppm	0.004801	0.01	419106.000000	Y 377.433
Sn (189.925 nm)	0.002248	ppm	0.000081	3.62	14.065700	Y 377.433
Sr (421.552 nm)	0.314363	ppm	0.001033	0.33	66114.626219	Y_R 488.368
Th (288.505 nm)	0.016867	ppm	0.000189	1.12	123.962000	Y 377.433
Ti (336.122 nm)	0.235722	ppm	0.000530	0.22	33600.200000	Y 377.433
Tl (190.794 nm)	0.000212 u	ppm	0.001922	> 100.00	-6.533860	Y 377.433
U (409.013 nm)	-0.006825 u	ppm	0.006129	89.79	-232.674000	Y 377.433
V (292.401 nm)	0.040473	ppm	0.000349	0.86	1503.190000	Y 377.433
Zn (206.200 nm)	0.072249	ppm	0.000348	0.48	405.071000	Y 377.433
Zr (343.823 nm)	0.010348	ppm	0.000319	3.09	1457.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.151166	21964.489554	0.000327	0.03
Y 377.433	1.139152	1153036.020234	0.001438	0.13
Y_R 377.433	1.239390	93565.100000	0.004977	0.40
Y_R 488.368	1.207500	52865.100000	0.006478	0.54
Y_R2 488.368	1.182008	102576.518250	0.009083	0.77

Sample Name: 280-116525-B-2-A

Date: 11/7/2018 4:41:16 AM
Rack:Tube: 4:9
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000951	ppm	0.000490	51.52	-418.556000	Y 377.433
Al (167.019 nm)	111.531000 o	ppm	0.398875	0.36	62270.500000	Y_R 377.433
Al H (396.152 nm)	193.672970 o	ppm	0.767774	0.40	488108.429990	Y_R 377.433
As (188.980 nm)	0.060366	ppm	0.000741	1.23	73.148800	Y 242.219
B (249.678 nm)	0.386721	ppm	0.000791	0.20	9528.250000	Y 242.219
Ba (493.408 nm)	0.609560	ppm	0.000596	0.10	71801.500000	Y_R 488.368
Be (234.861 nm)	0.007141	ppm	0.000011	0.16	6064.500000	Y_R 488.368
Bi (223.061 nm)	-0.006484 u	ppm	0.000861	13.28	17.454700	Y 377.433
Ca (315.887 nm)	2100.644818 o	ppm	13.591503	0.65	1665569.124754	Y_R 377.433
Cd (214.439 nm)	0.001152	ppm	0.000076	6.61	192.705000	Y 377.433
Co (228.615 nm)	0.075406	ppm	0.000155	0.21	1356.370000	Y 242.219
Cr (205.560 nm)	0.138316	ppm	0.000356	0.26	2066.280000	Y 377.433
Cu (324.754 nm)	0.203208	ppm	0.000871	0.43	9943.840000	Y 377.433
Fe (238.204 nm)	124.982371 o	ppm	0.010754	0.01	462276.516051	Y_R 377.433
Fe H (259.940 nm)	132.081000	ppm	0.160963	0.12	249874.000000	Y_R 377.433
K (766.491 nm)	76.335400	ppm	0.476356	0.62	87141.900000	Y_R2 488.368
Li (670.783 nm)	0.144978	ppm	0.000560	0.39	3481.400000	Y_R2 488.368
Mg (279.078 nm)	160.592000 o	ppm	0.078348	0.05	927487.000000	Y 377.433
Mn (257.610 nm)	3.625540 o	ppm	0.004391	0.12	847950.000000	Y 377.433
Mo (202.032 nm)	0.017532	ppm	0.000238	1.36	150.957000	Y 377.433
Na (589.592 nm)	16.630800 o	ppm	0.088072	0.53	111042.000000	Y_R2 488.368
Na H (589.593 nm)	18.627756	ppm	0.052357	0.28	71217.413806	Y_R 488.368
Ni (231.604 nm)	0.163738	ppm	0.001615	0.99	1118.120000	Y 377.433
P (213.618 nm)	4.659350 o	ppm	0.006499	0.14	10149.300000	Y 242.219
Pb (220.353 nm)	0.208065	ppm	0.000048	0.02	547.350000	Y 242.219
S (181.972 nm)	91.696115 o	ppm	0.104709	0.11	46985.177050	Y 377.433
Sb (206.834 nm)	-0.008016 u	ppm	0.001685	21.02	-85.596700	Y 377.433
Se (196.026 nm)	0.001706	ppm	0.000416	24.39	-4.103030	Y 242.219
Si (288.158 nm)	91.773900 o	ppm	0.293191	0.32	789698.000000	Y 377.433
Sn (189.925 nm)	0.020621	ppm	0.000584	2.83	50.587400	Y 377.433
Sr (421.552 nm)	4.405988 o	ppm	0.027953	0.63	924606.073010	Y_R 488.368
Th (288.505 nm)	0.090867	ppm	0.002557	2.81	378.494000	Y 377.433
Ti (336.122 nm)	0.773349	ppm	0.005356	0.69	116476.000000	Y 377.433
Tl (190.794 nm)	0.003404	ppm	0.002234	65.64	-4.359070	Y 377.433
U (409.013 nm)	-0.109028 u	ppm	0.002328	2.13	-984.365000	Y 377.433
V (292.401 nm)	0.159160	ppm	0.000205	0.13	5804.670000	Y 377.433
Zn (206.200 nm)	0.387068	ppm	0.000705	0.18	2049.270000	Y 377.433
Zr (343.823 nm)	0.038782	ppm	0.000154	0.40	5497.650000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.073078	20474.562106	0.000520	0.05
Y 377.433	1.073014	1086091.244859	0.002064	0.19
Y_R 377.433	1.238870	93526.100000	0.004899	0.40
Y_R 488.368	1.202220	52634.000000	0.005572	0.46
Y_R2 488.368	1.205637	104627.077334	0.007101	0.59

Sample Name: MB 280-436428/1-A

Date: 11/7/2018 4:44:41 AM Rack:Tube: 4:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001276	ppm	0.000039	3.03	-386.413000	Y 377.433
Al (167.019 nm)	0.007978	ppm	0.001830	22.94	6.807830	Y_R 377.433
Al H (396.152 nm)	-0.013948 u	ppm	0.003571	25.60	43.970291	Y_R 377.433
As (188.980 nm)	0.001186	ppm	0.000312	26.29	-0.243944	Y 242.219
B (249.678 nm)	0.000682	ppm	0.000058	8.49	74.173300	Y 242.219
Ba (493.408 nm)	-0.001032 u	ppm	0.000022	2.09	479.984000	Y_R 488.368
Be (234.861 nm)	0.000032	ppm	0.000032	98.62	-36.449200	Y_R 488.368
Bi (223.061 nm)	-0.000337 u	ppm	0.000663	> 100.00	11.895900	Y 377.433
Ca (315.887 nm)	0.098275	ppm	0.000534	0.54	16.334227	Y_R 377.433
Cd (214.439 nm)	0.000037 u	ppm	0.000099	> 100.00	3.093390	Y 377.433
Co (228.615 nm)	0.000268	ppm	0.000018	6.82	-31.596000	Y 242.219
Cr (205.560 nm)	0.000331	ppm	0.000006	1.95	1.084100	Y 377.433
Cu (324.754 nm)	0.001868	ppm	0.000062	3.30	-188.749000	Y 377.433
Fe (238.204 nm)	0.008646	ppm	0.000379	4.38	56.815250	Y_R 377.433
Fe H (259.940 nm)	0.014091 u	ppm	0.000354	2.51	29.891300	Y_R 377.433
K (766.491 nm)	0.166642	ppm	0.021388	12.83	-564.705000	Y_R2 488.368
Li (670.783 nm)	0.010270	ppm	0.000663	6.45	-1011.210000	Y_R2 488.368
Mg (279.078 nm)	0.009078	ppm	0.002039	22.46	91.763400	Y 377.433
Mn (257.610 nm)	0.000908	ppm	0.000018	1.99	274.047000	Y 377.433
Mo (202.032 nm)	-0.000266 u	ppm	0.000022	8.15	-2.317000	Y 377.433
Na (589.592 nm)	0.077264	ppm	0.003998	5.17	804.033000	Y_R2 488.368
Na H (589.593 nm)	0.288029 u	ppm	0.004615	1.60	3448.547382	Y_R 488.368
Ni (231.604 nm)	0.000538	ppm	0.000149	27.71	-0.432513	Y 377.433
P (213.618 nm)	-0.002052 u	ppm	0.002468	> 100.00	20.098700	Y 242.219
Pb (220.353 nm)	0.000038 u	ppm	0.000609	> 100.00	3.542680	Y 242.219
S (181.972 nm)	0.060750	ppm	0.005803	9.55	45.287529	Y 377.433
Sb (206.834 nm)	0.000674	ppm	0.000037	5.54	-21.390800	Y 377.433
Se (196.026 nm)	-0.002469 u	ppm	0.000356	14.40	10.532400	Y 242.219
Si (288.158 nm)	0.101383	ppm	0.003016	2.97	1801.010000	Y 377.433
Sn (189.925 nm)	-0.001909 u	ppm	0.000660	34.55	5.802130	Y 377.433
Sr (421.552 nm)	0.000062 u	ppm	0.000094	> 100.00	169.128401	Y_R 488.368
Th (288.505 nm)	0.005546	ppm	0.000588	10.61	87.217900	Y 377.433
Ti (336.122 nm)	0.000209	ppm	0.000045	21.43	-198.214000	Y 377.433
Tl (190.794 nm)	0.000471	ppm	0.000137	29.19	-4.309540	Y 377.433
U (409.013 nm)	0.007375	ppm	0.001356	18.39	-174.224000	Y 377.433
V (292.401 nm)	-0.000009 u	ppm	0.000084	> 100.00	34.280700	Y 377.433
Zn (206.200 nm)	-0.004177 u	ppm	0.000144	3.44	5.925230	Y 377.433
Zr (343.823 nm)	-0.000214 u	ppm	0.000007	3.20	-1.404320	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.164338	22215.825455	0.004227	0.36
Y 377.433	1.154493	1168563.653854	0.004959	0.43
Y_R 377.433	1.225990	92553.600000	0.002000	0.16
Y_R 488.368	1.193400	52248.000000	0.018309	1.53
Y_R2 488.368	1.191298	103382.674766	0.006862	0.58

Sample Name: LCS 280-436428/2-A

Date: 11/7/2018 4:48:04 AM Rack:Tube: 4:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048235	ppm	0.000170	0.35	1739.860000	Y 377.433
Al (167.019 nm)	1.996830	ppm	0.016716	0.84	1116.340000	Y_R 377.433
Al H (396.152 nm)	1.996481	ppm	0.018802	0.94	5208.604401	Y_R 377.433
As (188.980 nm)	1.010230	ppm	0.001050	0.10	1270.440000	Y 242.219
B (249.678 nm)	1.061200	ppm	0.006796	0.64	26586.400000	Y 242.219
Ba (493.408 nm)	2.031240 o	ppm	0.004599	0.23	235861.000000	Y_R 488.368
Be (234.861 nm)	0.049225	ppm	0.000511	1.04	14593.300000	Y_R 488.368
Bi (223.061 nm)	1.990460	ppm	0.006838	0.34	5025.100000	Y 377.433
Ca (315.887 nm)	51.980968 o	ppm	0.336333	0.65	41154.905823	Y_R 377.433
Cd (214.439 nm)	0.099588	ppm	0.000334	0.34	5954.380000	Y 377.433
Co (228.615 nm)	0.487430	ppm	0.000752	0.15	8829.170000	Y 242.219
Cr (205.560 nm)	0.203154	ppm	0.000722	0.36	3085.820000	Y 377.433
Cu (324.754 nm)	0.258502	ppm	0.001965	0.76	14136.000000	Y 377.433
Fe (238.204 nm)	1.007096	ppm	0.003024	0.30	3749.616651	Y_R 377.433
Fe H (259.940 nm)	1.033990 u	ppm	0.006631	0.64	1959.340000	Y_R 377.433
K (766.491 nm)	52.654200	ppm	0.231211	0.44	59873.500000	Y_R2 488.368
Li (670.783 nm)	1.030790	ppm	0.001154	0.11	33024.000000	Y_R2 488.368
Mg (279.078 nm)	50.655400 o	ppm	0.168983	0.33	292593.000000	Y 377.433
Mn (257.610 nm)	0.505732	ppm	0.001919	0.38	118335.000000	Y 377.433
Mo (202.032 nm)	1.052990	ppm	0.003024	0.29	9068.270000	Y 377.433
Na (589.592 nm)	51.256200 o	ppm	0.406106	0.79	341894.000000	Y_R2 488.368
Na H (589.593 nm)	53.997640	ppm	0.000472	0.00	202133.989164	Y_R 488.368
Ni (231.604 nm)	0.503588	ppm	0.001592	0.32	3433.710000	Y 377.433
P (213.618 nm)	10.467600 o	ppm	0.059901	0.57	22770.700000	Y 242.219
Pb (220.353 nm)	0.502127	ppm	0.002835	0.56	1444.330000	Y 242.219
S (181.972 nm)	2.063291	ppm	0.011169	0.54	1072.136475	Y 377.433
Sb (206.834 nm)	0.525682	ppm	0.002632	0.50	1408.140000	Y 377.433
Se (196.026 nm)	2.065500	ppm	0.022104	1.07	2069.090000	Y 242.219
Si (288.158 nm)	10.390700	ppm	0.017005	0.16	90234.200000	Y 377.433
Sn (189.925 nm)	2.116060	ppm	0.006886	0.33	4215.880000	Y 377.433
Sr (421.552 nm)	1.037629	ppm	0.002119	0.20	217868.059517	Y_R 488.368
Th (288.505 nm)	1.027370	ppm	0.005439	0.53	2772.740000	Y 377.433
Ti (336.122 nm)	1.032700	ppm	0.004636	0.45	147005.000000	Y 377.433
Tl (190.794 nm)	2.049320	ppm	0.008397	0.41	4492.860000	Y 377.433
U (409.013 nm)	2.109010	ppm	0.012704	0.60	9283.220000	Y 377.433
V (292.401 nm)	0.512848	ppm	0.002277	0.44	18559.800000	Y 377.433
Zn (206.200 nm)	0.494758	ppm	0.000028	0.01	2611.700000	Y 377.433
Zr (343.823 nm)	0.514345	ppm	0.001636	0.32	67657.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131760	21594.228767	0.002491	0.22
Y 377.433	1.125411	1139127.577666	0.000804	0.07
Y_R 377.433	1.216960	91872.100000	0.013183	1.08
Y_R 488.368	1.187830	52003.700000	0.009451	0.80
Y_R2 488.368	1.172922	101788.040142	0.005717	0.49

Sample Name: 280-116491-D-1-A

Date: 11/7/2018 4:51:29 AM Rack:Tube: 4:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001363	ppm	0.000163	11.95	-382.405000	Y 377.433
Al (167.019 nm)	0.083946	ppm	0.000715	0.85	49.185800	Y_R 377.433
Al H (396.152 nm)	0.068817 u	ppm	0.000348	0.51	261.344054	Y_R 377.433
As (188.980 nm)	-0.000695 u	ppm	0.000447	64.30	-2.613020	Y 242.219
B (249.678 nm)	0.042977	ppm	0.000027	0.06	1130.660000	Y 242.219
Ba (493.408 nm)	0.005169	ppm	0.000051	0.99	1203.130000	Y_R 488.368
Be (234.861 nm)	0.000035	ppm	0.000012	35.21	-34.693400	Y_R 488.368
Bi (223.061 nm)	-0.000522 u	ppm	0.000767	> 100.00	11.435700	Y 377.433
Ca (315.887 nm)	21.229870 o	ppm	0.055794	0.26	16771.871679	Y_R 377.433
Cd (214.439 nm)	0.000081	ppm	0.000025	30.22	5.795130	Y 377.433
Co (228.615 nm)	0.000579	ppm	0.000196	33.79	-25.927400	Y 242.219
Cr (205.560 nm)	0.000701	ppm	0.000019	2.72	6.699010	Y 377.433
Cu (324.754 nm)	0.003307	ppm	0.000202	6.12	-119.733000	Y 377.433
Fe (238.204 nm)	0.041936	ppm	0.000246	0.59	179.938550	Y_R 377.433
Fe H (259.940 nm)	0.045196 u	ppm	0.000191	0.42	88.735200	Y_R 377.433
K (766.491 nm)	1.678620	ppm	0.016697	0.99	1176.300000	Y_R2 488.368
Li (670.783 nm)	0.012315	ppm	0.000197	1.60	-942.977000	Y_R2 488.368
Mg (279.078 nm)	1.686680	ppm	0.004860	0.29	9782.480000	Y 377.433
Mn (257.610 nm)	0.056245	ppm	0.000154	0.27	13215.600000	Y 377.433
Mo (202.032 nm)	0.000140	ppm	0.000040	28.82	1.174860	Y 377.433
Na (589.592 nm)	7.575570	ppm	0.007984	0.11	50188.000000	Y_R2 488.368
Na H (589.593 nm)	8.008615 u	ppm	0.045099	0.56	31739.540345	Y_R 488.368
Ni (231.604 nm)	0.000926	ppm	0.000101	10.93	2.221180	Y 377.433
P (213.618 nm)	0.000108 u	ppm	0.001215	> 100.00	24.792400	Y 242.219
Pb (220.353 nm)	0.000528 u	ppm	0.001754	> 100.00	4.919490	Y 242.219
S (181.972 nm)	1.321005	ppm	0.009553	0.72	690.862027	Y 377.433
Sb (206.834 nm)	0.001811	ppm	0.001101	60.77	-18.281500	Y 377.433
Se (196.026 nm)	-0.000429 u	ppm	0.000996	> 100.00	12.603200	Y 242.219
Si (288.158 nm)	2.486210	ppm	0.022171	0.89	22297.800000	Y 377.433
Sn (189.925 nm)	0.000033 u	ppm	0.000542	> 100.00	9.663740	Y 377.433
Sr (421.552 nm)	0.105750	ppm	0.000400	0.38	22344.124355	Y_R 488.368
Th (288.505 nm)	0.005055	ppm	0.000416	8.23	87.089000	Y 377.433
Ti (336.122 nm)	0.001001	ppm	0.000006	0.55	-19.273100	Y 377.433
Tl (190.794 nm)	0.001228	ppm	0.001103	89.83	-2.649570	Y 377.433
U (409.013 nm)	0.004650	ppm	0.003036	65.29	-190.558000	Y 377.433
V (292.401 nm)	0.000363	ppm	0.000028	7.58	48.421200	Y 377.433
Zn (206.200 nm)	-0.003283 u	ppm	0.000035	1.06	10.593800	Y 377.433
Zr (343.823 nm)	0.000121	ppm	0.000024	20.27	42.672600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.153276	22004.759205	0.003258	0.28
Y 377.433	1.143457	1157392.525457	0.004513	0.39
Y_R 377.433	1.252860	94581.700000	0.005944	0.47
Y_R 488.368	1.222980	53542.900000	0.007395	0.60
Y_R2 488.368	1.199162	104065.140027	0.004720	0.39

Sample Name: 280-116491-D-2-A

Date: 11/7/2018 4:54:52 AM Rack:Tube: 4:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001466	ppm	0.000180	12.30	-379.428000	Y 377.433
Al (167.019 nm)	1.575460	ppm	0.004518	0.29	885.978000	Y_R 377.433
Al H (396.152 nm)	1.526553	ppm	0.010987	0.72	3921.229966	Y_R 377.433
As (188.980 nm)	0.000080 u	ppm	0.000417	> 100.00	-1.704970	Y 242.219
B (249.678 nm)	0.031975	ppm	0.000058	0.18	844.129000	Y 242.219
Ba (493.408 nm)	0.020705	ppm	0.000333	1.61	3006.150000	Y_R 488.368
Be (234.861 nm)	0.000001 u	ppm	0.000002	> 100.00	197.413000	Y_R 488.368
Bi (223.061 nm)	-0.003562 u	ppm	0.000886	24.87	5.059230	Y 377.433
Ca (315.887 nm)	6.223241	ppm	0.003394	0.05	4872.905425	Y_R 377.433
Cd (214.439 nm)	0.000067	ppm	0.000020	29.69	12.392500	Y 377.433
Co (228.615 nm)	0.001615	ppm	0.000056	3.47	-6.185590	Y 242.219
Cr (205.560 nm)	0.001372	ppm	0.000109	7.94	14.772400	Y 377.433
Cu (324.754 nm)	0.003937	ppm	0.000042	1.06	-71.410500	Y 377.433
Fe (238.204 nm)	7.634724 o	ppm	0.001704	0.02	28262.130111	Y_R 377.433
Fe H (259.940 nm)	7.883050	ppm	0.005296	0.07	14916.400000	Y_R 377.433
K (766.491 nm)	1.168800	ppm	0.037257	3.19	589.262000	Y_R2 488.368
Li (670.783 nm)	0.012437	ppm	0.000194	1.56	-938.926000	Y_R2 488.368
Mg (279.078 nm)	2.654700	ppm	0.000439	0.02	15361.000000	Y 377.433
Mn (257.610 nm)	0.129163	ppm	0.000220	0.17	30268.600000	Y 377.433
Mo (202.032 nm)	0.000059	ppm	0.000040	67.99	0.483778	Y 377.433
Na (589.592 nm)	21.680700 o	ppm	0.014921	0.07	143092.000000	Y_R2 488.368
Na H (589.593 nm)	22.357933	ppm	0.275956	1.23	84324.197291	Y_R 488.368
Ni (231.604 nm)	0.002124	ppm	0.000015	0.70	10.710700	Y 377.433
P (213.618 nm)	0.042277	ppm	0.001975	4.67	116.425000	Y 242.219
Pb (220.353 nm)	-0.000421 u	ppm	0.000449	> 100.00	2.392590	Y 242.219
S (181.972 nm)	1.691895	ppm	0.012822	0.76	880.993164	Y 377.433
Sb (206.834 nm)	-0.000278 u	ppm	0.000530	> 100.00	-25.931900	Y 377.433
Se (196.026 nm)	-0.001829 u	ppm	0.001073	58.66	9.783850	Y 242.219
Si (288.158 nm)	11.413900 o	ppm	0.111534	0.98	99028.800000	Y 377.433
Sn (189.925 nm)	-0.000322 u	ppm	0.001378	> 100.00	8.957600	Y 377.433
Sr (421.552 nm)	0.051703	ppm	0.000755	1.46	11004.121848	Y_R 488.368
Th (288.505 nm)	0.005641	ppm	0.000316	5.60	90.157800	Y 377.433
Ti (336.122 nm)	0.029104	ppm	0.000064	0.22	3936.020000	Y 377.433
Tl (190.794 nm)	0.001102	ppm	0.000280	25.40	-3.254200	Y 377.433
U (409.013 nm)	0.006801	ppm	0.001437	21.13	-170.902000	Y 377.433
V (292.401 nm)	0.012092	ppm	0.000085	0.70	473.350000	Y 377.433
Zn (206.200 nm)	0.005824	ppm	0.000486	8.34	58.154200	Y 377.433
Zr (343.823 nm)	0.001587	ppm	0.000022	1.39	258.055000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.158461	22103.691131	0.002295	0.20
Y 377.433	1.148881	1162882.765424	0.000681	0.06
Y_R 377.433	1.244190	93927.800000	0.000300	0.02
Y_R 488.368	1.221600	53482.400000	0.017213	1.41
Y_R2 488.368	1.196768	103857.377864	0.005100	0.43

Sample Name: 280-116491-D-3-A

Date: 11/7/2018 4:58:16 AM Rack:Tube: 4:14

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001390	ppm	0.000325	23.38	-381.201000	Y 377.433
Al (167.019 nm)	0.250295	ppm	0.004805	1.92	141.923000	Y_R 377.433
Al H (396.152 nm)	0.232994 u	ppm	0.000314	0.13	666.321185	Y_R 377.433
As (188.980 nm)	-0.000385 u	ppm	0.000750	> 100.00	-2.222640	Y 242.219
B (249.678 nm)	0.012353	ppm	0.000347	2.81	365.685000	Y 242.219
Ba (493.408 nm)	0.024885	ppm	0.000696	2.80	3482.340000	Y_R 488.368
Be (234.861 nm)	0.000191	ppm	0.000004	1.95	11.625000	Y_R 488.368
Bi (223.061 nm)	-0.001865 u	ppm	0.000922	49.45	8.052400	Y 377.433
Ca (315.887 nm)	2.994441	ppm	0.001102	0.04	2312.745136	Y_R 377.433
Cd (214.439 nm)	0.000221	ppm	0.000075	34.01	14.105300	Y 377.433
Co (228.615 nm)	0.001405	ppm	0.000063	4.49	-11.004300	Y 242.219
Cr (205.560 nm)	0.000868	ppm	0.000190	21.93	9.242430	Y 377.433
Cu (324.754 nm)	0.005447	ppm	0.000304	5.58	10.520300	Y 377.433
Fe (238.204 nm)	0.030365	ppm	0.000105	0.35	137.144999	Y_R 377.433
Fe H (259.940 nm)	0.033977 u	ppm	0.000049	0.14	67.511500	Y_R 377.433
K (766.491 nm)	0.609623	ppm	0.033179	5.44	-54.623300	Y_R2 488.368
Li (670.783 nm)	0.013637	ppm	0.000642	4.71	-898.916000	Y_R2 488.368
Mg (279.078 nm)	2.297660	ppm	0.002855	0.12	13311.800000	Y 377.433
Mn (257.610 nm)	0.110863	ppm	0.000153	0.14	25988.800000	Y 377.433
Mo (202.032 nm)	-0.000221 u	ppm	0.000035	15.78	-1.935150	Y 377.433
Na (589.592 nm)	9.262200	ppm	0.019780	0.21	61333.500000	Y_R2 488.368
Na H (589.593 nm)	9.640959	ppm	0.106871	1.11	37738.502667	Y_R 488.368
Ni (231.604 nm)	0.012513	ppm	0.000631	5.04	81.260300	Y 377.433
P (213.618 nm)	0.005954	ppm	0.000133	2.23	37.495100	Y 242.219
Pb (220.353 nm)	0.019662	ppm	0.000050	0.26	59.755900	Y 242.219
S (181.972 nm)	2.603794	ppm	0.003089	0.12	1347.976363	Y 377.433
Sb (206.834 nm)	0.000698	ppm	0.000887	> 100.00	-21.324600	Y 377.433
Se (196.026 nm)	0.000677	ppm	0.000755	> 100.00	13.754000	Y 242.219
Si (288.158 nm)	8.149580	ppm	0.024410	0.30	70972.700000	Y 377.433
Sn (189.925 nm)	-0.001125 u	ppm	0.000127	11.31	7.361570	Y 377.433
Sr (421.552 nm)	0.023580	ppm	0.000439	1.86	5103.457152	Y_R 488.368
Th (288.505 nm)	0.004437	ppm	0.000164	3.70	86.623400	Y 377.433
Ti (336.122 nm)	0.000135	ppm	0.000020	14.97	-199.749000	Y 377.433
Tl (190.794 nm)	-0.000092 u	ppm	0.001434	> 100.00	-5.544590	Y 377.433
U (409.013 nm)	0.007819	ppm	0.002982	38.14	-172.746000	Y 377.433
V (292.401 nm)	-0.000428 u	ppm	0.000089	20.76	19.521500	Y 377.433
Zn (206.200 nm)	0.014905	ppm	0.000300	2.01	105.581000	Y 377.433
Zr (343.823 nm)	-0.000179 u	ppm	0.000047	26.45	3.278630	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.163374	22197.428733	0.001045	0.09
Y 377.433	1.153694	1167755.015007	0.001187	0.10
Y_R 377.433	1.243230	93855.100000	0.002461	0.20
Y_R 488.368	1.211810	53053.900000	0.010616	0.88
Y_R2 488.368	1.205471	104612.644364	0.006514	0.54

Sample Name: 280-116491-D-3-A SD@5

Date: 11/7/2018 5:01:39 AM
Rack:Tube: 4:15
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001355	ppm	0.000024	1.76	-382.860000	Y 377.433
Al (167.019 nm)	0.049900	ppm	0.000246	0.49	30.179400	Y_R 377.433
Al H (396.152 nm)	0.028133 u	ppm	0.001355	4.82	150.039461	Y_R 377.433
As (188.980 nm)	-0.000295 u	ppm	0.000836	> 100.00	-2.108240	Y 242.219
B (249.678 nm)	0.002661	ppm	0.000163	6.14	123.600000	Y 242.219
Ba (493.408 nm)	0.004255	ppm	0.000370	8.69	1092.440000	Y_R 488.368
Be (234.861 nm)	0.000051	ppm	0.000009	16.63	-30.815400	Y_R 488.368
Bi (223.061 nm)	-0.000412 u	ppm	0.000120	29.15	11.705500	Y 377.433
Ca (315.887 nm)	0.614686	ppm	0.011993	1.95	425.803345	Y_R 377.433
Cd (214.439 nm)	0.000091	ppm	0.000020	21.67	6.303490	Y 377.433
Co (228.615 nm)	0.000550	ppm	0.000094	17.17	-26.487700	Y 242.219
Cr (205.560 nm)	0.000291	ppm	0.000123	42.34	0.468611	Y 377.433
Cu (324.754 nm)	0.002478	ppm	0.000117	4.73	-155.070000	Y 377.433
Fe (238.204 nm)	0.005476	ppm	0.001083	19.78	45.090737	Y_R 377.433
Fe H (259.940 nm)	0.010082 u	ppm	0.001090	10.81	22.305800	Y_R 377.433
K (766.491 nm)	0.251836	ppm	0.013030	5.17	-466.607000	Y_R2 488.368
Li (670.783 nm)	0.013114	ppm	0.000043	0.33	-916.358000	Y_R2 488.368
Mg (279.078 nm)	0.458961	ppm	0.000506	0.11	2690.520000	Y 377.433
Mn (257.610 nm)	0.022092	ppm	0.000001	0.00	5228.380000	Y 377.433
Mo (202.032 nm)	-0.000061 u	ppm	0.000129	> 100.00	-0.552454	Y 377.433
Na (589.592 nm)	1.930900	ppm	0.001361	0.07	13019.400000	Y_R2 488.368
Na H (589.593 nm)	2.045599 u	ppm	0.016754	0.82	9892.401999	Y_R 488.368
Ni (231.604 nm)	0.002682	ppm	0.000162	6.05	14.198800	Y 377.433
P (213.618 nm)	-0.002428 u	ppm	0.000114	4.68	19.280700	Y 242.219
Pb (220.353 nm)	0.004191	ppm	0.000386	9.21	15.441900	Y 242.219
S (181.972 nm)	0.534053	ppm	0.004591	0.86	287.741106	Y 377.433
Sb (206.834 nm)	-0.000062 u	ppm	0.001491	> 100.00	-23.406000	Y 377.433
Se (196.026 nm)	-0.003027 u	ppm	0.001904	62.91	9.995650	Y 242.219
Si (288.158 nm)	1.615800	ppm	0.003742	0.23	14816.900000	Y 377.433
Sn (189.925 nm)	-0.001597 u	ppm	0.001782	> 100.00	6.422260	Y 377.433
Sr (421.552 nm)	0.004611	ppm	0.000034	0.73	1123.527782	Y_R 488.368
Th (288.505 nm)	0.007379	ppm	0.002192	29.71	92.353400	Y 377.433
Ti (336.122 nm)	-0.000072 u	ppm	0.000070	97.98	-236.582000	Y 377.433
Tl (190.794 nm)	0.000594	ppm	0.000088	14.89	-4.038290	Y 377.433
U (409.013 nm)	0.006720	ppm	0.004009	59.65	-177.277000	Y 377.433
V (292.401 nm)	-0.000099 u	ppm	0.000244	> 100.00	30.984700	Y 377.433
Zn (206.200 nm)	-0.001346 u	ppm	0.000213	15.80	20.712400	Y 377.433
Zr (343.823 nm)	-0.000270 u	ppm	0.000050	18.63	-8.813830	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.164702	22222.760129	0.000306	0.03
Y 377.433	1.154776	1168849.972154	0.003439	0.30
Y_R 377.433	1.247560	94182.100000	0.008088	0.65
Y_R 488.368	1.210340	52989.300000	0.011100	0.92
Y_R2 488.368	1.204319	104512.677427	0.003388	0.28

Sample Name: 280-116491-D-3-B MS

Date: 11/7/2018 5:05:03 AM
Rack:Tube: 4:16
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048410	ppm	0.000164	0.34	1747.050000	Y 377.433
Al (167.019 nm)	2.247500	ppm	0.000180	0.01	1256.110000	Y_R 377.433
Al H (396.152 nm)	2.246122	ppm	0.000647	0.03	5836.801385	Y_R 377.433
As (188.980 nm)	1.010900	ppm	0.003325	0.33	1271.290000	Y 242.219
B (249.678 nm)	1.067240	ppm	0.005116	0.48	26737.400000	Y 242.219
Ba (493.408 nm)	2.061280 o	ppm	0.001215	0.06	239341.000000	Y_R 488.368
Be (234.861 nm)	0.049483	ppm	0.000087	0.18	14671.400000	Y_R 488.368
Bi (223.061 nm)	1.992250	ppm	0.001603	0.08	5029.600000	Y 377.433
Ca (315.887 nm)	54.904113 o	ppm	0.026341	0.05	43472.708186	Y_R 377.433
Cd (214.439 nm)	0.099718	ppm	0.000209	0.21	5962.160000	Y 377.433
Co (228.615 nm)	0.489379	ppm	0.000717	0.15	8864.100000	Y 242.219
Cr (205.560 nm)	0.204196	ppm	0.000587	0.29	3101.700000	Y 377.433
Cu (324.754 nm)	0.262174	ppm	0.000554	0.21	14339.300000	Y 377.433
Fe (238.204 nm)	1.022494	ppm	0.001027	0.10	3806.569151	Y_R 377.433
Fe H (259.940 nm)	1.047300 u	ppm	0.002297	0.22	1984.510000	Y_R 377.433
K (766.491 nm)	53.135800	ppm	0.111046	0.21	60428.000000	Y_R2 488.368
Li (670.783 nm)	1.032440	ppm	0.002572	0.25	33079.000000	Y_R2 488.368
Mg (279.078 nm)	53.062000 o	ppm	0.144251	0.27	306495.000000	Y 377.433
Mn (257.610 nm)	0.613326	ppm	0.002395	0.39	143497.000000	Y 377.433
Mo (202.032 nm)	1.041350	ppm	0.003862	0.37	8968.000000	Y 377.433
Na (589.592 nm)	59.943600 o	ppm	0.285132	0.48	399156.000000	Y_R2 488.368
Na H (589.593 nm)	63.329166	ppm	0.177200	0.28	236349.463860	Y_R 488.368
Ni (231.604 nm)	0.515288	ppm	0.000525	0.10	3513.510000	Y 377.433
P (213.618 nm)	10.438400 o	ppm	0.024827	0.24	22707.100000	Y 242.219
Pb (220.353 nm)	0.518748	ppm	0.000130	0.03	1491.970000	Y 242.219
S (181.972 nm)	4.714272	ppm	0.007687	0.16	2430.099667	Y 377.433
Sb (206.834 nm)	0.525643	ppm	0.000443	0.08	1408.150000	Y 377.433
Se (196.026 nm)	2.055620	ppm	0.001981	0.10	2059.340000	Y 242.219
Si (288.158 nm)	18.736100 o	ppm	0.107420	0.57	161961.000000	Y 377.433
Sn (189.925 nm)	2.116590	ppm	0.008170	0.39	4216.940000	Y 377.433
Sr (421.552 nm)	1.063033	ppm	0.000970	0.09	223198.134863	Y_R 488.368
Th (288.505 nm)	1.025710	ppm	0.002671	0.26	2770.500000	Y 377.433
Ti (336.122 nm)	1.022870	ppm	0.002827	0.28	145614.000000	Y 377.433
Tl (190.794 nm)	2.043290	ppm	0.008293	0.41	4479.700000	Y 377.433
U (409.013 nm)	2.100860	ppm	0.000925	0.04	9246.200000	Y 377.433
V (292.401 nm)	0.511790	ppm	0.002212	0.43	18521.600000	Y 377.433
Zn (206.200 nm)	0.512957	ppm	0.000233	0.05	2706.740000	Y 377.433
Zr (343.823 nm)	0.509255	ppm	0.001543	0.30	66988.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.124558	21456.813768	0.000723	0.06
Y 377.433	1.117731	1131353.775229	0.001721	0.15
Y_R 377.433	1.209910	91339.700000	0.005210	0.43
Y_R 488.368	1.178640	51601.400000	0.002755	0.23
Y_R2 488.368	1.159096	100588.133348	0.006583	0.57

Sample Name: CCVH-5408055

Date: 11/7/2018 5:08:27 AM
Rack:Tube: S1:1

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000329 u	ppm	0.000183	55.60	-710.412000	Y 377.433
Al (167.019 nm)	44.603000 o	ppm	0.073713	0.17	24903.200000	Y_R 377.433
Al H (396.152 nm)	48.597607	ppm	0.139092	0.29	122309.106159	Y_R 377.433
As (188.980 nm)	0.000822	ppm	0.000660	80.30	-1.140290	Y 242.219
B (249.678 nm)	-0.000007 u	ppm	0.000072	> 100.00	-17.569200	Y 242.219
Ba (493.408 nm)	-0.000420 u	ppm	0.000178	42.28	596.939000	Y_R 488.368
Be (234.861 nm)	-0.000328 u	ppm	0.000050	15.33	1403.930000	Y_R 488.368
Bi (223.061 nm)	0.996750	ppm	0.000331	0.03	2530.810000	Y 377.433
Ca (315.887 nm)	0.005716 u	ppm	0.013153	> 100.00	-57.056749	Y_R 377.433
Cd (214.439 nm)	-0.000250 u	ppm	0.000006	2.46	33.592600	Y 377.433
Co (228.615 nm)	0.002833	ppm	0.000476	16.82	14.870100	Y 242.219
Cr (205.560 nm)	0.000136 u	ppm	0.000433	> 100.00	-15.526900	Y 377.433
Cu (324.754 nm)	-0.001970 u	ppm	0.000273	13.88	-73.077500	Y 377.433
Fe (238.204 nm)	48.397065 o	ppm	0.214436	0.44	179023.078007	Y_R 377.433
Fe H (259.940 nm)	49.802100	ppm	0.218522	0.44	94218.800000	Y_R 377.433
K (766.491 nm)	0.117455	ppm	0.003514	2.99	-621.343000	Y_R2 488.368
Li (670.783 nm)	0.009890	ppm	0.000174	1.76	-1023.850000	Y_R2 488.368
Mg (279.078 nm)	-0.015723 u	ppm	0.001154	7.34	-413.485000	Y 377.433
Mn (257.610 nm)	0.001444	ppm	0.000003	0.24	399.434000	Y 377.433
Mo (202.032 nm)	-0.000141 u	ppm	0.000209	> 100.00	-1.240580	Y 377.433
Na (589.592 nm)	245.789000 o	ppm	0.352427	0.14	1618650.000000	Y_R2 488.368
Na H (589.593 nm)	255.319482	ppm	0.049360	0.02	937781.059185	Y_R 488.368
Ni (231.604 nm)	0.004805	ppm	0.000006	0.13	30.714300	Y 377.433
P (213.618 nm)	-0.006220 u	ppm	0.002039	32.78	11.041600	Y 242.219
Pb (220.353 nm)	-0.003122 u	ppm	0.003158	> 100.00	12.302100	Y 242.219
S (181.972 nm)	5.035064	ppm	0.028881	0.57	2592.877670	Y 377.433
Sb (206.834 nm)	-0.001623 u	ppm	0.000471	29.05	-74.017400	Y 377.433
Se (196.026 nm)	-0.004327 u	ppm	0.000885	20.45	-0.242391	Y 242.219
Si (288.158 nm)	0.026063	ppm	0.000607	2.33	1153.660000	Y 377.433
Sn (189.925 nm)	0.000162	ppm	0.000133	82.08	9.919440	Y 377.433
Sr (421.552 nm)	0.000338	ppm	0.000046	13.67	226.998892	Y_R 488.368
Th (288.505 nm)	4.974820	ppm	0.005679	0.11	13008.500000	Y 377.433
Ti (336.122 nm)	0.001221	ppm	0.000002	0.19	-54.172500	Y 377.433
Tl (190.794 nm)	-0.002926 u	ppm	0.001032	35.26	-13.080800	Y 377.433
U (409.013 nm)	10.011400	ppm	0.010921	0.11	45125.400000	Y 377.433
V (292.401 nm)	0.004185	ppm	0.000013	0.32	14.136200	Y 377.433
Zn (206.200 nm)	-0.003996 u	ppm	0.000032	0.81	6.869570	Y 377.433
Zr (343.823 nm)	-0.004387 u	ppm	0.000015	0.34	-406.124000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.129545	21551.956421	0.003285	0.29
Y 377.433	1.111476	1125022.241145	0.006023	0.54
Y_R 377.433	1.215920	91793.000000	0.005145	0.42
Y_R 488.368	1.191900	52182.000000	0.000003	0.00
Y_R2 488.368	1.153229	100078.979394	0.006627	0.57

Sample Name: CCV-5407546

Date: 11/7/2018 5:11:50 AM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.497369	ppm	0.000215	0.04	22346.300000	Y 377.433
Al (167.019 nm)	0.512553	ppm	0.002854	0.56	289.806000	Y_R 377.433
Al H (396.152 nm)	0.488861 u	ppm	0.006698	1.37	1351.917950	Y_R 377.433
As (188.980 nm)	0.989316	ppm	0.002135	0.22	1244.100000	Y 242.219
B (249.678 nm)	0.493242	ppm	0.000603	0.12	12396.500000	Y 242.219
Ba (493.408 nm)	0.490924	ppm	0.002766	0.56	57469.300000	Y_R 488.368
Be (234.861 nm)	0.474464	ppm	0.000747	0.16	141394.000000	Y_R 488.368
Bi (223.061 nm)	-0.002725 u	ppm	0.000312	11.45	6.292990	Y 377.433
Ca (315.887 nm)	5.102356	ppm	0.018864	0.37	3984.425403	Y_R 377.433
Cd (214.439 nm)	0.498391	ppm	0.000670	0.13	29790.800000	Y 377.433
Co (228.615 nm)	0.490747	ppm	0.000139	0.03	8869.890000	Y 242.219
Cr (205.560 nm)	0.499267	ppm	0.006028	1.21	7590.360000	Y 377.433
Cu (324.754 nm)	0.507683	ppm	0.000090	0.02	27998.900000	Y 377.433
Fe (238.204 nm)	2.450419	ppm	0.005367	0.22	9087.799472	Y_R 377.433
Fe H (259.940 nm)	2.537380 u	ppm	0.017609	0.69	4803.450000	Y_R 377.433
K (766.491 nm)	50.315900	ppm	0.072677	0.14	57181.000000	Y_R2 488.368
Li (670.783 nm)	0.996383	ppm	0.002671	0.27	31876.400000	Y_R2 488.368
Mg (279.078 nm)	19.863100	ppm	0.025593	0.13	114775.000000	Y 377.433
Mn (257.610 nm)	0.498855	ppm	0.000417	0.08	116727.000000	Y 377.433
Mo (202.032 nm)	0.505895	ppm	0.000200	0.04	4356.710000	Y 377.433
Na (589.592 nm)	5.098750	ppm	0.014015	0.27	34862.900000	Y_R2 488.368
Na H (589.593 nm)	5.611730 u	ppm	0.039275	0.70	23416.377055	Y_R 488.368
Ni (231.604 nm)	0.516963	ppm	0.000820	0.16	3523.730000	Y 377.433
P (213.618 nm)	0.997769	ppm	0.003127	0.31	2192.710000	Y 242.219
Pb (220.353 nm)	0.984944	ppm	0.002473	0.25	2826.400000	Y 242.219
S (181.972 nm)	0.042711	ppm	0.005040	11.80	37.282548	Y 377.433
Sb (206.834 nm)	1.007920	ppm	0.002076	0.21	2744.850000	Y 377.433
Se (196.026 nm)	0.986024	ppm	0.003315	0.34	994.339000	Y 242.219
Si (288.158 nm)	4.982200	ppm	0.001084	0.02	43750.100000	Y 377.433
Sn (189.925 nm)	1.030040	ppm	0.000224	0.02	2057.110000	Y 377.433
Sr (421.552 nm)	0.501842	ppm	0.001850	0.37	105450.975275	Y_R 488.368
Th (288.505 nm)	0.005682	ppm	0.003140	55.26	104.174000	Y 377.433
Ti (336.122 nm)	0.497181	ppm	0.000039	0.01	70592.900000	Y 377.433
Tl (190.794 nm)	1.004270	ppm	0.001282	0.13	2200.030000	Y 377.433
U (409.013 nm)	0.009204	ppm	0.001053	11.44	-204.018000	Y 377.433
V (292.401 nm)	0.492416	ppm	0.000770	0.16	17781.900000	Y 377.433
Zn (206.200 nm)	0.495583	ppm	0.000544	0.11	2616.010000	Y 377.433
Zr (343.823 nm)	0.500910	ppm	0.000150	0.03	65895.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.144447	21836.296546	0.001530	0.13
Y 377.433	1.130052	1143824.385439	0.002328	0.21
Y_R 377.433	1.217570	91918.100000	0.003598	0.30
Y_R 488.368	1.186950	51965.500000	0.004563	0.38
Y_R2 488.368	1.180421	102438.820659	0.008634	0.73

Sample Name: CCB

Date: 11/7/2018 5:15:12 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001054	ppm	0.000103	9.73	-396.565000	Y 377.433
Al (167.019 nm)	-0.002048 u	ppm	0.003613	> 100.00	1.211050	Y_R 377.433
Al H (396.152 nm)	-0.023897 u	ppm	0.002263	9.47	18.929451	Y_R 377.433
As (188.980 nm)	-0.000016 u	ppm	0.000808	> 100.00	-1.757330	Y 242.219
B (249.678 nm)	0.000767	ppm	0.000448	58.34	76.316500	Y 242.219
Ba (493.408 nm)	-0.000942 u	ppm	0.000202	21.47	490.384000	Y_R 488.368
Be (234.861 nm)	0.000062	ppm	0.000000	0.75	-28.044300	Y_R 488.368
Bi (223.061 nm)	-0.001619 u	ppm	0.001314	81.16	8.666130	Y 377.433
Ca (315.887 nm)	0.010033	ppm	0.001215	12.11	-53.634245	Y_R 377.433
Cd (214.439 nm)	0.000018	ppm	0.000021	> 100.00	1.944580	Y 377.433
Co (228.615 nm)	0.000382	ppm	0.000127	33.17	-29.524100	Y 242.219
Cr (205.560 nm)	0.000127	ppm	0.000077	60.25	-2.023690	Y 377.433
Cu (324.754 nm)	0.001593	ppm	0.000079	4.98	-203.274000	Y 377.433
Fe (238.204 nm)	-0.001818 u	ppm	0.001211	66.62	18.113853	Y_R 377.433
Fe H (259.940 nm)	0.002991 u	ppm	0.002194	73.35	8.891640	Y_R 377.433
K (766.491 nm)	0.136740	ppm	0.086567	63.31	-599.137000	Y_R2 488.368
Li (670.783 nm)	0.010858 Z	ppm	0.000202	1.86	-991.576000 Z	Y_R2 488.368
Mg (279.078 nm)	0.000926 u	ppm	0.001601	> 100.00	44.703700	Y 377.433
Mn (257.610 nm)	0.000025	ppm	0.000004	15.27	67.598600	Y 377.433
Mo (202.032 nm)	-0.000086 u	ppm	0.000184	> 100.00	-0.764606	Y 377.433
Na (589.592 nm)	0.041562	ppm	0.001606	3.86	569.118000	Y_R2 488.368
Na H (589.593 nm)	0.104949 u	ppm	0.017968	17.12	2777.887103	Y_R 488.368
Ni (231.604 nm)	0.000661	ppm	0.000408	61.65	0.408808	Y 377.433
P (213.618 nm)	-0.003545 u	ppm	0.001468	41.41	16.853700	Y 242.219
Pb (220.353 nm)	0.000643	ppm	0.000270	42.01	5.279790	Y 242.219
S (181.972 nm)	0.033939	ppm	0.006078	17.91	31.553723	Y 377.433
Sb (206.834 nm)	0.000979 u	ppm	0.001976	> 100.00	-20.558400	Y 377.433
Se (196.026 nm)	-0.001795 u	ppm	0.000782	43.59	11.204200	Y 242.219
Si (288.158 nm)	-0.000723 u	ppm	0.001839	> 100.00	923.437000	Y 377.433
Sn (189.925 nm)	-0.001308 u	ppm	0.000143	10.96	6.997730	Y 377.433
Sr (421.552 nm)	-0.000126 u	ppm	0.000134	> 100.00	129.652613	Y_R 488.368
Th (288.505 nm)	0.004631	ppm	0.001978	42.70	84.852800	Y 377.433
Ti (336.122 nm)	-0.000003 u	ppm	0.000016	> 100.00	-228.676000	Y 377.433
Tl (190.794 nm)	0.000033 u	ppm	0.000512	> 100.00	-5.269730	Y 377.433
U (409.013 nm)	0.009504	ppm	0.002533	26.65	-164.597000	Y 377.433
V (292.401 nm)	-0.000185 u	ppm	0.000027	14.85	28.258900	Y 377.433
Zn (206.200 nm)	-0.005666 u	ppm	0.000017	0.30	-1.853100	Y 377.433
Zr (343.823 nm)	-0.000179 u	ppm	0.000095	52.81	3.116270	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.153756	22013.918716	0.003942	0.34
Y 377.433	1.145201	1159158.661917	0.003028	0.26
Y_R 377.433	1.230590	92900.700000	0.006313	0.51
Y_R 488.368	1.194380	52290.700000	0.004476	0.37
Y_R2 488.368	1.177518	102186.860974	0.002942	0.25

Sample Name: CCVL-5413446

Date: 11/7/2018 5:18:35 AM
Rack:Tube: S1:3

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011235	ppm	0.000240	2.14	70.186500	Y 377.433
Al (167.019 nm)	0.099453	ppm	0.000546	0.55	57.870700	Y_R 377.433
Al H (396.152 nm)	0.078066 u	ppm	0.000692	0.89	277.072768	Y_R 377.433
As (188.980 nm)	0.015086	ppm	0.000001	0.01	17.260100	Y 242.219
B (249.678 nm)	0.101684	ppm	0.000322	0.32	2597.490000	Y 242.219
Ba (493.408 nm)	0.009074	ppm	0.000062	0.68	1650.550000	Y_R 488.368
Be (234.861 nm)	0.000989	ppm	0.000001	0.07	250.631000	Y_R 488.368
Bi (223.061 nm)	0.102932	ppm	0.001576	1.53	271.952000	Y 377.433
Ca (315.887 nm)	0.232479	ppm	0.007110	3.06	122.749703	Y_R 377.433
Cd (214.439 nm)	0.005211	ppm	0.000084	1.61	312.456000	Y 377.433
Co (228.615 nm)	0.010530	ppm	0.000344	3.27	154.620000	Y 242.219
Cr (205.560 nm)	0.010418	ppm	0.000043	0.41	154.563000	Y 377.433
Cu (324.754 nm)	0.018108	ppm	0.000012	0.07	715.588000	Y 377.433
Fe (238.204 nm)	0.099771	ppm	0.000895	0.90	393.844023	Y_R 377.433
Fe H (259.940 nm)	0.106129 u	ppm	0.001267	1.19	204.008000	Y_R 377.433
K (766.491 nm)	3.307210	ppm	0.015945	0.48	3051.590000	Y_R2 488.368
Li (670.783 nm)	0.033189 Q	ppm	0.000070	0.21	-246.832000 Q	Y_R2 488.368
Mg (279.078 nm)	0.206559	ppm	0.000250	0.12	1231.330000	Y 377.433
Mn (257.610 nm)	0.010459	ppm	0.000001	0.01	2507.740000	Y 377.433
Mo (202.032 nm)	0.019533	ppm	0.000404	2.07	168.186000	Y 377.433
Na (589.592 nm)	1.101850	ppm	0.004759	0.43	7570.540000	Y_R2 488.368
Na H (589.593 nm)	1.187276 u	ppm	0.036920	3.11	6752.471302	Y_R 488.368
Ni (231.604 nm)	0.042914	ppm	0.000771	1.80	288.664000	Y 377.433
P (213.618 nm)	2.921890 o	ppm	0.004375	0.15	6373.820000	Y 242.219
Pb (220.353 nm)	0.009896	ppm	0.002297	23.22	31.813200	Y 242.219
S (181.972 nm)	0.133227 Q	ppm	0.003604	2.71	82.429697 Q	Y 377.433
Sb (206.834 nm)	0.020922	ppm	0.000102	0.49	34.086000	Y 377.433
Se (196.026 nm)	0.015502	ppm	0.003155	20.35	28.410600	Y 242.219
Si (288.158 nm)	0.502026	ppm	0.001908	0.38	5244.410000	Y 377.433
Sn (189.925 nm)	0.101914	ppm	0.000720	0.71	212.182000	Y 377.433
Sr (421.552 nm)	0.010204	ppm	0.000223	2.19	2297.074317	Y_R 488.368
Th (288.505 nm)	0.021828 Q	ppm	0.000500	2.29	130.188000 Q	Y 377.433
Ti (336.122 nm)	0.009876	ppm	0.000010	0.10	1178.880000	Y 377.433
Tl (190.794 nm)	0.016449	ppm	0.002050	12.46	30.747600	Y 377.433
U (409.013 nm)	0.066031	ppm	0.002821	4.27	89.968600	Y 377.433
V (292.401 nm)	0.009824	ppm	0.000131	1.33	386.957000	Y 377.433
Zn (206.200 nm)	0.015817	ppm	0.000262	1.65	110.345000	Y 377.433
Zr (343.823 nm)	0.015235	ppm	0.000008	0.05	2030.160000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.162183	22174.704345	0.002250	0.19
Y 377.433	1.150306	1164325.183818	0.001452	0.13
Y_R 377.433	1.233680	93133.900000	0.007397	0.60
Y_R 488.368	1.206900	52838.800000	0.019133	1.59
Y_R2 488.368	1.174686	101941.075514	0.009103	0.77

Sample Name: 280-116491-D-3-C MSD

Date: 11/7/2018 5:22:00 AM Rack:Tube: 4:17

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.047329	ppm	0.000076	0.16	1698.870000	Y 377.433
Al (167.019 nm)	2.199050	ppm	0.001690	0.08	1229.090000	Y_R 377.433
Al H (396.152 nm)	2.209570	ppm	0.000720	0.03	5743.966771	Y_R 377.433
As (188.980 nm)	0.989032	ppm	0.004751	0.48	1243.750000	Y 242.219
B (249.678 nm)	1.055130	ppm	0.001918	0.18	26434.500000	Y 242.219
Ba (493.408 nm)	2.030270 o	ppm	0.008390	0.41	235749.000000	Y_R 488.368
Be (234.861 nm)	0.049058	ppm	0.000157	0.32	14544.900000	Y_R 488.368
Bi (223.061 nm)	1.970350	ppm	0.005647	0.29	4974.460000	Y 377.433
Ca (315.887 nm)	54.097089 o	ppm	0.140356	0.26	42832.806841	Y_R 377.433
Cd (214.439 nm)	0.098179	ppm	0.000412	0.42	5870.130000	Y 377.433
Co (228.615 nm)	0.481179	ppm	0.003724	0.77	8715.300000	Y 242.219
Cr (205.560 nm)	0.201274	ppm	0.000424	0.21	3057.240000	Y 377.433
Cu (324.754 nm)	0.257950	ppm	0.000831	0.32	14103.900000	Y 377.433
Fe (238.204 nm)	1.009347	ppm	0.000996	0.10	3757.942799	Y_R 377.433
Fe H (259.940 nm)	1.035360 u	ppm	0.000977	0.09	1961.930000	Y_R 377.433
K (766.491 nm)	51.927300	ppm	0.020203	0.04	59036.500000	Y_R2 488.368
Li (670.783 nm)	1.009480	ppm	0.001857	0.18	32313.200000	Y_R2 488.368
Mg (279.078 nm)	52.254900 o	ppm	0.070726	0.14	301834.000000	Y 377.433
Mn (257.610 nm)	0.604183	ppm	0.000713	0.12	141359.000000	Y 377.433
Mo (202.032 nm)	1.034440	ppm	0.002109	0.20	8908.520000	Y 377.433
Na (589.592 nm)	58.844100 o	ppm	0.277409	0.47	391853.000000	Y_R2 488.368
Na H (589.593 nm)	62.656853	ppm	0.381180	0.61	233857.093565	Y_R 488.368
Ni (231.604 nm)	0.506833	ppm	0.000564	0.11	3455.790000	Y 377.433
P (213.618 nm)	10.260400 o	ppm	0.017587	0.17	22320.300000	Y 242.219
Pb (220.353 nm)	0.513767	ppm	0.000730	0.14	1477.620000	Y 242.219
S (181.972 nm)	4.659865	ppm	0.008923	0.19	2402.212794	Y 377.433
Sb (206.834 nm)	0.519762	ppm	0.001398	0.27	1392.120000	Y 377.433
Se (196.026 nm)	2.014300	ppm	0.000517	0.03	2018.210000	Y 242.219
Si (288.158 nm)	18.423200 o	ppm	0.059844	0.32	159272.000000	Y 377.433
Sn (189.925 nm)	2.099200	ppm	0.009554	0.46	4182.370000	Y 377.433
Sr (421.552 nm)	1.048306	ppm	0.002762	0.26	220108.238022	Y_R 488.368
Th (288.505 nm)	1.011940	ppm	0.002828	0.28	2734.100000	Y 377.433
Ti (336.122 nm)	1.014920	ppm	0.000613	0.06	144479.000000	Y 377.433
Tl (190.794 nm)	2.012790	ppm	0.001632	0.08	4412.680000	Y 377.433
U (409.013 nm)	2.066840	ppm	0.004555	0.22	9092.770000	Y 377.433
V (292.401 nm)	0.503787	ppm	0.001379	0.27	18232.500000	Y 377.433
Zn (206.200 nm)	0.506506	ppm	0.000023	0.00	2673.050000	Y 377.433
Zr (343.823 nm)	0.505358	ppm	0.000602	0.12	66476.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122726	21421.848909	0.000186	0.02
Y 377.433	1.115246	1128838.421320	0.001426	0.13
Y_R 377.433	1.196010	90290.200000	0.003092	0.26
Y_R 488.368	1.165230	51014.500000	0.004578	0.39
Y_R2 488.368	1.156925	100399.736701	0.001506	0.13

Sample Name: 280-116491-D-4-A

Date: 11/7/2018 5:25:25 AM Rack:Tube: 4:18

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001579	ppm	0.000051	3.23	-372.484000	Y 377.433
Al (167.019 nm)	0.072467	ppm	0.001299	1.79	42.781600	Y_R 377.433
Al H (396.152 nm)	0.061199 u	ppm	0.003650	5.96	242.014656	Y_R 377.433
As (188.980 nm)	0.000311	ppm	0.000416	> 100.00	-1.346080	Y 242.219
B (249.678 nm)	0.041586	ppm	0.000204	0.49	1095.910000	Y 242.219
Ba (493.408 nm)	0.004702	ppm	0.000189	4.02	1148.880000	Y_R 488.368
Be (234.861 nm)	0.000034	ppm	0.000012	35.00	-34.995700	Y_R 488.368
Bi (223.061 nm)	-0.003376 u	ppm	0.001525	45.18	4.247760	Y 377.433
Ca (315.887 nm)	20.882959 o	ppm	0.069809	0.33	16496.801172	Y_R 377.433
Cd (214.439 nm)	0.000036	ppm	0.000028	76.60	3.097110	Y 377.433
Co (228.615 nm)	0.000614	ppm	0.000041	6.68	-25.300300	Y 242.219
Cr (205.560 nm)	0.000488	ppm	0.000051	10.37	3.453930	Y 377.433
Cu (324.754 nm)	0.002946	ppm	0.000074	2.50	-140.127000	Y 377.433
Fe (238.204 nm)	0.035932	ppm	0.000095	0.26	157.733887	Y_R 377.433
Fe H (259.940 nm)	0.040365 u	ppm	0.001631	4.04	79.596000	Y_R 377.433
K (766.491 nm)	1.674790	ppm	0.070534	4.21	1171.890000	Y_R2 488.368
Li (670.783 nm)	0.012467	ppm	0.000269	2.16	-937.932000	Y_R2 488.368
Mg (279.078 nm)	1.651350	ppm	0.001078	0.07	9578.380000	Y 377.433
Mn (257.610 nm)	0.049119	ppm	0.000013	0.03	11549.000000	Y 377.433
Mo (202.032 nm)	-0.000033 u	ppm	0.000022	66.40	-0.309943	Y 377.433
Na (589.592 nm)	7.385750	ppm	0.032978	0.45	48937.300000	Y_R2 488.368
Na H (589.593 nm)	7.768797 u	ppm	0.024234	0.31	30860.551806	Y_R 488.368
Ni (231.604 nm)	0.000755	ppm	0.000398	52.67	1.055460	Y 377.433
P (213.618 nm)	0.000927 u	ppm	0.001793	> 100.00	26.572200	Y 242.219
Pb (220.353 nm)	0.000706 u	ppm	0.001030	> 100.00	5.430760	Y 242.219
S (181.972 nm)	1.286436	ppm	0.007793	0.61	673.140132	Y 377.433
Sb (206.834 nm)	0.000214 u	ppm	0.000751	> 100.00	-22.658000	Y 377.433
Se (196.026 nm)	-0.003358 u	ppm	0.000513	15.28	9.683730	Y 242.219
Si (288.158 nm)	2.410030	ppm	0.000636	0.03	21643.100000	Y 377.433
Sn (189.925 nm)	-0.000837 u	ppm	0.000251	30.01	7.933430	Y 377.433
Sr (421.552 nm)	0.104087	ppm	0.000223	0.21	21995.133369	Y_R 488.368
Th (288.505 nm)	0.002866	ppm	0.000334	11.65	81.327900	Y 377.433
Ti (336.122 nm)	0.000779	ppm	0.000010	1.29	-51.969600	Y 377.433
Tl (190.794 nm)	0.001904	ppm	0.000025	1.32	-1.163390	Y 377.433
U (409.013 nm)	0.008932	ppm	0.001046	11.71	-171.130000	Y 377.433
V (292.401 nm)	-0.000009 u	ppm	0.000323	> 100.00	34.835100	Y 377.433
Zn (206.200 nm)	-0.003300 u	ppm	0.000229	6.94	10.505900	Y 377.433
Zr (343.823 nm)	0.000128	ppm	0.000063	49.34	43.645800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.155966	22056.079267	0.000058	0.01
Y 377.433	1.146104	1160072.021234	0.000984	0.09
Y_R 377.433	1.231520	92970.700000	0.000445	0.04
Y_R 488.368	1.200690	52566.700000	0.000350	0.03
Y_R2 488.368	1.181481	102530.796315	0.003364	0.28

Sample Name: 280-116491-D-5-A

Date: 11/7/2018 5:28:50 AM Rack:Tube: 4:19

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001176	ppm	0.000134	11.41	-391.007000	Y 377.433
Al (167.019 nm)	0.057193	ppm	0.002445	4.28	34.374800	Y_R 377.433
Al H (396.152 nm)	0.041118 u	ppm	0.001067	2.60	185.656002	Y_R 377.433
As (188.980 nm)	-0.000084 u	ppm	0.001329	> 100.00	-1.844190	Y 242.219
B (249.678 nm)	0.008480	ppm	0.000196	2.31	268.689000	Y 242.219
Ba (493.408 nm)	0.006800	ppm	0.000139	2.05	1389.000000	Y_R 488.368
Be (234.861 nm)	0.000034	ppm	0.000011	32.53	-30.061600	Y_R 488.368
Bi (223.061 nm)	-0.000993 u	ppm	0.001719	> 100.00	10.273700	Y 377.433
Ca (315.887 nm)	7.437682	ppm	0.019714	0.27	5835.853012	Y_R 377.433
Cd (214.439 nm)	0.000052	ppm	0.000010	19.68	4.182780	Y 377.433
Co (228.615 nm)	0.000471	ppm	0.000198	42.12	-27.884200	Y 242.219
Cr (205.560 nm)	0.000243	ppm	0.000181	74.27	-0.312940	Y 377.433
Cu (324.754 nm)	0.002822	ppm	0.000056	1.97	-139.006000	Y 377.433
Fe (238.204 nm)	0.194575	ppm	0.000260	0.13	744.481905	Y_R 377.433
Fe H (259.940 nm)	0.200108 u	ppm	0.000187	0.09	381.798000	Y_R 377.433
K (766.491 nm)	0.727260	ppm	0.022443	3.09	80.833100	Y_R2 488.368
Li (670.783 nm)	0.010892	ppm	0.000164	1.50	-990.441000	Y_R2 488.368
Mg (279.078 nm)	1.584950	ppm	0.004679	0.30	9194.510000	Y 377.433
Mn (257.610 nm)	0.026889	ppm	0.000045	0.17	6350.270000	Y 377.433
Mo (202.032 nm)	-0.000123 u	ppm	0.000023	18.62	-1.085050	Y 377.433
Na (589.592 nm)	10.140200	ppm	0.002927	0.03	67077.000000	Y_R2 488.368
Na H (589.593 nm)	10.462606	ppm	0.022004	0.21	40731.346686	Y_R 488.368
Ni (231.604 nm)	0.000253	ppm	0.000065	25.68	-2.365750	Y 377.433
P (213.618 nm)	0.000031 u	ppm	0.001703	> 100.00	24.624900	Y 242.219
Pb (220.353 nm)	0.001392	ppm	0.000274	19.69	7.423360	Y 242.219
S (181.972 nm)	1.365729	ppm	0.003861	0.28	713.694878	Y 377.433
Sb (206.834 nm)	-0.000479 u	ppm	0.001684	> 100.00	-24.585900	Y 377.433
Se (196.026 nm)	-0.002720 u	ppm	0.001315	48.36	10.268200	Y 242.219
Si (288.158 nm)	5.741630	ppm	0.005285	0.09	50277.100000	Y 377.433
Sn (189.925 nm)	-0.000498 u	ppm	0.001008	> 100.00	8.608530	Y 377.433
Sr (421.552 nm)	0.057448	ppm	0.000034	0.06	12209.538041	Y_R 488.368
Th (288.505 nm)	0.003763	ppm	0.002609	69.35	83.173700	Y 377.433
Ti (336.122 nm)	0.001105	ppm	0.000003	0.31	-47.704900	Y 377.433
Tl (190.794 nm)	0.001107	ppm	0.000010	0.89	-2.919110	Y 377.433
U (409.013 nm)	0.003488	ppm	0.000068	1.94	-193.027000	Y 377.433
V (292.401 nm)	-0.000150 u	ppm	0.000017	11.67	29.541500	Y 377.433
Zn (206.200 nm)	-0.003124 u	ppm	0.000097	3.10	11.423500	Y 377.433
Zr (343.823 nm)	-0.000046 u	ppm	0.000109	> 100.00	21.209500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.162101	22173.130430	0.001268	0.11
Y 377.433	1.152724	1166772.873943	0.001173	0.10
Y_R 377.433	1.228240	92723.100000	0.000225	0.02
Y_R 488.368	1.197870	52443.400000	0.002095	0.17
Y_R2 488.368	1.182356	102606.684803	0.002110	0.18

Sample Name: 280-116491-D-6-A

Date: 11/7/2018 5:32:13 AM Rack:Tube: 4:20

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001619	ppm	0.000133	8.22	-370.794000	Y 377.433
Al (167.019 nm)	0.032733	ppm	0.004067	12.42	20.898700	Y_R 377.433
Al H (396.152 nm)	0.037919 u	ppm	0.003455	9.11	223.988522	Y_R 377.433
As (188.980 nm)	0.007290	ppm	0.000516	7.08	7.439940	Y 242.219
B (249.678 nm)	0.769830	ppm	0.000139	0.02	19287.200000	Y 242.219
Ba (493.408 nm)	0.063027	ppm	0.000188	0.30	7925.720000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000009	> 100.00	-33.192800	Y_R 488.368
Bi (223.061 nm)	-0.000402 u	ppm	0.001138	> 100.00	11.802000	Y 377.433
Ca (315.887 nm)	113.711717 o	ppm	0.120895	0.11	90102.024712	Y_R 377.433
Cd (214.439 nm)	0.000040 u	ppm	0.000129	> 100.00	3.713340	Y 377.433
Co (228.615 nm)	0.007177	ppm	0.000160	2.24	93.563000	Y 242.219
Cr (205.560 nm)	0.001710	ppm	0.000105	6.14	21.940400	Y 377.433
Cu (324.754 nm)	0.007718	ppm	0.000160	2.08	70.678500	Y 377.433
Fe (238.204 nm)	0.428528	ppm	0.004491	1.05	1609.762971	Y_R 377.433
Fe H (259.940 nm)	0.435444 u	ppm	0.004993	1.15	827.006000	Y_R 377.433
K (766.491 nm)	31.817200	ppm	0.113426	0.36	35880.100000	Y_R2 488.368
Li (670.783 nm)	0.021330	ppm	0.000286	1.34	-642.329000	Y_R2 488.368
Mg (279.078 nm)	14.181800	ppm	0.000713	0.01	81960.300000	Y 377.433
Mn (257.610 nm)	1.213620 o	ppm	0.001123	0.09	283884.000000	Y 377.433
Mo (202.032 nm)	0.001810	ppm	0.000112	6.18	15.556300	Y 377.433
Na (589.592 nm)	83.220900 o	ppm	0.257466	0.31	548380.000000	Y_R2 488.368
Na H (589.593 nm)	86.658613	ppm	0.146467	0.17	319936.334287	Y_R 488.368
Ni (231.604 nm)	0.019223	ppm	0.000554	2.88	127.052000	Y 377.433
P (213.618 nm)	0.101618	ppm	0.001801	1.77	245.373000	Y 242.219
Pb (220.353 nm)	0.001844	ppm	0.001457	79.01	8.724620	Y 242.219
S (181.972 nm)	17.613096 o	ppm	0.059351	0.34	9037.702548	Y 377.433
Sb (206.834 nm)	-0.000486 u	ppm	0.001779	> 100.00	-24.632000	Y 377.433
Se (196.026 nm)	-0.002393 u	ppm	0.002706	> 100.00	11.529800	Y 242.219
Si (288.158 nm)	4.579370	ppm	0.048252	1.05	40287.900000	Y 377.433
Sn (189.925 nm)	-0.001989 u	ppm	0.001440	72.40	5.644380	Y 377.433
Sr (421.552 nm)	0.872233	ppm	0.002639	0.30	183165.100913	Y_R 488.368
Th (288.505 nm)	0.005141	ppm	0.000083	1.62	110.959000	Y 377.433
Ti (336.122 nm)	0.000702	ppm	0.000175	24.98	227.726000	Y 377.433
Tl (190.794 nm)	0.000279 u	ppm	0.001147	> 100.00	-4.725530	Y 377.433
U (409.013 nm)	-0.001964 u	ppm	0.000909	46.29	-237.659000	Y 377.433
V (292.401 nm)	-0.000227 u	ppm	0.000194	85.78	27.082100	Y 377.433
Zn (206.200 nm)	0.004062	ppm	0.000069	1.70	48.955900	Y 377.433
Zr (343.823 nm)	-0.000140 u	ppm	0.000043	30.84	9.548820	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.118013	21331.920875	0.002664	0.24
Y 377.433	1.113800	1127374.996116	0.000401	0.04
Y_R 377.433	1.204950	90965.300000	0.009694	0.80
Y_R 488.368	1.179290	51629.900000	0.004703	0.40
Y_R2 488.368	1.167768	101340.744282	0.002084	0.18

Sample Name: 280-116491-D-7-A

Date: 11/7/2018 5:35:38 AM
Rack:Tube: 4:21

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001287	ppm	0.000189	14.65	-385.940000	Y 377.433
Al (167.019 nm)	0.184351	ppm	0.001375	0.75	105.380000	Y_R 377.433
Al H (396.152 nm)	0.167560 u	ppm	0.001955	1.17	504.173426	Y_R 377.433
As (188.980 nm)	0.001113	ppm	0.000130	11.65	-0.338385	Y 242.219
B (249.678 nm)	0.009327	ppm	0.000064	0.68	289.594000	Y 242.219
Ba (493.408 nm)	0.007041	ppm	0.000046	0.66	1417.300000	Y_R 488.368
Be (234.861 nm)	0.000028	ppm	0.000007	24.99	-26.535500	Y_R 488.368
Bi (223.061 nm)	-0.001001 u	ppm	0.001302	> 100.00	10.282300	Y 377.433
Ca (315.887 nm)	8.559927	ppm	0.013707	0.16	6725.696426	Y_R 377.433
Cd (214.439 nm)	0.000023 u	ppm	0.000039	> 100.00	2.603200	Y 377.433
Co (228.615 nm)	0.000721	ppm	0.000044	6.04	-23.271500	Y 242.219
Cr (205.560 nm)	0.000652	ppm	0.000008	1.18	5.868580	Y 377.433
Cu (324.754 nm)	0.003576	ppm	0.000637	17.81	-98.014200	Y 377.433
Fe (238.204 nm)	0.356057	ppm	0.000066	0.02	1341.728134	Y_R 377.433
Fe H (259.940 nm)	0.363887 u	ppm	0.003923	1.08	691.635000	Y_R 377.433
K (766.491 nm)	0.735788	ppm	0.005207	0.71	90.652500	Y_R2 488.368
Li (670.783 nm)	0.012459	ppm	0.000559	4.48	-938.191000	Y_R2 488.368
Mg (279.078 nm)	1.661260	ppm	0.003938	0.24	9635.010000	Y 377.433
Mn (257.610 nm)	0.050696	ppm	0.000176	0.35	11917.800000	Y 377.433
Mo (202.032 nm)	-0.000065 u	ppm	0.000084	> 100.00	-0.584651	Y 377.433
Na (589.592 nm)	10.223400	ppm	0.000299	0.00	67625.300000	Y_R2 488.368
Na H (589.593 nm)	10.646140	ppm	0.022969	0.22	41403.968458	Y_R 488.368
Ni (231.604 nm)	0.001258	ppm	0.000226	17.99	4.496230	Y 377.433
P (213.618 nm)	0.004012	ppm	0.000969	24.15	33.276000	Y 242.219
Pb (220.353 nm)	0.000583 u	ppm	0.001214	> 100.00	5.078490	Y 242.219
S (181.972 nm)	1.457400	ppm	0.005037	0.35	760.702907	Y 377.433
Sb (206.834 nm)	0.000583 u	ppm	0.001055	> 100.00	-21.732400	Y 377.433
Se (196.026 nm)	-0.001689 u	ppm	0.001019	60.32	11.284300	Y 242.219
Si (288.158 nm)	5.773130	ppm	0.037236	0.64	50547.900000	Y 377.433
Sn (189.925 nm)	-0.003187 u	ppm	0.000937	29.39	3.263310	Y 377.433
Sr (421.552 nm)	0.067042	ppm	0.000174	0.26	14222.532284	Y_R 488.368
Th (288.505 nm)	0.005686	ppm	0.000823	14.48	88.610300	Y 377.433
Ti (336.122 nm)	0.003693	ppm	0.000079	2.14	324.471000	Y 377.433
Tl (190.794 nm)	-0.000242 u	ppm	0.002429	> 100.00	-5.899160	Y 377.433
U (409.013 nm)	0.005281	ppm	0.000829	15.69	-185.000000	Y 377.433
V (292.401 nm)	0.000231	ppm	0.000123	53.06	43.154500	Y 377.433
Zn (206.200 nm)	-0.001756 u	ppm	0.000252	14.36	18.568200	Y 377.433
Zr (343.823 nm)	0.000142	ppm	0.000048	33.53	46.352200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.157311	22081.731086	0.003461	0.30
Y 377.433	1.146841	1160818.055155	0.005027	0.44
Y_R 377.433	1.236730	93364.500000	0.003621	0.29
Y_R 488.368	1.201300	52593.500000	0.007986	0.66
Y_R2 488.368	1.189726	103246.307660	0.010636	0.89

Sample Name: 280-116491-E-8-A

Date: 11/7/2018 5:39:01 AM Rack:Tube: 4:22

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001794	ppm	0.000164	9.17	-363.311000	Y 377.433
Al (167.019 nm)	0.076122	ppm	0.002852	3.75	93.502100	Y_R 377.433
Al H (396.152 nm)	0.107301 u	ppm	0.001926	1.79	457.147748	Y_R 377.433
As (188.980 nm)	0.033814	ppm	0.002470	7.30	40.203600	Y 242.219
B (249.678 nm)	2.887360 o	ppm	0.010992	0.38	72075.400000	Y 242.219
Ba (493.408 nm)	0.515284	ppm	0.003700	0.72	60403.100000	Y_R 488.368
Be (234.861 nm)	-0.000706 u	ppm	0.000054	7.70	1999.570000	Y_R 488.368
Bi (223.061 nm)	-0.008959 u	ppm	0.000816	9.11	2.098560	Y 377.433
Ca (315.887 nm)	248.812258 o	ppm	1.337879	0.54	197225.137742	Y_R 377.433
Cd (214.439 nm)	0.000069	ppm	0.000015	22.14	74.633900	Y 377.433
Co (228.615 nm)	0.010460	ppm	0.000019	0.18	153.157000	Y 242.219
Cr (205.560 nm)	0.003277	ppm	0.000033	1.02	25.973200	Y 377.433
Cu (324.754 nm)	0.024339	ppm	0.000049	0.20	980.049000	Y 377.433
Fe (238.204 nm)	70.794973 o	ppm	0.354705	0.50	261862.527116	Y_R 377.433
Fe H (259.940 nm)	72.988600	ppm	0.295340	0.40	138083.000000	Y_R 377.433
K (766.491 nm)	61.373700	ppm	0.221985	0.36	69913.800000	Y_R2 488.368
Li (670.783 nm)	0.025616	ppm	0.001594	6.22	-499.382000	Y_R2 488.368
Mg (279.078 nm)	34.245500	ppm	0.040600	0.12	197737.000000	Y 377.433
Mn (257.610 nm)	3.201820 o	ppm	0.000230	0.01	748854.000000	Y 377.433
Mo (202.032 nm)	0.001312	ppm	0.000252	19.19	11.271800	Y 377.433
Na (589.592 nm)	158.714000 o	ppm	0.760371	0.48	1046370.000000	Y_R2 488.368
Na H (589.593 nm)	167.196308	ppm	0.569150	0.34	615420.401662	Y_R 488.368
Ni (231.604 nm)	0.023541	ppm	0.000013	0.06	159.474000	Y 377.433
P (213.618 nm)	1.657040	ppm	0.003853	0.23	3625.300000	Y 242.219
Pb (220.353 nm)	0.001263 u	ppm	0.002690	> 100.00	13.262000	Y 242.219
S (181.972 nm)	57.687216 o	ppm	0.195075	0.34	29566.527057	Y 377.433
Sb (206.834 nm)	-0.000327 u	ppm	0.001479	> 100.00	-41.191500	Y 377.433
Se (196.026 nm)	-0.003434 u	ppm	0.000535	15.57	-1.902360	Y 242.219
Si (288.158 nm)	10.298400	ppm	0.008581	0.08	89441.000000	Y 377.433
Sn (189.925 nm)	0.000519 u	ppm	0.002424	> 100.00	10.629300	Y 377.433
Sr (421.552 nm)	1.977014 o	ppm	0.029074	1.47	414966.602906	Y_R 488.368
Th (288.505 nm)	0.013351	ppm	0.001812	13.57	169.043000	Y 377.433
Ti (336.122 nm)	0.004298	ppm	0.000054	1.26	1162.400000	Y 377.433
Tl (190.794 nm)	0.000891	ppm	0.000824	92.53	-5.287660	Y 377.433
U (409.013 nm)	-0.002795 u	ppm	0.001870	66.90	-200.689000	Y 377.433
V (292.401 nm)	0.003020	ppm	0.000224	7.41	145.211000	Y 377.433
Zn (206.200 nm)	0.053478	ppm	0.000355	0.66	307.039000	Y 377.433
Zr (343.823 nm)	0.000377	ppm	0.000100	26.53	286.869000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090682	20810.447711	0.000215	0.02
Y 377.433	1.090359	1103647.753056	0.001304	0.12
Y_R 377.433	1.199660	90566.000000	0.004967	0.41
Y_R 488.368	1.169590	51205.300000	0.005013	0.43
Y_R2 488.368	1.153747	100123.980900	0.002689	0.23

Sample Name: 280-116491-E-9-A

Date: 11/7/2018 5:42:25 AM
Rack:Tube: 4:23

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001824	ppm	0.000169	9.24	-361.816000	Y 377.433
Al (167.019 nm)	0.097550	ppm	0.005393	5.53	106.726000	Y_R 377.433
Al H (396.152 nm)	0.128937 u	ppm	0.009746	7.56	508.880762	Y_R 377.433
As (188.980 nm)	0.034985	ppm	0.001828	5.23	41.661100	Y 242.219
B (249.678 nm)	2.821300 o	ppm	0.001410	0.05	70422.400000	Y 242.219
Ba (493.408 nm)	0.514293	ppm	0.002135	0.42	60288.600000	Y_R 488.368
Be (234.861 nm)	-0.000670 u	ppm	0.000057	8.51	2069.420000	Y_R 488.368
Bi (223.061 nm)	-0.008284 u	ppm	0.000427	5.16	4.111670	Y 377.433
Ca (315.887 nm)	242.813181 o	ppm	0.551505	0.23	192468.385233	Y_R 377.433
Cd (214.439 nm)	0.000116	ppm	0.000044	38.38	79.257200	Y 377.433
Co (228.615 nm)	0.012840	ppm	0.000384	2.99	196.285000	Y 242.219
Cr (205.560 nm)	0.003626	ppm	0.000042	1.15	30.765900	Y 377.433
Cu (324.754 nm)	0.027807	ppm	0.000263	0.94	1178.950000	Y 377.433
Fe (238.204 nm)	72.624572 o	ppm	0.102859	0.14	268629.363067	Y_R 377.433
Fe H (259.940 nm)	74.961500	ppm	0.165288	0.22	141815.000000	Y_R 377.433
K (766.491 nm)	59.547800	ppm	0.152321	0.26	67811.300000	Y_R2 488.368
Li (670.783 nm)	0.025183	ppm	0.000269	1.07	-513.828000	Y_R2 488.368
Mg (279.078 nm)	33.376100	ppm	0.048756	0.15	192712.000000	Y 377.433
Mn (257.610 nm)	3.134980 o	ppm	0.002976	0.09	733224.000000	Y 377.433
Mo (202.032 nm)	0.001495	ppm	0.000088	5.90	12.846100	Y 377.433
Na (589.592 nm)	154.602000 o	ppm	0.321356	0.21	1019290.000000	Y_R2 488.368
Na H (589.593 nm)	161.358568	ppm	0.219732	0.14	594032.606611	Y_R 488.368
Ni (231.604 nm)	0.025510	ppm	0.000269	1.05	172.979000	Y 377.433
P (213.618 nm)	2.107110	ppm	0.005723	0.27	4603.290000	Y 242.219
Pb (220.353 nm)	0.002534	ppm	0.000986	38.90	17.053100	Y 242.219
S (181.972 nm)	57.441103 o	ppm	0.063615	0.11	29440.317787	Y 377.433
Sb (206.834 nm)	0.000252 u	ppm	0.000369	> 100.00	-40.037100	Y 377.433
Se (196.026 nm)	0.000187 u	ppm	0.004453	> 100.00	1.277190	Y 242.219
Si (288.158 nm)	10.087600	ppm	0.057417	0.57	87629.500000	Y 377.433
Sn (189.925 nm)	0.000721	ppm	0.000688	95.51	11.030500	Y 377.433
Sr (421.552 nm)	1.946487 o	ppm	0.009257	0.48	408561.614638	Y_R 488.368
Th (288.505 nm)	0.011087	ppm	0.000778	7.02	161.710000	Y 377.433
Ti (336.122 nm)	0.005163	ppm	0.000029	0.56	1266.280000	Y 377.433
Tl (190.794 nm)	0.002475	ppm	0.002168	87.60	-1.850360	Y 377.433
U (409.013 nm)	-0.004381 u	ppm	0.001859	42.44	-204.924000	Y 377.433
V (292.401 nm)	0.003169	ppm	0.000259	8.16	150.758000	Y 377.433
Zn (206.200 nm)	0.066774	ppm	0.000482	0.72	376.478000	Y 377.433
Zr (343.823 nm)	0.000280	ppm	0.000026	9.25	279.547000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090298	20803.109574	0.000227	0.02
Y 377.433	1.090481	1103771.536654	0.002239	0.21
Y_R 377.433	1.201880	90733.100000	0.003574	0.30
Y_R 488.368	1.167960	51134.000000	0.002625	0.22
Y_R2 488.368	1.151070	99891.632437	0.012730	1.11

Sample Name: MB 280-436433/1-A

Date: 11/7/2018 5:45:49 AM Rack:Tube: 4:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001363	ppm	0.000121	8.89	-382.429000	Y 377.433
Al (167.019 nm)	-0.002306 u	ppm	0.000460	19.97	1.070680	Y_R 377.433
Al H (396.152 nm)	-0.022299 u	ppm	0.001858	8.33	22.938955	Y_R 377.433
As (188.980 nm)	0.001283	ppm	0.000699	54.44	-0.121266	Y 242.219
B (249.678 nm)	0.002328	ppm	0.000007	0.28	115.294000	Y 242.219
Ba (493.408 nm)	-0.000916 u	ppm	0.000060	6.57	493.415000	Y_R 488.368
Be (234.861 nm)	0.000031	ppm	0.000022	71.21	-36.987700	Y_R 488.368
Bi (223.061 nm)	-0.000189 u	ppm	0.001460	> 100.00	12.265700	Y 377.433
Ca (315.887 nm)	0.025611	ppm	0.006948	27.13	-41.282181	Y_R 377.433
Cd (214.439 nm)	0.000050	ppm	0.000069	> 100.00	3.891430	Y 377.433
Co (228.615 nm)	0.000453	ppm	0.000035	7.76	-28.241100	Y 242.219
Cr (205.560 nm)	0.000254	ppm	0.000173	68.11	-0.098581	Y 377.433
Cu (324.754 nm)	0.001888	ppm	0.000072	3.80	-187.780000	Y 377.433
Fe (238.204 nm)	0.002941	ppm	0.002366	80.46	35.713392	Y_R 377.433
Fe H (259.940 nm)	0.010559 u	ppm	0.001747	16.54	23.209000	Y_R 377.433
K (766.491 nm)	0.138423	ppm	0.046982	33.94	-597.199000	Y_R2 488.368
Li (670.783 nm)	0.011966	ppm	0.002221	18.56	-954.616000	Y_R2 488.368
Mg (279.078 nm)	0.000834	ppm	0.000103	12.37	44.174600	Y 377.433
Mn (257.610 nm)	0.000218	ppm	0.000021	9.53	112.869000	Y 377.433
Mo (202.032 nm)	-0.000180 u	ppm	0.000104	57.52	-1.580690	Y 377.433
Na (589.592 nm)	0.075114	ppm	0.008431	11.22	790.412000	Y_R2 488.368
Na H (589.593 nm)	0.190731 u	ppm	0.017335	9.09	3092.335545	Y_R 488.368
Ni (231.604 nm)	0.000250 u	ppm	0.000838	> 100.00	-2.396090	Y 377.433
P (213.618 nm)	-0.004179 u	ppm	0.000942	22.53	15.475900	Y 242.219
Pb (220.353 nm)	-0.000213 u	ppm	0.000902	> 100.00	2.823810	Y 242.219
S (181.972 nm)	0.035041	ppm	0.010592	30.23	32.118862	Y 377.433
Sb (206.834 nm)	0.001187	ppm	0.000179	15.12	-19.983700	Y 377.433
Se (196.026 nm)	-0.002021 u	ppm	0.001252	61.94	10.978700	Y 242.219
Si (288.158 nm)	0.003526	ppm	0.001205	34.18	959.955000	Y 377.433
Sn (189.925 nm)	-0.001410 u	ppm	0.000109	7.76	6.794120	Y 377.433
Sr (421.552 nm)	-0.000004 u	ppm	0.000001	30.85	155.239726	Y_R 488.368
Th (288.505 nm)	0.004626	ppm	0.000845	18.26	84.835600	Y 377.433
Ti (336.122 nm)	-0.000077 u	ppm	0.000079	> 100.00	-239.046000	Y 377.433
Tl (190.794 nm)	0.000550	ppm	0.000087	15.87	-4.133220	Y 377.433
U (409.013 nm)	0.005536	ppm	0.000126	2.27	-182.531000	Y 377.433
V (292.401 nm)	-0.000122 u	ppm	0.000019	15.93	30.139300	Y 377.433
Zn (206.200 nm)	-0.004362 u	ppm	0.000285	6.54	4.957180	Y 377.433
Zr (343.823 nm)	-0.000293 u	ppm	0.000023	7.75	-11.835200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.158519	22104.789899	0.001046	0.09
Y 377.433	1.149497	1163507.032549	0.001830	0.16
Y_R 377.433	1.228930	92775.100000	0.006765	0.55
Y_R 488.368	1.194340	52288.800000	0.001457	0.12
Y_R2 488.368	1.180541	102449.188362	0.009112	0.77

Sample Name: LCS 280-436433/2-A

Date: 11/7/2018 5:49:12 AM Rack:Tube: 4:25

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.047679	ppm	0.000166	0.35	1714.500000	Y 377.433
Al (167.019 nm)	1.983700	ppm	0.018072	0.91	1109.020000	Y_R 377.433
Al H (396.152 nm)	1.977260	ppm	0.014860	0.75	5159.528218	Y_R 377.433
As (188.980 nm)	0.998208	ppm	0.006634	0.66	1255.310000	Y 242.219
B (249.678 nm)	1.051740	ppm	0.000341	0.03	26349.900000	Y 242.219
Ba (493.408 nm)	2.008270 o	ppm	0.007652	0.38	233201.000000	Y_R 488.368
Be (234.861 nm)	0.049016	ppm	0.000296	0.60	14531.300000	Y_R 488.368
Bi (223.061 nm)	1.984160	ppm	0.014846	0.75	5009.220000	Y 377.433
Ca (315.887 nm)	51.519298 o	ppm	0.322703	0.63	40788.840396	Y_R 377.433
Cd (214.439 nm)	0.099196	ppm	0.000028	0.03	5930.930000	Y 377.433
Co (228.615 nm)	0.482843	ppm	0.000307	0.06	8745.710000	Y 242.219
Cr (205.560 nm)	0.202683	ppm	0.000424	0.21	3078.670000	Y 377.433
Cu (324.754 nm)	0.255451	ppm	0.000042	0.02	13965.700000	Y 377.433
Fe (238.204 nm)	1.004913	ppm	0.005212	0.52	3741.542815	Y_R 377.433
Fe H (259.940 nm)	1.023450 u	ppm	0.004369	0.43	1939.400000	Y_R 377.433
K (766.491 nm)	52.113500	ppm	0.042582	0.08	59250.900000	Y_R2 488.368
Li (670.783 nm)	1.019950	ppm	0.003143	0.31	32662.500000	Y_R2 488.368
Mg (279.078 nm)	50.342300 o	ppm	0.083487	0.17	290785.000000	Y 377.433
Mn (257.610 nm)	0.502102	ppm	0.000163	0.03	117486.000000	Y 377.433
Mo (202.032 nm)	1.046330	ppm	0.000757	0.07	9010.900000	Y 377.433
Na (589.592 nm)	50.254100 o	ppm	0.442656	0.88	335250.000000	Y_R2 488.368
Na H (589.593 nm)	53.306462	ppm	0.201780	0.38	199580.626936	Y_R 488.368
Ni (231.604 nm)	0.498821	ppm	0.001780	0.36	3401.160000	Y 377.433
P (213.618 nm)	10.389300 o	ppm	0.016308	0.16	22600.400000	Y 242.219
Pb (220.353 nm)	0.499243	ppm	0.001613	0.32	1436.030000	Y 242.219
S (181.972 nm)	2.043350	ppm	0.000460	0.02	1061.914764	Y 377.433
Sb (206.834 nm)	0.522243	ppm	0.000593	0.11	1398.840000	Y 377.433
Se (196.026 nm)	2.052990	ppm	0.000914	0.04	2056.630000	Y 242.219
Si (288.158 nm)	10.374500	ppm	0.035238	0.34	90095.300000	Y 377.433
Sn (189.925 nm)	2.102450	ppm	0.000193	0.01	4188.830000	Y 377.433
Sr (421.552 nm)	1.023914	ppm	0.003097	0.30	214990.420700	Y_R 488.368
Th (288.505 nm)	1.017170	ppm	0.002767	0.27	2745.930000	Y 377.433
Ti (336.122 nm)	1.022750	ppm	0.001224	0.12	145586.000000	Y 377.433
Tl (190.794 nm)	2.031370	ppm	0.002570	0.13	4453.450000	Y 377.433
U (409.013 nm)	2.087480	ppm	0.003629	0.17	9186.320000	Y 377.433
V (292.401 nm)	0.508948	ppm	0.000274	0.05	18418.700000	Y 377.433
Zn (206.200 nm)	0.492993	ppm	0.001656	0.34	2602.480000	Y 377.433
Zr (343.823 nm)	0.509383	ppm	0.000582	0.11	67005.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.121055	21389.966802	0.001638	0.15
Y 377.433	1.112542	1126101.517398	0.004623	0.42
Y_R 377.433	1.196530	90329.600000	0.009411	0.79
Y_R 488.368	1.171120	51272.100000	0.005136	0.44
Y_R2 488.368	1.159747	100644.694754	0.006111	0.53

Sample Name: 280-116465-G-1-A

Date: 11/7/2018 5:52:36 AM
Rack:Tube: 4:26

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001444	ppm	0.000092	6.34	-380.588000	Y 377.433
Al (167.019 nm)	4.753460 o	ppm	0.004053	0.09	2656.500000	Y_R 377.433
Al H (396.152 nm)	4.707048	ppm	0.003508	0.07	11931.287250	Y_R 377.433
As (188.980 nm)	0.002279	ppm	0.001073	47.08	1.080460	Y 242.219
B (249.678 nm)	0.101891	ppm	0.000173	0.17	2593.630000	Y 242.219
Ba (493.408 nm)	0.043465	ppm	0.000014	0.03	5645.720000	Y_R 488.368
Be (234.861 nm)	0.000172	ppm	0.000010	5.89	187.308000	Y_R 488.368
Bi (223.061 nm)	-0.002605 u	ppm	0.000852	32.69	7.148150	Y 377.433
Ca (315.887 nm)	29.415169 o	ppm	0.179672	0.61	23262.110095	Y_R 377.433
Cd (214.439 nm)	0.000243	ppm	0.000019	7.85	21.062200	Y 377.433
Co (228.615 nm)	0.002225	ppm	0.000217	9.75	13.570700	Y 242.219
Cr (205.560 nm)	0.008761	ppm	0.000004	0.04	127.767000	Y 377.433
Cu (324.754 nm)	0.030436	ppm	0.000066	0.22	1387.760000	Y 377.433
Fe (238.204 nm)	5.738141 o	ppm	0.024632	0.43	21247.551651	Y_R 377.433
Fe H (259.940 nm)	5.891030	ppm	0.025993	0.44	11147.900000	Y_R 377.433
K (766.491 nm)	10.228900	ppm	0.001589	0.02	11021.700000	Y_R2 488.368
Li (670.783 nm)	0.020388	ppm	0.000795	3.90	-673.748000	Y_R2 488.368
Mg (279.078 nm)	6.130230	ppm	0.003246	0.05	35440.800000	Y 377.433
Mn (257.610 nm)	0.119122	ppm	0.000133	0.11	27920.300000	Y 377.433
Mo (202.032 nm)	0.007094	ppm	0.000021	0.29	61.064600	Y 377.433
Na (589.592 nm)	9.982090	ppm	0.015219	0.15	66111.200000	Y_R2 488.368
Na H (589.593 nm)	10.322438	ppm	0.073944	0.72	40252.734187	Y_R 488.368
Ni (231.604 nm)	0.006554	ppm	0.000834	12.73	40.847800	Y 377.433
P (213.618 nm)	0.578502	ppm	0.002296	0.40	1281.640000	Y 242.219
Pb (220.353 nm)	0.015862	ppm	0.001351	8.52	47.861300	Y 242.219
S (181.972 nm)	5.946277	ppm	0.009581	0.16	3059.844902	Y 377.433
Sb (206.834 nm)	0.003916	ppm	0.000158	4.03	-14.041000	Y 377.433
Se (196.026 nm)	-0.002962 u	ppm	0.002124	71.70	9.145670	Y 242.219
Si (288.158 nm)	10.195900	ppm	0.092140	0.90	88560.200000	Y 377.433
Sn (189.925 nm)	0.001138	ppm	0.000356	31.29	11.860700	Y 377.433
Sr (421.552 nm)	0.061039	ppm	0.000291	0.48	12962.977611	Y_R 488.368
Th (288.505 nm)	0.005933	ppm	0.003161	53.27	90.856100	Y 377.433
Ti (336.122 nm)	0.270475	ppm	0.000592	0.22	38383.000000	Y 377.433
Tl (190.794 nm)	0.001304	ppm	0.000154	11.80	-3.854570	Y 377.433
U (409.013 nm)	0.006282	ppm	0.001536	24.46	-179.441000	Y 377.433
V (292.401 nm)	0.012253	ppm	0.000006	0.05	483.779000	Y 377.433
Zn (206.200 nm)	0.103542	ppm	0.000105	0.10	568.505000	Y 377.433
Zr (343.823 nm)	0.001495	ppm	0.000145	9.70	240.246000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.162182	22174.682211	0.000249	0.02
Y 377.433	1.152292	1166336.147056	0.001091	0.09
Y_R 377.433	1.239280	93557.000000	0.002500	0.20
Y_R 488.368	1.215860	53230.900000	0.013770	1.13
Y_R2 488.368	1.200033	104140.757551	0.011547	0.96

Sample Name: CCVH-5408055

Date: 11/7/2018 5:56:01 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000311 u	ppm	0.000019	6.00	-709.448000	Y 377.433
Al (167.019 nm)	44.722800 o	ppm	0.004293	0.01	24969.900000	Y_R 377.433
Al H (396.152 nm)	48.596886	ppm	0.134979	0.28	122307.285546	Y_R 377.433
As (188.980 nm)	0.001845	ppm	0.000560	30.38	0.147553	Y 242.219
B (249.678 nm)	0.000503	ppm	0.000379	75.36	-4.753180	Y 242.219
Ba (493.408 nm)	-0.000687 u	ppm	0.000088	12.87	565.974000	Y_R 488.368
Be (234.861 nm)	-0.000262 u	ppm	0.000030	11.38	1422.050000	Y_R 488.368
Bi (223.061 nm)	0.995093	ppm	0.001810	0.18	2526.630000	Y 377.433
Ca (315.887 nm)	-0.000460 u	ppm	0.011929	> 100.00	-61.953476	Y_R 377.433
Cd (214.439 nm)	-0.000197 u	ppm	0.000080	40.76	36.702600	Y 377.433
Co (228.615 nm)	0.002887	ppm	0.000062	2.14	15.849300	Y 242.219
Cr (205.560 nm)	0.000119	ppm	0.000016	13.40	-15.784500	Y 377.433
Cu (324.754 nm)	-0.001980 u	ppm	0.000083	4.18	-78.575400	Y 377.433
Fe (238.204 nm)	48.374770 o	ppm	0.144646	0.30	178940.617714	Y_R 377.433
Fe H (259.940 nm)	49.799500	ppm	0.065699	0.13	94213.900000	Y_R 377.433
K (766.491 nm)	0.187302	ppm	0.062659	33.45	-540.916000	Y_R2 488.368
Li (670.783 nm)	0.011985	ppm	0.001396	11.65	-954.001000	Y_R2 488.368
Mg (279.078 nm)	-0.017095 u	ppm	0.000303	1.77	-421.177000	Y 377.433
Mn (257.610 nm)	0.001414	ppm	0.000014	0.99	392.478000	Y 377.433
Mo (202.032 nm)	-0.000282 u	ppm	0.000206	73.00	-2.457430	Y 377.433
Na (589.592 nm)	246.654000 o	ppm	0.037614	0.02	1624340.000000	Y_R2 488.368
Na H (589.593 nm)	257.110692	ppm	0.826346	0.32	944342.802664	Y_R 488.368
Ni (231.604 nm)	0.005071	ppm	0.000535	10.55	32.529400	Y 377.433
P (213.618 nm)	-0.005593 u	ppm	0.003603	64.42	12.403700	Y 242.219
Pb (220.353 nm)	-0.003398 u	ppm	0.000104	3.06	11.489600	Y 242.219
S (181.972 nm)	5.034486	ppm	0.024800	0.49	2592.581818	Y 377.433
Sb (206.834 nm)	-0.002812 u	ppm	0.003762	> 100.00	-77.244000	Y 377.433
Se (196.026 nm)	0.000059 u	ppm	0.006319	> 100.00	4.131130	Y 242.219
Si (288.158 nm)	0.023614	ppm	0.000064	0.27	1132.610000	Y 377.433
Sn (189.925 nm)	0.000510 u	ppm	0.000965	> 100.00	10.610800	Y 377.433
Sr (421.552 nm)	0.000369	ppm	0.000014	3.92	233.539514	Y_R 488.368
Th (288.505 nm)	4.948420	ppm	0.035794	0.72	12940.800000	Y 377.433
Ti (336.122 nm)	0.001142	ppm	0.000026	2.31	-65.471100	Y 377.433
Tl (190.794 nm)	-0.003936 u	ppm	0.001042	26.47	-15.296100	Y 377.433
U (409.013 nm)	10.010400	ppm	0.006367	0.06	45121.000000	Y 377.433
V (292.401 nm)	0.004628	ppm	0.000076	1.64	28.357000	Y 377.433
Zn (206.200 nm)	-0.004095 u	ppm	0.000165	4.03	6.355390	Y 377.433
Zr (343.823 nm)	-0.004408 u	ppm	0.000021	0.48	-409.014000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125403	21472.932253	0.001868	0.17
Y 377.433	1.105257	1118727.458495	0.002501	0.23
Y_R 377.433	1.199200	90531.300000	0.002205	0.18
Y_R 488.368	1.169840	51216.300000	0.006152	0.53
Y_R2 488.368	1.160627	100721.049156	0.007167	0.62

Sample Name: CCV-5407546

Date: 11/7/2018 5:59:24 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.496632	ppm	0.000634	0.13	22312.500000	Y 377.433
Al (167.019 nm)	0.506338	ppm	0.011501	2.27	286.337000	Y_R 377.433
Al H (396.152 nm)	0.492450 u	ppm	0.001328	0.27	1360.792479	Y_R 377.433
As (188.980 nm)	0.986167	ppm	0.001720	0.17	1240.130000	Y 242.219
B (249.678 nm)	0.492882	ppm	0.000312	0.06	12387.600000	Y 242.219
Ba (493.408 nm)	0.489068	ppm	0.001792	0.37	57254.300000	Y_R 488.368
Be (234.861 nm)	0.474701	ppm	0.002033	0.43	141465.000000	Y_R 488.368
Bi (223.061 nm)	-0.004078 u	ppm	0.000710	17.40	2.885460	Y 377.433
Ca (315.887 nm)	5.079477	ppm	0.001090	0.02	3966.283131	Y_R 377.433
Cd (214.439 nm)	0.495741	ppm	0.000371	0.07	29632.400000	Y 377.433
Co (228.615 nm)	0.492007	ppm	0.003774	0.77	8892.650000	Y 242.219
Cr (205.560 nm)	0.500097	ppm	0.000042	0.01	7602.980000	Y 377.433
Cu (324.754 nm)	0.506428	ppm	0.000863	0.17	27928.800000	Y 377.433
Fe (238.204 nm)	2.445586	ppm	0.006246	0.26	9069.923311	Y_R 377.433
Fe H (259.940 nm)	2.532680 u	ppm	0.001453	0.06	4794.550000	Y_R 377.433
K (766.491 nm)	50.090700	ppm	0.120923	0.24	56921.700000	Y_R2 488.368
Li (670.783 nm)	0.994799	ppm	0.002026	0.20	31823.600000	Y_R2 488.368
Mg (279.078 nm)	19.783300	ppm	0.006065	0.03	114314.000000	Y 377.433
Mn (257.610 nm)	0.497880	ppm	0.000206	0.04	116498.000000	Y 377.433
Mo (202.032 nm)	0.504160	ppm	0.000688	0.14	4341.770000	Y 377.433
Na (589.592 nm)	5.074080	ppm	0.019711	0.39	34697.200000	Y_R2 488.368
Na H (589.593 nm)	5.530679 u	ppm	0.037009	0.67	23117.899226	Y_R 488.368
Ni (231.604 nm)	0.513520	ppm	0.002349	0.46	3500.240000	Y 377.433
P (213.618 nm)	0.994594	ppm	0.003575	0.36	2185.810000	Y 242.219
Pb (220.353 nm)	0.984307	ppm	0.001143	0.12	2824.590000	Y 242.219
S (181.972 nm)	0.035440	ppm	0.003942	11.12	33.555964	Y 377.433
Sb (206.834 nm)	1.004190	ppm	0.002820	0.28	2734.660000	Y 377.433
Se (196.026 nm)	0.980441	ppm	0.001475	0.15	988.783000	Y 242.219
Si (288.158 nm)	4.989220	ppm	0.044246	0.89	43810.400000	Y 377.433
Sn (189.925 nm)	1.024560	ppm	0.002738	0.27	2046.200000	Y 377.433
Sr (421.552 nm)	0.500003	ppm	0.002200	0.44	105065.102856	Y_R 488.368
Th (288.505 nm)	0.010555	ppm	0.000696	6.59	116.601000	Y 377.433
Ti (336.122 nm)	0.495523	ppm	0.000333	0.07	70356.700000	Y 377.433
Tl (190.794 nm)	1.001210	ppm	0.001166	0.12	2193.340000	Y 377.433
U (409.013 nm)	0.008635	ppm	0.001746	20.22	-206.471000	Y 377.433
V (292.401 nm)	0.491042	ppm	0.000151	0.03	17731.800000	Y 377.433
Zn (206.200 nm)	0.491940	ppm	0.001045	0.21	2596.980000	Y 377.433
Zr (343.823 nm)	0.499492	ppm	0.000298	0.06	65709.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.147722	21898.782438	0.001059	0.09
Y 377.433	1.135249	1149084.525319	0.000147	0.01
Y_R 377.433	1.220180	92114.700000	0.004784	0.39
Y_R 488.368	1.189080	52058.600000	0.004973	0.42
Y_R2 488.368	1.180669	102460.312993	0.003564	0.30

Sample Name: CCB

Date: 11/7/2018 6:02:46 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001150	ppm	0.000231	20.11	-392.167000	Y 377.433
Al (167.019 nm)	-0.001036 u	ppm	0.002785	> 100.00	1.775790	Y_R 377.433
Al H (396.152 nm)	-0.027103 u	ppm	0.000211	0.78	10.878268	Y_R 377.433
As (188.980 nm)	-0.000074 u	ppm	0.000601	> 100.00	-1.830200	Y 242.219
B (249.678 nm)	0.001281	ppm	0.000073	5.72	89.154500	Y 242.219
Ba (493.408 nm)	-0.000661 u	ppm	0.000130	19.73	522.954000	Y_R 488.368
Be (234.861 nm)	0.000062	ppm	0.000025	39.87	-27.959500	Y_R 488.368
Bi (223.061 nm)	0.000423 u	ppm	0.003114	> 100.00	13.806800	Y 377.433
Ca (315.887 nm)	0.010399	ppm	0.003900	37.51	-53.344120	Y_R 377.433
Cd (214.439 nm)	0.000045	ppm	0.000012	27.71	3.553460	Y 377.433
Co (228.615 nm)	0.000188	ppm	0.000072	38.38	-33.039600	Y 242.219
Cr (205.560 nm)	0.000240	ppm	0.000144	59.99	-0.307113	Y 377.433
Cu (324.754 nm)	0.001659	ppm	0.000156	9.43	-200.082000	Y 377.433
Fe (238.204 nm)	-0.000962 u	ppm	0.001192	> 100.00	21.279468	Y_R 377.433
Fe H (259.940 nm)	0.004151 u	ppm	0.002182	52.56	11.085900	Y_R 377.433
K (766.491 nm)	0.077191	ppm	0.001215	1.57	-667.706000	Y_R2 488.368
Li (670.783 nm)	0.011698 Z	ppm	0.000221	1.89	-963.569000 Z	Y_R2 488.368
Mg (279.078 nm)	0.000926	ppm	0.000812	87.61	44.697200	Y 377.433
Mn (257.610 nm)	0.000059	ppm	0.000014	23.30	75.566600	Y 377.433
Mo (202.032 nm)	-0.000142 u	ppm	0.000051	35.81	-1.254670	Y 377.433
Na (589.592 nm)	0.036847	ppm	0.011932	32.38	538.859000	Y_R2 488.368
Na H (589.593 nm)	0.077429 u	ppm	0.013365	17.26	2677.430127	Y_R 488.368
Ni (231.604 nm)	0.000733	ppm	0.000827	> 100.00	0.900601	Y 377.433
P (213.618 nm)	-0.004047 u	ppm	0.002620	64.76	15.763800	Y 242.219
Pb (220.353 nm)	0.001109	ppm	0.000971	87.54	6.614810	Y 242.219
S (181.972 nm)	0.030418	ppm	0.010788	35.47	29.750618	Y 377.433
Sb (206.834 nm)	0.001252	ppm	0.000183	14.61	-19.805300	Y 377.433
Se (196.026 nm)	-0.000197 u	ppm	0.001098	> 100.00	12.794700	Y 242.219
Si (288.158 nm)	-0.000792 u	ppm	0.000710	89.72	922.848000	Y 377.433
Sn (189.925 nm)	-0.000170 u	ppm	0.000333	> 100.00	9.259620	Y 377.433
Sr (421.552 nm)	-0.000094 u	ppm	0.000008	8.09	136.269385	Y_R 488.368
Th (288.505 nm)	0.006903	ppm	0.004011	58.11	90.673500	Y 377.433
Ti (336.122 nm)	-0.000010 u	ppm	0.000081	> 100.00	-229.606000	Y 377.433
Tl (190.794 nm)	0.000848	ppm	0.000776	91.46	-3.479080	Y 377.433
U (409.013 nm)	0.007403	ppm	0.001994	26.94	-174.107000	Y 377.433
V (292.401 nm)	-0.000229 u	ppm	0.000076	33.17	26.408000	Y 377.433
Zn (206.200 nm)	-0.005111 u	ppm	0.000113	2.22	1.047660	Y 377.433
Zr (343.823 nm)	-0.000170 u	ppm	0.000013	7.92	4.370150	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.147665	21897.697865	0.002791	0.24
Y 377.433	1.137181	1151040.201985	0.001097	0.10
Y_R 377.433	1.210400	91376.600000	0.004029	0.33
Y_R 488.368	1.170720	51254.800000	0.000324	0.03
Y_R2 488.368	1.175188	101984.679059	0.005256	0.45

Sample Name: CCVL-5413446

Date: 11/7/2018 6:06:08 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011043	ppm	0.000127	1.15	61.336300	Y 377.433
Al (167.019 nm)	0.098508	ppm	0.001371	1.39	57.343400	Y_R 377.433
Al H (396.152 nm)	0.078734 u	ppm	0.000117	0.15	278.742196	Y_R 377.433
As (188.980 nm)	0.014976	ppm	0.002340	15.63	17.121300	Y 242.219
B (249.678 nm)	0.101766	ppm	0.000128	0.13	2599.570000	Y 242.219
Ba (493.408 nm)	0.009310	ppm	0.000274	2.94	1677.850000	Y_R 488.368
Be (234.861 nm)	0.000972	ppm	0.000013	1.34	245.677000	Y_R 488.368
Bi (223.061 nm)	0.099442	ppm	0.001772	1.78	263.165000	Y 377.433
Ca (315.887 nm)	0.228393	ppm	0.004299	1.88	119.509539	Y_R 377.433
Cd (214.439 nm)	0.005182	ppm	0.000015	0.29	310.700000	Y 377.433
Co (228.615 nm)	0.010734	ppm	0.000056	0.52	158.319000	Y 242.219
Cr (205.560 nm)	0.010490	ppm	0.000001	0.01	155.647000	Y 377.433
Cu (324.754 nm)	0.017740	ppm	0.000045	0.25	693.779000	Y 377.433
Fe (238.204 nm)	0.099539	ppm	0.003000	3.01	392.988035	Y_R 377.433
Fe H (259.940 nm)	0.104257 u	ppm	0.001664	1.60	200.466000	Y_R 377.433
K (766.491 nm)	3.319410	ppm	0.012368	0.37	3065.630000	Y_R2 488.368
Li (670.783 nm)	0.033180 Q	ppm	0.000903	2.72	-247.132000 Q	Y_R2 488.368
Mg (279.078 nm)	0.204034	ppm	0.000814	0.40	1216.740000	Y 377.433
Mn (257.610 nm)	0.010388	ppm	0.000020	0.20	2491.190000	Y 377.433
Mo (202.032 nm)	0.019425	ppm	0.000625	3.22	167.257000	Y 377.433
Na (589.592 nm)	1.119370	ppm	0.001709	0.15	7686.810000	Y_R2 488.368
Na H (589.593 nm)	1.134395 u	ppm	0.014854	1.31	6559.174597	Y_R 488.368
Ni (231.604 nm)	0.042588	ppm	0.000066	0.16	286.437000	Y 377.433
P (213.618 nm)	2.881740 o	ppm	0.013712	0.48	6286.570000	Y 242.219
Pb (220.353 nm)	0.010606	ppm	0.001669	15.73	33.852400	Y 242.219
S (181.972 nm)	0.129641	ppm	0.004580	3.53	80.593007	Y 377.433
Sb (206.834 nm)	0.021157	ppm	0.000532	2.52	34.738600	Y 377.433
Se (196.026 nm)	0.015960	ppm	0.002482	15.55	28.866300	Y 242.219
Si (288.158 nm)	0.502573	ppm	0.006045	1.20	5249.110000	Y 377.433
Sn (189.925 nm)	0.103608	ppm	0.000217	0.21	215.550000	Y 377.433
Sr (421.552 nm)	0.010228	ppm	0.000012	0.11	2301.940392	Y_R 488.368
Th (288.505 nm)	0.018596	ppm	0.003232	17.38	121.920000	Y 377.433
Ti (336.122 nm)	0.009963	ppm	0.000020	0.20	1191.330000	Y 377.433
Tl (190.794 nm)	0.016648	ppm	0.000207	1.25	31.187000	Y 377.433
U (409.013 nm)	0.065745	ppm	0.000277	0.42	88.688300	Y 377.433
V (292.401 nm)	0.009659	ppm	0.000295	3.06	380.361000	Y 377.433
Zn (206.200 nm)	0.016064	ppm	0.000347	2.16	111.638000	Y 377.433
Zr (343.823 nm)	0.015139	ppm	0.000085	0.56	2017.540000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.154652	22031.011724	0.000241	0.02
Y 377.433	1.143618	1157555.987790	0.000207	0.02
Y_R 377.433	1.220350	92127.800000	0.001080	0.09
Y_R 488.368	1.188910	52051.000000	0.002171	0.18
Y_R2 488.368	1.160521	100711.823945	0.003453	0.30

Sample Name: 280-116398-J-1-A

Date: 11/7/2018 6:09:31 AM
Rack:Tube: 4:27

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001858	ppm	0.000134	7.21	-360.935000	Y 377.433
Al (167.019 nm)	3.174760 o	ppm	0.000691	0.02	1773.820000	Y_R 377.433
Al H (396.152 nm)	3.200555	ppm	0.014000	0.44	8166.250356	Y_R 377.433
As (188.980 nm)	0.004083	ppm	0.000879	21.53	3.385970	Y 242.219
B (249.678 nm)	0.166000	ppm	0.000635	0.38	4200.620000	Y 242.219
Ba (493.408 nm)	0.075270	ppm	0.000246	0.33	9338.680000	Y_R 488.368
Be (234.861 nm)	0.000145	ppm	0.000002	1.18	63.366200	Y_R 488.368
Bi (223.061 nm)	-0.003220 u	ppm	0.000826	25.64	4.986440	Y 377.433
Ca (315.887 nm)	84.829545 o	ppm	0.190303	0.22	67200.945232	Y_R 377.433
Cd (214.439 nm)	0.000082	ppm	0.000074	91.03	7.832340	Y 377.433
Co (228.615 nm)	0.001018	ppm	0.000005	0.48	-13.401900	Y 242.219
Cr (205.560 nm)	0.006165	ppm	0.000064	1.03	89.289200	Y 377.433
Cu (324.754 nm)	0.009158	ppm	0.000101	1.11	169.023000	Y 377.433
Fe (238.204 nm)	2.094606	ppm	0.003345	0.16	7771.812369	Y_R 377.433
Fe H (259.940 nm)	2.161010 u	ppm	0.000850	0.04	4091.440000	Y_R 377.433
K (766.491 nm)	15.700800	ppm	0.093481	0.60	17322.500000	Y_R2 488.368
Li (670.783 nm)	0.024830	ppm	0.001214	4.89	-525.593000	Y_R2 488.368
Mg (279.078 nm)	44.754000 o	ppm	0.058824	0.13	258559.000000	Y 377.433
Mn (257.610 nm)	0.092814	ppm	0.000312	0.34	21767.700000	Y 377.433
Mo (202.032 nm)	0.005964	ppm	0.000004	0.06	51.336500	Y 377.433
Na (589.592 nm)	11.603400 o	ppm	0.037296	0.32	76851.000000	Y_R2 488.368
Na H (589.593 nm)	11.984219	ppm	0.023544	0.20	46370.960409	Y_R 488.368
Ni (231.604 nm)	0.004533	ppm	0.000268	5.90	26.912200	Y 377.433
P (213.618 nm)	0.193055	ppm	0.001030	0.53	444.065000	Y 242.219
Pb (220.353 nm)	0.002945	ppm	0.000100	3.41	10.979800	Y 242.219
S (181.972 nm)	63.959244 o	ppm	0.136855	0.21	32771.049091	Y 377.433
Sb (206.834 nm)	0.000649	ppm	0.000067	10.38	-22.074700	Y 377.433
Se (196.026 nm)	-0.004197 u	ppm	0.001257	29.96	8.558450	Y 242.219
Si (288.158 nm)	10.926200	ppm	0.070081	0.64	94836.600000	Y 377.433
Sn (189.925 nm)	-0.001099 u	ppm	0.001625	> 100.00	7.412680	Y 377.433
Sr (421.552 nm)	0.242315	ppm	0.000224	0.09	50997.820028	Y_R 488.368
Th (288.505 nm)	0.005529	ppm	0.004736	85.66	89.429800	Y 377.433
Ti (336.122 nm)	0.129691	ppm	0.000878	0.68	18507.000000	Y 377.433
Tl (190.794 nm)	0.001370	ppm	0.000180	13.15	-2.977500	Y 377.433
U (409.013 nm)	0.003579	ppm	0.003328	92.99	-205.804000	Y 377.433
V (292.401 nm)	0.010304	ppm	0.000141	1.37	411.060000	Y 377.433
Zn (206.200 nm)	0.010466	ppm	0.000770	7.36	82.399400	Y 377.433
Zr (343.823 nm)	0.003682	ppm	0.000124	3.37	517.056000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127207	21507.348302	0.004316	0.38
Y 377.433	1.119941	1133590.661657	0.006467	0.58
Y_R 377.433	1.225110	92486.900000	0.003891	0.32
Y_R 488.368	1.189710	52086.300000	0.001469	0.12
Y_R2 488.368	1.161404	100788.448585	0.012031	1.04

Sample Name: 280-116398-J-2-A

Date: 11/7/2018 6:12:55 AM Rack:Tube: 4:28

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001719	ppm	0.000065	3.80	-366.423000	Y 377.433
Al (167.019 nm)	0.051615	ppm	0.001775	3.44	31.218700	Y_R 377.433
Al H (396.152 nm)	0.045630 u	ppm	0.001614	3.54	217.213208	Y_R 377.433
As (188.980 nm)	0.001442 u	ppm	0.002439	> 100.00	0.077316	Y 242.219
B (249.678 nm)	0.135622	ppm	0.000052	0.04	3444.800000	Y 242.219
Ba (493.408 nm)	0.066733	ppm	0.001010	1.51	8340.790000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000012	40.68	-33.619200	Y_R 488.368
Bi (223.061 nm)	-0.001059 u	ppm	0.000843	79.62	10.096900	Y 377.433
Ca (315.887 nm)	53.669931 o	ppm	0.372658	0.69	42494.050880	Y_R 377.433
Cd (214.439 nm)	-0.000023 u	ppm	0.000026	> 100.00	-0.373170	Y 377.433
Co (228.615 nm)	-0.000021 u	ppm	0.000091	> 100.00	-36.776500	Y 242.219
Cr (205.560 nm)	0.000392	ppm	0.000223	56.83	1.973630	Y 377.433
Cu (324.754 nm)	0.002318	ppm	0.000040	1.74	-191.827000	Y 377.433
Fe (238.204 nm)	0.127294	ppm	0.000525	0.41	495.637582	Y_R 377.433
Fe H (259.940 nm)	0.125159 u	ppm	0.000889	0.71	240.009000	Y_R 377.433
K (766.491 nm)	8.074520	ppm	0.029076	0.36	8541.030000	Y_R2 488.368
Li (670.783 nm)	0.022069	ppm	0.001972	8.94	-617.701000	Y_R2 488.368
Mg (279.078 nm)	53.355400 o	ppm	0.049803	0.09	308248.000000	Y 377.433
Mn (257.610 nm)	0.118469	ppm	0.000057	0.05	27767.600000	Y 377.433
Mo (202.032 nm)	0.001176	ppm	0.000184	15.63	10.098900	Y 377.433
Na (589.592 nm)	24.842200 o	ppm	0.021771	0.09	164003.000000	Y_R2 488.368
Na H (589.593 nm)	25.519560	ppm	0.415587	1.63	95950.955795	Y_R 488.368
Ni (231.604 nm)	0.000311	ppm	0.000096	30.79	-1.972670	Y 377.433
P (213.618 nm)	0.020687	ppm	0.000315	1.52	69.509800	Y 242.219
Pb (220.353 nm)	-0.000739 u	ppm	0.000051	6.88	1.298710	Y 242.219
S (181.972 nm)	54.855610 o	ppm	0.078254	0.14	28108.698085	Y 377.433
Sb (206.834 nm)	0.000308	ppm	0.000001	0.41	-22.422300	Y 377.433
Se (196.026 nm)	-0.001001 u	ppm	0.001107	> 100.00	12.068800	Y 242.219
Si (288.158 nm)	0.803891	ppm	0.002025	0.25	7838.850000	Y 377.433
Sn (189.925 nm)	-0.000475 u	ppm	0.000916	> 100.00	8.654350	Y 377.433
Sr (421.552 nm)	0.185134	ppm	0.002887	1.56	39000.217642	Y_R 488.368
Th (288.505 nm)	0.007403	ppm	0.000483	6.53	94.434900	Y 377.433
Ti (336.122 nm)	0.001410	ppm	0.000217	15.41	140.518000	Y 377.433
Tl (190.794 nm)	0.001707	ppm	0.001048	61.38	-1.604780	Y 377.433
U (409.013 nm)	0.003764 u	ppm	0.005668	> 100.00	-200.609000	Y 377.433
V (292.401 nm)	0.000024 u	ppm	0.000131	> 100.00	37.272300	Y 377.433
Zn (206.200 nm)	-0.003702 u	ppm	0.000093	2.51	8.407450	Y 377.433
Zr (343.823 nm)	-0.000203 u	ppm	0.000073	36.04	0.338950	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131759	21594.201453	0.002483	0.22
Y 377.433	1.124622	1138328.516432	0.001941	0.17
Y_R 377.433	1.209690	91323.000000	0.007942	0.66
Y_R 488.368	1.187240	51978.000000	0.019889	1.68
Y_R2 488.368	1.152692	100032.433070	0.006365	0.55

Sample Name: 280-116398-J-3-A

Date: 11/7/2018 6:16:18 AM Rack:Tube: 4:29

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001921	ppm	0.000073	3.80	-357.024000	Y 377.433
Al (167.019 nm)	0.159785	ppm	0.006765	4.23	91.551200	Y_R 377.433
Al H (396.152 nm)	0.158980 u	ppm	0.004561	2.87	520.292518	Y_R 377.433
As (188.980 nm)	0.002993	ppm	0.001332	44.52	2.030190	Y 242.219
B (249.678 nm)	0.157815	ppm	0.000293	0.19	3999.160000	Y 242.219
Ba (493.408 nm)	0.083946	ppm	0.000023	0.03	10344.000000	Y_R 488.368
Be (234.861 nm)	0.000063	ppm	0.000024	37.46	-22.666400	Y_R 488.368
Bi (223.061 nm)	-0.003814 u	ppm	0.001570	41.17	3.166060	Y 377.433
Ca (315.887 nm)	94.664330 o	ppm	0.104245	0.11	74999.084245	Y_R 377.433
Cd (214.439 nm)	0.000069	ppm	0.000000	0.58	5.148530	Y 377.433
Co (228.615 nm)	0.000442	ppm	0.000032	7.34	-28.143300	Y 242.219
Cr (205.560 nm)	0.000522	ppm	0.000017	3.35	3.937140	Y 377.433
Cu (324.754 nm)	0.002528	ppm	0.000121	4.78	-205.909000	Y 377.433
Fe (238.204 nm)	0.161799	ppm	0.000295	0.18	623.257633	Y_R 377.433
Fe H (259.940 nm)	0.164079 u	ppm	0.000140	0.09	313.638000	Y_R 377.433
K (766.491 nm)	7.421370	ppm	0.044963	0.61	7788.950000	Y_R2 488.368
Li (670.783 nm)	0.019833	ppm	0.001739	8.77	-692.267000	Y_R2 488.368
Mg (279.078 nm)	27.675500	ppm	0.022421	0.08	159908.000000	Y 377.433
Mn (257.610 nm)	0.155623	ppm	0.000049	0.03	36456.700000	Y 377.433
Mo (202.032 nm)	0.003239	ppm	0.000182	5.63	27.862400	Y 377.433
Na (589.592 nm)	11.792200 o	ppm	0.013473	0.11	78112.100000	Y_R2 488.368
Na H (589.593 nm)	12.221198	ppm	0.015948	0.13	47247.466328	Y_R 488.368
Ni (231.604 nm)	0.003161	ppm	0.000064	2.04	17.473000	Y 377.433
P (213.618 nm)	0.035830	ppm	0.001323	3.69	102.414000	Y 242.219
Pb (220.353 nm)	0.000564 u	ppm	0.001503	> 100.00	4.980460	Y 242.219
S (181.972 nm)	74.481233 o	ppm	0.019651	0.03	38160.028832	Y 377.433
Sb (206.834 nm)	-0.001020 u	ppm	0.000798	78.27	-26.080200	Y 377.433
Se (196.026 nm)	-0.001170 u	ppm	0.001290	> 100.00	11.927800	Y 242.219
Si (288.158 nm)	1.263660	ppm	0.010107	0.80	11790.500000	Y 377.433
Sn (189.925 nm)	0.000382	ppm	0.000363	94.88	10.357900	Y 377.433
Sr (421.552 nm)	0.266085	ppm	0.000441	0.17	55985.103765	Y_R 488.368
Th (288.505 nm)	0.004498	ppm	0.000414	9.21	87.719500	Y 377.433
Ti (336.122 nm)	0.008505	ppm	0.000989	11.63	1279.170000	Y 377.433
Tl (190.794 nm)	0.000704 u	ppm	0.001694	> 100.00	-3.845190	Y 377.433
U (409.013 nm)	0.005851	ppm	0.001630	27.86	-198.936000	Y 377.433
V (292.401 nm)	-0.000085 u	ppm	0.000034	40.47	33.139800	Y 377.433
Zn (206.200 nm)	-0.003257 u	ppm	0.000406	12.46	10.729300	Y 377.433
Zr (343.823 nm)	-0.000031 u	ppm	0.000018	60.27	23.123900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.128302	21528.245851	0.000853	0.08
Y 377.433	1.121750	1135421.352878	0.001048	0.09
Y_R 377.433	1.206940	91115.200000	0.010399	0.86
Y_R 488.368	1.176840	51522.600000	0.005422	0.46
Y_R2 488.368	1.173501	101838.223561	0.003526	0.30

Sample Name: 280-116398-J-4-A

Date: 11/7/2018 6:19:42 AM Rack:Tube: 4:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001879	ppm	0.000118	6.30	-359.195000	Y 377.433
Al (167.019 nm)	0.026385	ppm	0.001218	4.62	17.108400	Y_R 377.433
Al H (396.152 nm)	0.026443 u	ppm	0.006974	26.37	179.897730	Y_R 377.433
As (188.980 nm)	0.003682	ppm	0.000267	7.25	2.899270	Y 242.219
B (249.678 nm)	0.512312	ppm	0.000056	0.01	12854.700000	Y 242.219
Ba (493.408 nm)	0.043917	ppm	0.000307	0.70	5704.110000	Y_R 488.368
Be (234.861 nm)	0.000037	ppm	0.000001	3.39	-33.459600	Y_R 488.368
Bi (223.061 nm)	-0.002372 u	ppm	0.003338	> 100.00	6.780990	Y 377.433
Ca (315.887 nm)	78.859384 o	ppm	0.274516	0.35	62467.121050	Y_R 377.433
Cd (214.439 nm)	0.000055	ppm	0.000066	> 100.00	4.225650	Y 377.433
Co (228.615 nm)	0.000053 u	ppm	0.000199	> 100.00	-35.455800	Y 242.219
Cr (205.560 nm)	0.001056	ppm	0.000139	13.21	12.096000	Y 377.433
Cu (324.754 nm)	0.002751	ppm	0.000024	0.88	-182.985000	Y 377.433
Fe (238.204 nm)	0.063319	ppm	0.001343	2.12	259.026495	Y_R 377.433
Fe H (259.940 nm)	0.059971 u	ppm	0.000543	0.91	116.686000	Y_R 377.433
K (766.491 nm)	12.225400	ppm	0.031483	0.26	13320.700000	Y_R2 488.368
Li (670.783 nm)	0.078362	ppm	0.000119	0.15	1259.710000	Y_R2 488.368
Mg (279.078 nm)	89.921900 o	ppm	0.308176	0.34	519476.000000	Y 377.433
Mn (257.610 nm)	0.036529	ppm	0.000094	0.26	8604.550000	Y 377.433
Mo (202.032 nm)	0.000808	ppm	0.000019	2.38	6.926310	Y 377.433
Na (589.592 nm)	44.179400 o	ppm	0.052901	0.12	291279.000000	Y_R2 488.368
Na H (589.593 nm)	45.946875	ppm	0.439899	0.96	170766.922065	Y_R 488.368
Ni (231.604 nm)	0.000277 u	ppm	0.000442	> 100.00	-2.203340	Y 377.433
P (213.618 nm)	0.177264	ppm	0.001742	0.98	409.752000	Y 242.219
Pb (220.353 nm)	0.001486	ppm	0.000355	23.93	7.687790	Y 242.219
S (181.972 nm)	132.562631 bo	ppm	0.010520	0.01	67906.049302	Y 377.433
Sb (206.834 nm)	0.000624 u	ppm	0.002671	> 100.00	-21.530200	Y 377.433
Se (196.026 nm)	-0.000679 u	ppm	0.002115	> 100.00	12.333100	Y 242.219
Si (288.158 nm)	0.967549	ppm	0.004504	0.47	9245.430000	Y 377.433
Sn (189.925 nm)	-0.000198 u	ppm	0.001106	> 100.00	9.204040	Y 377.433
Sr (421.552 nm)	0.679714	ppm	0.005933	0.87	142771.413548	Y_R 488.368
Th (288.505 nm)	0.010814	ppm	0.000962	8.89	101.563000	Y 377.433
Ti (336.122 nm)	0.000703	ppm	0.000021	2.97	118.565000	Y 377.433
Tl (190.794 nm)	0.003197	ppm	0.001100	34.41	1.674050	Y 377.433
U (409.013 nm)	-0.001209 u	ppm	0.001767	> 100.00	-227.948000	Y 377.433
V (292.401 nm)	0.000404	ppm	0.000061	15.08	50.877800	Y 377.433
Zn (206.200 nm)	-0.003926 u	ppm	0.000443	11.28	7.236630	Y 377.433
Zr (343.823 nm)	-0.000251 u	ppm	0.000002	0.89	-6.140460	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.110369	21186.069340	0.001247	0.11
Y 377.433	1.104207	1117664.596930	0.002559	0.23
Y_R 377.433	1.196910	90358.000000	0.002097	0.18
Y_R 488.368	1.160830	50821.800000	0.006217	0.54
Y_R2 488.368	1.150457	99838.451054	0.005267	0.46

Sample Name: 280-116398-J-4-A SD@5

Date: 11/7/2018 6:23:06 AM Rack:Tube: 4:31

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001545	ppm	0.000058	3.77	-374.230000	Y 377.433
Al (167.019 nm)	0.003201 u	ppm	0.005185	> 100.00	4.150530	Y_R 377.433
Al H (396.152 nm)	-0.013671 u	ppm	0.001689	12.36	51.560906	Y_R 377.433
As (188.980 nm)	0.001793	ppm	0.002164	> 100.00	0.521344	Y 242.219
B (249.678 nm)	0.100862	ppm	0.000197	0.20	2576.670000	Y 242.219
Ba (493.408 nm)	0.008145	ppm	0.000116	1.42	1546.510000	Y_R 488.368
Be (234.861 nm)	0.000026	ppm	0.000026	> 100.00	-37.983000	Y_R 488.368
Bi (223.061 nm)	0.000420 u	ppm	0.001511	> 100.00	13.801700	Y 377.433
Ca (315.887 nm)	15.934889 o	ppm	0.176990	1.11	12573.407567	Y_R 377.433
Cd (214.439 nm)	-0.000007 u	ppm	0.000003	40.62	0.484484	Y 377.433
Co (228.615 nm)	0.000191	ppm	0.000166	86.74	-32.980100	Y 242.219
Cr (205.560 nm)	0.000267	ppm	0.000111	41.40	0.106823	Y 377.433
Cu (324.754 nm)	0.002288	ppm	0.000147	6.45	-172.462000	Y 377.433
Fe (238.204 nm)	0.017317	ppm	0.000434	2.51	88.886595	Y_R 377.433
Fe H (259.940 nm)	0.021389 u	ppm	0.000204	0.95	43.697400	Y_R 377.433
K (766.491 nm)	2.416370	ppm	0.013301	0.55	2025.810000	Y_R2 488.368
Li (670.783 nm)	0.023154	ppm	0.000151	0.65	-581.490000	Y_R2 488.368
Mg (279.078 nm)	17.685900	ppm	0.038870	0.22	102202.000000	Y 377.433
Mn (257.610 nm)	0.007493	ppm	0.000044	0.59	1814.070000	Y 377.433
Mo (202.032 nm)	0.000004 u	ppm	0.000143	> 100.00	0.006083	Y 377.433
Na (589.592 nm)	8.792660	ppm	0.048931	0.56	58208.300000	Y_R2 488.368
Na H (589.593 nm)	9.125271	ppm	0.102685	1.13	35833.576157	Y_R 488.368
Ni (231.604 nm)	0.000183	ppm	0.000204	> 100.00	-2.852790	Y 377.433
P (213.618 nm)	0.032342	ppm	0.000578	1.79	94.836800	Y 242.219
Pb (220.353 nm)	0.000393 u	ppm	0.000858	> 100.00	4.562400	Y 242.219
S (181.972 nm)	25.987222 o	ppm	0.010895	0.04	13323.513973	Y 377.433
Sb (206.834 nm)	0.002609	ppm	0.001334	51.14	-16.099900	Y 377.433
Se (196.026 nm)	0.001437	ppm	0.000863	60.05	14.422700	Y 242.219
Si (288.158 nm)	0.191042	ppm	0.000963	0.50	2571.600000	Y 377.433
Sn (189.925 nm)	-0.000715 u	ppm	0.000034	4.80	8.177240	Y 377.433
Sr (421.552 nm)	0.134848	ppm	0.001102	0.82	28449.291459	Y_R 488.368
Th (288.505 nm)	0.005153	ppm	0.000372	7.22	86.358100	Y 377.433
Ti (336.122 nm)	0.000060	ppm	0.000018	29.46	-169.822000	Y 377.433
Tl (190.794 nm)	0.000767 u	ppm	0.001973	> 100.00	-3.659690	Y 377.433
U (409.013 nm)	0.007186	ppm	0.003654	50.85	-178.064000	Y 377.433
V (292.401 nm)	-0.000165 u	ppm	0.000170	> 100.00	29.717600	Y 377.433
Zn (206.200 nm)	-0.005041 u	ppm	0.000177	3.51	1.409950	Y 377.433
Zr (343.823 nm)	-0.000292 u	ppm	0.000012	4.03	-11.635700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.142968	21808.071719	0.002372	0.21
Y 377.433	1.130653	1144433.006609	0.002103	0.19
Y_R 377.433	1.212830	91560.000000	0.011361	0.94
Y_R 488.368	1.185620	51907.100000	0.011882	1.00
Y_R2 488.368	1.158233	100513.247049	0.005008	0.43

Sample Name: 280-116398-J-4-B MS

Date: 11/7/2018 6:26:30 AM Rack:Tube: 4:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049132	ppm	0.000439	0.89	1780.490000	Y 377.433
Al (167.019 nm)	2.025150	ppm	0.007868	0.39	1132.170000	Y_R 377.433
Al H (396.152 nm)	2.088558	ppm	0.006411	0.31	5475.227248	Y_R 377.433
As (188.980 nm)	1.044260	ppm	0.002431	0.23	1313.300000	Y 242.219
B (249.678 nm)	1.606280 o	ppm	0.003718	0.23	40202.400000	Y 242.219
Ba (493.408 nm)	2.098840 o	ppm	0.009307	0.44	243708.000000	Y_R 488.368
Be (234.861 nm)	0.049827	ppm	0.000179	0.36	14773.400000	Y_R 488.368
Bi (223.061 nm)	2.023700	ppm	0.000307	0.02	5108.810000	Y 377.433
Ca (315.887 nm)	129.296599 o	ppm	0.728682	0.56	102459.552612	Y_R 377.433
Cd (214.439 nm)	0.098795	ppm	0.000229	0.23	5907.040000	Y 377.433
Co (228.615 nm)	0.487926	ppm	0.002036	0.42	8838.600000	Y 242.219
Cr (205.560 nm)	0.203441	ppm	0.000047	0.02	3090.140000	Y 377.433
Cu (324.754 nm)	0.264967	ppm	0.000004	0.00	14449.100000	Y 377.433
Fe (238.204 nm)	1.062472	ppm	0.006658	0.63	3954.426234	Y_R 377.433
Fe H (259.940 nm)	1.087620 u	ppm	0.002015	0.19	2060.800000	Y_R 377.433
K (766.491 nm)	65.830700	ppm	0.157687	0.24	75046.000000	Y_R2 488.368
Li (670.783 nm)	1.122980	ppm	0.004626	0.41	36098.400000	Y_R2 488.368
Mg (279.078 nm)	139.431000 o	ppm	0.154212	0.11	805406.000000	Y 377.433
Mn (257.610 nm)	0.544772	ppm	0.000319	0.06	127465.000000	Y 377.433
Mo (202.032 nm)	1.070460	ppm	0.000717	0.07	9218.680000	Y 377.433
Na (589.592 nm)	94.125900 o	ppm	0.078589	0.08	624300.000000	Y_R2 488.368
Na H (589.593 nm)	98.664812	ppm	0.661321	0.67	365840.596363	Y_R 488.368
Ni (231.604 nm)	0.500946	ppm	0.000145	0.03	3415.670000	Y 377.433
P (213.618 nm)	10.960900 o	ppm	0.023010	0.21	23842.500000	Y 242.219
Pb (220.353 nm)	0.502483	ppm	0.002976	0.59	1445.300000	Y 242.219
S (181.972 nm)	134.095549 bo	ppm	0.311966	0.23	68692.390312	Y 377.433
Sb (206.834 nm)	0.543348	ppm	0.001399	0.26	1456.270000	Y 377.433
Se (196.026 nm)	2.098430	ppm	0.008674	0.41	2101.880000	Y 242.219
Si (288.158 nm)	11.514800 o	ppm	0.020618	0.18	99895.400000	Y 377.433
Sn (189.925 nm)	2.134700	ppm	0.002944	0.14	4252.930000	Y 377.433
Sr (421.552 nm)	1.722770 o	ppm	0.009453	0.55	361622.008578	Y_R 488.368
Th (288.505 nm)	1.035050	ppm	0.004867	0.47	2793.830000	Y 377.433
Ti (336.122 nm)	1.044820	ppm	0.001064	0.10	148973.000000	Y 377.433
Tl (190.794 nm)	2.037000	ppm	0.000015	0.00	4465.700000	Y 377.433
U (409.013 nm)	2.132370	ppm	0.005780	0.27	9373.880000	Y 377.433
V (292.401 nm)	0.518535	ppm	0.000033	0.01	18765.300000	Y 377.433
Zn (206.200 nm)	0.489733	ppm	0.000521	0.11	2585.450000	Y 377.433
Zr (343.823 nm)	0.518907	ppm	0.000161	0.03	68257.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.081606	20637.264272	0.003026	0.28
Y 377.433	1.080244	1093409.550636	0.000942	0.09
Y_R 377.433	1.175440	88737.200000	0.006883	0.59
Y_R 488.368	1.145300	50141.900000	0.004962	0.43
Y_R2 488.368	1.151433	99923.160874	0.005521	0.48

Sample Name: 280-116398-J-4-C MSD

Date: 11/7/2018 6:29:54 AM
Rack:Tube: 4:33

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049494	ppm	0.000241	0.49	1797.550000	Y 377.433
Al (167.019 nm)	2.001480	ppm	0.023827	1.19	1118.970000	Y_R 377.433
Al H (396.152 nm)	2.071584	ppm	0.010139	0.49	5432.263317	Y_R 377.433
As (188.980 nm)	1.041310	ppm	0.001430	0.14	1309.590000	Y 242.219
B (249.678 nm)	1.606110 o	ppm	0.000401	0.02	40198.300000	Y 242.219
Ba (493.408 nm)	2.092120 o	ppm	0.004275	0.20	242930.000000	Y_R 488.368
Be (234.861 nm)	0.049841	ppm	0.000058	0.12	14777.600000	Y_R 488.368
Bi (223.061 nm)	2.024770	ppm	0.000637	0.03	5111.490000	Y 377.433
Ca (315.887 nm)	128.511886 o	ppm	0.470839	0.37	101837.342040	Y_R 377.433
Cd (214.439 nm)	0.098651	ppm	0.000175	0.18	5898.420000	Y 377.433
Co (228.615 nm)	0.487140	ppm	0.000127	0.03	8824.330000	Y 242.219
Cr (205.560 nm)	0.203503	ppm	0.000307	0.15	3091.090000	Y 377.433
Cu (324.754 nm)	0.265183	ppm	0.000698	0.26	14462.700000	Y 377.433
Fe (238.204 nm)	1.062516	ppm	0.002794	0.26	3954.590284	Y_R 377.433
Fe H (259.940 nm)	1.086150 u	ppm	0.000766	0.07	2058.020000	Y_R 377.433
K (766.491 nm)	65.510500	ppm	0.030097	0.05	74677.200000	Y_R2 488.368
Li (670.783 nm)	1.118230	ppm	0.006640	0.59	35940.200000	Y_R2 488.368
Mg (279.078 nm)	139.021000 o	ppm	0.141968	0.10	803037.000000	Y 377.433
Mn (257.610 nm)	0.544575	ppm	0.000955	0.18	127419.000000	Y 377.433
Mo (202.032 nm)	1.070410	ppm	0.003057	0.29	9218.240000	Y 377.433
Na (589.592 nm)	93.885200 o	ppm	0.614034	0.65	622701.000000	Y_R2 488.368
Na H (589.593 nm)	98.823833	ppm	0.160668	0.16	366416.574044	Y_R 488.368
Ni (231.604 nm)	0.499307	ppm	0.000291	0.06	3404.480000	Y 377.433
P (213.618 nm)	10.933000 o	ppm	0.010138	0.09	23782.000000	Y 242.219
Pb (220.353 nm)	0.501281	ppm	0.001781	0.36	1441.810000	Y 242.219
S (181.972 nm)	133.721692 bo	ppm	0.321224	0.24	68500.919124	Y 377.433
Sb (206.834 nm)	0.544016	ppm	0.000895	0.16	1458.140000	Y 377.433
Se (196.026 nm)	2.101070	ppm	0.000038	0.00	2104.510000	Y 242.219
Si (288.158 nm)	11.576100 o	ppm	0.023076	0.20	100423.000000	Y 377.433
Sn (189.925 nm)	2.128940	ppm	0.001620	0.08	4241.480000	Y 377.433
Sr (421.552 nm)	1.716937 o	ppm	0.005454	0.32	360398.239108	Y_R 488.368
Th (288.505 nm)	1.034330	ppm	0.003478	0.34	2791.650000	Y 377.433
Ti (336.122 nm)	1.044590	ppm	0.000563	0.05	148937.000000	Y 377.433
Tl (190.794 nm)	2.032380	ppm	0.005341	0.26	4455.530000	Y 377.433
U (409.013 nm)	2.120380	ppm	0.000817	0.04	9319.800000	Y 377.433
V (292.401 nm)	0.517891	ppm	0.000290	0.06	18742.800000	Y 377.433
Zn (206.200 nm)	0.487713	ppm	0.002394	0.49	2574.900000	Y 377.433
Zr (343.823 nm)	0.519171	ppm	0.000208	0.04	68292.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.089855	20794.659606	0.002597	0.24
Y 377.433	1.087541	1100795.263884	0.002652	0.24
Y_R 377.433	1.181960	89229.700000	0.003785	0.32
Y_R 488.368	1.151010	50391.800000	0.001011	0.09
Y_R2 488.368	1.132354	98267.492462	0.007302	0.64

Sample Name: CCVH-5408055

Date: 11/7/2018 6:33:18 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000108 u	ppm	0.000018	16.58	-700.100000	Y 377.433
Al (167.019 nm)	44.378200 o	ppm	0.260828	0.59	24777.800000	Y_R 377.433
Al H (396.152 nm)	48.567187	ppm	0.140820	0.29	122232.604288	Y_R 377.433
As (188.980 nm)	0.001033	ppm	0.000459	44.39	-0.874391	Y 242.219
B (249.678 nm)	0.001077	ppm	0.000292	27.10	9.655730	Y 242.219
Ba (493.408 nm)	-0.000670 u	ppm	0.000179	26.71	567.900000	Y_R 488.368
Be (234.861 nm)	-0.000277 u	ppm	0.000095	34.31	1416.100000	Y_R 488.368
Bi (223.061 nm)	0.995080	ppm	0.002173	0.22	2526.590000	Y 377.433
Ca (315.887 nm)	0.009380	ppm	0.005220	55.66	-54.151635	Y_R 377.433
Cd (214.439 nm)	-0.000209 u	ppm	0.000040	19.27	35.928900	Y 377.433
Co (228.615 nm)	0.003066	ppm	0.000053	1.74	19.102800	Y 242.219
Cr (205.560 nm)	0.000075 u	ppm	0.000134	> 100.00	-16.429900	Y 377.433
Cu (324.754 nm)	-0.001868 u	ppm	0.000299	16.03	-68.318500	Y 377.433
Fe (238.204 nm)	48.278556 o	ppm	0.194042	0.40	178584.768412	Y_R 377.433
Fe H (259.940 nm)	49.662200	ppm	0.198767	0.40	93954.100000	Y_R 377.433
K (766.491 nm)	0.153437	ppm	0.061428	40.03	-579.911000	Y_R2 488.368
Li (670.783 nm)	0.011125	ppm	0.002228	20.03	-982.668000	Y_R2 488.368
Mg (279.078 nm)	-0.010827 u	ppm	0.001618	14.94	-384.823000	Y 377.433
Mn (257.610 nm)	0.001451	ppm	0.000020	1.38	401.111000	Y 377.433
Mo (202.032 nm)	0.000060 u	ppm	0.000419	> 100.00	0.488026	Y 377.433
Na (589.592 nm)	244.473000 o	ppm	0.062299	0.03	1609980.000000	Y_R2 488.368
Na H (589.593 nm)	255.808305	ppm	0.284106	0.11	939571.126109	Y_R 488.368
Ni (231.604 nm)	0.004116	ppm	0.000149	3.63	26.011700	Y 377.433
P (213.618 nm)	-0.006069 u	ppm	0.001310	21.58	11.369600	Y 242.219
Pb (220.353 nm)	-0.003325 u	ppm	0.001291	38.83	11.689000	Y 242.219
S (181.972 nm)	5.064632	ppm	0.019611	0.39	2608.020974	Y 377.433
Sb (206.834 nm)	-0.001318 u	ppm	0.000837	63.50	-73.137600	Y 377.433
Se (196.026 nm)	-0.003242 u	ppm	0.000188	5.79	0.854419	Y 242.219
Si (288.158 nm)	0.022997	ppm	0.000377	1.64	1127.310000	Y 377.433
Sn (189.925 nm)	0.000798	ppm	0.000354	44.39	11.183500	Y 377.433
Sr (421.552 nm)	0.000386	ppm	0.000007	1.81	236.998190	Y_R 488.368
Th (288.505 nm)	4.962460	ppm	0.007979	0.16	12976.700000	Y 377.433
Ti (336.122 nm)	0.001148	ppm	0.000063	5.53	-64.584100	Y 377.433
Tl (190.794 nm)	-0.001674 u	ppm	0.001691	> 100.00	-10.326200	Y 377.433
U (409.013 nm)	10.001800	ppm	0.005704	0.06	45081.800000	Y 377.433
V (292.401 nm)	0.004386	ppm	0.000196	4.47	21.304500	Y 377.433
Zn (206.200 nm)	-0.004583 u	ppm	0.000052	1.14	3.803230	Y 377.433
Zr (343.823 nm)	-0.004259 u	ppm	0.000048	1.14	-389.567000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122524	21417.996473	0.003582	0.32
Y 377.433	1.098872	1112265.004491	0.005813	0.53
Y_R 377.433	1.195720	90268.500000	0.003573	0.30
Y_R 488.368	1.167330	51106.500000	0.009771	0.84
Y_R2 488.368	1.144923	99358.207711	0.008080	0.71

Sample Name: CCV-5407546

Date: 11/7/2018 6:36:41 AM
Rack:Tube: S1:2
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.498042	ppm	0.000851	0.17	22376.900000	Y 377.433
Al (167.019 nm)	0.507573	ppm	0.000715	0.14	287.036000	Y_R 377.433
Al H (396.152 nm)	0.492885 u	ppm	0.007827	1.59	1362.076730	Y_R 377.433
As (188.980 nm)	0.991120	ppm	0.005809	0.59	1246.370000	Y 242.219
B (249.678 nm)	0.494114	ppm	0.000983	0.20	12418.300000	Y 242.219
Ba (493.408 nm)	0.492100	ppm	0.003620	0.74	57605.600000	Y_R 488.368
Be (234.861 nm)	0.478067	ppm	0.001246	0.26	142468.000000	Y_R 488.368
Bi (223.061 nm)	-0.001396 u	ppm	0.001328	95.12	9.641320	Y 377.433
Ca (315.887 nm)	5.116687	ppm	0.039670	0.78	3995.788738	Y_R 377.433
Cd (214.439 nm)	0.498101	ppm	0.000395	0.08	29773.400000	Y 377.433
Co (228.615 nm)	0.490950	ppm	0.000214	0.04	8873.580000	Y 242.219
Cr (205.560 nm)	0.500466	ppm	0.000375	0.08	7608.570000	Y 377.433
Cu (324.754 nm)	0.508038	ppm	0.001202	0.24	28018.900000	Y 377.433
Fe (238.204 nm)	2.460411	ppm	0.021244	0.86	9124.753784	Y_R 377.433
Fe H (259.940 nm)	2.547590 u	ppm	0.016305	0.64	4822.760000	Y_R 377.433
K (766.491 nm)	50.508900	ppm	0.239370	0.47	57403.300000	Y_R2 488.368
Li (670.783 nm)	0.998096	ppm	0.004397	0.44	31933.500000	Y_R2 488.368
Mg (279.078 nm)	19.885300	ppm	0.013804	0.07	114903.000000	Y 377.433
Mn (257.610 nm)	0.499706	ppm	0.000406	0.08	116926.000000	Y 377.433
Mo (202.032 nm)	0.505949	ppm	0.000983	0.19	4357.180000	Y 377.433
Na (589.592 nm)	5.114770	ppm	0.006791	0.13	34970.700000	Y_R2 488.368
Na H (589.593 nm)	5.510770 u	ppm	0.057693	1.05	23047.584742	Y_R 488.368
Ni (231.604 nm)	0.515176	ppm	0.000870	0.17	3511.540000	Y 377.433
P (213.618 nm)	1.000840	ppm	0.007603	0.76	2199.380000	Y 242.219
Pb (220.353 nm)	0.988465	ppm	0.003746	0.38	2836.510000	Y 242.219
S (181.972 nm)	0.050327	ppm	0.000758	1.51	41.185486	Y 377.433
Sb (206.834 nm)	1.007740	ppm	0.001898	0.19	2744.350000	Y 377.433
Se (196.026 nm)	0.986217	ppm	0.004130	0.42	994.530000	Y 242.219
Si (288.158 nm)	4.991770	ppm	0.006917	0.14	43832.300000	Y 377.433
Sn (189.925 nm)	1.027250	ppm	0.000566	0.06	2051.550000	Y 377.433
Sr (421.552 nm)	0.503736	ppm	0.002910	0.58	105848.208846	Y_R 488.368
Th (288.505 nm)	0.008768	ppm	0.003292	37.55	112.060000	Y 377.433
Ti (336.122 nm)	0.496916	ppm	0.001151	0.23	70555.200000	Y 377.433
Tl (190.794 nm)	1.005320	ppm	0.002492	0.25	2202.340000	Y 377.433
U (409.013 nm)	0.006152	ppm	0.003228	52.47	-217.801000	Y 377.433
V (292.401 nm)	0.492622	ppm	0.001049	0.21	17789.100000	Y 377.433
Zn (206.200 nm)	0.494854	ppm	0.000744	0.15	2612.200000	Y 377.433
Zr (343.823 nm)	0.500726	ppm	0.000647	0.13	65871.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.144669	21840.526260	0.001508	0.13
Y 377.433	1.130527	1144304.950460	0.000590	0.05
Y_R 377.433	1.214140	91659.300000	0.006117	0.50
Y_R 488.368	1.180330	51675.400000	0.004384	0.37
Y_R2 488.368	1.165466	101140.997722	0.008208	0.70

Sample Name: CCB

Date: 11/7/2018 6:40:03 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001411	ppm	0.000101	7.15	-380.312000	Y 377.433
Al (167.019 nm)	-0.003784 u	ppm	0.000181	4.79	0.243344	Y_R 377.433
Al H (396.152 nm)	-0.024931 u	ppm	0.003678	14.75	16.356712	Y_R 377.433
As (188.980 nm)	-0.000038 u	ppm	0.000243	> 100.00	-1.785440	Y 242.219
B (249.678 nm)	0.001312	ppm	0.000205	15.62	89.915900	Y 242.219
Ba (493.408 nm)	-0.000871 u	ppm	0.000320	36.74	498.555000	Y_R 488.368
Be (234.861 nm)	0.000060	ppm	0.000013	22.21	-28.385400	Y_R 488.368
Bi (223.061 nm)	0.001525 u	ppm	0.002629	> 100.00	16.582600	Y 377.433
Ca (315.887 nm)	0.006455	ppm	0.001579	24.46	-56.470916	Y_R 377.433
Cd (214.439 nm)	0.000104	ppm	0.000056	54.15	7.096880	Y 377.433
Co (228.615 nm)	0.000223	ppm	0.000058	25.92	-32.413300	Y 242.219
Cr (205.560 nm)	0.000252	ppm	0.000040	16.02	-0.119654	Y 377.433
Cu (324.754 nm)	0.002185	ppm	0.000242	11.09	-170.571000	Y 377.433
Fe (238.204 nm)	-0.001413 u	ppm	0.000402	28.43	19.611540	Y_R 377.433
Fe H (259.940 nm)	0.003484 u	ppm	0.002823	81.02	9.824560	Y_R 377.433
K (766.491 nm)	0.137053	ppm	0.010433	7.61	-598.777000	Y_R2 488.368
Li (670.783 nm)	0.010673 Z	ppm	0.000745	6.98	-997.750000 Z	Y_R2 488.368
Mg (279.078 nm)	0.001700	ppm	0.000672	39.53	49.143100	Y 377.433
Mn (257.610 nm)	0.000007 u	ppm	0.000031	> 100.00	63.540000	Y 377.433
Mo (202.032 nm)	0.000213	ppm	0.000086	40.34	1.808350	Y 377.433
Na (589.592 nm)	0.030199	ppm	0.004814	15.94	494.076000	Y_R2 488.368
Na H (589.593 nm)	-0.005263 u	ppm	0.007895	> 100.00	2374.009709	Y_R 488.368
Ni (231.604 nm)	0.000422	ppm	0.000092	21.91	-1.221840	Y 377.433
P (213.618 nm)	-0.003491 u	ppm	0.001796	51.44	16.970800	Y 242.219
Pb (220.353 nm)	0.000638	ppm	0.000021	3.25	5.265880	Y 242.219
S (181.972 nm)	0.042199	ppm	0.002706	6.41	35.784124	Y 377.433
Sb (206.834 nm)	0.000526 u	ppm	0.002227	> 100.00	-21.803300	Y 377.433
Se (196.026 nm)	-0.001391 u	ppm	0.002437	> 100.00	11.606600	Y 242.219
Si (288.158 nm)	-0.001271 u	ppm	0.000266	20.91	918.734000	Y 377.433
Sn (189.925 nm)	-0.001268 u	ppm	0.000141	11.14	7.078110	Y 377.433
Sr (421.552 nm)	-0.000063 u	ppm	0.000021	33.30	142.715116	Y_R 488.368
Th (288.505 nm)	0.005933	ppm	0.001615	27.22	88.212600	Y 377.433
Ti (336.122 nm)	0.000006 u	ppm	0.000090	> 100.00	-227.321000	Y 377.433
Tl (190.794 nm)	0.002367	ppm	0.000556	23.48	-0.142075	Y 377.433
U (409.013 nm)	0.005590	ppm	0.005645	> 100.00	-182.296000	Y 377.433
V (292.401 nm)	0.000113	ppm	0.000062	55.02	38.881300	Y 377.433
Zn (206.200 nm)	-0.005248 u	ppm	0.000056	1.06	0.332003	Y 377.433
Zr (343.823 nm)	-0.000166 u	ppm	0.000009	5.66	4.830220	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.161563	22162.863134	0.004107	0.35
Y 377.433	1.148512	1162510.049775	0.003667	0.32
Y_R 377.433	1.218370	91978.500000	0.000426	0.03
Y_R 488.368	1.184520	51859.000000	0.008638	0.73
Y_R2 488.368	1.164633	101068.698638	0.003488	0.30

Sample Name: CCVL-5413446

Date: 11/7/2018 6:43:27 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.011057	ppm	0.000335	3.03	62.043400	Y 377.433
Al (167.019 nm)	0.100543	ppm	0.000520	0.52	58.478900	Y_R 377.433
Al H (396.152 nm)	0.075719 u	ppm	0.003302	4.36	271.171154	Y_R 377.433
As (188.980 nm)	0.014256	ppm	0.000994	6.97	16.214200	Y 242.219
B (249.678 nm)	0.101990	ppm	0.000005	0.00	2605.140000	Y 242.219
Ba (493.408 nm)	0.009127	ppm	0.000219	2.40	1656.590000	Y_R 488.368
Be (234.861 nm)	0.000980	ppm	0.000015	1.55	248.167000	Y_R 488.368
Bi (223.061 nm)	0.100976	ppm	0.000672	0.67	267.027000	Y 377.433
Ca (315.887 nm)	0.229265	ppm	0.001345	0.59	120.200551	Y_R 377.433
Cd (214.439 nm)	0.005150	ppm	0.000017	0.33	308.814000	Y 377.433
Co (228.615 nm)	0.010476	ppm	0.000062	0.59	153.638000	Y 242.219
Cr (205.560 nm)	0.010197	ppm	0.000038	0.37	151.184000	Y 377.433
Cu (324.754 nm)	0.018054	ppm	0.000036	0.20	712.018000	Y 377.433
Fe (238.204 nm)	0.099819	ppm	0.000675	0.68	394.022463	Y_R 377.433
Fe H (259.940 nm)	0.104135 u	ppm	0.000311	0.30	200.236000	Y_R 377.433
K (766.491 nm)	3.283810	ppm	0.042536	1.30	3024.640000	Y_R2 488.368
Li (670.783 nm)	0.032857 Q	ppm	0.000928	2.83	-257.911000 Q	Y_R2 488.368
Mg (279.078 nm)	0.204928	ppm	0.000084	0.04	1221.950000	Y 377.433
Mn (257.610 nm)	0.010394	ppm	0.000041	0.39	2492.640000	Y 377.433
Mo (202.032 nm)	0.019667	ppm	0.000278	1.41	169.346000	Y 377.433
Na (589.592 nm)	1.106900	ppm	0.010930	0.99	7604.410000	Y_R2 488.368
Na H (589.593 nm)	1.083100 u	ppm	0.003413	0.32	6371.119391	Y_R 488.368
Ni (231.604 nm)	0.043336	ppm	0.000538	1.24	291.540000	Y 377.433
P (213.618 nm)	2.913640 o	ppm	0.002644	0.09	6355.890000	Y 242.219
Pb (220.353 nm)	0.009240	ppm	0.000556	6.01	29.932300	Y 242.219
S (181.972 nm)	0.139696 Q	ppm	0.002172	1.55	85.742721 Q	Y 377.433
Sb (206.834 nm)	0.019930	ppm	0.000728	3.65	31.372400	Y 377.433
Se (196.026 nm)	0.016685	ppm	0.001229	7.37	29.588100	Y 242.219
Si (288.158 nm)	0.502439	ppm	0.004521	0.90	5247.960000	Y 377.433
Sn (189.925 nm)	0.101562	ppm	0.000508	0.50	211.482000	Y 377.433
Sr (421.552 nm)	0.010270	ppm	0.000122	1.19	2310.887525	Y_R 488.368
Th (288.505 nm)	0.019465	ppm	0.001376	7.07	124.109000	Y 377.433
Ti (336.122 nm)	0.009871	ppm	0.000081	0.82	1178.190000	Y 377.433
Tl (190.794 nm)	0.015290	ppm	0.000104	0.68	28.198900	Y 377.433
U (409.013 nm)	0.063301	ppm	0.003415	5.40	77.624300	Y 377.433
V (292.401 nm)	0.009675	ppm	0.000247	2.55	381.414000	Y 377.433
Zn (206.200 nm)	0.015920	ppm	0.000391	2.45	110.882000	Y 377.433
Zr (343.823 nm)	0.015121	ppm	0.000124	0.82	2015.080000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.156397	22064.294457	0.001589	0.14
Y 377.433	1.143780	1157719.748801	0.000524	0.05
Y_R 377.433	1.219720	92080.600000	0.002358	0.19
Y_R 488.368	1.182190	51756.900000	0.001228	0.10
Y_R2 488.368	1.178955	102311.551831	0.009650	0.82

Sample Name: 280-116471-B-1-A

Date: 11/7/2018 6:46:51 AM Rack:Tube: 4:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001467	ppm	0.000044	2.99	-377.839000	Y 377.433
Al (167.019 nm)	5.329970 o	ppm	0.024093	0.45	2976.600000	Y_R 377.433
Al H (396.152 nm)	5.315630	ppm	0.026954	0.51	13463.736030	Y_R 377.433
As (188.980 nm)	0.002055	ppm	0.000058	2.81	0.816259	Y 242.219
B (249.678 nm)	0.037418	ppm	0.000159	0.42	985.981000	Y 242.219
Ba (493.408 nm)	0.165430	ppm	0.001763	1.07	19770.700000	Y_R 488.368
Be (234.861 nm)	0.000269	ppm	0.000001	0.49	155.400000	Y_R 488.368
Bi (223.061 nm)	-0.004075 u	ppm	0.000021	0.51	3.124670	Y 377.433
Ca (315.887 nm)	34.713970 o	ppm	0.001155	0.00	27463.604154	Y_R 377.433
Cd (214.439 nm)	0.000061	ppm	0.000041	67.07	8.273170	Y 377.433
Co (228.615 nm)	0.000917	ppm	0.000025	2.71	-13.904700	Y 242.219
Cr (205.560 nm)	0.006012	ppm	0.000102	1.70	86.484900	Y 377.433
Cu (324.754 nm)	0.006663	ppm	0.000094	1.41	59.692300	Y 377.433
Fe (238.204 nm)	3.812237	ppm	0.001439	0.04	14124.528102	Y_R 377.433
Fe H (259.940 nm)	3.918300 u	ppm	0.000932	0.02	7415.870000	Y_R 377.433
K (766.491 nm)	5.015850	ppm	0.028851	0.58	5019.040000	Y_R2 488.368
Li (670.783 nm)	0.023949	ppm	0.001107	4.62	-554.988000	Y_R2 488.368
Mg (279.078 nm)	8.709800	ppm	0.012567	0.14	50345.100000	Y 377.433
Mn (257.610 nm)	0.065709	ppm	0.000022	0.03	15428.800000	Y 377.433
Mo (202.032 nm)	0.000533	ppm	0.000347	65.07	4.563170	Y 377.433
Na (589.592 nm)	15.479100 o	ppm	0.099557	0.64	102553.000000	Y_R2 488.368
Na H (589.593 nm)	15.829727	ppm	0.155783	0.98	60544.399430	Y_R 488.368
Ni (231.604 nm)	0.004242	ppm	0.000288	6.79	24.999700	Y 377.433
P (213.618 nm)	0.213169	ppm	0.001115	0.52	487.772000	Y 242.219
Pb (220.353 nm)	0.001000 u	ppm	0.001475	> 100.00	4.884880	Y 242.219
S (181.972 nm)	7.053799	ppm	0.003164	0.04	3626.928995	Y 377.433
Sb (206.834 nm)	-0.000861 u	ppm	0.001261	> 100.00	-26.755400	Y 377.433
Se (196.026 nm)	-0.003437 u	ppm	0.001302	37.87	8.990970	Y 242.219
Si (288.158 nm)	15.434300 o	ppm	0.214108	1.39	133583.000000	Y 377.433
Sn (189.925 nm)	-0.000865 u	ppm	0.000846	97.76	7.878200	Y 377.433
Sr (421.552 nm)	0.197835	ppm	0.001736	0.88	41665.037133	Y_R 488.368
Th (288.505 nm)	0.006046	ppm	0.001528	25.27	89.975100	Y 377.433
Ti (336.122 nm)	0.165868	ppm	0.005931	3.58	23502.100000	Y 377.433
Tl (190.794 nm)	0.000216	ppm	0.000248	> 100.00	-5.710450	Y 377.433
U (409.013 nm)	0.000730 u	ppm	0.004084	> 100.00	-207.725000	Y 377.433
V (292.401 nm)	0.008227	ppm	0.000271	3.29	335.783000	Y 377.433
Zn (206.200 nm)	0.005463	ppm	0.000271	4.96	56.268800	Y 377.433
Zr (343.823 nm)	0.005898	ppm	0.000370	6.28	813.491000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.153653	22011.942789	0.002690	0.23
Y 377.433	1.143817	1157757.913956	0.002597	0.23
Y_R 377.433	1.246280	94085.600000	0.004465	0.36
Y_R 488.368	1.221810	53491.400000	0.006016	0.49
Y_R2 488.368	1.201271	104248.154672	0.004510	0.38

Sample Name: 280-116527-D-1-A

Date: 11/7/2018 6:50:14 AM Rack:Tube: 4:35

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001503	ppm	0.000058	3.89	-376.149000	Y 377.433
Al (167.019 nm)	0.790119	ppm	0.000192	0.02	443.240000	Y_R 377.433
Al H (396.152 nm)	0.775946 u	ppm	0.000322	0.04	2051.828282	Y_R 377.433
As (188.980 nm)	0.000880	ppm	0.000182	20.72	-0.633540	Y 242.219
B (249.678 nm)	0.011723	ppm	0.000031	0.26	349.162000	Y 242.219
Ba (493.408 nm)	0.020467	ppm	0.000279	1.36	2981.460000	Y_R 488.368
Be (234.861 nm)	0.000047	ppm	0.000017	35.52	-15.499100	Y_R 488.368
Bi (223.061 nm)	0.000134 u	ppm	0.000704	> 100.00	13.170900	Y 377.433
Ca (315.887 nm)	47.855585 o	ppm	0.249485	0.52	37883.774336	Y_R 377.433
Cd (214.439 nm)	0.000106	ppm	0.000029	26.88	7.771650	Y 377.433
Co (228.615 nm)	0.000596	ppm	0.000145	24.28	-24.801900	Y 242.219
Cr (205.560 nm)	0.003161	ppm	0.000168	5.32	43.995200	Y 377.433
Cu (324.754 nm)	0.007543	ppm	0.000365	4.83	99.563500	Y 377.433
Fe (238.204 nm)	0.537049	ppm	0.003165	0.59	2011.130882	Y_R 377.433
Fe H (259.940 nm)	0.552412 u	ppm	0.003252	0.59	1048.290000	Y_R 377.433
K (766.491 nm)	1.528660	ppm	0.010152	0.66	1003.630000	Y_R2 488.368
Li (670.783 nm)	0.014251	ppm	0.001123	7.88	-878.414000	Y_R2 488.368
Mg (279.078 nm)	2.445310	ppm	0.002368	0.10	14163.900000	Y 377.433
Mn (257.610 nm)	0.017337	ppm	0.000029	0.17	4116.200000	Y 377.433
Mo (202.032 nm)	0.004669	ppm	0.000061	1.31	40.180300	Y 377.433
Na (589.592 nm)	1.119650	ppm	0.003930	0.35	7711.120000	Y_R2 488.368
Na H (589.593 nm)	1.021190 u	ppm	0.012469	1.22	6154.906874	Y_R 488.368
Ni (231.604 nm)	0.001946	ppm	0.000540	27.77	9.199180	Y 377.433
P (213.618 nm)	0.141585	ppm	0.000384	0.27	332.220000	Y 242.219
Pb (220.353 nm)	0.001432	ppm	0.000702	49.01	7.296890	Y 242.219
S (181.972 nm)	3.113960	ppm	0.009339	0.30	1609.025217	Y 377.433
Sb (206.834 nm)	0.001531	ppm	0.001221	79.75	-19.171800	Y 377.433
Se (196.026 nm)	0.000739 u	ppm	0.001062	> 100.00	13.651300	Y 242.219
Si (288.158 nm)	2.009880	ppm	0.012361	0.62	18204.000000	Y 377.433
Sn (189.925 nm)	-0.000536 u	ppm	0.000001	0.19	8.531880	Y 377.433
Sr (421.552 nm)	0.122500	ppm	0.001109	0.90	25858.668255	Y_R 488.368
Th (288.505 nm)	0.003191	ppm	0.002396	75.07	81.564200	Y 377.433
Ti (336.122 nm)	0.024688	ppm	0.000062	0.25	3437.410000	Y 377.433
Tl (190.794 nm)	-0.000051 u	ppm	0.000389	> 100.00	-5.588960	Y 377.433
U (409.013 nm)	0.006855	ppm	0.003956	57.70	-185.244000	Y 377.433
V (292.401 nm)	0.002221	ppm	0.000073	3.28	115.372000	Y 377.433
Zn (206.200 nm)	0.020321	ppm	0.000238	1.17	133.869000	Y 377.433
Zr (343.823 nm)	0.000998	ppm	0.000117	11.73	159.446000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.158899	22112.044078	0.003050	0.26
Y 377.433	1.149935	1163950.330033	0.003506	0.30
Y_R 377.433	1.236440	93342.500000	0.006917	0.56
Y_R 488.368	1.210680	53004.300000	0.016613	1.37
Y_R2 488.368	1.197812	103948.012575	0.009181	0.77

Sample Name: 280-116552-A-1-A

Date: 11/7/2018 6:53:37 AM Rack:Tube: 4:36

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001469	ppm	0.000116	7.90	-380.679000	Y 377.433
Al (167.019 nm)	5.570860 o	ppm	0.049545	0.89	3117.000000	Y_R 377.433
Al H (396.152 nm)	5.562172	ppm	0.036342	0.65	14088.205200	Y_R 377.433
As (188.980 nm)	0.002637	ppm	0.000160	6.05	1.468650	Y 242.219
B (249.678 nm)	0.146450	ppm	0.000027	0.02	3696.160000	Y 242.219
Ba (493.408 nm)	0.132589	ppm	0.001076	0.81	15977.900000	Y_R 488.368
Be (234.861 nm)	0.000072	ppm	0.000041	56.50	379.127000	Y_R 488.368
Bi (223.061 nm)	-0.005012 u	ppm	0.001263	25.19	2.254840	Y 377.433
Ca (315.887 nm)	44.631541 o	ppm	0.176272	0.39	35327.385454	Y_R 377.433
Cd (214.439 nm)	0.000315	ppm	0.000039	12.26	32.194100	Y 377.433
Co (228.615 nm)	0.004588	ppm	0.000118	2.57	62.385900	Y 242.219
Cr (205.560 nm)	0.015420	ppm	0.000302	1.96	227.196000	Y 377.433
Cu (324.754 nm)	0.023733	ppm	0.000069	0.29	1008.250000	Y 377.433
Fe (238.204 nm)	12.637094 o	ppm	0.062941	0.50	46763.572526	Y_R 377.433
Fe H (259.940 nm)	13.086300	ppm	0.041389	0.32	24759.900000	Y_R 377.433
K (766.491 nm)	11.495600	ppm	0.074084	0.64	12480.300000	Y_R2 488.368
Li (670.783 nm)	0.019643	ppm	0.001199	6.10	-698.611000	Y_R2 488.368
Mg (279.078 nm)	6.286550	ppm	0.003686	0.06	36331.800000	Y 377.433
Mn (257.610 nm)	0.375015	ppm	0.000982	0.26	87764.700000	Y 377.433
Mo (202.032 nm)	0.001491	ppm	0.000034	2.25	12.815200	Y 377.433
Na (589.592 nm)	13.980800 o	ppm	0.020983	0.15	92620.700000	Y_R2 488.368
Na H (589.593 nm)	14.333008	ppm	0.161585	1.13	55030.006364	Y_R 488.368
Ni (231.604 nm)	0.012872	ppm	0.000081	0.63	84.238500	Y 377.433
P (213.618 nm)	0.225094	ppm	0.001480	0.66	513.686000	Y 242.219
Pb (220.353 nm)	0.012617	ppm	0.001964	15.57	38.909900	Y 242.219
S (181.972 nm)	4.649265	ppm	0.004095	0.09	2396.217453	Y 377.433
Sb (206.834 nm)	-0.001050 u	ppm	0.001743	> 100.00	-29.139100	Y 377.433
Se (196.026 nm)	-0.001212 u	ppm	0.000672	55.41	9.776810	Y 242.219
Si (288.158 nm)	12.360500 o	ppm	0.069546	0.56	107164.000000	Y 377.433
Sn (189.925 nm)	-0.000473 u	ppm	0.000197	41.66	8.657190	Y 377.433
Sr (421.552 nm)	0.225351	ppm	0.002014	0.89	47438.491093	Y_R 488.368
Th (288.505 nm)	0.003555	ppm	0.000079	2.23	89.993900	Y 377.433
Ti (336.122 nm)	0.436338	ppm	0.001554	0.36	62051.700000	Y 377.433
Tl (190.794 nm)	0.000015 u	ppm	0.000132	> 100.00	-7.598610	Y 377.433
U (409.013 nm)	0.003914 u	ppm	0.009817	> 100.00	-186.558000	Y 377.433
V (292.401 nm)	0.020442	ppm	0.000135	0.66	783.594000	Y 377.433
Zn (206.200 nm)	0.092765	ppm	0.000381	0.41	512.222000	Y 377.433
Zr (343.823 nm)	0.002391	ppm	0.000301	12.58	378.813000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.145676	21859.737786	0.000186	0.02
Y 377.433	1.134662	1148490.676559	0.001268	0.11
Y_R 377.433	1.216320	91823.600000	0.003648	0.30
Y_R 488.368	1.184660	51865.000000	0.010957	0.92
Y_R2 488.368	1.165642	101156.229708	0.011098	0.95

Sample Name: 280-116552-A-2-A

Date: 11/7/2018 6:57:02 AM
Rack:Tube: 4:37

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001544	ppm	0.000198	12.81	-375.753000	Y 377.433
Al (167.019 nm)	2.174680	ppm	0.020819	0.96	1222.620000	Y_R 377.433
Al H (396.152 nm)	2.191646	ppm	0.001051	0.05	5628.469552	Y_R 377.433
As (188.980 nm)	0.006769	ppm	0.000743	10.97	6.683810	Y 242.219
B (249.678 nm)	0.260024	ppm	0.000104	0.04	6535.240000	Y 242.219
Ba (493.408 nm)	0.182775	ppm	0.000878	0.48	21798.400000	Y_R 488.368
Be (234.861 nm)	-0.000042 u	ppm	0.000023	55.04	302.704000	Y_R 488.368
Bi (223.061 nm)	-0.002990 u	ppm	0.000305	10.19	7.125740	Y 377.433
Ca (315.887 nm)	84.621812 o	ppm	0.083090	0.10	67036.231431	Y_R 377.433
Cd (214.439 nm)	0.000186	ppm	0.000074	39.76	23.155200	Y 377.433
Co (228.615 nm)	0.004300	ppm	0.000014	0.33	46.607800	Y 242.219
Cr (205.560 nm)	0.007501	ppm	0.000132	1.76	107.017000	Y 377.433
Cu (324.754 nm)	0.020067	ppm	0.000132	0.66	783.499000	Y 377.433
Fe (238.204 nm)	11.327560 o	ppm	0.006800	0.06	41920.214298	Y_R 377.433
Fe H (259.940 nm)	11.719900	ppm	0.024257	0.21	22175.000000	Y_R 377.433
K (766.491 nm)	44.310400	ppm	0.380189	0.86	50265.800000	Y_R2 488.368
Li (670.783 nm)	0.016496	ppm	0.002306	13.98	-803.559000	Y_R2 488.368
Mg (279.078 nm)	10.357600	ppm	0.023865	0.23	59850.800000	Y 377.433
Mn (257.610 nm)	1.489200 o	ppm	0.002656	0.18	348335.000000	Y 377.433
Mo (202.032 nm)	0.004446	ppm	0.000465	10.46	38.263300	Y 377.433
Na (589.592 nm)	32.862600 o	ppm	0.095463	0.29	217046.000000	Y_R2 488.368
Na H (589.593 nm)	34.111300	ppm	0.087824	0.26	127537.106328	Y_R 488.368
Ni (231.604 nm)	0.013281	ppm	0.000069	0.52	86.978800	Y 377.433
P (213.618 nm)	0.557008	ppm	0.002635	0.47	1234.930000	Y 242.219
Pb (220.353 nm)	0.009986	ppm	0.001742	17.45	32.328800	Y 242.219
S (181.972 nm)	19.754633 o	ppm	0.048570	0.25	10135.176873	Y 377.433
Sb (206.834 nm)	0.000303 u	ppm	0.000617	> 100.00	-25.126900	Y 377.433
Se (196.026 nm)	-0.003334 u	ppm	0.002424	72.70	8.717840	Y 242.219
Si (288.158 nm)	6.751570	ppm	0.036817	0.55	58957.200000	Y 377.433
Sn (189.925 nm)	-0.000882 u	ppm	0.000743	84.20	7.844070	Y 377.433
Sr (421.552 nm)	0.578087	ppm	0.002246	0.39	121448.357870	Y_R 488.368
Th (288.505 nm)	0.007920	ppm	0.004642	58.61	123.570000	Y 377.433
Ti (336.122 nm)	0.145095	ppm	0.000079	0.05	20700.000000	Y 377.433
Tl (190.794 nm)	0.000828	ppm	0.000899	> 100.00	-4.473770	Y 377.433
U (409.013 nm)	-0.002180 u	ppm	0.000297	13.63	-222.795000	Y 377.433
V (292.401 nm)	0.009054	ppm	0.000156	1.72	365.389000	Y 377.433
Zn (206.200 nm)	0.040216	ppm	0.000302	0.75	237.775000	Y 377.433
Zr (343.823 nm)	0.000120	ppm	0.000025	20.51	76.189400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.133693	21631.111567	0.002271	0.20
Y 377.433	1.126514	1140243.366803	0.005204	0.46
Y_R 377.433	1.225020	92480.100000	0.005682	0.46
Y_R 488.368	1.191630	52170.200000	0.003436	0.29
Y_R2 488.368	1.172908	101786.798838	0.001032	0.09

Sample Name: 280-116552-A-3-A

Date: 11/7/2018 7:00:26 AM
Rack:Tube: 4:38

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001320	ppm	0.000112	8.50	-384.660000	Y 377.433
Al (167.019 nm)	0.547414	ppm	0.001667	0.30	308.272000	Y_R 377.433
Al H (396.152 nm)	0.525143 u	ppm	0.000929	0.18	1409.673326	Y_R 377.433
As (188.980 nm)	0.001537	ppm	0.000632	41.12	0.189425	Y 242.219
B (249.678 nm)	0.048011	ppm	0.000467	0.97	1254.850000	Y 242.219
Ba (493.408 nm)	0.038730	ppm	0.000698	1.80	5091.280000	Y_R 488.368
Be (234.861 nm)	0.000038	ppm	0.000022	58.23	-1.885490	Y_R 488.368
Bi (223.061 nm)	-0.001167 u	ppm	0.000099	8.53	9.980000	Y 377.433
Ca (315.887 nm)	22.549353 o	ppm	0.037451	0.17	17818.108608	Y_R 377.433
Cd (214.439 nm)	0.000135	ppm	0.000015	10.82	9.990080	Y 377.433
Co (228.615 nm)	0.000737	ppm	0.000078	10.63	-21.685800	Y 242.219
Cr (205.560 nm)	0.002087	ppm	0.000067	3.19	27.519000	Y 377.433
Cu (324.754 nm)	0.012585	ppm	0.000045	0.36	395.692000	Y 377.433
Fe (238.204 nm)	1.039132	ppm	0.001330	0.13	3868.102904	Y_R 377.433
Fe H (259.940 nm)	1.071800 u	ppm	0.001681	0.16	2030.860000	Y_R 377.433
K (766.491 nm)	8.277720	ppm	0.005917	0.07	8775.010000	Y_R2 488.368
Li (670.783 nm)	0.012856	ppm	0.000994	7.73	-924.950000	Y_R2 488.368
Mg (279.078 nm)	1.974700	ppm	0.001546	0.08	11444.500000	Y 377.433
Mn (257.610 nm)	0.020376	ppm	0.000035	0.17	4827.060000	Y 377.433
Mo (202.032 nm)	0.000596	ppm	0.000113	18.97	5.108730	Y 377.433
Na (589.592 nm)	5.254460	ppm	0.023164	0.44	34973.600000	Y_R2 488.368
Na H (589.593 nm)	5.338772 u	ppm	0.113448	2.12	21990.234098	Y_R 488.368
Ni (231.604 nm)	0.002455	ppm	0.000175	7.11	12.692400	Y 377.433
P (213.618 nm)	0.083317	ppm	0.000693	0.83	205.605000	Y 242.219
Pb (220.353 nm)	0.002171	ppm	0.000649	29.90	9.566550	Y 242.219
S (181.972 nm)	3.244658	ppm	0.012173	0.38	1675.969609	Y 377.433
Sb (206.834 nm)	0.000806 u	ppm	0.001316	> 100.00	-21.259400	Y 377.433
Se (196.026 nm)	-0.001420 u	ppm	0.003301	> 100.00	11.405300	Y 242.219
Si (288.158 nm)	2.561690	ppm	0.005753	0.22	22946.600000	Y 377.433
Sn (189.925 nm)	-0.001276 u	ppm	0.000337	26.41	7.061660	Y 377.433
Sr (421.552 nm)	0.101286	ppm	0.001494	1.48	21407.551774	Y_R 488.368
Th (288.505 nm)	0.002121	ppm	0.002617	> 100.00	78.825700	Y 377.433
Ti (336.122 nm)	0.040093	ppm	0.000112	0.28	5551.990000	Y 377.433
Tl (190.794 nm)	-0.000557 u	ppm	0.000736	> 100.00	-6.771830	Y 377.433
U (409.013 nm)	0.003636	ppm	0.000944	25.96	-194.425000	Y 377.433
V (292.401 nm)	0.001531	ppm	0.000213	13.88	90.979800	Y 377.433
Zn (206.200 nm)	0.012044	ppm	0.000017	0.15	90.638900	Y 377.433
Zr (343.823 nm)	-0.000106 u	ppm	0.000101	95.27	15.841700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.151712	21974.903918	0.002093	0.18
Y 377.433	1.137103	1150961.887138	0.003452	0.30
Y_R 377.433	1.223870	92393.300000	0.005311	0.43
Y_R 488.368	1.196860	52399.200000	0.020980	1.75
Y_R2 488.368	1.176959	102138.360054	0.007501	0.64

Sample Name: CCVH-5408055

Date: 11/7/2018 7:03:49 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000102 u	ppm	0.000130	> 100.00	-700.106000	Y 377.433
Al (167.019 nm)	44.143800 o	ppm	0.238188	0.54	24646.900000	Y_R 377.433
Al H (396.152 nm)	48.094746	ppm	0.083331	0.17	121044.327326	Y_R 377.433
As (188.980 nm)	0.002047	ppm	0.002301	> 100.00	0.405439	Y 242.219
B (249.678 nm)	-0.000390 u	ppm	0.000226	57.97	-26.525300	Y 242.219
Ba (493.408 nm)	-0.000783 u	ppm	0.000232	29.63	554.593000	Y_R 488.368
Be (234.861 nm)	-0.000264 u	ppm	0.000007	2.57	1410.050000	Y_R 488.368
Bi (223.061 nm)	0.995657	ppm	0.002039	0.20	2527.990000	Y 377.433
Ca (315.887 nm)	0.002569	ppm	0.000508	19.79	-59.552105	Y_R 377.433
Cd (214.439 nm)	-0.000272 u	ppm	0.000053	19.35	31.874500	Y 377.433
Co (228.615 nm)	0.003003	ppm	0.000443	14.76	17.954200	Y 242.219
Cr (205.560 nm)	0.000060 u	ppm	0.000115	> 100.00	-16.577100	Y 377.433
Cu (324.754 nm)	-0.001555 u	ppm	0.000300	19.31	-48.057000	Y 377.433
Fe (238.204 nm)	47.905515 o	ppm	0.060326	0.13	177205.061874	Y_R 377.433
Fe H (259.940 nm)	49.422500	ppm	0.148349	0.30	93500.600000	Y_R 377.433
K (766.491 nm)	0.145626	ppm	0.005495	3.77	-588.905000	Y_R2 488.368
Li (670.783 nm)	0.009984	ppm	0.002032	20.35	-1020.730000	Y_R2 488.368
Mg (279.078 nm)	-0.018775 u	ppm	0.001359	7.24	-430.568000	Y 377.433
Mn (257.610 nm)	0.001377	ppm	0.000032	2.31	383.755000	Y 377.433
Mo (202.032 nm)	-0.000082 u	ppm	0.000118	> 100.00	-0.737298	Y 377.433
Na (589.592 nm)	243.225000 o	ppm	0.352225	0.14	1601770.000000	Y_R2 488.368
Na H (589.593 nm)	252.018666	ppm	2.116946	0.84	925687.678352	Y_R 488.368
Ni (231.604 nm)	0.003986	ppm	0.000215	5.39	25.111500	Y 377.433
P (213.618 nm)	-0.006499 u	ppm	0.001313	20.20	10.434700	Y 242.219
Pb (220.353 nm)	-0.002476 u	ppm	0.000524	21.15	14.283700	Y 242.219
S (181.972 nm)	4.995134	ppm	0.004491	0.09	2572.427630	Y 377.433
Sb (206.834 nm)	-0.000222 u	ppm	0.000935	> 100.00	-70.076900	Y 377.433
Se (196.026 nm)	-0.003081 u	ppm	0.000055	1.77	1.070550	Y 242.219
Si (288.158 nm)	0.018303	ppm	0.001386	7.57	1086.960000	Y 377.433
Sn (189.925 nm)	0.000497	ppm	0.000326	65.61	10.586000	Y 377.433
Sr (421.552 nm)	0.000231	ppm	0.000033	14.38	204.530165	Y_R 488.368
Th (288.505 nm)	4.976460	ppm	0.007194	0.14	13012.800000	Y 377.433
Ti (336.122 nm)	0.000984	ppm	0.000059	6.05	-88.005800	Y 377.433
Tl (190.794 nm)	-0.003080 u	ppm	0.000183	5.93	-13.407100	Y 377.433
U (409.013 nm)	9.995540	ppm	0.009188	0.09	45053.300000	Y 377.433
V (292.401 nm)	0.004346	ppm	0.000377	8.68	20.881100	Y 377.433
Zn (206.200 nm)	-0.004215 u	ppm	0.000440	10.43	5.726970	Y 377.433
Zr (343.823 nm)	-0.004394 u	ppm	0.000044	1.01	-408.247000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131118	21581.974889	0.002560	0.23
Y 377.433	1.108854	1122368.461694	0.000526	0.05
Y_R 377.433	1.211840	91485.700000	0.004727	0.39
Y_R 488.368	1.184090	51840.100000	0.002767	0.23
Y_R2 488.368	1.151711	99947.265597	0.006260	0.54

Sample Name: CCV-5407546

Date: 11/7/2018 7:07:13 AM
Rack:Tube: S1:2

Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.498188	ppm	0.000608	0.12	22383.500000	Y 377.433
Al (167.019 nm)	0.498326	ppm	0.001755	0.35	281.872000	Y_R 377.433
Al H (396.152 nm)	0.475580 u	ppm	0.003980	0.84	1318.576955	Y_R 377.433
As (188.980 nm)	0.984271	ppm	0.000647	0.07	1237.740000	Y 242.219
B (249.678 nm)	0.492949	ppm	0.000050	0.01	12389.300000	Y 242.219
Ba (493.408 nm)	0.492669	ppm	0.000827	0.17	57671.500000	Y_R 488.368
Be (234.861 nm)	0.475143	ppm	0.000572	0.12	141596.000000	Y_R 488.368
Bi (223.061 nm)	-0.001747 u	ppm	0.000138	7.92	8.755030	Y 377.433
Ca (315.887 nm)	5.118632	ppm	0.017772	0.35	3997.332063	Y_R 377.433
Cd (214.439 nm)	0.499019	ppm	0.000796	0.16	29828.300000	Y 377.433
Co (228.615 nm)	0.491362	ppm	0.000719	0.15	8881.030000	Y 242.219
Cr (205.560 nm)	0.499482	ppm	0.003366	0.67	7593.610000	Y 377.433
Cu (324.754 nm)	0.508133	ppm	0.000809	0.16	28023.700000	Y 377.433
Fe (238.204 nm)	2.441813	ppm	0.008540	0.35	9055.967670	Y_R 377.433
Fe H (259.940 nm)	2.526820 u	ppm	0.000631	0.02	4783.470000	Y_R 377.433
K (766.491 nm)	50.518400	ppm	0.138024	0.27	57414.200000	Y_R2 488.368
Li (670.783 nm)	0.996758	ppm	0.002112	0.21	31888.900000	Y_R2 488.368
Mg (279.078 nm)	19.946400	ppm	0.016205	0.08	115256.000000	Y 377.433
Mn (257.610 nm)	0.499753	ppm	0.000958	0.19	116936.000000	Y 377.433
Mo (202.032 nm)	0.506422	ppm	0.000441	0.09	4361.250000	Y 377.433
Na (589.592 nm)	5.039480	ppm	0.017036	0.34	34476.500000	Y_R2 488.368
Na H (589.593 nm)	5.385489 u	ppm	0.023546	0.44	22589.315633	Y_R 488.368
Ni (231.604 nm)	0.517500	ppm	0.000770	0.15	3527.380000	Y 377.433
P (213.618 nm)	0.998607	ppm	0.000535	0.05	2194.530000	Y 242.219
Pb (220.353 nm)	0.979128	ppm	0.000115	0.01	2809.730000	Y 242.219
S (181.972 nm)	0.029891	ppm	0.006158	20.60	30.720837	Y 377.433
Sb (206.834 nm)	0.994653	ppm	0.007183	0.72	2708.530000	Y 377.433
Se (196.026 nm)	0.981482	ppm	0.002119	0.22	989.821000	Y 242.219
Si (288.158 nm)	4.962430	ppm	0.024624	0.50	43580.200000	Y 377.433
Sn (189.925 nm)	1.028390	ppm	0.001795	0.17	2053.820000	Y 377.433
Sr (421.552 nm)	0.504452	ppm	0.000954	0.19	105998.439766	Y_R 488.368
Th (288.505 nm)	0.006277	ppm	0.003519	56.06	105.820000	Y 377.433
Ti (336.122 nm)	0.496488	ppm	0.001361	0.27	70494.300000	Y 377.433
Tl (190.794 nm)	0.997480	ppm	0.001189	0.12	2185.120000	Y 377.433
U (409.013 nm)	0.004958	ppm	0.001661	33.50	-223.223000	Y 377.433
V (292.401 nm)	0.493196	ppm	0.000905	0.18	17810.000000	Y 377.433
Zn (206.200 nm)	0.496453	ppm	0.001765	0.36	2620.550000	Y 377.433
Zr (343.823 nm)	0.500369	ppm	0.001317	0.26	65824.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.134433	21645.213696	0.001101	0.10
Y 377.433	1.119217	1132857.424914	0.001783	0.16
Y_R 377.433	1.209090	91277.500000	0.001711	0.14
Y_R 488.368	1.176300	51499.000000	0.001260	0.11
Y_R2 488.368	1.159824	100651.375350	0.000277	0.02

Sample Name: CCB

Date: 11/7/2018 7:10:36 AM
Rack:Tube: S1:4
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001264	ppm	0.000030	2.34	-387.055000	Y 377.433
Al (167.019 nm)	-0.002490 u	ppm	0.001936	77.78	0.965335	Y_R 377.433
Al H (396.152 nm)	-0.021405 u	ppm	0.000001	0.00	25.184624	Y_R 377.433
As (188.980 nm)	0.000145	ppm	0.000001	0.52	-1.554940	Y 242.219
B (249.678 nm)	0.000075 u	ppm	0.000284	> 100.00	59.027600	Y 242.219
Ba (493.408 nm)	-0.000865 u	ppm	0.000161	18.62	499.256000	Y_R 488.368
Be (234.861 nm)	0.000085	ppm	0.000004	4.64	-20.962900	Y_R 488.368
Bi (223.061 nm)	-0.001821 u	ppm	0.001823	> 100.00	8.155530	Y 377.433
Ca (315.887 nm)	0.007296	ppm	0.000735	10.07	-55.804390	Y_R 377.433
Cd (214.439 nm)	0.000092	ppm	0.000028	29.99	6.397740	Y 377.433
Co (228.615 nm)	0.000591	ppm	0.000043	7.26	-25.747600	Y 242.219
Cr (205.560 nm)	0.000072	ppm	0.000079	> 100.00	-2.861070	Y 377.433
Cu (324.754 nm)	0.002392	ppm	0.000266	11.11	-159.110000	Y 377.433
Fe (238.204 nm)	-0.001464 u	ppm	0.000764	52.16	19.423263	Y_R 377.433
Fe H (259.940 nm)	0.001211 u	ppm	0.002337	> 100.00	5.524850	Y_R 377.433
K (766.491 nm)	0.143424	ppm	0.027143	18.93	-591.440000	Y_R2 488.368
Li (670.783 nm)	0.011170 Z	ppm	0.000954	8.54	-981.178000 Z	Y_R2 488.368
Mg (279.078 nm)	-0.000676 u	ppm	0.000146	21.63	35.410100	Y 377.433
Mn (257.610 nm)	-0.000027 u	ppm	0.000004	15.27	55.368900	Y 377.433
Mo (202.032 nm)	-0.000191 u	ppm	0.000139	72.40	-1.676450	Y 377.433
Na (589.592 nm)	0.043930	ppm	0.008660	19.71	584.748000	Y_R2 488.368
Na H (589.593 nm)	-0.092796 u	ppm	0.004671	5.03	2053.448454	Y_R 488.368
Ni (231.604 nm)	0.000389 u	ppm	0.000783	> 100.00	-1.446500	Y 377.433
P (213.618 nm)	-0.004630 u	ppm	0.003029	65.43	14.496200	Y 242.219
Pb (220.353 nm)	0.000227	ppm	0.000129	56.75	4.092790	Y 242.219
S (181.972 nm)	0.017175	ppm	0.000136	0.79	22.967987	Y 377.433
Sb (206.834 nm)	0.001968	ppm	0.000133	6.75	-17.856800	Y 377.433
Se (196.026 nm)	-0.003859 u	ppm	0.000760	19.69	9.150060	Y 242.219
Si (288.158 nm)	-0.004233 u	ppm	0.002234	52.77	893.274000	Y 377.433
Sn (189.925 nm)	-0.001809 u	ppm	0.000585	32.36	6.001650	Y 377.433
Sr (421.552 nm)	-0.000108 u	ppm	0.000121	> 100.00	133.384122	Y_R 488.368
Th (288.505 nm)	0.006405	ppm	0.001403	21.91	89.422100	Y 377.433
Ti (336.122 nm)	0.000285	ppm	0.000031	11.04	-187.606000	Y 377.433
Tl (190.794 nm)	0.001977	ppm	0.001030	52.08	-0.996469	Y 377.433
U (409.013 nm)	0.003554 u	ppm	0.005650	> 100.00	-191.490000	Y 377.433
V (292.401 nm)	-0.000291 u	ppm	0.000127	43.76	24.227100	Y 377.433
Zn (206.200 nm)	-0.005277 u	ppm	0.000062	1.17	0.181948	Y 377.433
Zr (343.823 nm)	-0.000309 u	ppm	0.000082	26.35	-14.014800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.156391	22064.188194	0.004962	0.43
Y 377.433	1.143585	1157522.852625	0.005439	0.48
Y_R 377.433	1.222830	92314.900000	0.001054	0.09
Y_R 488.368	1.195340	52332.800000	0.010889	0.91
Y_R2 488.368	1.169153	101460.938827	0.000955	0.08

Sample Name: CCVL-5413446

Date: 11/7/2018 7:13:59 AM
Rack:Tube: S1:3
Weight (g): 1
Volume (mL): 1
Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010899	ppm	0.000073	0.67	54.828500	Y 377.433
Al (167.019 nm)	0.101869	ppm	0.001050	1.03	59.217400	Y_R 377.433
Al H (396.152 nm)	0.075680 u	ppm	0.004018	5.31	271.023394	Y_R 377.433
As (188.980 nm)	0.013435	ppm	0.000676	5.03	15.180400	Y 242.219
B (249.678 nm)	0.100957	ppm	0.000048	0.05	2579.330000	Y 242.219
Ba (493.408 nm)	0.009455	ppm	0.000153	1.62	1694.610000	Y_R 488.368
Be (234.861 nm)	0.000992	ppm	0.000010	0.96	251.626000	Y_R 488.368
Bi (223.061 nm)	0.101789	ppm	0.000979	0.96	269.073000	Y 377.433
Ca (315.887 nm)	0.225521	ppm	0.004515	2.00	117.232461	Y_R 377.433
Cd (214.439 nm)	0.005286	ppm	0.000040	0.75	316.924000	Y 377.433
Co (228.615 nm)	0.010616	ppm	0.000001	0.01	156.174000	Y 242.219
Cr (205.560 nm)	0.010248	ppm	0.000143	1.39	151.969000	Y 377.433
Cu (324.754 nm)	0.018014	ppm	0.000135	0.75	710.389000	Y 377.433
Fe (238.204 nm)	0.098500	ppm	0.001037	1.05	389.141663	Y_R 377.433
Fe H (259.940 nm)	0.104355 u	ppm	0.003044	2.92	200.652000	Y_R 377.433
K (766.491 nm)	3.252650	ppm	0.036922	1.14	2988.760000	Y_R2 488.368
Li (670.783 nm)	0.031101 Q	ppm	0.000239	0.77	-316.480000 Q	Y_R2 488.368
Mg (279.078 nm)	0.205654	ppm	0.000809	0.39	1226.150000	Y 377.433
Mn (257.610 nm)	0.010437	ppm	0.000043	0.41	2502.650000	Y 377.433
Mo (202.032 nm)	0.018975	ppm	0.000125	0.66	163.381000	Y 377.433
Na (589.592 nm)	1.099420	ppm	0.007603	0.69	7555.000000	Y_R2 488.368
Na H (589.593 nm)	1.027934 u	ppm	0.012616	1.23	6168.931996	Y_R 488.368
Ni (231.604 nm)	0.043250	ppm	0.000542	1.25	290.955000	Y 377.433
P (213.618 nm)	2.909940 o	ppm	0.001586	0.05	6347.840000	Y 242.219
Pb (220.353 nm)	0.008857	ppm	0.000190	2.15	28.833700	Y 242.219
S (181.972 nm)	0.125856	ppm	0.010438	8.29	78.654463	Y 377.433
Sb (206.834 nm)	0.021233	ppm	0.001589	7.48	34.947200	Y 377.433
Se (196.026 nm)	0.016542	ppm	0.000142	0.86	29.446000	Y 242.219
Si (288.158 nm)	0.506032	ppm	0.001897	0.37	5278.830000	Y 377.433
Sn (189.925 nm)	0.102673	ppm	0.000090	0.09	213.690000	Y 377.433
Sr (421.552 nm)	0.010262	ppm	0.000012	0.12	2309.127787	Y_R 488.368
Th (288.505 nm)	0.021621 Q	ppm	0.000368	1.70	129.624000 Q	Y 377.433
Ti (336.122 nm)	0.009902	ppm	0.000063	0.64	1182.590000	Y 377.433
Tl (190.794 nm)	0.014517	ppm	0.002094	14.42	26.502700	Y 377.433
U (409.013 nm)	0.066391	ppm	0.003452	5.20	91.602700	Y 377.433
V (292.401 nm)	0.009699	ppm	0.000003	0.04	382.512000	Y 377.433
Zn (206.200 nm)	0.016161	ppm	0.000191	1.18	112.144000	Y 377.433
Zr (343.823 nm)	0.015090	ppm	0.000042	0.28	2011.020000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.150770	21956.938272	0.005892	0.51
Y 377.433	1.136906	1150762.334155	0.005223	0.46
Y_R 377.433	1.210740	91402.300000	0.000391	0.03
Y_R 488.368	1.181810	51740.300000	0.006066	0.51
Y_R2 488.368	1.154817	100216.785940	0.004791	0.41

Path: D:\My Results\52A110518.esws

Date created: 11/5/2018 9:05:08 AM

Instrument used: MY18171010

Software Version : 7.4.1.10449

Firmware Version : 3585

Notes:

Sample Name: icis

Date: 11/5/2018 1:41:51 PM Rack:Tube: S1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000000	ppm	N/A	N/A	-239.432000	Y 377.433
Al (394.401 nm)	0.000000	ppm	N/A	N/A	90.588700	Y 377.433
Al H (396.152 nm)	0.000000	ppm	N/A	N/A	11.269600	Y_R 377.433
As (188.980 nm)	0.000000	ppm	N/A	N/A	-15.115300	Y 242.219
B (249.678 nm)	0.000000	ppm	N/A	N/A	46.700700	Y 242.219
Ba (493.408 nm)	0.000000	ppm	N/A	N/A	801.023000	Y_R 488.368
Be (234.861 nm)	0.000000	ppm	N/A	N/A	-5.887070	Y_R 488.368
Bi (223.061 nm)	0.000000	ppm	N/A	N/A	43.272100	Y 377.433
Ca (315.887 nm)	0.000000	ppm	N/A	N/A	-2.318843	Y_R 377.433
Cd (214.439 nm)	0.000000	ppm	N/A	N/A	-11.158100	Y 377.433
Co (228.615 nm)	0.000000	ppm	N/A	N/A	-27.949900	Y 242.219
Cr (205.560 nm)	0.000000	ppm	N/A	N/A	-9.348540	Y 377.433
Cu (324.754 nm)	0.000000	ppm	N/A	N/A	200.710000	Y 377.433
Fe (238.204 nm)	0.000000	ppm	N/A	N/A	11.535380	Y_R 377.433
Fe H (259.940 nm)	0.000000	ppm	N/A	N/A	4.096440	Y_R 377.433
K (766.491 nm)	0.000000	ppm	N/A	N/A	1735.910000	Y_R2 488.368
Li (670.783 nm)	0.000000	ppm	N/A	N/A	-446.897000	Y_R2 488.368
Mg (279.078 nm)	0.000000	ppm	N/A	N/A	13.859300	Y 377.433
Mn (257.610 nm)	0.000000	ppm	N/A	N/A	22.650600	Y 377.433
Mo (202.032 nm)	0.000000	ppm	N/A	N/A	18.679800	Y 377.433
Na (589.592 nm)	0.000000	ppm	N/A	N/A	-136.037000	Y_R2 488.368
Na H (589.593 nm)	0.000000	ppm	N/A	N/A	36.274666	Y_R4
Ni (231.604 nm)	0.000000	ppm	N/A	N/A	9.083300	Y 377.433
P (213.618 nm)	0.000000	ppm	N/A	N/A	-1.097700	Y 242.219
Pb (220.353 nm)	0.000000	ppm	N/A	N/A	14.533100	Y 242.219
S (181.972 nm)	0.000000	ppm	N/A	N/A	-25.709724	Y 377.433
Sb (206.834 nm)	0.000000	ppm	N/A	N/A	-1.133120	Y 377.433
Se (196.026 nm)	0.000000	ppm	N/A	N/A	1.641930	Y 242.219
Si (288.158 nm)	0.000000	ppm	N/A	N/A	1284.810000	Y 377.433
Sn (189.925 nm)	0.000000	ppm	N/A	N/A	8.062920	Y 377.433
Sr (421.552 nm)	0.000000	ppm	N/A	N/A	278.210328	Y_R 488.368
Th (288.505 nm)	0.000000	ppm	N/A	N/A	14.465900	Y 377.433
Ti (336.122 nm)	0.000000	ppm	N/A	N/A	-365.042000	Y 377.433
Tl (190.794 nm)	0.000000	ppm	N/A	N/A	-8.815560	Y 377.433
U (409.013 nm)	0.000000	ppm	N/A	N/A	114.832000	Y 377.433
V (292.401 nm)	0.000000	ppm	N/A	N/A	-195.484000	Y 377.433
Zn (206.200 nm)	0.000000	ppm	N/A	N/A	4.379210	Y 377.433
Zr (343.823 nm)	0.000000	ppm	N/A	N/A	-118.536000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000000	10652.191767	0.000000	0.00
Y 377.433	1.000000	461637.386995	0.000000	0.00
Y_R 377.433	1.000000	37787.800000	0.000000	0.00
Y_R 488.368	1.000000	36090.000000	0.000000	0.00
Y_R2 488.368	1.000000	70376.738214	0.000000	0.00
Y_R4	1.000000	30684.200000	0.000000	0.00

Sample Name: ic1

Date: 11/5/2018 1:45:10 PM Rack:Tube: 3:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.000000	ppm	N/A	N/A	27485.400000	Y 377.433
Al (394.401 nm)	1.000000	ppm	N/A	N/A	12539.500000	Y 377.433
Al H (396.152 nm)	1.000000	ppm	N/A	N/A	1433.610000	Y_R 377.433
As (188.980 nm)	2.000000	ppm	N/A	N/A	2787.210000	Y 242.219
B (249.678 nm)	1.000000	ppm	N/A	N/A	4061.890000	Y 242.219
Ba (493.408 nm)	1.000000	ppm	N/A	N/A	92320.000000	Y_R 488.368
Be (234.861 nm)	1.000000	ppm	N/A	N/A	51779.700000	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	46.719900	Y 377.433
Ca (315.887 nm)	10.000000	ppm	N/A	N/A	6602.870053	Y_R 377.433
Cd (214.439 nm)	1.000000	ppm	N/A	N/A	24888.900000	Y 377.433
Co (228.615 nm)	1.000000	ppm	N/A	N/A	23688.900000	Y 242.219
Cr (205.560 nm)	1.000000	ppm	N/A	N/A	4764.550000	Y 377.433
Cu (324.754 nm)	1.000000	ppm	N/A	N/A	48314.500000	Y 377.433
Fe (238.204 nm)	5.000000	ppm	N/A	N/A	8342.382483	Y_R 377.433
Fe H (259.940 nm)	5.000000	ppm	N/A	N/A	4577.250000	Y_R 377.433
K (766.491 nm)	100.000000	ppm	N/A	N/A	99469.900000	Y_R2 488.368
Li (670.783 nm)	2.000000	ppm	N/A	N/A	27880.200000	Y_R2 488.368
Mg (279.078 nm)	40.000000	ppm	N/A	N/A	87149.900000	Y 377.433
Mn (257.610 nm)	1.000000	ppm	N/A	N/A	209247.000000	Y 377.433
Mo (202.032 nm)	1.000000	ppm	N/A	N/A	11395.200000	Y 377.433
Na (589.592 nm)		ppm	N/A	N/A	4740.950000	Y_R2 488.368
Na H (589.593 nm)		ppm	N/A	N/A	3422.389531	Y_R4
Ni (231.604 nm)	1.000000	ppm	N/A	N/A	3840.900000	Y 377.433
P (213.618 nm)	2.000000	ppm	N/A	N/A	2319.110000	Y 242.219
Pb (220.353 nm)	2.000000	ppm	N/A	N/A	4482.390000	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	-28.322845	Y 377.433
Sb (206.834 nm)	2.000000	ppm	N/A	N/A	3289.450000	Y 377.433
Se (196.026 nm)	2.000000	ppm	N/A	N/A	3008.540000	Y 242.219
Si (288.158 nm)	10.000000	ppm	N/A	N/A	46083.800000	Y 377.433
Sn (189.925 nm)	2.000000	ppm	N/A	N/A	2342.790000	Y 377.433
Sr (421.552 nm)	1.000000	ppm	N/A	N/A	116356.911216	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	-112.926000	Y 377.433
Ti (336.122 nm)	1.000000	ppm	N/A	N/A	94718.400000	Y 377.433
Tl (190.794 nm)	2.000000	ppm	N/A	N/A	1137.940000	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	1.686340	Y 377.433
V (292.401 nm)	1.000000	ppm	N/A	N/A	48320.300000	Y 377.433
Zn (206.200 nm)	1.000000	ppm	N/A	N/A	3460.460000	Y 377.433
Zr (343.823 nm)	1.000000	ppm	N/A	N/A	40407.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991868	10565.573041	0.005242	0.53
Y 377.433	0.993384	458583.136864	0.004712	0.47
Y_R 377.433	1.006130	38019.200000	0.003722	0.37
Y_R 488.368	1.012070	36525.800000	0.005191	0.51
Y_R2 488.368	1.003727	70639.058869	0.003443	0.34
Y_R4	1.011650	31041.500000	0.008929	0.88

Sample Name: ic3

Date: 11/5/2018 1:49:16 PM Rack:Tube: 3:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-229.888000	Y 377.433
Al (394.401 nm)		ppm	N/A	N/A	132.363000	Y 377.433
Al H (396.152 nm)		ppm	N/A	N/A	13.510300	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	-16.565500	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	55.446500	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	849.104000	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	-0.957323	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	47.026000	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	-10.876182	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	-8.991510	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	-24.933100	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	-8.277260	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	190.921000	Y 377.433
Fe (238.204 nm)		ppm	N/A	N/A	11.419701	Y_R 377.433
Fe H (259.940 nm)		ppm	N/A	N/A	1.914380	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	1791.390000	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-493.462000	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	26.621300	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	42.935900	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	15.587300	Y 377.433
Na (589.592 nm)	50.000000	ppm	N/A	N/A	24983.900000	Y_R2 488.368
Na H (589.593 nm)	50.000000	ppm	N/A	N/A	17463.127177	Y_R4
Ni (231.604 nm)		ppm	N/A	N/A	9.300610	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	2.595090	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	10.612800	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	-24.508052	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	-3.247060	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	6.215670	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	1161.240000	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	2.014890	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	289.706290	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	21.102700	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	-350.735000	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	-9.647050	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	116.315000	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-207.786000	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	6.202620	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-112.356000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996523	10615.152008	0.000085	0.01
Y 377.433	0.991857	457878.126978	0.000052	0.01
Y_R 377.433	0.990045	37411.600000	0.001950	0.20
Y_R 488.368	0.996060	35947.800000	0.009727	0.98
Y_R2 488.368	0.999363	70331.898456	0.011194	1.12
Y_R4	0.998451	30636.700000	0.006824	0.68

Sample Name: ic2

Date: 11/5/2018 1:52:48 PM Rack:Tube: 3:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-431.360000	Y 377.433
Al (394.401 nm)	100.000000	ppm	N/A	N/A	1276050.000000	Y 377.433
Al H (396.152 nm)	100.000000	ppm	N/A	N/A	164677.000000	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	-32.339300	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	12.705000	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	1045.240000	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	-1427.760000	Y_R 488.368
Bi (223.061 nm)	2.000000	ppm	N/A	N/A	3339.780000	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	9.831919	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	-8.668950	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	135.016000	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	-13.111200	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	1047.240000	Y 377.433
Fe (238.204 nm)	100.000000	ppm	N/A	N/A	167308.538664	Y_R 377.433
Fe H (259.940 nm)	100.000000	ppm	N/A	N/A	91754.200000	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	1884.430000	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-394.288000	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	-440.126000	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	130.858000	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	3.782770	Y 377.433
Na (589.592 nm)	500.000000	ppm	N/A	N/A	245825.000000	Y_R2 488.368
Na H (589.593 nm)	500.000000	ppm	N/A	N/A	178146.236054	Y_R4
Ni (231.604 nm)		ppm	N/A	N/A	27.069100	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	-35.552500	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	36.428700	Y 242.219
S (181.972 nm)	10.000000	ppm	N/A	N/A	4750.690161	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	9.650930	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	-25.791800	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	1108.140000	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	3.300600	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	320.685417	Y_R 488.368
Th (288.505 nm)	10.000000	ppm	N/A	N/A	10661.600000	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	-312.975000	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	-27.180100	Y 377.433
U (409.013 nm)	20.000000	ppm	N/A	N/A	45829.600000	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-687.082000	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	12.078200	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-726.951000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.958159	10206.489814	0.003922	0.41
Y 377.433	0.957294	441922.689863	0.002056	0.21
Y_R 377.433	0.990713	37436.800000	0.002690	0.27
Y_R 488.368	0.996395	35959.900000	0.013562	1.36
Y_R2 488.368	1.002727	70568.645267	0.005520	0.55
Y_R4	1.018700	31257.800000	0.006655	0.65

Sample Name: S1-5407545

Date: 11/5/2018 1:56:54 PM Rack:Tube: 3:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.003250	ppm	0.001121	0.11	27518.200000	Y 377.433
Al (394.401 nm)	1.010540	ppm	0.001887	0.19	12911.200000	Y 377.433
Al H (396.152 nm)	0.963870	ppm	0.005971	0.62	1753.120000	Y_R 377.433
As (188.980 nm)	2.002660	ppm	0.008362	0.42	2790.790000	Y 242.219
B (249.678 nm)	1.004560	ppm	0.000460	0.05	4078.590000	Y 242.219
Ba (493.408 nm)	0.999208	ppm	0.001546	0.15	92251.200000	Y_R 488.368
Be (234.861 nm)	1.008450	ppm	0.001474	0.15	52146.800000	Y_R 488.368
Bi (223.061 nm)	0.006356	ppm	0.000531	8.35	54.563300	Y 377.433
Ca (315.887 nm)	10.024180	ppm	0.009582	0.10	6619.056525	Y_R 377.433
Cd (214.439 nm)	1.006280	ppm	0.001303	0.13	25045.300000	Y 377.433
Co (228.615 nm)	0.999282	ppm	0.003238	0.32	23724.600000	Y 242.219
Cr (205.560 nm)	1.007560	ppm	0.000962	0.10	4795.250000	Y 377.433
Cu (324.754 nm)	1.001550	ppm	0.001748	0.17	48403.000000	Y 377.433
Fe (238.204 nm)	5.036828	ppm	0.007022	0.14	8403.744524	Y_R 377.433
Fe H (259.940 nm)	5.039610	ppm	0.003021	0.06	4613.600000	Y_R 377.433
K (766.491 nm)	98.893900	ppm	0.727017	0.74	98388.900000	Y_R2 488.368
Li (670.783 nm)	1.986530	ppm	0.016855	0.85	27689.400000	Y_R2 488.368
Mg (279.078 nm)	40.353800	ppm	0.073900	0.18	87917.100000	Y 377.433
Mn (257.610 nm)	1.006880	ppm	0.001423	0.14	210686.000000	Y 377.433
Mo (202.032 nm)	1.007120	ppm	0.000360	0.04	11476.200000	Y 377.433
Na (589.592 nm)	9.687620	ppm	0.021264	0.22	4715.620000	Y_R2 488.368
Na H (589.593 nm)	11.151429 Qu	ppm	0.050695	0.45	3492.939985 Q	Y_R4
Ni (231.604 nm)	1.008920	ppm	0.002061	0.20	3877.540000	Y 377.433
P (213.618 nm)	1.995360	ppm	0.003278	0.16	2268.680000	Y 242.219
Pb (220.353 nm)	2.005960	ppm	0.002578	0.13	4491.440000	Y 242.219
S (181.972 nm)	-0.002158 u	ppm	0.004600	> 100.00	-22.960429	Y 377.433
Sb (206.834 nm)	2.001900	ppm	0.003465	0.17	3290.490000	Y 377.433
Se (196.026 nm)	1.996520	ppm	0.002280	0.11	3003.570000	Y 242.219
Si (288.158 nm)	9.978480	ppm	0.019917	0.20	45987.400000	Y 377.433
Sn (189.925 nm)	2.014660	ppm	0.007523	0.37	2359.900000	Y 377.433
Sr (421.552 nm)	0.997388	ppm	0.002042	0.20	116054.268804	Y_R 488.368
Th (288.505 nm)	-0.057070 u	ppm	0.007879	13.81	-111.770000	Y 377.433
Ti (336.122 nm)	1.004230	ppm	0.001490	0.15	95152.000000	Y 377.433
Tl (190.794 nm)	2.004510	ppm	0.002071	0.10	1138.830000	Y 377.433
U (409.013 nm)	-0.001377 u	ppm	0.002359	> 100.00	22.974000	Y 377.433
V (292.401 nm)	1.005120	ppm	0.000552	0.05	48193.900000	Y 377.433
Zn (206.200 nm)	1.009330	ppm	0.003438	0.34	3493.240000	Y 377.433
Zr (343.823 nm)	1.005420	ppm	0.000197	0.02	40626.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.989064	10535.694893	0.003302	0.33
Y 377.433	0.985520	454952.950000	0.004373	0.44
Y_R 377.433	0.991929	37482.800000	0.000211	0.02
Y_R 488.368	0.998681	36042.400000	0.002973	0.30
Y_R2 488.368	0.996504	70130.687466	0.003159	0.32
Y_R4	0.994461	30514.200000	0.002786	0.28

Sample Name: S3-5364017

Date: 11/5/2018 2:00:25 PM Rack:Tube: 3:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000606	ppm	0.000720	> 100.00	-222.662000	Y 377.433
Al (394.401 nm)	0.002123	ppm	0.000141	6.66	114.860000	Y 377.433
Al H (396.152 nm)	0.138173 u	ppm	0.005103	3.69	12.438300	Y_R 377.433
As (188.980 nm)	-0.002454 u	ppm	0.000483	19.70	-18.553200	Y 242.219
B (249.678 nm)	0.000276 u	ppm	0.001632	> 100.00	47.806600	Y 242.219
Ba (493.408 nm)	-0.000068 u	ppm	0.000303	> 100.00	794.766000	Y_R 488.368
Be (234.861 nm)	0.000168	ppm	0.000019	11.42	2.768180	Y_R 488.368
Bi (223.061 nm)	0.004437	ppm	0.002340	52.73	50.585200	Y 377.433
Ca (315.887 nm)	-0.005202 u	ppm	0.005999	> 100.00	-5.754573	Y_R 377.433
Cd (214.439 nm)	0.000070 u	ppm	0.000113	> 100.00	-9.420250	Y 377.433
Co (228.615 nm)	0.000540	ppm	0.000011	2.12	-15.136400	Y 242.219
Cr (205.560 nm)	0.000147 u	ppm	0.001711	> 100.00	-8.649000	Y 377.433
Cu (324.754 nm)	-0.000168 u	ppm	0.000194	> 100.00	194.045000	Y 377.433
Fe (238.204 nm)	0.001219	ppm	0.001554	> 100.00	13.566757	Y_R 377.433
Fe H (259.940 nm)	0.014108 u	ppm	0.000669	4.74	1.939030	Y_R 377.433
K (766.491 nm)	0.021607 u	ppm	0.122908	> 100.00	1757.030000	Y_R2 488.368
Li (670.783 nm)	0.001049 u	ppm	0.005118	> 100.00	-432.045000	Y_R2 488.368
Mg (279.078 nm)	0.005211	ppm	0.006010	> 100.00	25.253600	Y 377.433
Mn (257.610 nm)	0.000138	ppm	0.000001	0.64	51.623500	Y 377.433
Mo (202.032 nm)	-0.000605 u	ppm	0.000321	53.08	11.801200	Y 377.433
Na (589.592 nm)	49.871200	ppm	0.178070	0.36	24919.200000	Y_R2 488.368
Na H (589.593 nm)	50.229238	ppm	0.040082	0.08	17544.984756	Y_R4
Ni (231.604 nm)	0.001214	ppm	0.000204	16.78	13.731100	Y 377.433
P (213.618 nm)	0.003329 u	ppm	0.005734	> 100.00	2.747680	Y 242.219
Pb (220.353 nm)	-0.001215 u	ppm	0.000803	66.13	11.812300	Y 242.219
S (181.972 nm)	-0.004636 u	ppm	0.000434	9.37	-27.924860	Y 377.433
Sb (206.834 nm)	0.002442	ppm	0.000216	8.86	2.898470	Y 377.433
Se (196.026 nm)	0.003702	ppm	0.003862	> 100.00	7.206740	Y 242.219
Si (288.158 nm)	-0.046897 u	ppm	0.005140	10.96	1074.710000	Y 377.433
Sn (189.925 nm)	-0.004307 u	ppm	0.000980	22.75	3.034600	Y 377.433
Sr (421.552 nm)	-0.000110 u	ppm	0.000125	> 100.00	265.487804	Y_R 488.368
Th (288.505 nm)	0.002779	ppm	0.002997	> 100.00	17.391100	Y 377.433
Ti (336.122 nm)	0.000191	ppm	0.000081	42.19	-346.889000	Y 377.433
Tl (190.794 nm)	-0.004975 u	ppm	0.002883	57.95	-11.667200	Y 377.433
U (409.013 nm)	-0.009049 u	ppm	0.004028	44.51	94.149000	Y 377.433
V (292.401 nm)	-0.000205 u	ppm	0.000314	> 100.00	-204.822000	Y 377.433
Zn (206.200 nm)	0.000189 u	ppm	0.000591	> 100.00	5.032250	Y 377.433
Zr (343.823 nm)	0.000267	ppm	0.000082	30.74	-107.703000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003718	10691.795707	0.004965	0.49
Y 377.433	0.995566	459590.463865	0.004949	0.50
Y_R 377.433	1.009730	38155.400000	0.005380	0.53
Y_R 488.368	1.012210	36530.600000	0.001882	0.19
Y_R2 488.368	1.013160	71302.911349	0.002035	0.20
Y_R4	1.006750	30891.400000	0.002635	0.26

Sample Name: S2-5408054

Date: 11/5/2018 2:03:53 PM Rack:Tube: 3:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001224	ppm	0.000056	4.57	-422.370000	Y 377.433
Al (394.401 nm)	102.351000 o	ppm	0.081555	0.08	1274470.000000	Y 377.433
Al H (396.152 nm)	100.075000	ppm	0.083448	0.08	164796.000000	Y_R 377.433
As (188.980 nm)	-0.009204 u	ppm	0.000443	4.81	-32.212100	Y 242.219
B (249.678 nm)	-0.003012 u	ppm	0.001218	40.44	2.126450	Y 242.219
Ba (493.408 nm)	0.001702	ppm	0.000465	27.33	1029.870000	Y_R 488.368
Be (234.861 nm)	-0.000003 u	ppm	0.000500	> 100.00	-1412.720000	Y_R 488.368
Bi (223.061 nm)	1.995260	ppm	0.005571	0.28	3344.980000	Y 377.433
Ca (315.887 nm)	-0.016701 u	ppm	0.007222	43.25	7.403392	Y_R 377.433
Cd (214.439 nm)	0.000206	ppm	0.000169	82.17	-6.033610	Y 377.433
Co (228.615 nm)	0.002029	ppm	0.000065	3.19	131.515000	Y 242.219
Cr (205.560 nm)	0.000069 u	ppm	0.000836	> 100.00	-10.931800	Y 377.433
Cu (324.754 nm)	-0.002141 u	ppm	0.000138	6.46	1053.800000	Y 377.433
Fe (238.204 nm)	100.213164 o	ppm	0.006895	0.01	166983.645196	Y_R 377.433
Fe H (259.940 nm)	99.890600	ppm	0.170434	0.17	91653.800000	Y_R 377.433
K (766.491 nm)	0.174150	ppm	0.100742	57.85	1906.120000	Y_R2 488.368
Li (670.783 nm)	0.003736 u	ppm	0.005758	> 100.00	-393.980000	Y_R2 488.368
Mg (279.078 nm)	-0.069294 u	ppm	0.001521	2.19	-435.738000	Y 377.433
Mn (257.610 nm)	0.000469	ppm	0.000075	16.02	120.692000	Y 377.433
Mo (202.032 nm)	-0.001255 u	ppm	0.000006	0.52	4.407490	Y 377.433
Na (589.592 nm)	489.246000 o	ppm	3.595550	0.73	245661.000000	Y_R2 488.368
Na H (589.593 nm)	501.316577	ppm	3.517954	0.70	178616.261688	Y_R4
Ni (231.604 nm)	0.000686	ppm	0.000061	8.85	26.636600	Y 377.433
P (213.618 nm)	-0.023150 u	ppm	0.002301	9.94	-30.554400	Y 242.219
Pb (220.353 nm)	-0.000912 u	ppm	0.003739	> 100.00	32.339800	Y 242.219
S (181.972 nm)	9.953376	ppm	0.013674	0.14	4728.001836	Y 377.433
Sb (206.834 nm)	0.003819	ppm	0.002299	60.20	13.379700	Y 377.433
Se (196.026 nm)	-0.001718 u	ppm	0.002308	> 100.00	-26.612400	Y 242.219
Si (288.158 nm)	-0.057851 u	ppm	0.001880	3.25	1025.640000	Y 377.433
Sn (189.925 nm)	-0.004928 u	ppm	0.000108	2.19	2.310530	Y 377.433
Sr (421.552 nm)	0.000292	ppm	0.000056	19.22	323.672883	Y_R 488.368
Th (288.505 nm)	10.005300	ppm	0.010707	0.11	10717.800000	Y 377.433
Ti (336.122 nm)	0.000643	ppm	0.000008	1.31	-303.769000	Y 377.433
Tl (190.794 nm)	-0.014562 u	ppm	0.002239	15.37	-23.805500	Y 377.433
U (409.013 nm)	19.981100	ppm	0.004015	0.02	45839.600000	Y 377.433
V (292.401 nm)	-0.010199 u	ppm	0.000259	2.54	-678.365000	Y 377.433
Zn (206.200 nm)	-0.000383 u	ppm	0.000329	85.94	13.755000	Y 377.433
Zr (343.823 nm)	-0.014730 u	ppm	0.000237	1.61	-715.489000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960908	10235.772857	0.000377	0.04
Y 377.433	0.959144	442776.918195	0.000894	0.09
Y_R 377.433	0.991871	37480.600000	0.001668	0.17
Y_R 488.368	1.010250	36460.000000	0.005822	0.58
Y_R2 488.368	0.991028	69745.348148	0.008413	0.85
Y_R4	1.004260	30815.000000	0.001080	0.11

Sample Name: ICVH-5412859

Date: 11/5/2018 2:07:40 PM Rack:Tube: 3:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000474	ppm	0.000646	> 100.00	-280.984000	Y 377.433
Al (394.401 nm)	40.678700 o	ppm	0.057223	0.14	506456.000000	Y 377.433
Al H (396.152 nm)	40.561700	ppm	0.078663	0.19	66664.500000	Y_R 377.433
As (188.980 nm)	-0.003528 u	ppm	0.000582	16.50	-22.772600	Y 242.219
B (249.678 nm)	-0.001634 u	ppm	0.000943	57.73	13.906100	Y 242.219
Ba (493.408 nm)	0.000652	ppm	0.000240	36.77	919.720000	Y_R 488.368
Be (234.861 nm)	-0.000887 u	ppm	0.000013	1.51	-1188.030000	Y_R 488.368
Bi (223.061 nm)	0.477639	ppm	0.000179	0.04	841.044000	Y 377.433
Ca (315.887 nm)	-0.012020 u	ppm	0.004236	35.24	-1.867867	Y_R 377.433
Cd (214.439 nm)	0.000280	ppm	0.000303	> 100.00	-4.190210	Y 377.433
Co (228.615 nm)	-0.002657 u	ppm	0.000319	12.02	-1.050760	Y 242.219
Cr (205.560 nm)	-0.000103 u	ppm	0.000228	> 100.00	-10.608400	Y 377.433
Cu (324.754 nm)	-0.000842 u	ppm	0.000219	26.05	545.865000	Y 377.433
Fe (238.204 nm)	81.003623 o	ppm	0.080637	0.10	134977.295243	Y_R 377.433
Fe H (259.940 nm)	80.805400	ppm	0.041391	0.05	74140.200000	Y_R 377.433
K (766.491 nm)	0.058885	ppm	0.003556	6.04	1793.460000	Y_R2 488.368
Li (670.783 nm)	0.001152	ppm	0.001260	> 100.00	-430.579000	Y_R2 488.368
Mg (279.078 nm)	-0.029399 u	ppm	0.000716	2.44	-173.880000	Y 377.433
Mn (257.610 nm)	0.000245	ppm	0.000044	18.02	73.909500	Y 377.433
Mo (202.032 nm)	-0.001157 u	ppm	0.000163	14.06	5.522660	Y 377.433
Na (589.592 nm)	82.137800 o	ppm	0.123293	0.15	41129.900000	Y_R2 488.368
Na H (589.593 nm)	81.144278	ppm	0.442199	0.54	28583.898103	Y_R4
Ni (231.604 nm)	-0.001999 u	ppm	0.000113	5.66	13.474400	Y 377.433
P (213.618 nm)	-0.003635 u	ppm	0.001876	51.60	-5.858940	Y 242.219
Pb (220.353 nm)	-0.000158 u	ppm	0.002488	> 100.00	17.065200	Y 242.219
S (181.972 nm)	3.936706	ppm	0.022469	0.57	1854.274952	Y 377.433
Sb (206.834 nm)	0.002715	ppm	0.000349	12.86	9.982920	Y 377.433
Se (196.026 nm)	0.001228 u	ppm	0.003117	> 100.00	-17.248800	Y 242.219
Si (288.158 nm)	-0.066316 u	ppm	0.003910	5.90	987.720000	Y 377.433
Sn (189.925 nm)	-0.007629 u	ppm	0.000355	4.65	-0.843306	Y 377.433
Sr (421.552 nm)	-0.000087 u	ppm	0.000258	> 100.00	277.449192	Y_R 488.368
Th (288.505 nm)	3.004080	ppm	0.015695	0.52	3219.380000	Y 377.433
Ti (336.122 nm)	0.000170	ppm	0.000110	64.88	-348.814000	Y 377.433
Tl (190.794 nm)	-0.006922 u	ppm	0.003738	54.00	-16.694400	Y 377.433
U (409.013 nm)	5.009550	ppm	0.011140	0.22	11608.200000	Y 377.433
V (292.401 nm)	-0.002348 u	ppm	0.000077	3.30	-270.033000	Y 377.433
Zn (206.200 nm)	-0.002258 u	ppm	0.000413	18.29	5.217450	Y 377.433
Zr (343.823 nm)	-0.003127 u	ppm	0.000624	19.96	-245.277000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997197	10622.329586	0.002375	0.24
Y 377.433	1.006643	464704.131297	0.000439	0.04
Y_R 377.433	1.005200	37984.200000	0.001899	0.19
Y_R 488.368	1.018610	36761.700000	0.003523	0.35
Y_R2 488.368	1.013754	71344.674482	0.004348	0.43
Y_R4	1.006860	30894.500000	0.001103	0.11

Sample Name: ICVH-5412859

Date: 11/5/2018 2:11:17 PM Rack:Tube: 3:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000298	ppm	0.000048	16.01	-286.102000	Y 377.433
Al (394.401 nm)	40.881300 o	ppm	0.057724	0.14	508977.000000	Y 377.433
Al H (396.152 nm)	40.552700	ppm	0.075693	0.19	66649.600000	Y_R 377.433
As (188.980 nm)	-0.003461 u	ppm	0.000894	25.82	-22.679000	Y 242.219
B (249.678 nm)	-0.004893 u	ppm	0.000315	6.43	0.824878	Y 242.219
Ba (493.408 nm)	0.000554	ppm	0.000173	31.21	910.760000	Y_R 488.368
Be (234.861 nm)	-0.000921 u	ppm	0.000159	17.26	-1189.550000	Y_R 488.368
Bi (223.061 nm)	0.474041	ppm	0.002818	0.59	835.112000	Y 377.433
Ca (315.887 nm)	-0.009828 u	ppm	0.007529	76.61	-0.420155	Y_R 377.433
Cd (214.439 nm)	0.000415	ppm	0.000191	46.04	-0.815904	Y 377.433
Co (228.615 nm)	-0.002869 u	ppm	0.000165	5.76	-6.094470	Y 242.219
Cr (205.560 nm)	0.000127	ppm	0.000047	37.04	-9.507520	Y 377.433
Cu (324.754 nm)	-0.000800 u	ppm	0.000033	4.11	549.974000	Y 377.433
Fe (238.204 nm)	80.977967 o	ppm	0.008709	0.01	134934.548483	Y_R 377.433
Fe H (259.940 nm)	80.880700	ppm	0.062359	0.08	74209.300000	Y_R 377.433
K (766.491 nm)	-0.114717 u	ppm	0.099656	86.87	1623.800000	Y_R2 488.368
Li (670.783 nm)	-0.004741 u	ppm	0.003312	69.86	-514.051000	Y_R2 488.368
Mg (279.078 nm)	-0.024933 u	ppm	0.001319	5.29	-164.410000	Y 377.433
Mn (257.610 nm)	0.000264	ppm	0.000010	3.84	77.919400	Y 377.433
Mo (202.032 nm)	-0.001219 u	ppm	0.000054	4.43	4.810330	Y 377.433
Na (589.592 nm)	81.881500 o	ppm	0.003833	0.00	41001.100000	Y_R2 488.368
Na H (589.593 nm)	80.860285	ppm	0.373822	0.46	28482.479217	Y_R4
Ni (231.604 nm)	-0.001730 u	ppm	0.000336	19.41	14.505500	Y 377.433
P (213.618 nm)	-0.007001 u	ppm	0.004033	57.61	-9.784700	Y 242.219
Pb (220.353 nm)	-0.000489 u	ppm	0.001350	> 100.00	16.370900	Y 242.219
S (181.972 nm)	3.954258	ppm	0.001015	0.03	1862.658270	Y 377.433
Sb (206.834 nm)	-0.000374 u	ppm	0.000376	> 100.00	4.897740	Y 377.433
Se (196.026 nm)	0.001999 u	ppm	0.004112	> 100.00	-16.085400	Y 242.219
Si (288.158 nm)	-0.075432 u	ppm	0.000144	0.19	946.879000	Y 377.433
Sn (189.925 nm)	-0.007955 u	ppm	0.000236	2.97	-1.223180	Y 377.433
Sr (421.552 nm)	0.000053	ppm	0.000044	83.10	293.708703	Y_R 488.368
Th (288.505 nm)	3.028350	ppm	0.022690	0.75	3245.330000	Y 377.433
Ti (336.122 nm)	0.000507	ppm	0.000222	43.90	-316.857000	Y 377.433
Tl (190.794 nm)	-0.006619 u	ppm	0.003468	52.40	-16.520200	Y 377.433
U (409.013 nm)	5.043650	ppm	0.006839	0.14	11686.100000	Y 377.433
V (292.401 nm)	-0.002251 u	ppm	0.000052	2.29	-264.781000	Y 377.433
Zn (206.200 nm)	-0.001306 u	ppm	0.001015	77.78	8.507580	Y 377.433
Zr (343.823 nm)	-0.003289 u	ppm	0.000195	5.91	-251.818000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.998307	10634.162021	0.001442	0.14
Y 377.433	1.001702	462422.898033	0.000221	0.02
Y_R 377.433	1.003540	37921.400000	0.005645	0.56
Y_R 488.368	1.018010	36740.100000	0.012512	1.23
Y_R2 488.368	1.007572	70909.596154	0.006496	0.64
Y_R4	1.022950	31388.400000	0.005790	0.57

Sample Name: ICV-5412563

Date: 11/5/2018 2:14:52 PM Rack:Tube: 3:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.249118	ppm	0.000529	0.21	6654.570000	Y 377.433
Al (394.401 nm)	0.248669	ppm	0.000476	0.19	3236.160000	Y 377.433
Al H (396.152 nm)	0.343969 u	ppm	0.002189	0.64	447.595000	Y_R 377.433
As (188.980 nm)	0.244663	ppm	0.001598	0.65	327.687000	Y 242.219
B (249.678 nm)	0.247313	ppm	0.001983	0.80	1039.630000	Y 242.219
Ba (493.408 nm)	0.252691	ppm	0.001662	0.66	23927.200000	Y_R 488.368
Be (234.861 nm)	0.247650	ppm	0.001179	0.48	12815.400000	Y_R 488.368
Bi (223.061 nm)	0.001764 u	ppm	0.002502	> 100.00	46.244200	Y 377.433
Ca (315.887 nm)	2.021213	ppm	0.005500	0.27	1332.787543	Y_R 377.433
Cd (214.439 nm)	0.248899	ppm	0.000049	0.02	6186.460000	Y 377.433
Co (228.615 nm)	0.245100	ppm	0.001645	0.67	5796.920000	Y 242.219
Cr (205.560 nm)	0.247898	ppm	0.000011	0.00	1172.760000	Y 377.433
Cu (324.754 nm)	0.243486	ppm	0.000332	0.14	11923.500000	Y 377.433
Fe (238.204 nm)	0.246978	ppm	0.002476	1.00	423.042892	Y_R 377.433
Fe H (259.940 nm)	0.255601 u	ppm	0.005529	2.16	223.546000	Y_R 377.433
K (766.491 nm)	20.100000	ppm	0.026292	0.13	21380.500000	Y_R2 488.368
Li (670.783 nm)	0.249767	ppm	0.006005	2.40	3090.700000	Y_R2 488.368
Mg (279.078 nm)	10.005000	ppm	0.003812	0.04	21809.400000	Y 377.433
Mn (257.610 nm)	0.259730	ppm	0.000211	0.08	54364.300000	Y 377.433
Mo (202.032 nm)	0.248132	ppm	0.000436	0.18	2841.570000	Y 377.433
Na (589.592 nm)	2.019700	ppm	0.077830	3.85	874.766000	Y_R2 488.368
Na H (589.593 nm)	3.371940 u	ppm	0.016826	0.50	788.611206	Y_R4
Ni (231.604 nm)	0.247837	ppm	0.001402	0.57	959.210000	Y 377.433
P (213.618 nm)	1.951750	ppm	0.003729	0.19	2252.180000	Y 242.219
Pb (220.353 nm)	0.251928	ppm	0.000443	0.18	576.162000	Y 242.219
S (181.972 nm)	-0.005333 u	ppm	0.002308	43.27	-27.311786	Y 377.433
Sb (206.834 nm)	0.245464	ppm	0.001736	0.71	402.100000	Y 377.433
Se (196.026 nm)	0.491079	ppm	0.002650	0.54	740.288000	Y 242.219
Si (288.158 nm)	1.923130	ppm	0.007321	0.38	9900.250000	Y 377.433
Sn (189.925 nm)	0.494263	ppm	0.001551	0.31	585.047000	Y 377.433
Sr (421.552 nm)	0.253071	ppm	0.001467	0.58	29654.409199	Y_R 488.368
Th (288.505 nm)	-0.012892 u	ppm	0.007854	60.92	-15.154800	Y 377.433
Ti (336.122 nm)	0.249731	ppm	0.000132	0.05	23386.600000	Y 377.433
Tl (190.794 nm)	0.511759	ppm	0.002389	0.47	284.232000	Y 377.433
U (409.013 nm)	-0.002937 u	ppm	0.015999	> 100.00	85.847300	Y 377.433
V (292.401 nm)	0.247653	ppm	0.000114	0.05	11732.200000	Y 377.433
Zn (206.200 nm)	0.250041	ppm	0.000034	0.01	868.568000	Y 377.433
Zr (343.823 nm)	0.248859	ppm	0.000033	0.01	9966.640000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021656	10882.875846	0.003922	0.38
Y 377.433	1.017125	469542.696553	0.003931	0.39
Y_R 377.433	1.022180	38625.900000	0.004707	0.46
Y_R 488.368	1.019840	36805.900000	0.001647	0.16
Y_R2 488.368	1.023982	72064.494915	0.000204	0.02
Y_R4	1.002650	30765.600000	0.004481	0.45

Sample Name: ICV-5412563

Date: 11/5/2018 2:18:17 PM Rack:Tube: 3:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.248794	ppm	0.000123	0.05	6645.280000	Y 377.433
Al (394.401 nm)	0.247562	ppm	0.001125	0.45	3229.120000	Y 377.433
Al H (396.152 nm)	0.351536 u	ppm	0.013249	3.77	459.545000	Y_R 377.433
As (188.980 nm)	0.246521	ppm	0.001438	0.58	330.290000	Y 242.219
B (249.678 nm)	0.246818	ppm	0.000934	0.38	1037.650000	Y 242.219
Ba (493.408 nm)	0.251781	ppm	0.001484	0.59	23843.900000	Y_R 488.368
Be (234.861 nm)	0.247026	ppm	0.002113	0.86	12783.100000	Y_R 488.368
Bi (223.061 nm)	0.002521	ppm	0.000932	36.97	47.491400	Y 377.433
Ca (315.887 nm)	2.018702	ppm	0.003784	0.19	1331.129623	Y_R 377.433
Cd (214.439 nm)	0.248577	ppm	0.000362	0.15	6178.420000	Y 377.433
Co (228.615 nm)	0.245247	ppm	0.000276	0.11	5800.400000	Y 242.219
Cr (205.560 nm)	0.248992	ppm	0.000334	0.13	1177.990000	Y 377.433
Cu (324.754 nm)	0.243206	ppm	0.000332	0.14	11906.300000	Y 377.433
Fe (238.204 nm)	0.246966	ppm	0.003015	1.22	423.022342	Y_R 377.433
Fe H (259.940 nm)	0.249682 u	ppm	0.000832	0.33	218.114000	Y_R 377.433
K (766.491 nm)	19.971100	ppm	0.017557	0.09	21254.500000	Y_R2 488.368
Li (670.783 nm)	0.248317	ppm	0.001949	0.78	3070.150000	Y_R2 488.368
Mg (279.078 nm)	9.963870	ppm	0.013299	0.13	21719.500000	Y 377.433
Mn (257.610 nm)	0.258841	ppm	0.000341	0.13	54178.500000	Y 377.433
Mo (202.032 nm)	0.248638	ppm	0.000668	0.27	2847.330000	Y 377.433
Na (589.592 nm)	2.051650	ppm	0.031296	1.53	890.831000	Y_R2 488.368
Na H (589.593 nm)	3.308512 u	ppm	0.010626	0.32	766.035648	Y_R4
Ni (231.604 nm)	0.247959	ppm	0.000675	0.27	959.676000	Y 377.433
P (213.618 nm)	1.945130	ppm	0.003338	0.17	2244.510000	Y 242.219
Pb (220.353 nm)	0.250630	ppm	0.000615	0.25	573.324000	Y 242.219
S (181.972 nm)	-0.009544 u	ppm	0.000319	3.34	-29.326001	Y 377.433
Sb (206.834 nm)	0.246356	ppm	0.000102	0.04	403.564000	Y 377.433
Se (196.026 nm)	0.490452	ppm	0.000357	0.07	739.345000	Y 242.219
Si (288.158 nm)	1.906020	ppm	0.012720	0.67	9823.580000	Y 377.433
Sn (189.925 nm)	0.495022	ppm	0.005350	1.08	585.933000	Y 377.433
Sr (421.552 nm)	0.252379	ppm	0.000834	0.33	29574.009201	Y_R 488.368
Th (288.505 nm)	-0.012084 u	ppm	0.014539	> 100.00	-14.166000	Y 377.433
Ti (336.122 nm)	0.249151	ppm	0.000266	0.11	23331.400000	Y 377.433
Tl (190.794 nm)	0.512525	ppm	0.002322	0.45	284.672000	Y 377.433
U (409.013 nm)	0.007733	ppm	0.005400	69.83	110.223000	Y 377.433
V (292.401 nm)	0.247370	ppm	0.000420	0.17	11716.000000	Y 377.433
Zn (206.200 nm)	0.249540	ppm	0.000813	0.33	866.835000	Y 377.433
Zr (343.823 nm)	0.248610	ppm	0.000343	0.14	9956.530000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025558	10924.444201	0.003301	0.32
Y 377.433	1.021536	471579.257004	0.003920	0.38
Y_R 377.433	1.027260	38817.800000	0.008278	0.81
Y_R 488.368	1.025350	37004.700000	0.013255	1.29
Y_R2 488.368	1.032337	72652.535550	0.001075	0.10
Y_R4	1.021990	31359.000000	0.011733	1.15

Sample Name: ICVL-5412564

Date: 11/5/2018 2:21:42 PM Rack:Tube: 3:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010804	ppm	0.000110	1.02	60.112200	Y 377.433
Al (394.401 nm)	0.100028	ppm	0.001212	1.21	1341.490000	Y 377.433
Al H (396.152 nm)	0.236043 u	ppm	0.007046	2.99	178.108000	Y_R 377.433
As (188.980 nm)	0.012402	ppm	0.000657	5.29	2.257230	Y 242.219
B (249.678 nm)	0.099753	ppm	0.000557	0.56	447.197000	Y 242.219
Ba (493.408 nm)	0.010513	ppm	0.000023	0.22	1763.200000	Y_R 488.368
Be (234.861 nm)	0.001028	ppm	0.000009	0.92	45.993400	Y_R 488.368
Bi (223.061 nm)	0.098498	ppm	0.000070	0.07	205.639000	Y 377.433
Ca (315.887 nm)	0.192921	ppm	0.001610	0.83	125.132736	Y_R 377.433
Cd (214.439 nm)	0.005208	ppm	0.000075	1.44	118.517000	Y 377.433
Co (228.615 nm)	0.010674	ppm	0.000083	0.78	225.805000	Y 242.219
Cr (205.560 nm)	0.010261	ppm	0.000365	3.56	39.511400	Y 377.433
Cu (324.754 nm)	0.015298	ppm	0.000171	1.12	937.058000	Y 377.433
Fe (238.204 nm)	0.097331	ppm	0.001018	1.05	173.705131	Y_R 377.433
Fe H (259.940 nm)	0.111659 u	ppm	0.002426	2.17	91.457000	Y_R 377.433
K (766.491 nm)	3.016950	ppm	0.036690	1.22	4684.500000	Y_R2 488.368
Li (670.783 nm)	0.024819	ppm	0.001099	4.43	-95.375600	Y_R2 488.368
Mg (279.078 nm)	0.206927	ppm	0.004093	1.98	463.990000	Y 377.433
Mn (257.610 nm)	0.010509	ppm	0.000047	0.45	2221.330000	Y 377.433
Mo (202.032 nm)	0.019774	ppm	0.000017	0.09	243.642000	Y 377.433
Na (589.592 nm)	1.071130	ppm	0.001862	0.17	401.937000	Y_R2 488.368
Na H (589.593 nm)	2.305803 u	ppm	0.038535	1.67	431.760528	Y_R4
Ni (231.604 nm)	0.041455	ppm	0.000368	0.89	167.958000	Y 377.433
P (213.618 nm)	2.810870	ppm	0.013597	0.48	3259.100000	Y 242.219
Pb (220.353 nm)	0.006487	ppm	0.001464	22.57	29.042200	Y 242.219
S (181.972 nm)	0.092102	ppm	0.004755	5.16	18.323370	Y 377.433
Sb (206.834 nm)	0.022005	ppm	0.000331	1.50	34.936500	Y 377.433
Se (196.026 nm)	0.019554	ppm	0.003867	19.78	31.032100	Y 242.219
Si (288.158 nm)	0.408964	ppm	0.000577	0.14	3116.930000	Y 377.433
Sn (189.925 nm)	0.093559	ppm	0.002414	2.58	117.280000	Y 377.433
Sr (421.552 nm)	0.009424	ppm	0.000136	1.44	1372.185759	Y_R 488.368
Th (288.505 nm)	0.015617	ppm	0.000365	2.34	30.767100	Y 377.433
Ti (336.122 nm)	0.010190	ppm	0.000015	0.14	604.540000	Y 377.433
Tl (190.794 nm)	0.013392	ppm	0.000516	3.86	-1.171160	Y 377.433
U (409.013 nm)	0.068743 Q	ppm	0.005294	7.70	270.744000 Q	Y 377.433
V (292.401 nm)	0.009803	ppm	0.000079	0.80	275.288000	Y 377.433
Zn (206.200 nm)	0.021512	ppm	0.000058	0.27	78.737100	Y 377.433
Zr (343.823 nm)	0.014802	ppm	0.000069	0.47	481.330000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041443	11093.651295	0.005289	0.51
Y 377.433	1.028288	474696.004718	0.006644	0.65
Y_R 377.433	1.039120	39266.000000	0.005451	0.52
Y_R 488.368	1.036810	37418.400000	0.022427	2.16
Y_R2 488.368	1.040292	73212.346895	0.000864	0.08
Y_R4	1.019000	31267.200000	0.014333	1.41

Sample Name: CCVH-5408055

Date: 11/5/2018 2:25:06 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000920	ppm	0.000558	60.69	-321.289000	Y 377.433
Al (394.401 nm)	50.892300 o	ppm	0.105282	0.21	633776.000000	Y 377.433
Al H (396.152 nm)	49.562400	ppm	0.064058	0.13	81507.200000	Y_R 377.433
As (188.980 nm)	-0.005387 u	ppm	0.000165	3.06	-24.736300	Y 242.219
B (249.678 nm)	-0.003186 u	ppm	0.000130	4.09	17.894900	Y 242.219
Ba (493.408 nm)	0.000623	ppm	0.000319	51.27	894.061000	Y_R 488.368
Be (234.861 nm)	-0.000655 u	ppm	0.000185	28.22	-733.372000	Y_R 488.368
Bi (223.061 nm)	0.974723	ppm	0.008293	0.85	1656.270000	Y 377.433
Ca (315.887 nm)	-0.017348 u	ppm	0.004133	23.83	-3.518878	Y_R 377.433
Cd (214.439 nm)	0.000109	ppm	0.000011	9.73	-8.453220	Y 377.433
Co (228.615 nm)	0.001467	ppm	0.000297	20.25	61.732700	Y 242.219
Cr (205.560 nm)	0.000243	ppm	0.000169	69.64	-9.131630	Y 377.433
Cu (324.754 nm)	-0.001376 u	ppm	0.000077	5.62	593.699000	Y 377.433
Fe (238.204 nm)	49.429379 o	ppm	0.035170	0.07	82369.255805	Y_R 377.433
Fe H (259.940 nm)	49.346900	ppm	0.006286	0.01	45272.200000	Y_R 377.433
K (766.491 nm)	0.050866	ppm	0.000770	1.51	1785.630000	Y_R2 488.368
Li (670.783 nm)	0.002711	ppm	0.002033	75.01	-408.506000	Y_R2 488.368
Mg (279.078 nm)	-0.031931 u	ppm	0.006063	18.99	-203.539000	Y 377.433
Mn (257.610 nm)	0.000288	ppm	0.000010	3.46	82.930600	Y 377.433
Mo (202.032 nm)	-0.001099 u	ppm	0.000416	37.81	6.178710	Y 377.433
Na (589.592 nm)	248.996000 o	ppm	1.657790	0.67	124959.000000	Y_R2 488.368
Na H (589.593 nm)	248.727593	ppm	1.346896	0.54	88423.495014	Y_R4
Ni (231.604 nm)	0.000662 u	ppm	0.001421	> 100.00	18.978900	Y 377.433
P (213.618 nm)	-0.012597 u	ppm	0.000399	3.16	-16.941100	Y 242.219
Pb (220.353 nm)	-0.000760 u	ppm	0.002313	> 100.00	22.696200	Y 242.219
S (181.972 nm)	4.913953	ppm	0.012578	0.26	2321.182328	Y 377.433
Sb (206.834 nm)	0.001934	ppm	0.002701	> 100.00	6.114810	Y 377.433
Se (196.026 nm)	0.001470 u	ppm	0.003048	> 100.00	-8.806210	Y 242.219
Si (288.158 nm)	-0.084047 u	ppm	0.009252	11.01	908.286000	Y 377.433
Sn (189.925 nm)	-0.006899 u	ppm	0.000083	1.20	0.008783	Y 377.433
Sr (421.552 nm)	0.000254	ppm	0.000043	17.08	313.411780	Y_R 488.368
Th (288.505 nm)	4.911690	ppm	0.010223	0.21	5269.120000	Y 377.433
Ti (336.122 nm)	0.000499	ppm	0.000022	4.42	-317.559000	Y 377.433
Tl (190.794 nm)	-0.006900 u	ppm	0.001054	15.27	-16.049800	Y 377.433
U (409.013 nm)	9.903410	ppm	0.014182	0.14	22777.600000	Y 377.433
V (292.401 nm)	-0.005171 u	ppm	0.000312	6.04	-447.516000	Y 377.433
Zn (206.200 nm)	-0.000146 u	ppm	0.000630	> 100.00	9.149770	Y 377.433
Zr (343.823 nm)	-0.007079 u	ppm	0.000195	2.75	-405.403000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002798	10681.999512	0.003852	0.38
Y 377.433	1.002767	462914.759610	0.003918	0.39
Y_R 377.433	1.014840	38348.600000	0.006067	0.60
Y_R 488.368	1.011270	36496.600000	0.009033	0.89
Y_R2 488.368	1.017829	71631.510820	0.000536	0.05
Y_R4	1.019350	31278.100000	0.007120	0.70

Sample Name: CCV-5407762

Date: 11/5/2018 2:40:22 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.495130	ppm	0.000067	0.01	13461.100000	Y 377.433
Al (394.401 nm)	0.501043	ppm	0.002333	0.47	6445.420000	Y 377.433
Al H (396.152 nm)	0.548260 u	ppm	0.000258	0.05	878.846000	Y_R 377.433
As (188.980 nm)	0.980547	ppm	0.003283	0.33	1358.720000	Y 242.219
B (249.678 nm)	0.491561	ppm	0.000378	0.08	2019.600000	Y 242.219
Ba (493.408 nm)	0.500757	ppm	0.001268	0.25	46631.700000	Y_R 488.368
Be (234.861 nm)	0.496473	ppm	0.001753	0.35	25669.100000	Y_R 488.368
Bi (223.061 nm)	0.000861 u	ppm	0.001508	> 100.00	45.097400	Y 377.433
Ca (315.887 nm)	5.000340	ppm	0.001921	0.04	3300.607957	Y_R 377.433
Cd (214.439 nm)	0.500567	ppm	0.002829	0.57	12453.000000	Y 377.433
Co (228.615 nm)	0.497672	ppm	0.000026	0.01	11801.500000	Y 242.219
Cr (205.560 nm)	0.497057	ppm	0.003243	0.65	2360.870000	Y 377.433
Cu (324.754 nm)	0.496924	ppm	0.002934	0.59	24117.600000	Y 377.433
Fe (238.204 nm)	2.515109	ppm	0.002538	0.10	4202.133295	Y_R 377.433
Fe H (259.940 nm)	2.498480 u	ppm	0.001097	0.04	2281.730000	Y_R 377.433
K (766.491 nm)	49.665100	ppm	0.340890	0.69	50275.700000	Y_R2 488.368
Li (670.783 nm)	0.996854	ppm	0.005230	0.52	13672.100000	Y_R2 488.368
Mg (279.078 nm)	19.891400	ppm	0.001160	0.01	43343.900000	Y 377.433
Mn (257.610 nm)	0.498375	ppm	0.000199	0.04	104295.000000	Y 377.433
Mo (202.032 nm)	0.500846	ppm	0.000617	0.12	5716.580000	Y 377.433
Na (589.592 nm)	24.725900	ppm	0.074086	0.30	12278.500000	Y_R2 488.368
Na H (589.593 nm)	25.733026 u	ppm	0.130570	0.51	8748.688892	Y_R4
Ni (231.604 nm)	0.500574	ppm	0.001440	0.29	1928.400000	Y 377.433
P (213.618 nm)	0.985054	ppm	0.004798	0.49	1119.310000	Y 242.219
Pb (220.353 nm)	1.000610	ppm	0.000961	0.10	2247.670000	Y 242.219
S (181.972 nm)	-0.010827 u	ppm	0.008118	74.98	-29.014774	Y 377.433
Sb (206.834 nm)	0.997054	ppm	0.002730	0.27	1638.210000	Y 377.433
Se (196.026 nm)	0.984741	ppm	0.000247	0.03	1482.270000	Y 242.219
Si (288.158 nm)	4.845790	ppm	0.014102	0.29	22993.500000	Y 377.433
Sn (189.925 nm)	0.996569	ppm	0.003760	0.38	1171.420000	Y 377.433
Sr (421.552 nm)	0.501192	ppm	0.001256	0.25	58456.222044	Y_R 488.368
Th (288.505 nm)	-0.031556 u	ppm	0.006365	20.17	-51.377000	Y 377.433
Ti (336.122 nm)	0.500666	ppm	0.000364	0.07	47255.300000	Y 377.433
Tl (190.794 nm)	0.993516	ppm	0.008351	0.84	560.006000	Y 377.433
U (409.013 nm)	0.000477 u	ppm	0.007803	> 100.00	71.903900	Y 377.433
V (292.401 nm)	0.496930	ppm	0.000169	0.03	23730.500000	Y 377.433
Zn (206.200 nm)	0.499336	ppm	0.006461	1.29	1730.390000	Y 377.433
Zr (343.823 nm)	0.500439	ppm	0.000273	0.05	20162.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019677	10861.794695	0.002431	0.24
Y 377.433	1.016210	469120.667218	0.003408	0.34
Y_R 377.433	1.028520	38865.500000	0.000134	0.01
Y_R 488.368	1.031370	37222.300000	0.001633	0.16
Y_R2 488.368	1.025978	72204.973063	0.005214	0.51
Y_R4	1.023740	31412.700000	0.013718	1.34

Sample Name: ICB

Date: 11/5/2018 2:43:50 PM Rack:Tube: S1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000744	ppm	0.000132	17.70	-218.937000	Y 377.433
Al (394.401 nm)	-0.000004 u	ppm	0.000969	> 100.00	91.824400	Y 377.433
Al H (396.152 nm)	0.137933 Zu	ppm	0.009242	6.70	12.024400 Z	Y_R 377.433
As (188.980 nm)	-0.001416 u	ppm	0.002496	> 100.00	-17.099300	Y 242.219
B (249.678 nm)	-0.002820 u	ppm	0.002286	81.07	35.377300	Y 242.219
Ba (493.408 nm)	-0.000261 u	ppm	0.000077	29.51	777.132000	Y_R 488.368
Be (234.861 nm)	0.000027 u	ppm	0.000093	> 100.00	-4.483480	Y_R 488.368
Bi (223.061 nm)	-0.002131 u	ppm	0.003517	> 100.00	39.759000	Y 377.433
Ca (315.887 nm)	-0.013060 u	ppm	0.002780	21.29	-10.944933	Y_R 377.433
Cd (214.439 nm)	-0.000048 u	ppm	0.000253	> 100.00	-12.342100	Y 377.433
Co (228.615 nm)	0.000170	ppm	0.000064	37.33	-23.916200	Y 242.219
Cr (205.560 nm)	-0.000229 u	ppm	0.000077	33.54	-10.437800	Y 377.433
Cu (324.754 nm)	0.000022 u	ppm	0.000035	> 100.00	201.250000	Y 377.433
Fe (238.204 nm)	-0.000136 u	ppm	0.002042	> 100.00	11.308595	Y_R 377.433
Fe H (259.940 nm)	0.013983 u	ppm	0.003018	21.58	1.824050	Y_R 377.433
K (766.491 nm)	-0.088090 u	ppm	0.033424	37.94	1649.820000	Y_R2 488.368
Li (670.783 nm)	-0.003499 u	ppm	0.001586	45.31	-496.462000	Y_R2 488.368
Mg (279.078 nm)	0.003880	ppm	0.001614	41.59	22.201900	Y 377.433
Mn (257.610 nm)	0.000058	ppm	0.000064	> 100.00	34.828100	Y 377.433
Mo (202.032 nm)	-0.000567 u	ppm	0.000070	12.29	12.226600	Y 377.433
Na (589.592 nm)	-0.042142 u	ppm	0.071956	> 100.00	-157.201000	Y_R2 488.368
Na H (589.593 nm)	1.296839 u	ppm	0.002765	0.21	72.569764	Y_R4
Ni (231.604 nm)	-0.000092 u	ppm	0.000309	> 100.00	8.728110	Y 377.433
P (213.618 nm)	-0.000233 u	ppm	0.000405	> 100.00	-1.373750	Y 242.219
Pb (220.353 nm)	-0.002121 u	ppm	0.001923	90.64	9.813150	Y 242.219
S (181.972 nm)	-0.001209 u	ppm	0.001737	> 100.00	-26.287763	Y 377.433
Sb (206.834 nm)	0.001018	ppm	0.000512	50.30	0.554021	Y 377.433
Se (196.026 nm)	0.004668	ppm	0.000613	13.13	8.659890	Y 242.219
Si (288.158 nm)	-0.136762 Zu	ppm	0.004918	3.60	672.127000 Z	Y 377.433
Sn (189.925 nm)	-0.006365 u	ppm	0.000586	9.20	0.632087	Y 377.433
Sr (421.552 nm)	-0.000113 u	ppm	0.000206	> 100.00	265.071963	Y_R 488.368
Th (288.505 nm)	0.000806	ppm	0.000015	1.87	15.341700	Y 377.433
Ti (336.122 nm)	0.000309	ppm	0.000174	56.52	-335.715000	Y 377.433
Tl (190.794 nm)	-0.002198 u	ppm	0.002232	> 100.00	-10.074300	Y 377.433
U (409.013 nm)	0.000391 u	ppm	0.004172	> 100.00	115.716000	Y 377.433
V (292.401 nm)	0.000034 u	ppm	0.000110	> 100.00	-194.250000	Y 377.433
Zn (206.200 nm)	0.000224	ppm	0.000316	> 100.00	5.153860	Y 377.433
Zr (343.823 nm)	0.000249	ppm	0.000073	29.48	-108.445000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037310	11049.627885	0.003740	0.36
Y 377.433	1.028936	474995.137171	0.004324	0.42
Y_R 377.433	1.034750	39100.800000	0.004279	0.41
Y_R 488.368	1.036800	37418.200000	0.005226	0.50
Y_R2 488.368	1.040431	73222.106306	0.007818	0.75
Y_R4	1.011710	31043.600000	0.008565	0.85

Sample Name: CRI-5412564

Date: 11/5/2018 2:47:03 PM Rack:Tube: 3:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010285	ppm	0.000345	3.36	45.764000	Y 377.433
Al (394.401 nm)	0.101220	ppm	0.000788	0.78	1353.270000	Y 377.433
Al H (396.152 nm)	0.225645 u	ppm	0.004447	1.97	160.954000	Y_R 377.433
As (188.980 nm)	0.012528	ppm	0.000590	4.71	2.434900	Y 242.219
B (249.678 nm)	0.096920	ppm	0.001497	1.54	435.823000	Y 242.219
Ba (493.408 nm)	0.009764	ppm	0.000364	3.73	1694.700000	Y_R 488.368
Be (234.861 nm)	0.001062	ppm	0.000045	4.23	47.749900	Y_R 488.368
Bi (223.061 nm)	0.097444	ppm	0.001364	1.40	203.901000	Y 377.433
Ca (315.887 nm)	0.191409	ppm	0.015151	7.92	124.130380	Y_R 377.433
Cd (214.439 nm)	0.005332	ppm	0.000035	0.65	121.601000	Y 377.433
Co (228.615 nm)	0.010596	ppm	0.000157	1.49	223.957000	Y 242.219
Cr (205.560 nm)	0.010427	ppm	0.000492	4.72	40.306300	Y 377.433
Cu (324.754 nm)	0.015540	ppm	0.000300	1.93	950.613000	Y 377.433
Fe (238.204 nm)	0.094775	ppm	0.003248	3.43	169.446316	Y_R 377.433
Fe H (259.940 nm)	0.100006 u	ppm	0.001686	1.69	80.763500	Y_R 377.433
K (766.491 nm)	3.047640	ppm	0.093528	3.07	4714.490000	Y_R2 488.368
Li (670.783 nm)	0.023454	ppm	0.002994	12.77	-114.699000	Y_R2 488.368
Mg (279.078 nm)	0.200395	ppm	0.000857	0.43	449.862000	Y 377.433
Mn (257.610 nm)	0.010478	ppm	0.000018	0.17	2214.920000	Y 377.433
Mo (202.032 nm)	0.019752	ppm	0.000277	1.40	243.384000	Y 377.433
Na (589.592 nm)	1.080720	ppm	0.013711	1.27	406.769000	Y_R2 488.368
Na H (589.593 nm)	2.273278 u	ppm	0.028389	1.25	420.244203	Y_R4
Ni (231.604 nm)	0.042288	ppm	0.000772	1.83	171.149000	Y 377.433
P (213.618 nm)	2.818710	ppm	0.016117	0.57	3268.190000	Y 242.219
Pb (220.353 nm)	0.007143 Q	ppm	0.001330	18.61	30.495500 Q	Y 242.219
S (181.972 nm)	0.094372	ppm	0.002822	2.99	19.406637	Y 377.433
Sb (206.834 nm)	0.021424	ppm	0.000150	0.70	33.977500	Y 377.433
Se (196.026 nm)	0.023361	ppm	0.001207	5.17	36.757500	Y 242.219
Si (288.158 nm)	0.310832 Q	ppm	0.001098	0.35	2677.300000 Q	Y 377.433
Sn (189.925 nm)	0.094575	ppm	0.000584	0.62	118.467000	Y 377.433
Sr (421.552 nm)	0.009356	ppm	0.000094	1.01	1364.241516	Y_R 488.368
Th (288.505 nm)	0.018050 Q	ppm	0.008702	48.21	33.308600 Q	Y 377.433
Ti (336.122 nm)	0.010394	ppm	0.000049	0.47	623.870000	Y 377.433
Tl (190.794 nm)	0.012087	ppm	0.005572	46.10	-1.918340	Y 377.433
U (409.013 nm)	0.063178	ppm	0.001876	2.97	258.013000	Y 377.433
V (292.401 nm)	0.010065	ppm	0.000079	0.78	289.151000	Y 377.433
Zn (206.200 nm)	0.021010	ppm	0.000069	0.33	77.001600	Y 377.433
Zr (343.823 nm)	0.015024	ppm	0.000292	1.95	490.332000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.056187	11250.708154	0.004256	0.40
Y 377.433	1.044553	482204.935255	0.002974	0.28
Y_R 377.433	1.024860	38727.000000	0.002794	0.27
Y_R 488.368	1.034670	37341.100000	0.001055	0.10
Y_R2 488.368	1.039623	73165.275579	0.009217	0.89
Y_R4	1.053490	32325.500000	0.004506	0.43

Sample Name: ICSA-5374484

Date: 11/5/2018 2:55:39 PM Rack:Tube: 3:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000251	ppm	0.000206	82.35	-233.995000	Y 377.433
Al (394.401 nm)	525.428000 o	ppm	0.013998	0.00	6541110.000000	Y 377.433
Al H (396.152 nm)	521.096000	ppm	1.463790	0.28	858939.000000	Y_R 377.433
As (188.980 nm)	-0.013950 Ku	ppm	0.001834	13.15	-48.250300 K	Y 242.219
B (249.678 nm)	-0.016740 Ku	ppm	0.002020	12.06	-82.659900 K	Y 242.219
Ba (493.408 nm)	-0.000647 u	ppm	0.000593	91.55	881.684000	Y_R 488.368
Be (234.861 nm)	0.000512 K	ppm	0.000314	61.27	-2670.870000 K	Y_R 488.368
Bi (223.061 nm)	0.040429	ppm	0.001527	3.78	134.790000	Y 377.433
Ca (315.887 nm)	490.000761	ppm	1.135094	0.23	323760.620693	Y_R 377.433
Cd (214.439 nm)	0.001181	ppm	0.000249	21.13	18.241200	Y 377.433
Co (228.615 nm)	-0.009147 Ku	ppm	0.000077	0.85	-31.905800 K	Y 242.219
Cr (205.560 nm)	0.001822	ppm	0.000008	0.44	-10.610800	Y 377.433
Cu (324.754 nm)	-0.006593 u	ppm	0.000073	1.11	-47.913500	Y 377.433
Fe (238.204 nm)	191.874849 o	ppm	0.273282	0.14	319707.541737	Y_R 377.433
Fe H (259.940 nm)	192.626000	ppm	0.115260	0.06	176752.000000	Y_R 377.433
K (766.491 nm)	0.048685	ppm	0.054522	> 100.00	1783.500000	Y_R2 488.368
Li (670.783 nm)	0.010253 K	ppm	0.000057	0.55	-301.681000 K	Y_R2 488.368
Mg (279.078 nm)	510.866000	ppm	1.031120	0.20	1112720.000000	Y 377.433
Mn (257.610 nm)	-0.001626 Ku	ppm	0.000042	2.55	-317.561000 K	Y 377.433
Mo (202.032 nm)	-0.000647 u	ppm	0.000720	> 100.00	11.316000	Y 377.433
Na (589.592 nm)	0.035247	ppm	0.020434	57.97	-118.330000	Y_R2 488.368
Na H (589.593 nm)	1.606920 u	ppm	0.020530	1.28	183.233929	Y_R4
Ni (231.604 nm)	-0.004295 u	ppm	0.000530	12.33	21.187200	Y 377.433
P (213.618 nm)	-0.003790 u	ppm	0.007730	> 100.00	-5.085920	Y 242.219
Pb (220.353 nm)	0.005868 K	ppm	0.000532	9.07	-44.448600 K	Y 242.219
S (181.972 nm)	-0.155685 Ku	ppm	0.014793	9.50	-75.893302 K	Y 377.433
Sb (206.834 nm)	-0.003062 u	ppm	0.007147	> 100.00	9.569770	Y 377.433
Se (196.026 nm)	-0.001206 u	ppm	0.002916	> 100.00	-49.295600	Y 242.219
Si (288.158 nm)	-0.143250 Ku	ppm	0.001922	1.34	643.062000 K	Y 377.433
Sn (189.925 nm)	-0.006390 u	ppm	0.001634	25.58	0.603021	Y 377.433
Sr (421.552 nm)	0.004185 K	ppm	0.000005	0.13	786.221055 K	Y_R 488.368
Th (288.505 nm)	-0.001777 u	ppm	0.003949	> 100.00	-12.104400	Y 377.433
Ti (336.122 nm)	0.000499	ppm	0.000021	4.20	914.778000	Y 377.433
Tl (190.794 nm)	0.000954 u	ppm	0.001626	> 100.00	-37.774500	Y 377.433
U (409.013 nm)	0.032994	ppm	0.012367	37.48	244.733000	Y 377.433
V (292.401 nm)	0.001913	ppm	0.000265	13.82	-104.281000	Y 377.433
Zn (206.200 nm)	-0.001138 u	ppm	0.001693	> 100.00	20.919800	Y 377.433
Zr (343.823 nm)	0.000475 u	ppm	0.000732	> 100.00	-99.278800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.915176	9748.631746	0.003886	0.42
Y 377.433	0.921831	425551.797722	0.004626	0.50
Y_R 377.433	0.979048	36996.000000	0.002096	0.21
Y_R 488.368	0.974184	35158.300000	0.009997	1.03
Y_R2 488.368	0.986384	69418.519090	0.000207	0.02
Y_R4	0.996119	30565.100000	0.005520	0.55

Sample Name: ICSAB-5408059

Date: 11/5/2018 3:05:25 PM Rack:Tube: 3:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.136850	ppm	0.001749	0.15	31343.500000	Y 377.433
Al (394.401 nm)	523.213000 o	ppm	0.505154	0.10	6513340.000000	Y 377.433
Al H (396.152 nm)	515.301000	ppm	0.962796	0.19	849774.000000	Y_R 377.433
As (188.980 nm)	2.159880	ppm	0.008869	0.41	2997.770000	Y 242.219
B (249.678 nm)	2.200130	ppm	0.005808	0.26	8819.000000	Y 242.219
Ba (493.408 nm)	0.511360	ppm	0.003541	0.69	47739.000000	Y_R 488.368
Be (234.861 nm)	0.506102	ppm	0.002435	0.48	23532.200000	Y_R 488.368
Bi (223.061 nm)	1.024690	ppm	0.002332	0.23	1756.990000	Y 377.433
Ca (315.887 nm)	485.148832	ppm	1.866773	0.38	320554.691331	Y_R 377.433
Cd (214.439 nm)	0.975275	ppm	0.006067	0.62	24273.300000	Y 377.433
Co (228.615 nm)	0.467508	ppm	0.001085	0.23	11319.100000	Y 242.219
Cr (205.560 nm)	0.497209	ppm	0.000869	0.17	2349.530000	Y 377.433
Cu (324.754 nm)	0.525731	ppm	0.001334	0.25	25918.200000	Y 377.433
Fe (238.204 nm)	190.543193 o	ppm	0.181684	0.10	317488.776982	Y_R 377.433
Fe H (259.940 nm)	190.773000	ppm	0.362354	0.19	175052.000000	Y_R 377.433
K (766.491 nm)	54.676700	ppm	0.128181	0.23	55173.600000	Y_R2 488.368
Li (670.783 nm)	1.093310	ppm	0.009961	0.91	15038.300000	Y_R2 488.368
Mg (279.078 nm)	509.379000	ppm	0.480671	0.09	1109480.000000	Y 377.433
Mn (257.610 nm)	0.494569	ppm	0.001508	0.31	103498.000000	Y 377.433
Mo (202.032 nm)	1.010960	ppm	0.000087	0.01	11519.900000	Y 377.433
Na (589.592 nm)	53.423700	ppm	0.026151	0.05	26696.100000	Y_R2 488.368
Na H (589.593 nm)	55.523596	ppm	0.552596	1.00	19385.157205	Y_R4
Ni (231.604 nm)	0.928022	ppm	0.003044	0.33	3601.800000	Y 377.433
P (213.618 nm)	2.116350	ppm	0.020323	0.96	2430.300000	Y 242.219
Pb (220.353 nm)	1.016060	ppm	0.003037	0.30	2209.380000	Y 242.219
S (181.972 nm)	0.903896	ppm	0.016646	1.84	431.539243	Y 377.433
Sb (206.834 nm)	1.067060	ppm	0.005672	0.53	1757.990000	Y 377.433
Se (196.026 nm)	5.314560	ppm	0.021692	0.41	7943.900000	Y 242.219
Si (288.158 nm)	10.474600	ppm	0.031022	0.30	48209.800000	Y 377.433
Sn (189.925 nm)	9.766250	ppm	0.056136	0.57	11408.800000	Y 377.433
Sr (421.552 nm)	1.030137	ppm	0.003415	0.33	119877.216531	Y_R 488.368
Th (288.505 nm)	1.924240	ppm	0.007878	0.41	2006.080000	Y 377.433
Ti (336.122 nm)	1.041640	ppm	0.002342	0.22	99902.200000	Y 377.433
Tl (190.794 nm)	9.700390	ppm	0.009569	0.10	5521.930000	Y 377.433
U (409.013 nm)	0.021802	ppm	0.018001	82.57	129.443000	Y 377.433
V (292.401 nm)	0.508609	ppm	0.001110	0.22	24452.600000	Y 377.433
Zn (206.200 nm)	0.963884	ppm	0.000286	0.03	3355.960000	Y 377.433
Zr (343.823 nm)	0.996106	ppm	0.001222	0.12	40249.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.898698	9573.103021	0.000184	0.02
Y 377.433	0.915442	422602.308686	0.000351	0.04
Y_R 377.433	0.979187	37001.300000	0.004225	0.43
Y_R 488.368	0.985529	35567.700000	0.007761	0.79
Y_R2 488.368	0.985887	69383.493813	0.001556	0.16
Y_R4	1.006410	30880.800000	0.004312	0.43

Sample Name: LRA-5347188

Date: 11/5/2018 3:09:20 PM Rack:Tube: 3:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.016874 u	ppm	0.000248	1.47	-3208.990000	Y 377.433
Al (394.401 nm)	-0.156312 u	ppm	0.006920	4.43	647.680000	Y 377.433
Al H (396.152 nm)	-1.768720 u	ppm	0.017272	0.98	350.829000	Y_R 377.433
As (188.980 nm)	9.947950	ppm	0.070271	0.71	13911.400000	Y 242.219
B (249.678 nm)	9.991630	ppm	0.003036	0.03	40008.000000	Y 242.219
Ba (493.408 nm)	12.178900	ppm	0.032998	0.27	1115760.000000	Y_R 488.368
Be (234.861 nm)	0.001459	ppm	0.001360	93.22	-6731.130000	Y_R 488.368
Bi (223.061 nm)	-0.043578 u	ppm	0.007175	16.47	34.312800	Y 377.433
Ca (315.887 nm)	0.028481	ppm	0.000221	0.78	16.551379	Y_R 377.433
Cd (214.439 nm)	1.994660	ppm	0.004183	0.21	49655.900000	Y 377.433
Co (228.615 nm)	5.033270	ppm	0.005479	0.11	120348.000000	Y 242.219
Cr (205.560 nm)	9.983660	ppm	0.020924	0.21	47621.400000	Y 377.433
Cu (324.754 nm)	10.367700	ppm	0.094917	0.92	499668.000000	Y 377.433
Fe (238.204 nm)	484.533426 o	ppm	0.097874	0.02	807326.313497	Y_R 377.433
Fe H (259.940 nm)	488.223000	ppm	0.380101	0.08	448008.000000	Y_R 377.433
K (766.491 nm)	-0.174304 u	ppm	0.010493	6.02	1565.560000	Y_R2 488.368
Li (670.783 nm)	0.002002 u	ppm	0.003027	> 100.00	-418.548000	Y_R2 488.368
Mg (279.078 nm)	-0.047731 u	ppm	0.004069	8.53	-511.980000	Y 377.433
Mn (257.610 nm)	9.846280	ppm	0.017172	0.17	2060100.000000	Y 377.433
Mo (202.032 nm)	4.958070	ppm	0.001632	0.03	56424.400000	Y 377.433
Na (589.592 nm)	0.247944	ppm	0.060583	24.43	-199.285000	Y_R2 488.368
Na H (589.593 nm)	3.633192 u	ppm	0.066265	1.82	-293.541945	Y_R4
Ni (231.604 nm)	10.078800	ppm	0.007594	0.08	38705.900000	Y 377.433
P (213.618 nm)	0.178436	ppm	0.001785	1.00	-258.298000	Y 242.219
Pb (220.353 nm)	10.334100	ppm	0.009836	0.10	23070.200000	Y 242.219
S (181.972 nm)	-0.102695 u	ppm	0.001913	1.86	-44.704948	Y 377.433
Sb (206.834 nm)	-0.082923 u	ppm	0.001562	1.88	-61.480200	Y 377.433
Se (196.026 nm)	5.001700	ppm	0.009388	0.19	7411.620000	Y 242.219
Si (288.158 nm)	48.507800	ppm	0.587784	1.21	218595.000000	Y 377.433
Sn (189.925 nm)	-0.003617 u	ppm	0.000252	6.97	3.840870	Y 377.433
Sr (421.552 nm)	10.076302	ppm	0.026007	0.26	1169978.343421	Y_R 488.368
Th (288.505 nm)	-0.548463 u	ppm	0.007722	1.41	-1205.370000	Y 377.433
Ti (336.122 nm)	9.850110	ppm	0.004043	0.04	936282.000000	Y 377.433
Tl (190.794 nm)	5.163550	ppm	0.006529	0.13	2924.440000	Y 377.433
U (409.013 nm)	-0.016274 u	ppm	0.001848	11.35	333.064000	Y 377.433
V (292.401 nm)	9.943320	ppm	0.003728	0.04	478801.000000	Y 377.433
Zn (206.200 nm)	9.774200	ppm	0.020042	0.21	33836.600000	Y 377.433
Zr (343.823 nm)	0.001962	ppm	0.000128	6.52	-39.038400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015793	10820.425125	0.003523	0.35
Y 377.433	1.019864	470807.213779	0.004358	0.43
Y_R 377.433	1.055250	39875.600000	0.005894	0.56
Y_R 488.368	1.064530	38419.000000	0.008519	0.80
Y_R2 488.368	1.053631	74151.123490	0.002248	0.21
Y_R4	1.026830	31507.400000	0.001443	0.14

Sample Name: CCVH-5408055

Date: 11/5/2018 3:13:13 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001163	ppm	0.000610	52.44	-314.826000	Y 377.433
Al (394.401 nm)	51.168000 o	ppm	0.156894	0.31	637211.000000	Y 377.433
Al H (396.152 nm)	49.711500	ppm	0.042439	0.09	81753.000000	Y_R 377.433
As (188.980 nm)	-0.006402 u	ppm	0.001219	19.04	-26.170300	Y 242.219
B (249.678 nm)	-0.000575 u	ppm	0.003340	> 100.00	28.265900	Y 242.219
Ba (493.408 nm)	0.000594	ppm	0.000722	> 100.00	891.666000	Y_R 488.368
Be (234.861 nm)	-0.000157 u	ppm	0.000227	> 100.00	-712.340000	Y_R 488.368
Bi (223.061 nm)	0.983609	ppm	0.003428	0.35	1670.960000	Y 377.433
Ca (315.887 nm)	-0.014881 u	ppm	0.000895	6.01	-1.856011	Y_R 377.433
Cd (214.439 nm)	0.000230	ppm	0.000036	15.67	-5.426610	Y 377.433
Co (228.615 nm)	0.001341	ppm	0.000356	26.57	59.128000	Y 242.219
Cr (205.560 nm)	0.000759	ppm	0.000127	16.77	-6.672620	Y 377.433
Cu (324.754 nm)	-0.000615 u	ppm	0.000019	3.10	628.785000	Y 377.433
Fe (238.204 nm)	49.787117 o	ppm	0.000831	0.00	82965.307613	Y_R 377.433
Fe H (259.940 nm)	49.716600	ppm	0.059818	0.12	45611.600000	Y_R 377.433
K (766.491 nm)	-0.055687 u	ppm	0.126340	> 100.00	1681.490000	Y_R2 488.368
Li (670.783 nm)	0.000774 u	ppm	0.003536	> 100.00	-435.933000	Y_R2 488.368
Mg (279.078 nm)	-0.030742 u	ppm	0.001451	4.72	-201.351000	Y 377.433
Mn (257.610 nm)	0.000550	ppm	0.000040	7.32	137.662000	Y 377.433
Mo (202.032 nm)	-0.000506 u	ppm	0.000271	53.68	12.927800	Y 377.433
Na (589.592 nm)	249.459000 o	ppm	0.904724	0.36	125192.000000	Y_R2 488.368
Na H (589.593 nm)	249.332001	ppm	1.758966	0.71	88639.331058	Y_R4
Ni (231.604 nm)	0.001325	ppm	0.001451	> 100.00	21.568500	Y 377.433
P (213.618 nm)	-0.010257 u	ppm	0.001784	17.39	-14.237400	Y 242.219
Pb (220.353 nm)	0.000487 u	ppm	0.003202	> 100.00	25.477200	Y 242.219
S (181.972 nm)	4.997491	ppm	0.013153	0.26	2361.083421	Y 377.433
Sb (206.834 nm)	-0.002443 u	ppm	0.004336	> 100.00	-1.060660	Y 377.433
Se (196.026 nm)	0.005009	ppm	0.004127	82.39	-3.571940	Y 242.219
Si (288.158 nm)	-0.191489 u	ppm	0.002977	1.55	426.954000	Y 377.433
Sn (189.925 nm)	-0.004542 u	ppm	0.000266	5.86	2.760460	Y 377.433
Sr (421.552 nm)	0.000273	ppm	0.000031	11.35	315.694437	Y_R 488.368
Th (288.505 nm)	4.908390	ppm	0.043880	0.89	5265.570000	Y 377.433
Ti (336.122 nm)	0.000806	ppm	0.000032	3.92	-288.355000	Y 377.433
Tl (190.794 nm)	-0.009579 u	ppm	0.004236	44.22	-17.602200	Y 377.433
U (409.013 nm)	9.898220	ppm	0.003237	0.03	22766.000000	Y 377.433
V (292.401 nm)	-0.004695 u	ppm	0.000029	0.63	-425.651000	Y 377.433
Zn (206.200 nm)	-0.000222 u	ppm	0.000070	31.38	8.923000	Y 377.433
Zr (343.823 nm)	-0.007316 u	ppm	0.000023	0.31	-415.019000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003614	10690.691618	0.003187	0.32
Y 377.433	1.004913	463905.292963	0.003870	0.39
Y_R 377.433	1.043230	39421.200000	0.006966	0.67
Y_R 488.368	1.052710	37992.400000	0.010231	0.97
Y_R2 488.368	1.053869	74167.837535	0.007992	0.76
Y_R4	1.056980	32432.600000	0.004007	0.38

Sample Name: CCV-5407762

Date: 11/5/2018 3:16:48 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.501804	ppm	0.000758	0.15	13645.800000	Y 377.433
Al (394.401 nm)	0.510060	ppm	0.001195	0.23	6553.990000	Y 377.433
Al H (396.152 nm)	0.556908 u	ppm	0.001394	0.25	894.226000	Y_R 377.433
As (188.980 nm)	0.994727	ppm	0.002221	0.22	1378.590000	Y 242.219
B (249.678 nm)	0.496627	ppm	0.003465	0.70	2039.940000	Y 242.219
Ba (493.408 nm)	0.502499	ppm	0.002688	0.53	46791.100000	Y_R 488.368
Be (234.861 nm)	0.502424	ppm	0.000024	0.00	25977.100000	Y_R 488.368
Bi (223.061 nm)	-0.002734 u	ppm	0.003190	> 100.00	39.173800	Y 377.433
Ca (315.887 nm)	5.007229	ppm	0.021558	0.43	3305.159559	Y_R 377.433
Cd (214.439 nm)	0.505949	ppm	0.002924	0.58	12587.000000	Y 377.433
Co (228.615 nm)	0.497906	ppm	0.001595	0.32	11807.400000	Y 242.219
Cr (205.560 nm)	0.506801	ppm	0.004722	0.93	2407.340000	Y 377.433
Cu (324.754 nm)	0.506260	ppm	0.000127	0.03	24568.800000	Y 377.433
Fe (238.204 nm)	2.519767	ppm	0.000939	0.04	4209.893610	Y_R 377.433
Fe H (259.940 nm)	2.530080 u	ppm	0.010974	0.43	2310.720000	Y_R 377.433
K (766.491 nm)	49.995700	ppm	0.134508	0.27	50598.700000	Y_R2 488.368
Li (670.783 nm)	0.998938	ppm	0.001516	0.15	13701.600000	Y_R2 488.368
Mg (279.078 nm)	20.224700	ppm	0.003375	0.02	44070.300000	Y 377.433
Mn (257.610 nm)	0.506045	ppm	0.000324	0.06	105899.000000	Y 377.433
Mo (202.032 nm)	0.509873	ppm	0.000310	0.06	5819.280000	Y 377.433
Na (589.592 nm)	24.972600	ppm	0.054750	0.22	12402.400000	Y_R2 488.368
Na H (589.593 nm)	26.069776 u	ppm	0.116924	0.45	8868.792744	Y_R4
Ni (231.604 nm)	0.508972	ppm	0.001992	0.39	1960.590000	Y 377.433
P (213.618 nm)	1.001090	ppm	0.000672	0.07	1137.490000	Y 242.219
Pb (220.353 nm)	1.005600	ppm	0.001440	0.14	2258.730000	Y 242.219
S (181.972 nm)	-0.012566 u	ppm	0.001752	13.94	-29.814819	Y 377.433
Sb (206.834 nm)	1.019450	ppm	0.000129	0.01	1675.040000	Y 377.433
Se (196.026 nm)	1.008260	ppm	0.006996	0.69	1517.650000	Y 242.219
Si (288.158 nm)	4.827980	ppm	0.005842	0.12	22913.700000	Y 377.433
Sn (189.925 nm)	1.015590	ppm	0.003661	0.36	1193.620000	Y 377.433
Sr (421.552 nm)	0.502729	ppm	0.001230	0.24	58634.646039	Y_R 488.368
Th (288.505 nm)	-0.029944 u	ppm	0.001461	4.88	-50.204700	Y 377.433
Ti (336.122 nm)	0.508148	ppm	0.000699	0.14	47967.000000	Y 377.433
Tl (190.794 nm)	1.009000	ppm	0.000383	0.04	568.859000	Y 377.433
U (409.013 nm)	-0.012138 u	ppm	0.009561	78.76	42.489500	Y 377.433
V (292.401 nm)	0.504175	ppm	0.000384	0.08	24080.400000	Y 377.433
Zn (206.200 nm)	0.511496	ppm	0.000869	0.17	1772.420000	Y 377.433
Zr (343.823 nm)	0.507062	ppm	0.001162	0.23	20430.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040515	11083.768542	0.002957	0.28
Y 377.433	1.029022	475035.034323	0.000043	0.00
Y_R 377.433	1.047110	39567.800000	0.000184	0.02
Y_R 488.368	1.053830	38032.900000	0.002335	0.22
Y_R2 488.368	1.045101	73550.785579	0.004027	0.39
Y_R4	1.037720	31841.700000	0.002460	0.24

Sample Name: CCB

Date: 11/5/2018 3:20:15 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000277 u	ppm	0.000145	52.26	-247.289000	Y 377.433
Al (394.401 nm)	0.000359 u	ppm	0.002547	> 100.00	94.178200	Y 377.433
Al H (396.152 nm)	0.132050 Zu	ppm	0.004229	3.20	2.309590 Z	Y_R 377.433
As (188.980 nm)	-0.003720 u	ppm	0.000741	19.91	-20.327200	Y 242.219
B (249.678 nm)	-0.001952 u	ppm	0.000051	2.63	38.862700	Y 242.219
Ba (493.408 nm)	-0.000350 u	ppm	0.000114	32.58	769.011000	Y_R 488.368
Be (234.861 nm)	0.000159	ppm	0.000118	74.25	2.314770	Y_R 488.368
Bi (223.061 nm)	0.000415 u	ppm	0.002963	> 100.00	43.956700	Y 377.433
Ca (315.887 nm)	0.000503 u	ppm	0.014959	> 100.00	-1.986639	Y_R 377.433
Cd (214.439 nm)	0.000044 u	ppm	0.000072	> 100.00	-10.053600	Y 377.433
Co (228.615 nm)	0.000439	ppm	0.000162	36.94	-17.523700	Y 242.219
Cr (205.560 nm)	0.000030 u	ppm	0.000380	> 100.00	-9.204920	Y 377.433
Cu (324.754 nm)	-0.000033 u	ppm	0.000083	> 100.00	200.348000	Y 377.433
Fe (238.204 nm)	0.001174 u	ppm	0.003310	> 100.00	13.491228	Y_R 377.433
Fe H (259.940 nm)	0.014252 u	ppm	0.002374	16.66	2.071310	Y_R 377.433
K (766.491 nm)	0.035581	ppm	0.008660	24.34	1770.690000	Y_R2 488.368
Li (670.783 nm)	0.001001 u	ppm	0.003811	> 100.00	-432.723000	Y_R2 488.368
Mg (279.078 nm)	0.003353	ppm	0.000863	25.74	21.035100	Y 377.433
Mn (257.610 nm)	0.000031	ppm	0.000044	> 100.00	29.202400	Y 377.433
Mo (202.032 nm)	-0.000404 u	ppm	0.000510	> 100.00	14.083200	Y 377.433
Na (589.592 nm)	0.039670	ppm	0.019393	48.89	-116.102000	Y_R2 488.368
Na H (589.593 nm)	1.413225 u	ppm	0.042128	2.98	114.108413	Y_R4
Ni (231.604 nm)	0.000464	ppm	0.000457	98.48	10.859200	Y 377.433
P (213.618 nm)	0.000609 u	ppm	0.002810	> 100.00	-0.407322	Y 242.219
Pb (220.353 nm)	-0.003309 u	ppm	0.001734	52.40	7.161590	Y 242.219
S (181.972 nm)	-0.007024 u	ppm	0.005183	73.79	-29.064643	Y 377.433
Sb (206.834 nm)	0.000303	ppm	0.000231	76.49	-0.627319	Y 377.433
Se (196.026 nm)	0.005094	ppm	0.001895	37.19	9.300650	Y 242.219
Si (288.158 nm)	-0.200318 Zu	ppm	0.001423	0.71	387.403000 Z	Y 377.433
Sn (189.925 nm)	-0.005628 u	ppm	0.001372	24.37	1.492660	Y 377.433
Sr (421.552 nm)	-0.000162 u	ppm	0.000060	37.09	259.357506	Y_R 488.368
Th (288.505 nm)	0.007317	ppm	0.005357	73.22	22.267500	Y 377.433
Ti (336.122 nm)	0.000339	ppm	0.000130	38.24	-332.777000	Y 377.433
Tl (190.794 nm)	-0.003836 u	ppm	0.002481	64.69	-11.013900	Y 377.433
U (409.013 nm)	0.003069	ppm	0.004105	> 100.00	121.826000	Y 377.433
V (292.401 nm)	0.000423	ppm	0.000065	15.42	-174.589000	Y 377.433
Zn (206.200 nm)	0.000224	ppm	0.000308	> 100.00	5.152320	Y 377.433
Zr (343.823 nm)	0.000132 u	ppm	0.000330	> 100.00	-113.172000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051951	11205.588311	0.001047	0.10
Y 377.433	1.038373	479351.696403	0.000364	0.04
Y_R 377.433	1.048120	39606.000000	0.005189	0.50
Y_R 488.368	1.048340	37834.600000	0.001799	0.17
Y_R2 488.368	1.051783	74021.072570	0.004676	0.44
Y_R4	1.033490	31711.600000	0.007025	0.68

Sample Name: CCVL-5412564

Date: 11/5/2018 3:23:26 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009458	ppm	0.000139	1.47	22.766600	Y 377.433
Al (394.401 nm)	0.101276	ppm	0.001630	1.61	1358.350000	Y 377.433
Al H (396.152 nm)	0.239609 u	ppm	0.002479	1.03	184.024000	Y_R 377.433
As (188.980 nm)	0.009897 Q	ppm	0.000762	7.70	-1.251590 Q	Y 242.219
B (249.678 nm)	0.095036	ppm	0.001025	1.08	428.257000	Y 242.219
Ba (493.408 nm)	0.009626	ppm	0.000582	6.04	1682.050000	Y_R 488.368
Be (234.861 nm)	0.000982	ppm	0.000042	4.27	43.623500	Y_R 488.368
Bi (223.061 nm)	0.098138	ppm	0.013819	14.08	205.044000	Y 377.433
Ca (315.887 nm)	0.195542	ppm	0.007863	4.02	126.863162	Y_R 377.433
Cd (214.439 nm)	0.005349	ppm	0.000032	0.61	122.044000	Y 377.433
Co (228.615 nm)	0.010561	ppm	0.000030	0.29	223.106000	Y 242.219
Cr (205.560 nm)	0.009727	ppm	0.000082	0.84	36.962400	Y 377.433
Cu (324.754 nm)	0.015505	ppm	0.000376	2.43	946.362000	Y 377.433
Fe (238.204 nm)	0.094247	ppm	0.001339	1.42	168.566456	Y_R 377.433
Fe H (259.940 nm)	0.105952 u	ppm	0.004563	4.31	86.220300	Y_R 377.433
K (766.491 nm)	3.038570	ppm	0.064006	2.11	4705.630000	Y_R2 488.368
Li (670.783 nm)	0.020112	ppm	0.003298	16.40	-162.039000	Y_R2 488.368
Mg (279.078 nm)	0.209487	ppm	0.002060	0.98	469.503000	Y 377.433
Mn (257.610 nm)	0.010555	ppm	0.000025	0.24	2230.940000	Y 377.433
Mo (202.032 nm)	0.020449	ppm	0.000398	1.95	251.314000	Y 377.433
Na (589.592 nm)	1.069210	ppm	0.035788	3.35	400.994000	Y_R2 488.368
Na H (589.593 nm)	2.313973 u	ppm	0.021123	0.91	434.811158	Y_R4
Ni (231.604 nm)	0.041584	ppm	0.000021	0.05	168.452000	Y 377.433
P (213.618 nm)	2.858380	ppm	0.000951	0.03	3314.210000	Y 242.219
Pb (220.353 nm)	0.007791	ppm	0.001192	15.30	31.967900	Y 242.219
S (181.972 nm)	0.084736	ppm	0.003348	3.95	14.804158	Y 377.433
Sb (206.834 nm)	0.019912	ppm	0.001517	7.62	31.477400	Y 377.433
Se (196.026 nm)	0.026251 Q	ppm	0.000714	2.72	41.101600 Q	Y 242.219
Si (288.158 nm)	0.296084 Q	ppm	0.003295	1.11	2611.230000 Q	Y 377.433
Sn (189.925 nm)	0.093566	ppm	0.000764	0.82	117.289000	Y 377.433
Sr (421.552 nm)	0.009373	ppm	0.000002	0.02	1366.190971	Y_R 488.368
Th (288.505 nm)	0.015798	ppm	0.003382	21.41	30.958300	Y 377.433
Ti (336.122 nm)	0.010319	ppm	0.000032	0.31	616.792000	Y 377.433
Tl (190.794 nm)	0.012727	ppm	0.002486	19.53	-1.552820	Y 377.433
U (409.013 nm)	0.063557	ppm	0.002683	4.22	258.825000	Y 377.433
V (292.401 nm)	0.010238	ppm	0.000162	1.59	296.257000	Y 377.433
Zn (206.200 nm)	0.021593	ppm	0.000226	1.05	79.016700	Y 377.433
Zr (343.823 nm)	0.015396	ppm	0.000240	1.56	505.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068159	11378.229908	0.000137	0.01
Y 377.433	1.049214	484356.304908	0.001146	0.11
Y_R 377.433	1.072870	40541.200000	0.001977	0.18
Y_R 488.368	1.076270	38842.600000	0.004146	0.39
Y_R2 488.368	1.080165	76018.523716	0.001859	0.17
Y_R4	1.057100	32436.100000	0.003834	0.36

Sample Name: 280-115820-A-1-A

Date: 11/5/2018 3:26:50 PM Rack:Tube: 1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001945	ppm	0.000111	5.71	-185.488000	Y 377.433
Al (394.401 nm)	-0.124497 bu	ppm	0.000680	0.55	1549.620000	Y 377.433
Al H (396.152 nm)	-1.989460 bu	ppm	0.011481	0.58	31.913700	Y_R 377.433
As (188.980 nm)	-0.005923 u	ppm	0.000947	16.00	-23.427000	Y 242.219
B (249.678 nm)	0.699230	ppm	0.004616	0.66	2854.080000	Y 242.219
Ba (493.408 nm)	0.013649	ppm	0.000686	5.03	2050.490000	Y_R 488.368
Be (234.861 nm)	0.000060	ppm	0.000019	31.74	-9.783360	Y_R 488.368
Bi (223.061 nm)	0.016704	ppm	0.000589	3.53	70.875500	Y 377.433
Ca (315.887 nm)	567.344305	ppm	0.128238	0.02	374739.319484	Y_R 377.433
Cd (214.439 nm)	0.000234	ppm	0.000264	> 100.00	-5.342100	Y 377.433
Co (228.615 nm)	0.000125 u	ppm	0.000252	> 100.00	-24.410000	Y 242.219
Cr (205.560 nm)	0.002174	ppm	0.001055	48.54	0.995333	Y 377.433
Cu (324.754 nm)	0.026343	ppm	0.000111	0.42	1137.420000	Y 377.433
Fe (238.204 nm)	0.497785	ppm	0.005385	1.08	840.928917	Y_R 377.433
Fe H (259.940 nm)	0.471547 u	ppm	0.011258	2.39	421.709000	Y_R 377.433
K (766.491 nm)	3.620130	ppm	0.140191	3.87	5274.010000	Y_R2 488.368
Li (670.783 nm)	0.108837	ppm	0.002882	2.65	1094.620000	Y_R2 488.368
Mg (279.078 nm)	119.338000	ppm	0.104883	0.09	259981.000000	Y 377.433
Mn (257.610 nm)	0.116814	ppm	0.000102	0.09	24462.800000	Y 377.433
Mo (202.032 nm)	0.006406	ppm	0.000090	1.40	91.556000	Y 377.433
Na (589.592 nm)	69.091300 o	ppm	0.043365	0.06	34575.200000	Y_R2 488.368
Na H (589.593 nm)	69.746711	ppm	0.344584	0.49	24512.900784	Y_R4
Ni (231.604 nm)	0.012143	ppm	0.000882	7.27	55.687400	Y 377.433
P (213.618 nm)	0.008133	ppm	0.002076	25.52	6.929190	Y 242.219
Pb (220.353 nm)	0.002723	ppm	0.001933	70.99	20.544300	Y 242.219
S (181.972 nm)	540.908839 bo	ppm	1.452486	0.27	258363.377920	Y 377.433
Sb (206.834 nm)	-0.009018 u	ppm	0.000015	0.17	-15.939600	Y 377.433
Se (196.026 nm)	0.008333	ppm	0.002188	26.25	14.202800	Y 242.219
Si (288.158 nm)	7.901970	ppm	0.021660	0.27	36684.800000	Y 377.433
Sn (189.925 nm)	-0.005319 u	ppm	0.001079	20.29	1.854070	Y 377.433
Sr (421.552 nm)	11.523683 bo	ppm	0.093581	0.81	1337932.442146	Y_R 488.368
Th (288.505 nm)	-0.008469 u	ppm	0.001299	15.33	2.754620	Y 377.433
Ti (336.122 nm)	0.000585	ppm	0.000151	25.86	1121.000000	Y 377.433
Tl (190.794 nm)	-0.011621 u	ppm	0.000368	3.17	-21.143000	Y 377.433
U (409.013 nm)	-0.023748 u	ppm	0.005748	24.20	6.547170	Y 377.433
V (292.401 nm)	0.001823	ppm	0.000425	23.34	-106.459000	Y 377.433
Zn (206.200 nm)	0.086414	ppm	0.002536	2.93	303.087000	Y 377.433
Zr (343.823 nm)	-0.000237 u	ppm	0.000003	1.39	-128.132000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982654	10467.414294	0.001004	0.10
Y 377.433	0.990456	457231.422976	0.000114	0.01
Y_R 377.433	1.007670	38077.600000	0.007749	0.77
Y_R 488.368	1.012500	36541.200000	0.016638	1.64
Y_R2 488.368	1.008471	70972.902248	0.008552	0.85
Y_R4	1.021940	31357.500000	0.002076	0.20

Sample Name: Bottle 115820-A-1

Date: 11/5/2018 3:30:19 PM Rack:Tube: 1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001376	ppm	0.000176	12.77	-201.264000	Y 377.433
Al (394.401 nm)	-0.125476 bu	ppm	0.002468	1.97	1504.460000	Y 377.433
Al H (396.152 nm)	-1.977720 bu	ppm	0.002644	0.13	12.107500	Y_R 377.433
As (188.980 nm)	-0.000474 u	ppm	0.002708	> 100.00	-15.792300	Y 242.219
B (249.678 nm)	0.709303	ppm	0.000121	0.02	2894.530000	Y 242.219
Ba (493.408 nm)	0.012427	ppm	0.000647	5.20	1938.700000	Y_R 488.368
Be (234.861 nm)	0.000153	ppm	0.000036	23.78	-4.915310	Y_R 488.368
Bi (223.061 nm)	0.022148	ppm	0.004960	22.40	79.846300	Y 377.433
Ca (315.887 nm)	562.899686	ppm	2.024097	0.36	371803.562951	Y_R 377.433
Cd (214.439 nm)	0.000266	ppm	0.000245	91.93	-4.523240	Y 377.433
Co (228.615 nm)	0.000033 u	ppm	0.000173	> 100.00	-26.601500	Y 242.219
Cr (205.560 nm)	0.002240	ppm	0.000096	4.28	1.309870	Y 377.433
Cu (324.754 nm)	0.027933	ppm	0.000151	0.54	1216.130000	Y 377.433
Fe (238.204 nm)	0.492788	ppm	0.003727	0.76	832.604150	Y_R 377.433
Fe H (259.940 nm)	0.461986 u	ppm	0.003499	0.76	412.935000	Y_R 377.433
K (766.491 nm)	3.459870	ppm	0.102386	2.96	5117.380000	Y_R2 488.368
Li (670.783 nm)	0.108111	ppm	0.001518	1.40	1084.340000	Y_R2 488.368
Mg (279.078 nm)	119.904000	ppm	0.029479	0.02	261213.000000	Y 377.433
Mn (257.610 nm)	0.116672	ppm	0.000103	0.09	24433.200000	Y 377.433
Mo (202.032 nm)	0.006460	ppm	0.000318	4.93	92.177200	Y 377.433
Na (589.592 nm)	68.798900 o	ppm	0.036569	0.05	34428.300000	Y_R2 488.368
Na H (589.593 nm)	70.692976	ppm	0.119574	0.17	24850.955334	Y_R4
Ni (231.604 nm)	0.010399	ppm	0.000449	4.32	49.003100	Y 377.433
P (213.618 nm)	0.008496	ppm	0.001151	13.55	7.316560	Y 242.219
Pb (220.353 nm)	0.001495 u	ppm	0.002213	> 100.00	17.794300	Y 242.219
S (181.972 nm)	554.651415 bo	ppm	1.465367	0.26	264927.153364	Y 377.433
Sb (206.834 nm)	-0.007179 u	ppm	0.000123	1.71	-12.920000	Y 377.433
Se (196.026 nm)	0.005877	ppm	0.004663	79.33	10.512600	Y 242.219
Si (288.158 nm)	8.011830	ppm	0.045145	0.56	37177.000000	Y 377.433
Sn (189.925 nm)	-0.004398 u	ppm	0.003306	75.17	2.928690	Y 377.433
Sr (421.552 nm)	11.426088 bo	ppm	0.067256	0.59	1326603.724397	Y_R 488.368
Th (288.505 nm)	-0.010411 u	ppm	0.005729	55.03	0.692500	Y 377.433
Ti (336.122 nm)	0.000821	ppm	0.000062	7.59	1132.180000	Y 377.433
Tl (190.794 nm)	-0.010694 u	ppm	0.000643	6.01	-20.566800	Y 377.433
U (409.013 nm)	-0.015783 u	ppm	0.002397	15.18	25.193500	Y 377.433
V (292.401 nm)	0.002043	ppm	0.000016	0.78	-95.705800	Y 377.433
Zn (206.200 nm)	0.085811	ppm	0.001037	1.21	301.003000	Y 377.433
Zr (343.823 nm)	-0.000422 u	ppm	0.000189	44.84	-135.633000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.035817	11033.724503	0.001956	0.19
Y 377.433	1.036922	478681.769562	0.001132	0.11
Y_R 377.433	1.085000	40999.600000	0.012749	1.17
Y_R 488.368	1.093970	39481.300000	0.004095	0.37
Y_R2 488.368	1.090561	76750.091794	0.003887	0.36
Y_R4	1.088580	33402.300000	0.000945	0.09

Sample Name: Bottle 115984-F-2

Date: 11/5/2018 3:33:50 PM Rack:Tube: 1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000369	ppm	0.000003	0.70	-229.752000	Y 377.433
Al (394.401 nm)	0.338142	ppm	0.000626	0.19	4330.500000	Y 377.433
Al H (396.152 nm)	0.439763 u	ppm	0.002284	0.52	546.670000	Y_R 377.433
As (188.980 nm)	-0.001187 u	ppm	0.001837	> 100.00	-16.793500	Y 242.219
B (249.678 nm)	0.043547	ppm	0.000755	1.73	221.417000	Y 242.219
Ba (493.408 nm)	0.061643	ppm	0.000843	1.37	6442.850000	Y_R 488.368
Be (234.861 nm)	0.000217	ppm	0.000023	10.75	-0.370975	Y_R 488.368
Bi (223.061 nm)	0.001963	ppm	0.000762	38.82	46.565800	Y 377.433
Ca (315.887 nm)	24.097509	ppm	0.061869	0.26	15914.607194	Y_R 377.433
Cd (214.439 nm)	0.000319	ppm	0.000007	2.23	-3.226680	Y 377.433
Co (228.615 nm)	0.000636	ppm	0.000206	32.46	-12.359400	Y 242.219
Cr (205.560 nm)	0.000196	ppm	0.000255	> 100.00	-8.509950	Y 377.433
Cu (324.754 nm)	0.002797	ppm	0.000252	9.00	321.924000	Y 377.433
Fe (238.204 nm)	0.408215	ppm	0.001381	0.34	691.690643	Y_R 377.433
Fe H (259.940 nm)	0.414704 u	ppm	0.004439	1.07	369.547000	Y_R 377.433
K (766.491 nm)	3.275410	ppm	0.031243	0.95	4937.100000	Y_R2 488.368
Li (670.783 nm)	0.006918	ppm	0.004405	63.68	-348.913000	Y_R2 488.368
Mg (279.078 nm)	7.773880	ppm	0.011815	0.15	16948.500000	Y 377.433
Mn (257.610 nm)	0.028820	ppm	0.000043	0.15	6052.400000	Y 377.433
Mo (202.032 nm)	0.026233	ppm	0.000170	0.65	317.119000	Y 377.433
Na (589.592 nm)	18.555200	ppm	0.040427	0.22	9185.130000	Y_R2 488.368
Na H (589.593 nm)	20.043908 u	ppm	0.033739	0.17	6760.624717	Y_R4
Ni (231.604 nm)	0.002414	ppm	0.000642	26.58	18.391200	Y 377.433
P (213.618 nm)	0.029263	ppm	0.002037	6.96	32.749200	Y 242.219
Pb (220.353 nm)	-0.002469 u	ppm	0.001400	56.69	8.859800	Y 242.219
S (181.972 nm)	15.535142	ppm	0.061210	0.39	7395.812333	Y 377.433
Sb (206.834 nm)	0.000861 u	ppm	0.002327	> 100.00	0.149228	Y 377.433
Se (196.026 nm)	0.003168	ppm	0.000569	17.96	6.343590	Y 242.219
Si (288.158 nm)	4.512730	ppm	0.022209	0.49	21501.400000	Y 377.433
Sn (189.925 nm)	-0.006538 u	ppm	0.000063	0.97	0.430740	Y 377.433
Sr (421.552 nm)	0.125360	ppm	0.000946	0.76	14829.856287	Y_R 488.368
Th (288.505 nm)	-0.013743 u	ppm	0.002099	15.28	-0.461245	Y 377.433
Ti (336.122 nm)	0.002113	ppm	0.000102	4.85	-103.693000	Y 377.433
Tl (190.794 nm)	-0.004422 u	ppm	0.001262	28.55	-11.648800	Y 377.433
U (409.013 nm)	-0.004068 u	ppm	0.011070	> 100.00	103.430000	Y 377.433
V (292.401 nm)	0.005486	ppm	0.000012	0.22	69.587900	Y 377.433
Zn (206.200 nm)	0.022701	ppm	0.000940	4.14	82.877400	Y 377.433
Zr (343.823 nm)	0.000930	ppm	0.000207	22.23	-80.850900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.128285	12018.703521	0.002414	0.21
Y 377.433	1.114423	514459.389313	0.002575	0.23
Y_R 377.433	1.140590	43100.400000	0.004768	0.42
Y_R 488.368	1.149580	41488.300000	0.006118	0.53
Y_R2 488.368	1.140367	80255.305152	0.002981	0.26
Y_R4	1.137910	34915.800000	0.005127	0.45

Sample Name: Bottle 115984-G-3

Date: 11/5/2018 3:37:17 PM Rack:Tube: 1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000178 u	ppm	0.000313	> 100.00	-235.306000	Y 377.433
Al (394.401 nm)	0.327251	ppm	0.002550	0.78	4196.330000	Y 377.433
Al H (396.152 nm)	0.424450 u	ppm	0.011977	2.82	521.094000	Y_R 377.433
As (188.980 nm)	-0.001918 u	ppm	0.001662	86.67	-17.818000	Y 242.219
B (249.678 nm)	0.041737	ppm	0.001573	3.77	214.150000	Y 242.219
Ba (493.408 nm)	0.062148	ppm	0.000591	0.95	6489.060000	Y_R 488.368
Be (234.861 nm)	0.000215	ppm	0.000090	41.76	-0.473320	Y_R 488.368
Bi (223.061 nm)	0.000202 u	ppm	0.000634	> 100.00	43.663200	Y 377.433
Ca (315.887 nm)	23.950066	ppm	0.070946	0.30	15817.213490	Y_R 377.433
Cd (214.439 nm)	0.000301	ppm	0.000032	10.55	-3.651860	Y 377.433
Co (228.615 nm)	0.000567	ppm	0.000057	9.96	-14.006100	Y 242.219
Cr (205.560 nm)	0.000566	ppm	0.000237	41.89	-6.736480	Y 377.433
Cu (324.754 nm)	0.001931	ppm	0.000346	17.94	280.127000	Y 377.433
Fe (238.204 nm)	0.406939	ppm	0.002314	0.57	689.565250	Y_R 377.433
Fe H (259.940 nm)	0.400201 u	ppm	0.010454	2.61	356.238000	Y_R 377.433
K (766.491 nm)	3.169810	ppm	0.029444	0.93	4833.900000	Y_R2 488.368
Li (670.783 nm)	0.006857	ppm	0.001864	27.18	-349.772000	Y_R2 488.368
Mg (279.078 nm)	7.766110	ppm	0.011535	0.15	16931.400000	Y 377.433
Mn (257.610 nm)	0.029932	ppm	0.000085	0.29	6285.170000	Y 377.433
Mo (202.032 nm)	0.025478	ppm	0.000233	0.91	308.528000	Y 377.433
Na (589.592 nm)	18.333100	ppm	0.052316	0.29	9073.540000	Y_R2 488.368
Na H (589.593 nm)	19.955250 u	ppm	0.104475	0.52	6728.946525	Y_R4
Ni (231.604 nm)	0.002073	ppm	0.000198	9.54	17.085000	Y 377.433
P (213.618 nm)	0.032453	ppm	0.001143	3.52	36.486200	Y 242.219
Pb (220.353 nm)	-0.001769 u	ppm	0.000909	51.37	10.464900	Y 242.219
S (181.972 nm)	15.492430	ppm	0.027777	0.18	7375.406350	Y 377.433
Sb (206.834 nm)	-0.000370 u	ppm	0.002299	> 100.00	-1.868250	Y 377.433
Se (196.026 nm)	0.002237	ppm	0.000740	33.08	4.945150	Y 242.219
Si (288.158 nm)	4.482380	ppm	0.034176	0.76	21365.400000	Y 377.433
Sn (189.925 nm)	-0.006957 u	ppm	0.000740	10.63	-0.058877	Y 377.433
Sr (421.552 nm)	0.125117	ppm	0.000150	0.12	14801.701811	Y_R 488.368
Th (288.505 nm)	-0.007001 u	ppm	0.001608	22.97	6.799140	Y 377.433
Ti (336.122 nm)	0.001892	ppm	0.000095	5.01	-125.167000	Y 377.433
Tl (190.794 nm)	-0.004553 u	ppm	0.008282	> 100.00	-11.720700	Y 377.433
U (409.013 nm)	-0.001978 u	ppm	0.003601	> 100.00	108.233000	Y 377.433
V (292.401 nm)	0.005523	ppm	0.000027	0.50	70.878100	Y 377.433
Zn (206.200 nm)	0.010392	ppm	0.000568	5.47	40.337800	Y 377.433
Zr (343.823 nm)	0.000575	ppm	0.000073	12.78	-95.249200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.126125	11995.700465	0.000283	0.03
Y 377.433	1.111358	513044.548153	0.001018	0.09
Y_R 377.433	1.154120	43611.700000	0.000704	0.06
Y_R 488.368	1.158880	41823.800000	0.003247	0.28
Y_R2 488.368	1.161858	81767.791400	0.002929	0.25
Y_R4	1.132430	34747.600000	0.008149	0.72

Sample Name: Bottle 115984-G-4

Date: 11/5/2018 3:40:43 PM Rack:Tube: 1:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000181	ppm	0.000134	74.06	-235.174000	Y 377.433
Al (394.401 nm)	0.374015	ppm	0.001551	0.41	4777.450000	Y 377.433
Al H (396.152 nm)	0.477475 u	ppm	0.003172	0.66	608.655000	Y_R 377.433
As (188.980 nm)	-0.000937 u	ppm	0.000704	75.12	-16.445500	Y 242.219
B (249.678 nm)	0.040912	ppm	0.001031	2.52	210.816000	Y 242.219
Ba (493.408 nm)	0.062828	ppm	0.000986	1.57	6551.290000	Y_R 488.368
Be (234.861 nm)	0.000138	ppm	0.000148	> 100.00	-5.344070	Y_R 488.368
Bi (223.061 nm)	0.001477	ppm	0.000770	52.15	45.773100	Y 377.433
Ca (315.887 nm)	24.086523	ppm	0.021814	0.09	15907.358116	Y_R 377.433
Cd (214.439 nm)	0.000261	ppm	0.000103	39.35	-4.671100	Y 377.433
Co (228.615 nm)	0.000682	ppm	0.000426	62.55	-11.202300	Y 242.219
Cr (205.560 nm)	0.000635	ppm	0.000704	> 100.00	-6.409000	Y 377.433
Cu (324.754 nm)	0.002997	ppm	0.000016	0.54	332.046000	Y 377.433
Fe (238.204 nm)	0.471021	ppm	0.001064	0.23	796.336966	Y_R 377.433
Fe H (259.940 nm)	0.470703 u	ppm	0.002413	0.51	420.935000	Y_R 377.433
K (766.491 nm)	3.153820	ppm	0.017664	0.56	4818.270000	Y_R2 488.368
Li (670.783 nm)	0.008211	ppm	0.000334	4.07	-330.596000	Y_R2 488.368
Mg (279.078 nm)	7.790460	ppm	0.001562	0.02	16984.400000	Y 377.433
Mn (257.610 nm)	0.032153	ppm	0.000004	0.01	6749.800000	Y 377.433
Mo (202.032 nm)	0.025913	ppm	0.000038	0.15	313.482000	Y 377.433
Na (589.592 nm)	18.449900	ppm	0.100030	0.54	9132.240000	Y_R2 488.368
Na H (589.593 nm)	19.945611 u	ppm	0.047947	0.24	6725.421708	Y_R4
Ni (231.604 nm)	0.002366	ppm	0.000881	37.22	18.221300	Y 377.433
P (213.618 nm)	0.031594	ppm	0.001353	4.28	35.433300	Y 242.219
Pb (220.353 nm)	-0.001740 u	ppm	0.001203	69.15	10.511500	Y 242.219
S (181.972 nm)	15.526080	ppm	0.042907	0.28	7391.493728	Y 377.433
Sb (206.834 nm)	-0.002658 u	ppm	0.000622	23.39	-5.632340	Y 377.433
Se (196.026 nm)	0.002452	ppm	0.000240	9.80	5.254960	Y 242.219
Si (288.158 nm)	4.558880	ppm	0.009508	0.21	21708.100000	Y 377.433
Sn (189.925 nm)	-0.006484 u	ppm	0.000503	7.75	0.493341	Y 377.433
Sr (421.552 nm)	0.124904	ppm	0.000289	0.23	14776.906258	Y_R 488.368
Th (288.505 nm)	-0.004667 u	ppm	0.002338	50.10	9.269360	Y 377.433
Ti (336.122 nm)	0.002225	ppm	0.000035	1.59	-93.118500	Y 377.433
Tl (190.794 nm)	-0.000366 u	ppm	0.004848	> 100.00	-9.325970	Y 377.433
U (409.013 nm)	-0.004721 u	ppm	0.008046	> 100.00	101.963000	Y 377.433
V (292.401 nm)	0.005764	ppm	0.000240	4.17	82.960100	Y 377.433
Zn (206.200 nm)	0.029857	ppm	0.000447	1.50	107.619000	Y 377.433
Zr (343.823 nm)	0.000924	ppm	0.000164	17.78	-81.085500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.124606	11979.519071	0.001395	0.12
Y 377.433	1.110716	512748.014504	0.000107	0.01
Y_R 377.433	1.143850	43223.600000	0.003347	0.29
Y_R 488.368	1.151920	41572.800000	0.000341	0.03
Y_R2 488.368	1.143753	80493.612144	0.006149	0.54
Y_R4	1.131000	34703.900000	0.003776	0.33

Sample Name: Bottle 115984-G-5

Date: 11/5/2018 3:44:10 PM Rack:Tube: 1:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000717	ppm	0.000401	55.92	-220.473000	Y 377.433
Al (394.401 nm)	0.316433	ppm	0.000304	0.10	4063.660000	Y 377.433
Al H (396.152 nm)	0.413061 u	ppm	0.003080	0.75	501.816000	Y_R 377.433
As (188.980 nm)	-0.000596 u	ppm	0.000279	46.76	-15.965600	Y 242.219
B (249.678 nm)	0.041215	ppm	0.000624	1.51	212.057000	Y 242.219
Ba (493.408 nm)	0.061541	ppm	0.000501	0.81	6433.510000	Y_R 488.368
Be (234.861 nm)	0.000227	ppm	0.000072	31.83	0.333463	Y_R 488.368
Bi (223.061 nm)	0.001545	ppm	0.000345	22.32	45.875600	Y 377.433
Ca (315.887 nm)	24.150821	ppm	0.009580	0.04	15949.814130	Y_R 377.433
Cd (214.439 nm)	0.000124	ppm	0.000056	44.95	-8.075470	Y 377.433
Co (228.615 nm)	0.000302	ppm	0.000254	84.11	-20.312800	Y 242.219
Cr (205.560 nm)	0.000656	ppm	0.000002	0.28	-6.308950	Y 377.433
Cu (324.754 nm)	0.002064	ppm	0.000538	26.07	284.944000	Y 377.433
Fe (238.204 nm)	0.394386	ppm	0.006090	1.54	668.649365	Y_R 377.433
Fe H (259.940 nm)	0.393795 u	ppm	0.003743	0.95	350.360000	Y_R 377.433
K (766.491 nm)	3.294450	ppm	0.105860	3.21	4955.710000	Y_R2 488.368
Li (670.783 nm)	0.007353	ppm	0.000802	10.90	-342.750000	Y_R2 488.368
Mg (279.078 nm)	7.759580	ppm	0.007461	0.10	16917.100000	Y 377.433
Mn (257.610 nm)	0.028932	ppm	0.000083	0.29	6075.900000	Y 377.433
Mo (202.032 nm)	0.025424	ppm	0.000249	0.98	307.920000	Y 377.433
Na (589.592 nm)	18.425100	ppm	0.058966	0.32	9119.800000	Y_R2 488.368
Na H (589.593 nm)	19.865339 u	ppm	0.048507	0.24	6696.848107	Y_R4
Ni (231.604 nm)	0.001833	ppm	0.000634	34.58	16.164900	Y 377.433
P (213.618 nm)	0.030057	ppm	0.000507	1.69	33.680300	Y 242.219
Pb (220.353 nm)	-0.000305 u	ppm	0.000395	> 100.00	13.747500	Y 242.219
S (181.972 nm)	15.509771	ppm	0.052104	0.34	7383.696438	Y 377.433
Sb (206.834 nm)	-0.000861 u	ppm	0.000624	72.47	-2.675050	Y 377.433
Se (196.026 nm)	0.004179	ppm	0.000904	21.64	7.867590	Y 242.219
Si (288.158 nm)	4.458660	ppm	0.003340	0.07	21259.100000	Y 377.433
Sn (189.925 nm)	-0.006811 u	ppm	0.000658	9.66	0.112144	Y 377.433
Sr (421.552 nm)	0.123992	ppm	0.001193	0.96	14671.111723	Y_R 488.368
Th (288.505 nm)	-0.013013 u	ppm	0.003800	29.20	0.403077	Y 377.433
Ti (336.122 nm)	0.001824	ppm	0.000151	8.29	-131.091000	Y 377.433
Tl (190.794 nm)	-0.004626 u	ppm	0.002710	58.58	-11.763500	Y 377.433
U (409.013 nm)	0.005469	ppm	0.004915	89.88	125.233000	Y 377.433
V (292.401 nm)	0.005338	ppm	0.000385	7.22	60.955800	Y 377.433
Zn (206.200 nm)	0.021175	ppm	0.000785	3.71	77.604200	Y 377.433
Zr (343.823 nm)	0.000499	ppm	0.000005	0.99	-98.330500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119342	11923.441293	0.000243	0.02
Y 377.433	1.104959	510090.222464	0.000741	0.07
Y_R 377.433	1.142450	43170.500000	0.006485	0.57
Y_R 488.368	1.159930	41861.800000	0.004657	0.40
Y_R2 488.368	1.150908	80997.146639	0.003512	0.31
Y_R4	1.134230	34803.100000	0.008244	0.73

Sample Name: 280-116296-C-3-A

Date: 11/5/2018 3:47:38 PM Rack:Tube: 1:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000858	ppm	0.000387	45.10	-224.393000	Y 377.433
Al (394.401 nm)	0.172190	ppm	0.002065	1.20	2514.740000	Y 377.433
Al H (396.152 nm)	0.105272 u	ppm	0.002492	2.37	278.384000	Y_R 377.433
As (188.980 nm)	0.001098 u	ppm	0.002440	> 100.00	-13.582000	Y 242.219
B (249.678 nm)	0.189096	ppm	0.000785	0.42	805.921000	Y 242.219
Ba (493.408 nm)	0.070391	ppm	0.000715	1.02	7243.240000	Y_R 488.368
Be (234.861 nm)	0.000103	ppm	0.000042	40.54	-2.060700	Y_R 488.368
Bi (223.061 nm)	0.003328	ppm	0.001100	33.05	48.775700	Y 377.433
Ca (315.887 nm)	103.538935	ppm	0.099076	0.10	68387.137066	Y_R 377.433
Cd (214.439 nm)	0.000278	ppm	0.000267	96.17	-4.231850	Y 377.433
Co (228.615 nm)	-0.000169 u	ppm	0.000083	49.12	-31.770600	Y 242.219
Cr (205.560 nm)	0.002966	ppm	0.000206	6.94	4.801990	Y 377.433
Cu (324.754 nm)	0.000583	ppm	0.000245	41.93	167.900000	Y 377.433
Fe (238.204 nm)	0.108232	ppm	0.000450	0.42	191.868940	Y_R 377.433
Fe H (259.940 nm)	0.104587 u	ppm	0.000225	0.22	84.967500	Y_R 377.433
K (766.491 nm)	2.682940	ppm	0.024650	0.92	4358.060000	Y_R2 488.368
Li (670.783 nm)	0.046731	ppm	0.005680	12.15	214.977000	Y_R2 488.368
Mg (279.078 nm)	20.715200	ppm	0.035767	0.17	45139.800000	Y 377.433
Mn (257.610 nm)	0.001029	ppm	0.000026	2.51	237.866000	Y 377.433
Mo (202.032 nm)	0.001903	ppm	0.000096	5.06	40.329900	Y 377.433
Na (589.592 nm)	51.073700	ppm	0.047885	0.09	25522.300000	Y_R2 488.368
Na H (589.593 nm)	51.973287	ppm	0.189483	0.36	18160.876058	Y_R4
Ni (231.604 nm)	0.000228 u	ppm	0.000967	> 100.00	9.969850	Y 377.433
P (213.618 nm)	0.009399	ppm	0.002317	24.65	9.744990	Y 242.219
Pb (220.353 nm)	-0.000274 u	ppm	0.002276	> 100.00	13.872300	Y 242.219
S (181.972 nm)	30.618117	ppm	0.108835	0.36	14604.014776	Y 377.433
Sb (206.834 nm)	-0.005370 u	ppm	0.000753	14.01	-9.948870	Y 377.433
Se (196.026 nm)	0.011843	ppm	0.002309	19.50	19.420700	Y 242.219
Si (288.158 nm)	29.425000	ppm	0.060738	0.21	133106.000000	Y 377.433
Sn (189.925 nm)	-0.008547 u	ppm	0.000303	3.55	-1.914550	Y 377.433
Sr (421.552 nm)	1.073043	ppm	0.010150	0.95	124835.614132	Y_R 488.368
Th (288.505 nm)	-0.014169 u	ppm	0.005215	36.80	-3.773200	Y 377.433
Ti (336.122 nm)	0.002343	ppm	0.000126	5.37	118.177000	Y 377.433
Tl (190.794 nm)	-0.002708 u	ppm	0.009119	> 100.00	-11.408400	Y 377.433
U (409.013 nm)	0.017111	ppm	0.001063	6.21	144.090000	Y 377.433
V (292.401 nm)	0.037268	ppm	0.000395	1.06	1611.860000	Y 377.433
Zn (206.200 nm)	0.041136	ppm	0.000643	1.56	146.559000	Y 377.433
Zr (343.823 nm)	0.000309	ppm	0.000432	> 100.00	-106.005000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053122	11218.054066	0.004530	0.43
Y 377.433	1.043633	481780.230309	0.005838	0.56
Y_R 377.433	1.086030	41038.600000	0.001946	0.18
Y_R 488.368	1.094830	39512.200000	0.008487	0.78
Y_R2 488.368	1.097867	77264.311781	0.000295	0.03
Y_R4	1.088810	33409.200000	0.002774	0.25

Sample Name: CCVH-5408055

Date: 11/5/2018 3:51:08 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000879	ppm	0.000030	3.38	-324.327000	Y 377.433
Al (394.401 nm)	51.184000 o	ppm	0.095411	0.19	637416.000000	Y 377.433
Al H (396.152 nm)	49.715100	ppm	0.052098	0.10	81758.900000	Y_R 377.433
As (188.980 nm)	-0.005594 u	ppm	0.000784	14.01	-25.032800	Y 242.219
B (249.678 nm)	-0.006978 u	ppm	0.000696	9.98	2.620120	Y 242.219
Ba (493.408 nm)	-0.000081 u	ppm	0.000233	> 100.00	829.806000	Y_R 488.368
Be (234.861 nm)	-0.000369 u	ppm	0.000191	51.69	-720.580000	Y_R 488.368
Bi (223.061 nm)	0.991935	ppm	0.001736	0.18	1684.660000	Y 377.433
Ca (315.887 nm)	0.001326 u	ppm	0.001923	> 100.00	8.851775	Y_R 377.433
Cd (214.439 nm)	0.000189	ppm	0.000014	7.20	-6.444090	Y 377.433
Co (228.615 nm)	0.001167	ppm	0.000031	2.67	54.786200	Y 242.219
Cr (205.560 nm)	-0.000237 u	ppm	0.000387	> 100.00	-11.424000	Y 377.433
Cu (324.754 nm)	-0.000541 u	ppm	0.000329	60.86	635.075000	Y 377.433
Fe (238.204 nm)	49.504637 o	ppm	0.104324	0.21	82494.646978	Y_R 377.433
Fe H (259.940 nm)	49.624600	ppm	0.078021	0.16	45527.100000	Y_R 377.433
K (766.491 nm)	-0.069753 u	ppm	0.013346	19.13	1667.740000	Y_R2 488.368
Li (670.783 nm)	0.008556	ppm	0.001900	22.20	-325.716000	Y_R2 488.368
Mg (279.078 nm)	-0.030458 u	ppm	0.004830	15.86	-202.252000	Y 377.433
Mn (257.610 nm)	0.000335	ppm	0.000016	4.71	92.818000	Y 377.433
Mo (202.032 nm)	-0.000945 u	ppm	0.000344	36.37	7.930790	Y 377.433
Na (589.592 nm)	248.681000 o	ppm	0.443964	0.18	124801.000000	Y_R2 488.368
Na H (589.593 nm)	252.546441	ppm	1.447633	0.57	89787.241507	Y_R4
Ni (231.604 nm)	0.000515	ppm	0.000426	82.64	18.436700	Y 377.433
P (213.618 nm)	-0.011941 u	ppm	0.000621	5.20	-16.195500	Y 242.219
Pb (220.353 nm)	0.000356 u	ppm	0.001345	> 100.00	25.453300	Y 242.219
S (181.972 nm)	5.043425	ppm	0.008264	0.16	2383.024098	Y 377.433
Sb (206.834 nm)	0.004365	ppm	0.001024	23.46	10.123100	Y 377.433
Se (196.026 nm)	-0.000740 u	ppm	0.000819	> 100.00	-12.164900	Y 242.219
Si (288.158 nm)	-0.197493 u	ppm	0.000780	0.40	400.058000	Y 377.433
Sn (189.925 nm)	-0.007858 u	ppm	0.000355	4.52	-1.109810	Y 377.433
Sr (421.552 nm)	-0.000012 u	ppm	0.000039	> 100.00	282.524279	Y_R 488.368
Th (288.505 nm)	4.944450	ppm	0.020078	0.41	5304.500000	Y 377.433
Ti (336.122 nm)	0.000694	ppm	0.000166	23.96	-298.968000	Y 377.433
Tl (190.794 nm)	-0.007945 u	ppm	0.003729	46.93	-16.660400	Y 377.433
U (409.013 nm)	10.096600	ppm	0.044125	0.44	23219.300000	Y 377.433
V (292.401 nm)	-0.004724 u	ppm	0.000327	6.92	-428.506000	Y 377.433
Zn (206.200 nm)	0.000220	ppm	0.000154	70.05	10.430000	Y 377.433
Zr (343.823 nm)	-0.006754 u	ppm	0.000228	3.37	-392.254000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040892	11087.786414	0.003761	0.36
Y 377.433	1.036165	478332.668500	0.003159	0.30
Y_R 377.433	1.084630	40985.600000	0.000320	0.03
Y_R 488.368	1.085480	39175.100000	0.005566	0.51
Y_R2 488.368	1.089293	76660.887499	0.004735	0.43
Y_R4	1.107360	33978.500000	0.006896	0.62

Sample Name: CCV-5407762

Date: 11/5/2018 3:55:13 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.503869	ppm	0.001470	0.29	13702.700000	Y 377.433
Al (394.401 nm)	0.507243	ppm	0.000103	0.02	6522.940000	Y 377.433
Al H (396.152 nm)	0.559185 u	ppm	0.005671	1.01	901.208000	Y_R 377.433
As (188.980 nm)	0.998189	ppm	0.001775	0.18	1383.440000	Y 242.219
B (249.678 nm)	0.494936	ppm	0.000923	0.19	2033.150000	Y 242.219
Ba (493.408 nm)	0.509010	ppm	0.001318	0.26	47387.000000	Y_R 488.368
Be (234.861 nm)	0.503402	ppm	0.000388	0.08	26027.800000	Y_R 488.368
Bi (223.061 nm)	-0.001312 u	ppm	0.000828	63.10	41.518000	Y 377.433
Ca (315.887 nm)	5.017664	ppm	0.002783	0.06	3312.053056	Y_R 377.433
Cd (214.439 nm)	0.511398	ppm	0.003284	0.64	12722.700000	Y 377.433
Co (228.615 nm)	0.503331	ppm	0.001257	0.25	11936.200000	Y 242.219
Cr (205.560 nm)	0.514165	ppm	0.000543	0.11	2442.480000	Y 377.433
Cu (324.754 nm)	0.510909	ppm	0.002181	0.43	24792.000000	Y 377.433
Fe (238.204 nm)	2.519476	ppm	0.008039	0.32	4209.409442	Y_R 377.433
Fe H (259.940 nm)	2.531500 u	ppm	0.004863	0.19	2312.030000	Y_R 377.433
K (766.491 nm)	49.937200	ppm	0.358010	0.72	50541.500000	Y_R2 488.368
Li (670.783 nm)	1.006720	ppm	0.012238	1.22	13811.800000	Y_R2 488.368
Mg (279.078 nm)	20.281800	ppm	0.033760	0.17	44194.600000	Y 377.433
Mn (257.610 nm)	0.507782	ppm	0.000324	0.06	106263.000000	Y 377.433
Mo (202.032 nm)	0.513658	ppm	0.000586	0.11	5862.340000	Y 377.433
Na (589.592 nm)	25.013900	ppm	0.144176	0.58	12423.100000	Y_R2 488.368
Na H (589.593 nm)	26.926855 u	ppm	0.111656	0.41	9174.219799	Y_R4
Ni (231.604 nm)	0.512286	ppm	0.000175	0.03	1973.300000	Y 377.433
P (213.618 nm)	1.010250	ppm	0.005600	0.55	1147.930000	Y 242.219
Pb (220.353 nm)	1.004240	ppm	0.001411	0.14	2255.700000	Y 242.219
S (181.972 nm)	-0.005088 u	ppm	0.002290	45.01	-26.230436	Y 377.433
Sb (206.834 nm)	1.025290	ppm	0.004714	0.46	1684.650000	Y 377.433
Se (196.026 nm)	1.016240	ppm	0.004581	0.45	1529.650000	Y 242.219
Si (288.158 nm)	4.840790	ppm	0.015818	0.33	22971.100000	Y 377.433
Sn (189.925 nm)	1.020990	ppm	0.002576	0.25	1199.920000	Y 377.433
Sr (421.552 nm)	0.510765	ppm	0.000497	0.10	59567.413289	Y_R 488.368
Th (288.505 nm)	-0.024519 u	ppm	0.008277	33.76	-44.477400	Y 377.433
Ti (336.122 nm)	0.511733	ppm	0.000112	0.02	48307.900000	Y 377.433
Tl (190.794 nm)	1.020770	ppm	0.003793	0.37	575.613000	Y 377.433
U (409.013 nm)	-0.008609 u	ppm	0.007944	92.28	50.361800	Y 377.433
V (292.401 nm)	0.505940	ppm	0.000020	0.00	24164.100000	Y 377.433
Zn (206.200 nm)	0.512442	ppm	0.001870	0.36	1775.690000	Y 377.433
Zr (343.823 nm)	0.509598	ppm	0.000294	0.06	20533.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063341	11326.907375	0.000163	0.02
Y 377.433	1.053128	486163.408379	0.000318	0.03
Y_R 377.433	1.096440	41432.100000	0.000296	0.03
Y_R 488.368	1.089110	39306.100000	0.000336	0.03
Y_R2 488.368	1.113090	78335.642554	0.018996	1.71
Y_R4	1.104830	33900.800000	0.006226	0.56

Sample Name: CCB

Date: 11/5/2018 3:58:42 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000594 u	ppm	0.000033	5.58	-255.641000	Y 377.433
Al (394.401 nm)	-0.000503 u	ppm	0.000494	98.30	81.207700	Y 377.433
Al H (396.152 nm)	0.141688 Zu	ppm	0.011013	7.77	18.186400 Z	Y_R 377.433
As (188.980 nm)	-0.003160 u	ppm	0.000934	29.57	-19.543300	Y 242.219
B (249.678 nm)	-0.006330 u	ppm	0.000373	5.89	21.283100	Y 242.219
Ba (493.408 nm)	-0.000713 u	ppm	0.000509	71.44	735.785000	Y_R 488.368
Be (234.861 nm)	0.000094	ppm	0.000012	12.97	-1.042550	Y_R 488.368
Bi (223.061 nm)	-0.005275 u	ppm	0.005040	95.54	34.576700	Y 377.433
Ca (315.887 nm)	-0.010321 u	ppm	0.003240	31.39	-9.134655	Y_R 377.433
Cd (214.439 nm)	0.000009 u	ppm	0.000088	> 100.00	-10.935700	Y 377.433
Co (228.615 nm)	0.000415	ppm	0.000035	8.44	-18.103700	Y 242.219
Cr (205.560 nm)	0.000446	ppm	0.000365	81.83	-7.218260	Y 377.433
Cu (324.754 nm)	0.000060 u	ppm	0.000145	> 100.00	204.890000	Y 377.433
Fe (238.204 nm)	0.000883 u	ppm	0.001321	> 100.00	13.006915	Y_R 377.433
Fe H (259.940 nm)	0.013737 u	ppm	0.005613	40.86	1.598300	Y_R 377.433
K (766.491 nm)	-0.099069 u	ppm	0.037268	37.62	1639.090000	Y_R2 488.368
Li (670.783 nm)	0.003354 u	ppm	0.008233	> 100.00	-399.399000	Y_R2 488.368
Mg (279.078 nm)	0.003015	ppm	0.000962	31.91	20.643700	Y 377.433
Mn (257.610 nm)	0.000012	ppm	0.000016	> 100.00	25.161300	Y 377.433
Mo (202.032 nm)	0.000010 u	ppm	0.000035	> 100.00	18.792400	Y 377.433
Na (589.592 nm)	0.131191	ppm	0.002745	2.09	-70.107500	Y_R2 488.368
Na H (589.593 nm)	2.100940 u	ppm	0.001142	0.05	359.763678	Y_R4
Ni (231.604 nm)	0.000575	ppm	0.000166	28.81	11.286500	Y 377.433
P (213.618 nm)	-0.000404 u	ppm	0.001526	> 100.00	-1.565690	Y 242.219
Pb (220.353 nm)	-0.002988 u	ppm	0.000960	32.11	7.821880	Y 242.219
S (181.972 nm)	0.008752	ppm	0.003973	45.39	-21.530022	Y 377.433
Sb (206.834 nm)	-0.000380 u	ppm	0.000027	7.23	-1.748480	Y 377.433
Se (196.026 nm)	0.000708 u	ppm	0.003065	> 100.00	2.705880	Y 242.219
Si (288.158 nm)	-0.203266 Zu	ppm	0.000540	0.27	374.197000 Z	Y 377.433
Sn (189.925 nm)	-0.007362 u	ppm	0.000012	0.16	-0.530916	Y 377.433
Sr (421.552 nm)	-0.000361 u	ppm	0.000098	26.98	236.252128	Y_R 488.368
Th (288.505 nm)	0.001872 u	ppm	0.004231	> 100.00	16.385300	Y 377.433
Ti (336.122 nm)	0.000221	ppm	0.000190	86.12	-344.101000	Y 377.433
Tl (190.794 nm)	-0.003705 u	ppm	0.002974	80.25	-10.939800	Y 377.433
U (409.013 nm)	0.003040 u	ppm	0.007415	> 100.00	121.752000	Y 377.433
V (292.401 nm)	0.000138 u	ppm	0.000302	> 100.00	-187.865000	Y 377.433
Zn (206.200 nm)	-0.000039 u	ppm	0.000382	> 100.00	4.242890	Y 377.433
Zr (343.823 nm)	0.000485	ppm	0.000492	> 100.00	-98.900500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.084314	11550.316642	0.001161	0.11
Y 377.433	1.071460	494625.827805	0.002244	0.21
Y_R 377.433	1.088090	41116.600000	0.004376	0.40
Y_R 488.368	1.079630	38964.000000	0.006800	0.63
Y_R2 488.368	1.088162	76581.293394	0.008054	0.74
Y_R4	1.081890	33197.000000	0.000912	0.08

Sample Name: CCVL-5412564

Date: 11/5/2018 4:01:54 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009864	ppm	0.000932	9.45	34.287200	Y 377.433
Al (394.401 nm)	0.100485	ppm	0.001210	1.20	1345.120000	Y 377.433
Al H (396.152 nm)	0.244731 u	ppm	0.007238	2.96	192.470000	Y_R 377.433
As (188.980 nm)	0.009999 Q	ppm	0.004893	48.93	-1.109010 Q	Y 242.219
B (249.678 nm)	0.092975	ppm	0.000836	0.90	419.983000	Y 242.219
Ba (493.408 nm)	0.009383	ppm	0.000530	5.65	1659.830000	Y_R 488.368
Be (234.861 nm)	0.001020	ppm	0.000036	3.48	45.610100	Y_R 488.368
Bi (223.061 nm)	0.090743	ppm	0.000659	0.73	192.857000	Y 377.433
Ca (315.887 nm)	0.188073	ppm	0.004251	2.26	121.932279	Y_R 377.433
Cd (214.439 nm)	0.005232	ppm	0.000131	2.50	119.131000	Y 377.433
Co (228.615 nm)	0.010437	ppm	0.000190	1.82	220.186000	Y 242.219
Cr (205.560 nm)	0.010512	ppm	0.000179	1.70	40.709600	Y 377.433
Cu (324.754 nm)	0.015684	ppm	0.000312	1.99	956.175000	Y 377.433
Fe (238.204 nm)	0.093172	ppm	0.000072	0.08	166.775853	Y_R 377.433
Fe H (259.940 nm)	0.099682 u	ppm	0.007055	7.08	80.466200	Y_R 377.433
K (766.491 nm)	2.986090	ppm	0.023363	0.78	4654.340000	Y_R2 488.368
Li (670.783 nm)	0.027753 Q	ppm	0.003758	13.54	-53.817400 Q	Y_R2 488.368
Mg (279.078 nm)	0.206213	ppm	0.003013	1.46	462.666000	Y 377.433
Mn (257.610 nm)	0.010536	ppm	0.000063	0.60	2227.110000	Y 377.433
Mo (202.032 nm)	0.020239	ppm	0.000118	0.58	248.931000	Y 377.433
Na (589.592 nm)	1.229650	ppm	0.058724	4.78	481.602000	Y_R2 488.368
Na H (589.593 nm)	2.922100 u	ppm	0.003955	0.14	651.998040	Y_R4
Ni (231.604 nm)	0.042134	ppm	0.000225	0.53	170.554000	Y 377.433
P (213.618 nm)	2.881620	ppm	0.001713	0.06	3341.190000	Y 242.219
Pb (220.353 nm)	0.008105	ppm	0.001181	14.58	32.619900	Y 242.219
S (181.972 nm)	0.100558	ppm	0.010795	10.74	22.361291	Y 377.433
Sb (206.834 nm)	0.021592	ppm	0.000252	1.17	34.248800	Y 377.433
Se (196.026 nm)	0.023171	ppm	0.003714	16.03	36.472200	Y 242.219
Si (288.158 nm)	0.291252 Q	ppm	0.001968	0.68	2589.590000 Q	Y 377.433
Sn (189.925 nm)	0.092120	ppm	0.000499	0.54	115.600000	Y 377.433
Sr (421.552 nm)	0.009372	ppm	0.000281	2.99	1366.106663	Y_R 488.368
Th (288.505 nm)	0.012154	ppm	0.001365	11.23	26.994000	Y 377.433
Ti (336.122 nm)	0.010569	ppm	0.000016	0.16	640.467000	Y 377.433
Tl (190.794 nm)	0.010784	ppm	0.003988	36.98	-2.667280	Y 377.433
U (409.013 nm)	0.059109	ppm	0.002297	3.89	248.681000	Y 377.433
V (292.401 nm)	0.010587	ppm	0.000331	3.13	314.100000	Y 377.433
Zn (206.200 nm)	0.021350	ppm	0.002506	11.74	78.174900	Y 377.433
Zr (343.823 nm)	0.015485	ppm	0.000042	0.27	508.991000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102495	11743.983336	0.002042	0.19
Y 377.433	1.091078	503682.427439	0.003196	0.29
Y_R 377.433	1.102580	41664.000000	0.001569	0.14
Y_R 488.368	1.105940	39913.300000	0.006150	0.56
Y_R2 488.368	1.094721	77042.875202	0.009097	0.83
Y_R4	1.097280	33669.200000	0.004947	0.45

Sample Name: MB 280-436024/1-A

Date: 11/5/2018 4:05:19 PM Rack:Tube: 1:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000108 u	ppm	0.000454	> 100.00	-242.297000	Y 377.433
Al (394.401 nm)	0.001739	ppm	0.000215	12.35	111.248000	Y 377.433
Al H (396.152 nm)	0.139655 u	ppm	0.005244	3.75	14.863600	Y_R 377.433
As (188.980 nm)	-0.001419 u	ppm	0.000675	47.56	-17.103800	Y 242.219
B (249.678 nm)	-0.006895 u	ppm	0.001009	14.64	19.017800	Y 242.219
Ba (493.408 nm)	-0.000763 u	ppm	0.000333	43.66	731.159000	Y_R 488.368
Be (234.861 nm)	0.000089 u	ppm	0.000138	> 100.00	-1.255850	Y_R 488.368
Bi (223.061 nm)	-0.003141 u	ppm	0.000947	30.16	38.095000	Y 377.433
Ca (315.887 nm)	-0.007169 u	ppm	0.009558	> 100.00	-7.052285	Y_R 377.433
Cd (214.439 nm)	-0.000118 u	ppm	0.000136	> 100.00	-14.088400	Y 377.433
Co (228.615 nm)	0.000222	ppm	0.000135	60.52	-22.673800	Y 242.219
Cr (205.560 nm)	-0.000115 u	ppm	0.000410	> 100.00	-9.892270	Y 377.433
Cu (324.754 nm)	-0.000004 u	ppm	0.000170	> 100.00	200.742000	Y 377.433
Fe (238.204 nm)	-0.000807 u	ppm	0.002568	> 100.00	10.190649	Y_R 377.433
Fe H (259.940 nm)	0.012846 u	ppm	0.000983	7.66	0.780642	Y_R 377.433
K (766.491 nm)	-0.245851 u	ppm	0.087288	35.50	1495.630000	Y_R2 488.368
Li (670.783 nm)	0.001041 u	ppm	0.003068	> 100.00	-432.159000	Y_R2 488.368
Mg (279.078 nm)	0.000298 u	ppm	0.000839	> 100.00	14.610300	Y 377.433
Mn (257.610 nm)	0.000018	ppm	0.000019	> 100.00	26.399500	Y 377.433
Mo (202.032 nm)	-0.000483 u	ppm	0.000069	14.23	13.183100	Y 377.433
Na (589.592 nm)	0.128653	ppm	0.023258	18.08	-71.381700	Y_R2 488.368
Na H (589.593 nm)	1.808912 u	ppm	0.016798	0.93	255.494794	Y_R4
Ni (231.604 nm)	0.000138 u	ppm	0.000762	> 100.00	9.608720	Y 377.433
P (213.618 nm)	-0.001555 u	ppm	0.001168	75.14	-2.879250	Y 242.219
Pb (220.353 nm)	0.000108 u	ppm	0.000302	> 100.00	14.758800	Y 242.219
S (181.972 nm)	0.012396	ppm	0.003654	29.48	-19.790518	Y 377.433
Sb (206.834 nm)	0.000171 u	ppm	0.001963	> 100.00	-0.845131	Y 377.433
Se (196.026 nm)	0.005264	ppm	0.002370	45.02	9.556670	Y 242.219
Si (288.158 nm)	-0.204047 u	ppm	0.001118	0.55	370.696000	Y 377.433
Sn (189.925 nm)	-0.006162 u	ppm	0.000539	8.74	0.870131	Y 377.433
Sr (421.552 nm)	-0.000192 u	ppm	0.000127	66.26	255.970404	Y_R 488.368
Th (288.505 nm)	0.003340	ppm	0.003473	> 100.00	17.983000	Y 377.433
Ti (336.122 nm)	0.000488	ppm	0.000098	20.07	-318.706000	Y 377.433
Tl (190.794 nm)	-0.001026 u	ppm	0.002172	> 100.00	-9.402870	Y 377.433
U (409.013 nm)	-0.014546 u	ppm	0.009483	65.19	81.561700	Y 377.433
V (292.401 nm)	0.000198	ppm	0.000072	36.37	-185.508000	Y 377.433
Zn (206.200 nm)	0.000352	ppm	0.000016	4.56	5.594090	Y 377.433
Zr (343.823 nm)	0.000280	ppm	0.000069	24.84	-107.203000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093663	11649.903285	0.004906	0.45
Y 377.433	1.080954	499008.982393	0.005597	0.52
Y_R 377.433	1.102300	41653.500000	0.003734	0.34
Y_R 488.368	1.104700	39868.800000	0.004199	0.38
Y_R2 488.368	1.120380	78848.691928	0.000960	0.09
Y_R4	1.096630	33649.200000	0.008683	0.79

Sample Name: LCS 280-436024/2-A

Date: 11/5/2018 4:08:28 PM Rack:Tube: 1:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052816	ppm	0.000107	0.20	1171.860000	Y 377.433
Al (394.401 nm)	2.070390	ppm	0.007441	0.36	26174.500000	Y 377.433
Al H (396.152 nm)	2.000880	ppm	0.011494	0.57	3469.370000	Y_R 377.433
As (188.980 nm)	1.004250	ppm	0.004209	0.42	1391.950000	Y 242.219
B (249.678 nm)	1.044450	ppm	0.002647	0.25	4240.050000	Y 242.219
Ba (493.408 nm)	2.050930	ppm	0.000729	0.04	188501.000000	Y_R 488.368
Be (234.861 nm)	0.051261	ppm	0.000181	0.35	2634.440000	Y_R 488.368
Bi (223.061 nm)	1.960430	ppm	0.008480	0.43	3274.780000	Y 377.433
Ca (315.887 nm)	50.908389	ppm	0.131396	0.26	33624.067929	Y_R 377.433
Cd (214.439 nm)	0.102067	ppm	0.000268	0.26	2530.320000	Y 377.433
Co (228.615 nm)	0.493553	ppm	0.000805	0.16	11726.100000	Y 242.219
Cr (205.560 nm)	0.208605	ppm	0.001158	0.56	982.251000	Y 377.433
Cu (324.754 nm)	0.252195	ppm	0.000009	0.00	12376.300000	Y 377.433
Fe (238.204 nm)	1.021211	ppm	0.000149	0.01	1713.045151	Y_R 377.433
Fe H (259.940 nm)	1.016130 u	ppm	0.006251	0.62	921.445000	Y_R 377.433
K (766.491 nm)	51.891100	ppm	0.071685	0.14	52451.200000	Y_R2 488.368
Li (670.783 nm)	1.037930	ppm	0.003712	0.36	14253.900000	Y_R2 488.368
Mg (279.078 nm)	50.493600	ppm	0.137884	0.27	109987.000000	Y 377.433
Mn (257.610 nm)	0.509497	ppm	0.001257	0.25	106622.000000	Y 377.433
Mo (202.032 nm)	1.057150	ppm	0.003263	0.31	12045.400000	Y 377.433
Na (589.592 nm)	51.016100	ppm	0.115216	0.23	25462.800000	Y_R2 488.368
Na H (589.593 nm)	52.370406	ppm	0.251237	0.48	18107.401114	Y_R4
Ni (231.604 nm)	0.495642	ppm	0.003173	0.64	1910.200000	Y 377.433
P (213.618 nm)	10.390100	ppm	0.055953	0.54	12040.900000	Y 242.219
Pb (220.353 nm)	0.511713	ppm	0.000081	0.02	1157.580000	Y 242.219
S (181.972 nm)	2.009435	ppm	0.003822	0.19	938.351763	Y 377.433
Sb (206.834 nm)	0.521690	ppm	0.006264	1.20	846.362000	Y 377.433
Se (196.026 nm)	2.061540	ppm	0.001463	0.07	3101.680000	Y 242.219
Si (288.158 nm)	10.086100	ppm	0.062692	0.62	46469.600000	Y 377.433
Sn (189.925 nm)	2.085290	ppm	0.009845	0.47	2442.350000	Y 377.433
Sr (421.552 nm)	1.024745	ppm	0.000439	0.04	119229.376611	Y_R 488.368
Th (288.505 nm)	0.989134	ppm	0.003352	0.34	1042.740000	Y 377.433
Ti (336.122 nm)	1.040540	ppm	0.004173	0.40	98704.200000	Y 377.433
Tl (190.794 nm)	2.067840	ppm	0.018044	0.87	1174.130000	Y 377.433
U (409.013 nm)	2.089100	ppm	0.004654	0.22	4839.620000	Y 377.433
V (292.401 nm)	0.518257	ppm	0.000948	0.18	24836.200000	Y 377.433
Zn (206.200 nm)	0.508781	ppm	0.000241	0.05	1762.880000	Y 377.433
Zr (343.823 nm)	0.515962	ppm	0.001517	0.29	20791.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060919	11301.108222	0.003754	0.35
Y 377.433	1.058074	488446.703241	0.001664	0.16
Y_R 377.433	1.086570	41059.000000	0.002413	0.22
Y_R 488.368	1.091560	39394.400000	0.001257	0.12
Y_R2 488.368	1.089786	76695.589445	0.000349	0.03
Y_R4	1.103130	33848.600000	0.005587	0.51

Sample Name: LCSD 280-436024/3-A

Date: 11/5/2018 4:11:57 PM Rack:Tube: 1:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053404	ppm	0.000261	0.49	1187.450000	Y 377.433
Al (394.401 nm)	2.084190	ppm	0.005503	0.26	26341.500000	Y 377.433
Al H (396.152 nm)	2.009020	ppm	0.002479	0.12	3483.290000	Y_R 377.433
As (188.980 nm)	1.005400	ppm	0.000006	0.00	1393.550000	Y 242.219
B (249.678 nm)	1.036610	ppm	0.003460	0.33	4208.570000	Y 242.219
Ba (493.408 nm)	2.049430	ppm	0.005281	0.26	188363.000000	Y_R 488.368
Be (234.861 nm)	0.051462	ppm	0.000727	1.41	2644.870000	Y_R 488.368
Bi (223.061 nm)	1.969830	ppm	0.004067	0.21	3290.260000	Y 377.433
Ca (315.887 nm)	50.821050	ppm	0.127754	0.25	33566.383120	Y_R 377.433
Cd (214.439 nm)	0.103198	ppm	0.000063	0.06	2558.480000	Y 377.433
Co (228.615 nm)	0.493052	ppm	0.001367	0.28	11714.200000	Y 242.219
Cr (205.560 nm)	0.209702	ppm	0.000971	0.46	987.484000	Y 377.433
Cu (324.754 nm)	0.253261	ppm	0.000234	0.09	12431.300000	Y 377.433
Fe (238.204 nm)	1.021573	ppm	0.002940	0.29	1713.649001	Y_R 377.433
Fe H (259.940 nm)	1.018670 u	ppm	0.002784	0.27	923.779000	Y_R 377.433
K (766.491 nm)	51.679400	ppm	0.034572	0.07	52244.300000	Y_R2 488.368
Li (670.783 nm)	1.034790	ppm	0.000569	0.05	14209.400000	Y_R2 488.368
Mg (279.078 nm)	50.870100	ppm	0.085286	0.17	110807.000000	Y 377.433
Mn (257.610 nm)	0.512568	ppm	0.000985	0.19	107264.000000	Y 377.433
Mo (202.032 nm)	1.058550	ppm	0.002301	0.22	12061.400000	Y 377.433
Na (589.592 nm)	50.736000	ppm	0.079947	0.16	25322.100000	Y_R2 488.368
Na H (589.593 nm)	52.332823	ppm	0.162136	0.31	18094.345228	Y_R4
Ni (231.604 nm)	0.499157	ppm	0.001541	0.31	1923.690000	Y 377.433
P (213.618 nm)	10.365000	ppm	0.028064	0.27	12011.800000	Y 242.219
Pb (220.353 nm)	0.506916	ppm	0.000824	0.16	1146.850000	Y 242.219
S (181.972 nm)	1.997731	ppm	0.001369	0.07	932.768577	Y 377.433
Sb (206.834 nm)	0.523946	ppm	0.000253	0.05	850.074000	Y 377.433
Se (196.026 nm)	2.065290	ppm	0.006118	0.30	3107.320000	Y 242.219
Si (288.158 nm)	10.093700	ppm	0.051302	0.51	46503.700000	Y 377.433
Sn (189.925 nm)	2.079740	ppm	0.004271	0.21	2435.880000	Y 377.433
Sr (421.552 nm)	1.025917	ppm	0.002458	0.24	119365.448292	Y_R 488.368
Th (288.505 nm)	0.994066	ppm	0.005819	0.59	1047.760000	Y 377.433
Ti (336.122 nm)	1.041770	ppm	0.002892	0.28	98821.500000	Y 377.433
Tl (190.794 nm)	2.074780	ppm	0.008361	0.40	1178.110000	Y 377.433
U (409.013 nm)	2.101820	ppm	0.002063	0.10	4868.650000	Y 377.433
V (292.401 nm)	0.521965	ppm	0.001293	0.25	25017.700000	Y 377.433
Zn (206.200 nm)	0.513974	ppm	0.000179	0.03	1780.830000	Y 377.433
Zr (343.823 nm)	0.516689	ppm	0.000667	0.13	20820.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057633	11266.108524	0.001827	0.17
Y 377.433	1.047885	483742.672406	0.003925	0.37
Y_R 377.433	1.082600	40909.100000	0.009914	0.92
Y_R 488.368	1.085770	39185.600000	0.010446	0.96
Y_R2 488.368	1.088164	76581.407252	0.000748	0.07
Y_R4	1.087420	33366.600000	0.001771	0.16

Sample Name: 280-116356-A-2-D

Date: 11/5/2018 4:15:24 PM Rack:Tube: 1:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001396	ppm	0.000337	24.15	-200.636000	Y 377.433
Al (394.401 nm)	2.515010	ppm	0.002987	0.12	31465.300000	Y 377.433
Al H (396.152 nm)	2.562530	ppm	0.003884	0.15	4076.630000	Y_R 377.433
As (188.980 nm)	-0.006156 u	ppm	0.002139	34.74	-23.784400	Y 242.219
B (249.678 nm)	0.384442	ppm	0.002130	0.55	1590.290000	Y 242.219
Ba (493.408 nm)	0.018120	ppm	0.000475	2.62	2459.420000	Y_R 488.368
Be (234.861 nm)	0.000157	ppm	0.000063	40.22	1.447630	Y_R 488.368
Bi (223.061 nm)	0.001331 u	ppm	0.002095	> 100.00	45.480400	Y 377.433
Ca (315.887 nm)	74.259202	ppm	0.026036	0.04	49047.800674	Y_R 377.433
Cd (214.439 nm)	0.000175	ppm	0.000077	43.97	-6.806280	Y 377.433
Co (228.615 nm)	0.000234	ppm	0.000203	86.56	-22.329800	Y 242.219
Cr (205.560 nm)	0.000571	ppm	0.000287	50.31	-6.679900	Y 377.433
Cu (324.754 nm)	-0.000052 u	ppm	0.000235	> 100.00	154.417000	Y 377.433
Fe (238.204 nm)	0.054897	ppm	0.001938	3.53	103.002513	Y_R 377.433
Fe H (259.940 nm)	0.049354 u	ppm	0.001757	3.56	34.282500	Y_R 377.433
K (766.491 nm)	4.260720	ppm	0.033743	0.79	5900.090000	Y_R2 488.368
Li (670.783 nm)	0.022037	ppm	0.005007	22.72	-134.779000	Y_R2 488.368
Mg (279.078 nm)	27.725700	ppm	0.020405	0.07	60411.700000	Y 377.433
Mn (257.610 nm)	0.036205	ppm	0.000057	0.16	7597.630000	Y 377.433
Mo (202.032 nm)	0.001902	ppm	0.000046	2.44	40.322000	Y 377.433
Na (589.592 nm)	42.105000	ppm	0.100912	0.24	21017.200000	Y_R2 488.368
Na H (589.593 nm)	42.327115 u	ppm	0.275731	0.65	14721.651595	Y_R4
Ni (231.604 nm)	0.001943	ppm	0.000420	21.62	16.534600	Y 377.433
P (213.618 nm)	0.000395 u	ppm	0.002433	> 100.00	-0.666031	Y 242.219
Pb (220.353 nm)	-0.001786 u	ppm	0.001200	67.19	10.160200	Y 242.219
S (181.972 nm)	112.194253 bo	ppm	0.349034	0.31	53566.669253	Y 377.433
Sb (206.834 nm)	-0.002717 u	ppm	0.005118	> 100.00	-5.604510	Y 377.433
Se (196.026 nm)	0.004711	ppm	0.002286	48.53	8.759800	Y 242.219
Si (288.158 nm)	1.567040	ppm	0.004032	0.26	8305.000000	Y 377.433
Sn (189.925 nm)	-0.007399 u	ppm	0.000316	4.26	-0.574492	Y 377.433
Sr (421.552 nm)	0.254116	ppm	0.000772	0.30	29775.697420	Y_R 488.368
Th (288.505 nm)	-0.018104 u	ppm	0.001382	7.63	-5.021230	Y 377.433
Ti (336.122 nm)	0.000263	ppm	0.000225	85.41	-152.690000	Y 377.433
Tl (190.794 nm)	-0.002725 u	ppm	0.000720	26.40	-11.210600	Y 377.433
U (409.013 nm)	-0.003723 u	ppm	0.003150	84.61	99.243900	Y 377.433
V (292.401 nm)	0.000581	ppm	0.000486	83.78	-167.407000	Y 377.433
Zn (206.200 nm)	0.001981	ppm	0.000864	43.62	11.230000	Y 377.433
Zr (343.823 nm)	-0.000024 u	ppm	0.000299	> 100.00	-119.515000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061937	11311.958346	0.003277	0.31
Y 377.433	1.055075	487061.975716	0.000388	0.04
Y_R 377.433	1.083150	40930.000000	0.002517	0.23
Y_R 488.368	1.090950	39372.400000	0.000352	0.03
Y_R2 488.368	1.118578	78721.870289	0.004412	0.39
Y_R4	1.118640	34324.400000	0.001572	0.14

Sample Name: 280-116356-A-2-Dsd@5

Date: 11/5/2018 4:18:53 PM Rack:Tube: 1:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000219	ppm	0.000077	34.94	-233.292000	Y 377.433
Al (394.401 nm)	0.497526	ppm	0.031548	6.34	6295.290000	Y 377.433
Al H (396.152 nm)	0.584743 u	ppm	0.006318	1.08	761.055000	Y_R 377.433
As (188.980 nm)	-0.000072 u	ppm	0.000011	14.93	-15.224300	Y 242.219
B (249.678 nm)	0.070022	ppm	0.005133	7.33	327.849000	Y 242.219
Ba (493.408 nm)	0.002556	ppm	0.000228	8.92	1034.940000	Y_R 488.368
Be (234.861 nm)	0.000127	ppm	0.000088	69.59	0.498194	Y_R 488.368
Bi (223.061 nm)	-0.001715 u	ppm	0.000588	34.27	40.448100	Y 377.433
Ca (315.887 nm)	13.613642	ppm	0.156296	1.15	8989.841151	Y_R 377.433
Cd (214.439 nm)	0.000021 u	ppm	0.000106	> 100.00	-10.638600	Y 377.433
Co (228.615 nm)	0.000097 u	ppm	0.000202	> 100.00	-25.638400	Y 242.219
Cr (205.560 nm)	0.000112	ppm	0.000087	77.50	-8.823550	Y 377.433
Cu (324.754 nm)	-0.000061 u	ppm	0.000104	> 100.00	190.369000	Y 377.433
Fe (238.204 nm)	0.012480	ppm	0.002508	20.09	32.329431	Y_R 377.433
Fe H (259.940 nm)	0.027203 u	ppm	0.000402	1.48	13.955400	Y_R 377.433
K (766.491 nm)	0.653731	ppm	0.034507	5.28	2374.830000	Y_R2 488.368
Li (670.783 nm)	0.008722	ppm	0.000555	6.36	-323.367000	Y_R2 488.368
Mg (279.078 nm)	5.545610	ppm	0.348379	6.28	12094.500000	Y 377.433
Mn (257.610 nm)	0.007379	ppm	0.000454	6.15	1566.600000	Y 377.433
Mo (202.032 nm)	0.000147 u	ppm	0.000417	> 100.00	20.357100	Y 377.433
Na (589.592 nm)	7.575450	ppm	0.025486	0.34	3669.830000	Y_R2 488.368
Na H (589.593 nm)	8.899301 u	ppm	0.004304	0.05	2786.957985	Y_R4
Ni (231.604 nm)	0.000228	ppm	0.000276	> 100.00	9.955620	Y 377.433
P (213.618 nm)	-0.000585 u	ppm	0.000532	90.98	-1.753950	Y 242.219
Pb (220.353 nm)	-0.000565 u	ppm	0.000094	16.66	13.197600	Y 242.219
S (181.972 nm)	22.011975	ppm	1.449171	6.58	10488.804169	Y 377.433
Sb (206.834 nm)	0.001913 u	ppm	0.004758	> 100.00	2.021330	Y 377.433
Se (196.026 nm)	0.000880	ppm	0.000454	51.60	2.971930	Y 242.219
Si (288.158 nm)	0.143201	ppm	0.017473	12.20	1926.340000	Y 377.433
Sn (189.925 nm)	-0.008487 u	ppm	0.000228	2.69	-1.844250	Y 377.433
Sr (421.552 nm)	0.046457	ppm	0.000247	0.53	5670.873782	Y_R 488.368
Th (288.505 nm)	-0.001665 u	ppm	0.010452	> 100.00	12.627100	Y 377.433
Ti (336.122 nm)	0.000385	ppm	0.000140	36.46	-294.429000	Y 377.433
Tl (190.794 nm)	-0.007532 u	ppm	0.001714	22.76	-13.284800	Y 377.433
U (409.013 nm)	-0.000872 u	ppm	0.011807	> 100.00	111.508000	Y 377.433
V (292.401 nm)	0.000517	ppm	0.000233	44.98	-170.067000	Y 377.433
Zn (206.200 nm)	0.000786	ppm	0.000127	16.16	7.095340	Y 377.433
Zr (343.823 nm)	0.000395	ppm	0.000201	50.79	-102.513000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.086136	11569.726527	0.001924	0.18
Y 377.433	1.075524	496501.998547	0.003621	0.34
Y_R 377.433	1.105820	41786.400000	0.006440	0.58
Y_R 488.368	1.107450	39967.900000	0.002359	0.21
Y_R2 488.368	1.123777	79087.765920	0.002719	0.24
Y_R4	1.109940	34057.700000	0.002823	0.25

Sample Name: 280-116356-A-2-E MS

Date: 11/5/2018 4:22:18 PM Rack:Tube: 1:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053858	ppm	0.000028	0.05	1199.820000	Y 377.433
Al (394.401 nm)	4.708290 o	ppm	0.007214	0.15	59084.000000	Y 377.433
Al H (396.152 nm)	4.564720	ppm	0.009990	0.22	7771.610000	Y_R 377.433
As (188.980 nm)	1.029360	ppm	0.000896	0.09	1427.080000	Y 242.219
B (249.678 nm)	1.463240	ppm	0.003756	0.26	5921.520000	Y 242.219
Ba (493.408 nm)	2.090980	ppm	0.001355	0.06	192166.000000	Y_R 488.368
Be (234.861 nm)	0.051516	ppm	0.000142	0.28	2646.510000	Y_R 488.368
Bi (223.061 nm)	1.999780	ppm	0.009379	0.47	3339.650000	Y 377.433
Ca (315.887 nm)	127.598466	ppm	0.308779	0.24	84279.863083	Y_R 377.433
Cd (214.439 nm)	0.102155	ppm	0.000116	0.11	2532.500000	Y 377.433
Co (228.615 nm)	0.489524	ppm	0.000541	0.11	11630.700000	Y 242.219
Cr (205.560 nm)	0.207403	ppm	0.000701	0.34	976.441000	Y 377.433
Cu (324.754 nm)	0.256120	ppm	0.000631	0.25	12522.500000	Y 377.433
Fe (238.204 nm)	1.100988	ppm	0.002013	0.18	1845.968473	Y_R 377.433
Fe H (259.940 nm)	1.082660 u	ppm	0.015240	1.41	982.497000	Y_R 377.433
K (766.491 nm)	57.017400	ppm	0.293356	0.51	57461.400000	Y_R2 488.368
Li (670.783 nm)	1.064440	ppm	0.012408	1.17	14629.400000	Y_R2 488.368
Mg (279.078 nm)	79.434700	ppm	0.145861	0.18	173032.000000	Y 377.433
Mn (257.610 nm)	0.549921	ppm	0.001024	0.19	115079.000000	Y 377.433
Mo (202.032 nm)	1.064130	ppm	0.000082	0.01	12124.800000	Y 377.433
Na (589.592 nm)	93.541700 o	ppm	0.609311	0.65	46827.000000	Y_R2 488.368
Na H (589.593 nm)	96.292643	ppm	0.004783	0.00	33787.179702	Y_R4
Ni (231.604 nm)	0.493947	ppm	0.000946	0.19	1903.700000	Y 377.433
P (213.618 nm)	10.564900	ppm	0.035495	0.34	12243.400000	Y 242.219
Pb (220.353 nm)	0.505115	ppm	0.000433	0.09	1142.460000	Y 242.219
S (181.972 nm)	118.739704 bo	ppm	0.396304	0.33	56697.481990	Y 377.433
Sb (206.834 nm)	0.529590	ppm	0.003774	0.71	859.298000	Y 377.433
Se (196.026 nm)	2.079390	ppm	0.002664	0.13	3128.560000	Y 242.219
Si (288.158 nm)	12.019200	ppm	0.005519	0.05	55129.800000	Y 377.433
Sn (189.925 nm)	2.092000	ppm	0.000578	0.03	2450.190000	Y 377.433
Sr (421.552 nm)	1.301954	ppm	0.003629	0.28	151407.490423	Y_R 488.368
Th (288.505 nm)	0.994488	ppm	0.004004	0.40	1048.050000	Y 377.433
Ti (336.122 nm)	1.044660	ppm	0.000415	0.04	99291.100000	Y 377.433
Tl (190.794 nm)	2.040830	ppm	0.008866	0.43	1157.770000	Y 377.433
U (409.013 nm)	2.129440	ppm	0.012116	0.57	4924.350000	Y 377.433
V (292.401 nm)	0.522827	ppm	0.000896	0.17	25058.900000	Y 377.433
Zn (206.200 nm)	0.510306	ppm	0.001603	0.31	1768.160000	Y 377.433
Zr (343.823 nm)	0.517785	ppm	0.000401	0.08	20865.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046732	11149.991346	0.000986	0.09
Y 377.433	1.044219	482050.631653	0.000603	0.06
Y_R 377.433	1.079210	40781.000000	0.004362	0.40
Y_R 488.368	1.083090	39088.900000	0.003488	0.32
Y_R2 488.368	1.078163	75877.590690	0.009430	0.87
Y_R4	1.078350	33088.100000	0.001474	0.14

Sample Name: 280-116356-A-2-F MSD

Date: 11/5/2018 4:25:48 PM Rack:Tube: 1:14

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052861	ppm	0.000124	0.23	1174.000000	Y 377.433
Al (394.401 nm)	4.661270 o	ppm	0.000639	0.01	58488.600000	Y 377.433
Al H (396.152 nm)	4.511810	ppm	0.008923	0.20	7677.690000	Y_R 377.433
As (188.980 nm)	1.023550	ppm	0.002363	0.23	1418.940000	Y 242.219
B (249.678 nm)	1.466270	ppm	0.002353	0.16	5933.700000	Y 242.219
Ba (493.408 nm)	2.069450	ppm	0.004821	0.23	190196.000000	Y_R 488.368
Be (234.861 nm)	0.050889	ppm	0.000107	0.21	2614.370000	Y_R 488.368
Bi (223.061 nm)	1.977170	ppm	0.006092	0.31	3302.380000	Y 377.433
Ca (315.887 nm)	125.975430	ppm	0.195580	0.16	83207.802877	Y_R 377.433
Cd (214.439 nm)	0.101630	ppm	0.000320	0.31	2519.430000	Y 377.433
Co (228.615 nm)	0.485784	ppm	0.002218	0.46	11542.100000	Y 242.219
Cr (205.560 nm)	0.205956	ppm	0.000519	0.25	969.536000	Y 377.433
Cu (324.754 nm)	0.253840	ppm	0.000360	0.14	12415.300000	Y 377.433
Fe (238.204 nm)	1.075188	ppm	0.002201	0.20	1802.979951	Y_R 377.433
Fe H (259.940 nm)	1.064940 u	ppm	0.007866	0.74	966.240000	Y_R 377.433
K (766.491 nm)	56.733100	ppm	0.064011	0.11	57183.500000	Y_R2 488.368
Li (670.783 nm)	1.063870	ppm	0.005089	0.48	14621.300000	Y_R2 488.368
Mg (279.078 nm)	78.763200	ppm	0.054999	0.07	171570.000000	Y 377.433
Mn (257.610 nm)	0.545786	ppm	0.000042	0.01	114214.000000	Y 377.433
Mo (202.032 nm)	1.066310	ppm	0.000898	0.08	12149.600000	Y 377.433
Na (589.592 nm)	93.039600 o	ppm	0.112327	0.12	46575.100000	Y_R2 488.368
Na H (589.593 nm)	95.321497	ppm	0.065147	0.07	33442.199876	Y_R4
Ni (231.604 nm)	0.491429	ppm	0.001283	0.26	1894.030000	Y 377.433
P (213.618 nm)	10.502600	ppm	0.033325	0.32	12171.300000	Y 242.219
Pb (220.353 nm)	0.502246	ppm	0.001555	0.31	1136.010000	Y 242.219
S (181.972 nm)	117.791206 bo	ppm	0.509412	0.43	56244.343677	Y 377.433
Sb (206.834 nm)	0.536496	ppm	0.000468	0.09	870.615000	Y 377.433
Se (196.026 nm)	2.060840	ppm	0.001904	0.09	3100.660000	Y 242.219
Si (288.158 nm)	12.040300	ppm	0.005110	0.04	55224.100000	Y 377.433
Sn (189.925 nm)	2.091970	ppm	0.000639	0.03	2450.160000	Y 377.433
Sr (421.552 nm)	1.290604	ppm	0.004459	0.35	150090.009876	Y_R 488.368
Th (288.505 nm)	0.986183	ppm	0.005663	0.57	1039.410000	Y 377.433
Ti (336.122 nm)	1.046630	ppm	0.001504	0.14	99474.200000	Y 377.433
Tl (190.794 nm)	2.020860	ppm	0.009523	0.47	1146.330000	Y 377.433
U (409.013 nm)	2.098060	ppm	0.024741	1.18	4852.680000	Y 377.433
V (292.401 nm)	0.517825	ppm	0.000121	0.02	24818.300000	Y 377.433
Zn (206.200 nm)	0.503604	ppm	0.001741	0.35	1744.990000	Y 377.433
Zr (343.823 nm)	0.518407	ppm	0.000966	0.19	20890.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046767	11150.365001	0.001198	0.11
Y 377.433	1.045364	482579.205681	0.002280	0.22
Y_R 377.433	1.085020	41000.300000	0.000738	0.07
Y_R 488.368	1.088400	39280.500000	0.001045	0.10
Y_R2 488.368	1.089154	76651.107515	0.009805	0.90
Y_R4	1.093490	33552.900000	0.008277	0.76

Sample Name: 280-116351-D-1-A

Date: 11/5/2018 4:29:19 PM Rack:Tube: 1:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000388	ppm	0.000135	34.67	-227.715000	Y 377.433
Al (394.401 nm)	0.001681	ppm	0.000367	21.86	222.558000	Y 377.433
Al H (396.152 nm)	0.044602 u	ppm	0.004395	9.85	7.980590	Y_R 377.433
As (188.980 nm)	-0.002942 u	ppm	0.003252	> 100.00	-19.240300	Y 242.219
B (249.678 nm)	0.112668	ppm	0.000282	0.25	499.046000	Y 242.219
Ba (493.408 nm)	0.454529	ppm	0.002028	0.45	42399.100000	Y_R 488.368
Be (234.861 nm)	0.000216	ppm	0.000087	40.24	3.667640	Y_R 488.368
Bi (223.061 nm)	-0.001576 u	ppm	0.001612	> 100.00	40.694100	Y 377.433
Ca (315.887 nm)	2.214546	ppm	0.014013	0.63	1460.430881	Y_R 377.433
Cd (214.439 nm)	-0.000075 u	ppm	0.000045	60.46	-13.024400	Y 377.433
Co (228.615 nm)	0.000429	ppm	0.000183	42.61	-17.638100	Y 242.219
Cr (205.560 nm)	0.000914	ppm	0.000413	45.24	-4.987200	Y 377.433
Cu (324.754 nm)	0.000249 u	ppm	0.000355	> 100.00	217.610000	Y 377.433
Fe (238.204 nm)	0.116976	ppm	0.001797	1.54	206.437210	Y_R 377.433
Fe H (259.940 nm)	0.116338 u	ppm	0.000756	0.65	95.751000	Y_R 377.433
K (766.491 nm)	2.309320	ppm	0.054010	2.34	3992.910000	Y_R2 488.368
Li (670.783 nm)	0.093387	ppm	0.000575	0.62	875.798000	Y_R2 488.368
Mg (279.078 nm)	0.334566	ppm	0.004545	1.36	743.533000	Y 377.433
Mn (257.610 nm)	0.003960	ppm	0.000014	0.36	851.221000	Y 377.433
Mo (202.032 nm)	0.000721	ppm	0.000442	61.35	26.884300	Y 377.433
Na (589.592 nm)	532.451000 o	ppm	2.043500	0.38	267360.000000	Y_R2 488.368
Na H (589.593 nm)	571.634884	ppm	2.861869	0.50	203680.400537	Y_R4
Ni (231.604 nm)	0.000423 u	ppm	0.001230	> 100.00	10.724400	Y 377.433
P (213.618 nm)	0.030320	ppm	0.001911	6.30	34.069700	Y 242.219
Pb (220.353 nm)	-0.002915 u	ppm	0.001557	53.42	7.866020	Y 242.219
S (181.972 nm)	0.062329	ppm	0.001933	3.10	4.180883	Y 377.433
Sb (206.834 nm)	-0.000116 u	ppm	0.000487	> 100.00	-1.305550	Y 377.433
Se (196.026 nm)	0.004539	ppm	0.000896	19.74	8.441130	Y 242.219
Si (288.158 nm)	9.038370	ppm	0.039053	0.43	41775.800000	Y 377.433
Sn (189.925 nm)	-0.005776 u	ppm	0.001686	29.19	1.320750	Y 377.433
Sr (421.552 nm)	0.479901	ppm	0.000141	0.03	55984.510646	Y_R 488.368
Th (288.505 nm)	0.000971 u	ppm	0.002267	> 100.00	15.215000	Y 377.433
Ti (336.122 nm)	0.000371	ppm	0.000098	26.53	-324.498000	Y 377.433
Tl (190.794 nm)	-0.000917 u	ppm	0.000153	16.72	-9.366800	Y 377.433
U (409.013 nm)	-0.055663 u	ppm	0.002173	3.90	-12.558800	Y 377.433
V (292.401 nm)	-0.000009 u	ppm	0.000090	> 100.00	-191.646000	Y 377.433
Zn (206.200 nm)	0.000077 u	ppm	0.000167	> 100.00	4.658450	Y 377.433
Zr (343.823 nm)	0.000351	ppm	0.000418	> 100.00	-104.327000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.022787	10894.925054	0.000018	0.00
Y 377.433	1.019586	470679.239291	0.000327	0.03
Y_R 377.433	1.059800	40047.500000	0.007178	0.68
Y_R 488.368	1.056830	38141.000000	0.007975	0.75
Y_R2 488.368	1.084823	76346.333801	0.003304	0.30
Y_R4	1.084120	33265.400000	0.007594	0.70

Sample Name: 280-116233-D-1-B@5

Date: 11/5/2018 4:33:25 PM Rack:Tube: 1:16

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002134	ppm	0.000862	40.39	-181.714000	Y 377.433
Al (394.401 nm)	0.462021	ppm	0.010561	2.29	6494.090000	Y 377.433
Al H (396.152 nm)	0.112526 u	ppm	0.005598	4.97	751.117000	Y_R 377.433
As (188.980 nm)	0.021812	ppm	0.000924	4.24	15.432100	Y 242.219
B (249.678 nm)	2.791580	ppm	0.068304	2.45	11255.300000	Y 242.219
Ba (493.408 nm)	0.114572	ppm	0.001446	1.26	11286.700000	Y_R 488.368
Be (234.861 nm)	0.000127	ppm	0.000057	45.35	-2.997120	Y_R 488.368
Bi (223.061 nm)	0.008742	ppm	0.001240	14.19	57.768600	Y 377.433
Ca (315.887 nm)	130.097334	ppm	0.893632	0.69	85929.527768	Y_R 377.433
Cd (214.439 nm)	0.000282	ppm	0.000003	1.07	-4.145260	Y 377.433
Co (228.615 nm)	0.000143	ppm	0.000167	> 100.00	-23.624500	Y 242.219
Cr (205.560 nm)	0.001651	ppm	0.000144	8.69	-1.646420	Y 377.433
Cu (324.754 nm)	-0.000074 u	ppm	0.000306	> 100.00	127.115000	Y 377.433
Fe (238.204 nm)	0.261853	ppm	0.002798	1.07	447.827302	Y_R 377.433
Fe H (259.940 nm)	0.228414 u	ppm	0.000012	0.01	198.598000	Y_R 377.433
K (766.491 nm)	32.566600	ppm	0.116432	0.36	33564.500000	Y_R2 488.368
Li (670.783 nm)	0.183388	ppm	0.001501	0.82	2150.530000	Y_R2 488.368
Mg (279.078 nm)	207.575000	ppm	4.713430	2.27	452196.000000	Y 377.433
Mn (257.610 nm)	0.037060	ppm	0.000862	2.33	7776.550000	Y 377.433
Mo (202.032 nm)	0.048949	ppm	0.000608	1.24	575.553000	Y 377.433
Na (589.592 nm)	319.693000 o	ppm	1.407500	0.44	160476.000000	Y_R2 488.368
Na H (589.593 nm)	312.928554	ppm	2.093976	0.67	111336.767894	Y_R4
Ni (231.604 nm)	0.005102	ppm	0.000711	13.94	28.673900	Y 377.433
P (213.618 nm)	0.075152	ppm	0.000082	0.11	86.014500	Y 242.219
Pb (220.353 nm)	-0.001902 u	ppm	0.002513	> 100.00	9.962410	Y 242.219
S (181.972 nm)	552.877241 bo	ppm	13.865722	2.51	264057.362956	Y 377.433
Sb (206.834 nm)	-0.007502 u	ppm	0.000980	13.06	-13.805400	Y 377.433
Se (196.026 nm)	0.005354	ppm	0.003491	65.20	9.682810	Y 242.219
Si (288.158 nm)	6.517170	ppm	0.198329	3.04	30481.100000	Y 377.433
Sn (189.925 nm)	-0.006723 u	ppm	0.000269	4.00	0.214968	Y 377.433
Sr (421.552 nm)	2.537341	ppm	0.029950	1.18	294809.481009	Y_R 488.368
Th (288.505 nm)	-0.011838 u	ppm	0.003323	28.07	0.416797	Y 377.433
Ti (336.122 nm)	0.017471	ppm	0.000598	3.42	1625.170000	Y 377.433
Tl (190.794 nm)	-0.009381 u	ppm	0.002687	28.64	-15.599600	Y 377.433
U (409.013 nm)	-0.026918 u	ppm	0.006760	25.11	40.928000	Y 377.433
V (292.401 nm)	0.010634	ppm	0.000183	1.72	321.679000	Y 377.433
Zn (206.200 nm)	0.042525	ppm	0.001802	4.24	151.379000	Y 377.433
Zr (343.823 nm)	0.000690	ppm	0.000154	22.29	-90.578300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037657	11053.322196	0.000754	0.07
Y 377.433	1.043478	481708.589994	0.000537	0.05
Y_R 377.433	1.097080	41456.200000	0.006936	0.63
Y_R 488.368	1.103210	39814.900000	0.004064	0.37
Y_R2 488.368	1.091589	76822.500441	0.002169	0.20
Y_R4	1.115530	34229.000000	0.004149	0.37

Sample Name: 280-116233-D-2-B

Date: 11/5/2018 4:36:56 PM Rack:Tube: 1:17

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002044	ppm	0.000132	6.45	-182.435000	Y 377.433
Al (394.401 nm)	0.101716	ppm	0.001239	1.22	2477.410000	Y 377.433
Al H (396.152 nm)	-0.533796 u	ppm	0.005378	1.01	216.404000	Y_R 377.433
As (188.980 nm)	0.000227 u	ppm	0.002642	> 100.00	-14.804800	Y 242.219
B (249.678 nm)	0.988189	ppm	0.000185	0.02	4014.400000	Y 242.219
Ba (493.408 nm)	0.062463	ppm	0.000598	0.96	6517.760000	Y_R 488.368
Be (234.861 nm)	0.000090	ppm	0.000028	30.72	-4.317300	Y_R 488.368
Bi (223.061 nm)	0.010502	ppm	0.005117	48.73	60.626300	Y 377.433
Ca (315.887 nm)	274.781687	ppm	0.050417	0.02	181496.207865	Y_R 377.433
Cd (214.439 nm)	0.000264	ppm	0.000018	6.80	-4.577060	Y 377.433
Co (228.615 nm)	0.000317	ppm	0.000155	49.01	-20.039400	Y 242.219
Cr (205.560 nm)	0.001385	ppm	0.000404	29.19	-2.756750	Y 377.433
Cu (324.754 nm)	-0.000100 u	ppm	0.000153	> 100.00	37.651500	Y 377.433
Fe (238.204 nm)	0.219920	ppm	0.001259	0.57	377.959112	Y_R 377.433
Fe H (259.940 nm)	0.186679 u	ppm	0.004572	2.45	160.299000	Y_R 377.433
K (766.491 nm)	9.495320	ppm	0.156062	1.64	11016.100000	Y_R2 488.368
Li (670.783 nm)	0.156081	ppm	0.004252	2.72	1763.770000	Y_R2 488.368
Mg (279.078 nm)	140.391000	ppm	0.518533	0.37	305842.000000	Y 377.433
Mn (257.610 nm)	0.182746	ppm	0.000510	0.28	38257.400000	Y 377.433
Mo (202.032 nm)	0.003139	ppm	0.000387	12.34	54.387300	Y 377.433
Na (589.592 nm)	194.847000 o	ppm	0.262061	0.13	97754.100000	Y_R2 488.368
Na H (589.593 nm)	200.408963	ppm	0.591874	0.30	71164.198580	Y_R4
Ni (231.604 nm)	0.005702	ppm	0.000353	6.19	30.963900	Y 377.433
P (213.618 nm)	0.017443	ppm	0.002256	12.93	19.035600	Y 242.219
Pb (220.353 nm)	-0.000656 u	ppm	0.001253	> 100.00	12.906300	Y 242.219
S (181.972 nm)	413.159832 bo	ppm	0.551853	0.13	197330.638948	Y 377.433
Sb (206.834 nm)	-0.009816 u	ppm	0.002715	27.66	-17.281700	Y 377.433
Se (196.026 nm)	0.005116	ppm	0.000131	2.55	9.530520	Y 242.219
Si (288.158 nm)	9.743210	ppm	0.012573	0.13	44933.400000	Y 377.433
Sn (189.925 nm)	-0.007609 u	ppm	0.000238	3.13	-0.819682	Y 377.433
Sr (421.552 nm)	4.312632	ppm	0.015033	0.35	500882.936582	Y_R 488.368
Th (288.505 nm)	-0.016589 u	ppm	0.002785	16.79	-3.442810	Y 377.433
Ti (336.122 nm)	0.006013	ppm	0.000056	0.93	901.350000	Y 377.433
Tl (190.794 nm)	-0.005764 u	ppm	0.005944	> 100.00	-14.879400	Y 377.433
U (409.013 nm)	-0.026084 u	ppm	0.015642	59.97	28.932400	Y 377.433
V (292.401 nm)	0.003054	ppm	0.000025	0.81	-44.545100	Y 377.433
Zn (206.200 nm)	0.005808	ppm	0.001597	27.49	24.473900	Y 377.433
Zr (343.823 nm)	0.001078	ppm	0.000154	14.25	-74.854300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.048734	11171.314328	0.003285	0.31
Y 377.433	1.050168	484796.753173	0.006532	0.62
Y_R 377.433	1.108780	41898.200000	0.002877	0.26
Y_R 488.368	1.109850	40054.500000	0.008991	0.81
Y_R2 488.368	1.121073	78897.490680	0.000586	0.05
Y_R4	1.109330	34038.800000	0.007954	0.72

Sample Name: CCVH-5408055

Date: 11/5/2018 4:40:27 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000443	ppm	0.000501	> 100.00	-336.510000	Y 377.433
Al (394.401 nm)	50.801600 o	ppm	0.125379	0.25	632662.000000	Y 377.433
Al H (396.152 nm)	49.616200	ppm	0.083774	0.17	81595.800000	Y_R 377.433
As (188.980 nm)	-0.006041 u	ppm	0.002615	43.29	-25.652000	Y 242.219
B (249.678 nm)	-0.007743 u	ppm	0.001712	22.11	-0.380363	Y 242.219
Ba (493.408 nm)	-0.000498 u	ppm	0.000096	19.19	791.473000	Y_R 488.368
Be (234.861 nm)	-0.000350 u	ppm	0.000390	> 100.00	-716.592000	Y_R 488.368
Bi (223.061 nm)	0.988720	ppm	0.001087	0.11	1679.330000	Y 377.433
Ca (315.887 nm)	-0.008676 u	ppm	0.010278	> 100.00	2.222462	Y_R 377.433
Cd (214.439 nm)	0.000304	ppm	0.000124	40.87	-3.587140	Y 377.433
Co (228.615 nm)	0.001398	ppm	0.000195	13.98	60.013900	Y 242.219
Cr (205.560 nm)	0.000569	ppm	0.000165	29.06	-7.574260	Y 377.433
Cu (324.754 nm)	-0.000185 u	ppm	0.000063	34.08	647.336000	Y 377.433
Fe (238.204 nm)	49.176926 o	ppm	0.152952	0.31	81948.626065	Y_R 377.433
Fe H (259.940 nm)	49.339600	ppm	0.070927	0.14	45265.600000	Y_R 377.433
K (766.491 nm)	0.111737	ppm	0.098123	87.82	1845.120000	Y_R2 488.368
Li (670.783 nm)	0.008240	ppm	0.004222	51.24	-330.184000	Y_R2 488.368
Mg (279.078 nm)	-0.024940 u	ppm	0.000362	1.45	-190.099000	Y 377.433
Mn (257.610 nm)	0.000314	ppm	0.000009	2.71	88.377900	Y 377.433
Mo (202.032 nm)	-0.001181 u	ppm	0.000126	10.64	5.244080	Y 377.433
Na (589.592 nm)	249.409000 o	ppm	0.996430	0.40	125167.000000	Y_R2 488.368
Na H (589.593 nm)	255.176007	ppm	0.888552	0.35	90726.224147	Y_R4
Ni (231.604 nm)	-0.000392 u	ppm	0.001360	> 100.00	14.929600	Y 377.433
P (213.618 nm)	-0.015855 u	ppm	0.001386	8.74	-20.717300	Y 242.219
Pb (220.353 nm)	-0.000470 u	ppm	0.004052	> 100.00	23.632400	Y 242.219
S (181.972 nm)	5.050669	ppm	0.022889	0.45	2386.484876	Y 377.433
Sb (206.834 nm)	0.003481	ppm	0.002200	63.21	8.654700	Y 377.433
Se (196.026 nm)	-0.001375 u	ppm	0.000171	12.41	-13.064700	Y 242.219
Si (288.158 nm)	-0.197509 u	ppm	0.001018	0.52	399.986000	Y 377.433
Sn (189.925 nm)	-0.006408 u	ppm	0.001385	21.61	0.582257	Y 377.433
Sr (421.552 nm)	0.000221	ppm	0.000029	13.27	309.582056	Y_R 488.368
Th (288.505 nm)	4.921200	ppm	0.003623	0.07	5279.780000	Y 377.433
Ti (336.122 nm)	0.000899	ppm	0.000188	20.96	-279.483000	Y 377.433
Tl (190.794 nm)	-0.004660 u	ppm	0.007270	> 100.00	-14.765100	Y 377.433
U (409.013 nm)	10.136300	ppm	0.011112	0.11	23309.900000	Y 377.433
V (292.401 nm)	-0.004383 u	ppm	0.000337	7.68	-414.433000	Y 377.433
Zn (206.200 nm)	-0.000385 u	ppm	0.000095	24.60	8.315430	Y 377.433
Zr (343.823 nm)	-0.006744 u	ppm	0.000211	3.13	-391.860000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072186	11421.132005	0.006194	0.58
Y 377.433	1.077569	497446.224629	0.008387	0.78
Y_R 377.433	1.113440	42074.300000	0.002804	0.25
Y_R 488.368	1.110180	40066.400000	0.004011	0.36
Y_R2 488.368	1.123055	79036.961998	0.008825	0.79
Y_R4	1.133450	34778.900000	0.009461	0.83

Sample Name: CCV-5407762

Date: 11/5/2018 4:44:02 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.503430	ppm	0.000407	0.08	13691.500000	Y 377.433
Al (394.401 nm)	0.503093	ppm	0.001962	0.39	6471.270000	Y 377.433
Al H (396.152 nm)	0.559400 u	ppm	0.001233	0.22	899.817000	Y_R 377.433
As (188.980 nm)	0.993968	ppm	0.000106	0.01	1377.520000	Y 242.219
B (249.678 nm)	0.491822	ppm	0.000019	0.00	2020.640000	Y 242.219
Ba (493.408 nm)	0.500916	ppm	0.000604	0.12	46646.200000	Y_R 488.368
Be (234.861 nm)	0.505953	ppm	0.000505	0.10	26159.800000	Y_R 488.368
Bi (223.061 nm)	-0.006955 u	ppm	0.005305	76.28	32.217100	Y 377.433
Ca (315.887 nm)	5.011991	ppm	0.001966	0.04	3308.304504	Y_R 377.433
Cd (214.439 nm)	0.505750	ppm	0.000087	0.02	12582.100000	Y 377.433
Co (228.615 nm)	0.498929	ppm	0.001460	0.29	11831.700000	Y 242.219
Cr (205.560 nm)	0.508913	ppm	0.000454	0.09	2417.440000	Y 377.433
Cu (324.754 nm)	0.504282	ppm	0.001509	0.30	24471.400000	Y 377.433
Fe (238.204 nm)	2.523511	ppm	0.005384	0.21	4216.131892	Y_R 377.433
Fe H (259.940 nm)	2.518260 u	ppm	0.004771	0.19	2299.880000	Y_R 377.433
K (766.491 nm)	49.907500	ppm	0.213257	0.43	50512.500000	Y_R2 488.368
Li (670.783 nm)	1.014100	ppm	0.000892	0.09	13916.300000	Y_R2 488.368
Mg (279.078 nm)	20.089800	ppm	0.028397	0.14	43776.400000	Y 377.433
Mn (257.610 nm)	0.504012	ppm	0.000654	0.13	105474.000000	Y 377.433
Mo (202.032 nm)	0.508719	ppm	0.000045	0.01	5806.150000	Y 377.433
Na (589.592 nm)	25.377000	ppm	0.226894	0.89	12605.600000	Y_R2 488.368
Na H (589.593 nm)	28.044828 u	ppm	0.004225	0.02	9574.247127	Y_R4
Ni (231.604 nm)	0.505550	ppm	0.000418	0.08	1947.490000	Y 377.433
P (213.618 nm)	0.997307	ppm	0.000057	0.01	1133.200000	Y 242.219
Pb (220.353 nm)	1.001910	ppm	0.001596	0.16	2250.490000	Y 242.219
S (181.972 nm)	0.009123	ppm	0.011364	> 100.00	-19.454213	Y 377.433
Sb (206.834 nm)	1.014530	ppm	0.000471	0.05	1666.950000	Y 377.433
Se (196.026 nm)	1.003390	ppm	0.000439	0.04	1510.320000	Y 242.219
Si (288.158 nm)	4.832530	ppm	0.036235	0.75	22934.000000	Y 377.433
Sn (189.925 nm)	1.007700	ppm	0.001867	0.19	1184.420000	Y 377.433
Sr (421.552 nm)	0.507157	ppm	0.000776	0.15	59148.573269	Y_R 488.368
Th (288.505 nm)	-0.032492 u	ppm	0.001322	4.07	-52.738000	Y 377.433
Ti (336.122 nm)	0.508925	ppm	0.000983	0.19	48040.800000	Y 377.433
Tl (190.794 nm)	1.009820	ppm	0.009401	0.93	569.338000	Y 377.433
U (409.013 nm)	-0.019468 u	ppm	0.004005	20.57	25.771000	Y 377.433
V (292.401 nm)	0.500852	ppm	0.000318	0.06	23918.700000	Y 377.433
Zn (206.200 nm)	0.504052	ppm	0.001877	0.37	1746.690000	Y 377.433
Zr (343.823 nm)	0.507193	ppm	0.001352	0.27	20435.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099839	11715.691309	0.001910	0.17
Y 377.433	1.093713	504898.842647	0.002953	0.27
Y_R 377.433	1.111410	41997.600000	0.001659	0.15
Y_R 488.368	1.114470	40221.200000	0.000118	0.01
Y_R2 488.368	1.132985	79735.799414	0.005271	0.47
Y_R4	1.136150	34861.800000	0.006854	0.60

Sample Name: CCB

Date: 11/5/2018 4:47:32 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000225 u	ppm	0.000024	10.58	-245.437000	Y 377.433
Al (394.401 nm)	-0.000139 u	ppm	0.000874	> 100.00	85.703000	Y 377.433
Al H (396.152 nm)	0.132237 Zu	ppm	0.013095	9.90	2.570470 Z	Y_R 377.433
As (188.980 nm)	0.000416 u	ppm	0.000742	> 100.00	-14.532900	Y 242.219
B (249.678 nm)	-0.007996 u	ppm	0.000132	1.66	14.595500	Y 242.219
Ba (493.408 nm)	-0.001340 u	ppm	0.000091	6.77	678.353000	Y_R 488.368
Be (234.861 nm)	0.000156	ppm	0.000195	> 100.00	2.234470	Y_R 488.368
Bi (223.061 nm)	-0.006152 u	ppm	0.002933	47.68	33.130700	Y 377.433
Ca (315.887 nm)	-0.006714 u	ppm	0.005538	82.49	-6.754348	Y_R 377.433
Cd (214.439 nm)	-0.000059 u	ppm	0.000062	> 100.00	-12.637200	Y 377.433
Co (228.615 nm)	0.000386	ppm	0.000294	76.27	-18.816800	Y 242.219
Cr (205.560 nm)	0.000597	ppm	0.000112	18.67	-6.490940	Y 377.433
Cu (324.754 nm)	0.000249 u	ppm	0.000364	> 100.00	214.040000	Y 377.433
Fe (238.204 nm)	-0.002692 u	ppm	0.000955	35.47	7.050419	Y_R 377.433
Fe H (259.940 nm)	0.011888 u	ppm	0.002334	19.64	-0.098276	Y_R 377.433
K (766.491 nm)	-0.085048 u	ppm	0.016984	19.97	1652.790000	Y_R2 488.368
Li (670.783 nm)	0.005088	ppm	0.002373	46.64	-374.833000	Y_R2 488.368
Mg (279.078 nm)	0.000233 u	ppm	0.002133	> 100.00	14.583200	Y 377.433
Mn (257.610 nm)	0.000000 u	ppm	0.000009	> 100.00	22.664400	Y 377.433
Mo (202.032 nm)	-0.000593 u	ppm	0.000153	25.88	11.933700	Y 377.433
Na (589.592 nm)	0.299891	ppm	0.009562	3.19	14.659300	Y_R2 488.368
Na H (589.593 nm)	2.771738 u	ppm	0.047168	1.70	599.366357	Y_R4
Ni (231.604 nm)	0.000184 u	ppm	0.000662	> 100.00	9.783430	Y 377.433
P (213.618 nm)	0.002098	ppm	0.000889	42.37	1.348780	Y 242.219
Pb (220.353 nm)	-0.002025 u	ppm	0.000384	18.96	9.978210	Y 242.219
S (181.972 nm)	0.024289	ppm	0.001225	5.04	-14.110038	Y 377.433
Sb (206.834 nm)	0.001988	ppm	0.000192	9.68	2.147800	Y 377.433
Se (196.026 nm)	0.004446	ppm	0.001048	23.57	8.326500	Y 242.219
Si (288.158 nm)	-0.204242 Zu	ppm	0.001944	0.95	369.824000 Z	Y 377.433
Sn (189.925 nm)	-0.006892 u	ppm	0.000029	0.42	0.017229	Y 377.433
Sr (421.552 nm)	-0.000346 u	ppm	0.000033	9.57	238.007448	Y_R 488.368
Th (288.505 nm)	0.003304 u	ppm	0.008823	> 100.00	17.915300	Y 377.433
Ti (336.122 nm)	0.000549	ppm	0.000140	25.57	-312.954000	Y 377.433
Tl (190.794 nm)	-0.000609 u	ppm	0.001394	> 100.00	-9.162730	Y 377.433
U (409.013 nm)	-0.015578 u	ppm	0.003669	23.55	79.209800	Y 377.433
V (292.401 nm)	0.000180	ppm	0.000066	36.45	-185.730000	Y 377.433
Zn (206.200 nm)	0.000220	ppm	0.000221	> 100.00	5.140050	Y 377.433
Zr (343.823 nm)	0.000577	ppm	0.000102	17.68	-95.162300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.109704	11820.782265	0.000885	0.08
Y 377.433	1.098162	506952.639005	0.001285	0.12
Y_R 377.433	1.123190	42442.800000	0.001434	0.13
Y_R 488.368	1.126960	40672.100000	0.008103	0.72
Y_R2 488.368	1.125102	79180.984763	0.001405	0.12
Y_R4	1.117250	34281.900000	0.002299	0.21

Sample Name: CCVL-5412564

Date: 11/5/2018 4:50:43 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009409	ppm	0.000163	1.74	21.987700	Y 377.433
Al (394.401 nm)	0.098817	ppm	0.001089	1.10	1322.050000	Y 377.433
Al H (396.152 nm)	0.241150 u	ppm	0.002208	0.92	186.466000	Y_R 377.433
As (188.980 nm)	0.009952 Q	ppm	0.001607	16.15	-1.174940 Q	Y 242.219
B (249.678 nm)	0.090806	ppm	0.001035	1.14	411.273000	Y 242.219
Ba (493.408 nm)	0.008904	ppm	0.000028	0.32	1615.940000	Y_R 488.368
Be (234.861 nm)	0.001003	ppm	0.000044	4.41	44.687000	Y_R 488.368
Bi (223.061 nm)	0.089525	ppm	0.000586	0.65	190.848000	Y 377.433
Ca (315.887 nm)	0.188904	ppm	0.002938	1.56	122.479817	Y_R 377.433
Cd (214.439 nm)	0.005440	ppm	0.000025	0.45	124.303000	Y 377.433
Co (228.615 nm)	0.010511	ppm	0.000148	1.41	221.936000	Y 242.219
Cr (205.560 nm)	0.009708	ppm	0.000848	8.74	36.874100	Y 377.433
Cu (324.754 nm)	0.015544	ppm	0.000015	0.10	949.903000	Y 377.433
Fe (238.204 nm)	0.096535	ppm	0.001394	1.44	172.379827	Y_R 377.433
Fe H (259.940 nm)	0.105384 u	ppm	0.000744	0.71	85.699000	Y_R 377.433
K (766.491 nm)	2.817820	ppm	0.030217	1.07	4489.880000	Y_R2 488.368
Li (670.783 nm)	0.032369 Q	ppm	0.003916	12.10	11.555200 Q	Y_R2 488.368
Mg (279.078 nm)	0.203736	ppm	0.004387	2.15	457.537000	Y 377.433
Mn (257.610 nm)	0.010563	ppm	0.000001	0.01	2232.630000	Y 377.433
Mo (202.032 nm)	0.019827	ppm	0.000490	2.47	244.244000	Y 377.433
Na (589.592 nm)	1.333130 Q	ppm	0.013914	1.04	533.604000 Q	Y_R2 488.368
Na H (589.593 nm)	3.509621 u	ppm	0.000698	0.02	861.862910	Y_R4
Ni (231.604 nm)	0.041695	ppm	0.000343	0.82	168.878000	Y 377.433
P (213.618 nm)	2.854850	ppm	0.016222	0.57	3310.140000	Y 242.219
Pb (220.353 nm)	0.007400	ppm	0.000510	6.89	31.003700	Y 242.219
S (181.972 nm)	0.112883	ppm	0.000071	0.06	28.248894	Y 377.433
Sb (206.834 nm)	0.018070	ppm	0.001258	6.96	28.454100	Y 377.433
Se (196.026 nm)	0.026306 Q	ppm	0.000372	1.41	41.184600 Q	Y 242.219
Si (288.158 nm)	0.288030 Q	ppm	0.001051	0.36	2575.150000 Q	Y 377.433
Sn (189.925 nm)	0.093238	ppm	0.000460	0.49	116.906000	Y 377.433
Sr (421.552 nm)	0.009139	ppm	0.000155	1.70	1339.090150	Y_R 488.368
Th (288.505 nm)	0.009461 Q	ppm	0.002596	27.44	24.040200 Q	Y 377.433
Ti (336.122 nm)	0.010649	ppm	0.000027	0.25	648.102000	Y 377.433
Tl (190.794 nm)	0.013739	ppm	0.000308	2.24	-0.972015	Y 377.433
U (409.013 nm)	0.040415 Q	ppm	0.004297	10.63	205.926000 Q	Y 377.433
V (292.401 nm)	0.010291	ppm	0.000024	0.23	300.623000	Y 377.433
Zn (206.200 nm)	0.021463	ppm	0.000577	2.69	78.567400	Y 377.433
Zr (343.823 nm)	0.015916	ppm	0.000146	0.92	526.453000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.134253	12082.278947	0.002509	0.22
Y 377.433	1.122831	518340.887793	0.001295	0.12
Y_R 377.433	1.149440	43434.900000	0.003805	0.33
Y_R 488.368	1.154370	41661.200000	0.011639	1.01
Y_R2 488.368	1.147999	80792.449826	0.001200	0.10
Y_R4	1.130480	34687.900000	0.005614	0.50

Sample Name: 280-115983-A-4-A@10

Date: 11/5/2018 4:54:06 PM Rack:Tube: 1:18

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000975	ppm	0.000269	27.55	-214.405000	Y 377.433
Al (394.401 nm)	3.910740 o	ppm	0.129299	3.31	48818.400000	Y 377.433
Al H (396.152 nm)	3.718170	ppm	0.005931	0.16	5966.510000	Y_R 377.433
As (188.980 nm)	0.002482	ppm	0.000630	25.38	-11.877500	Y 242.219
B (249.678 nm)	0.043548	ppm	0.002153	4.94	219.237000	Y 242.219
Ba (493.408 nm)	0.131487	ppm	0.001254	0.95	12839.800000	Y_R 488.368
Be (234.861 nm)	0.000257	ppm	0.000080	31.19	-92.966700	Y_R 488.368
Bi (223.061 nm)	0.000755	ppm	0.000753	99.78	45.447700	Y 377.433
Ca (315.887 nm)	45.468768	ppm	0.245033	0.54	30031.411161	Y_R 377.433
Cd (214.439 nm)	0.009009	ppm	0.000521	5.79	213.167000	Y 377.433
Co (228.615 nm)	0.005425	ppm	0.000067	1.24	111.724000	Y 242.219
Cr (205.560 nm)	0.020973	ppm	0.000922	4.39	90.513100	Y 377.433
Cu (324.754 nm)	0.079817	ppm	0.002538	3.18	4024.670000	Y 377.433
Fe (238.204 nm)	7.150073 o	ppm	0.035866	0.50	11924.768777	Y_R 377.433
Fe H (259.940 nm)	7.125370	ppm	0.048947	0.69	6527.610000	Y_R 377.433
K (766.491 nm)	2.216520	ppm	0.124633	5.62	3902.210000	Y_R2 488.368
Li (670.783 nm)	0.011489	ppm	0.002656	23.12	-284.172000	Y_R2 488.368
Mg (279.078 nm)	4.889390	ppm	0.157285	3.22	10659.300000	Y 377.433
Mn (257.610 nm)	4.739060	ppm	0.154341	3.26	991547.000000	Y 377.433
Mo (202.032 nm)	0.002416	ppm	0.000417	17.28	46.162100	Y 377.433
Na (589.592 nm)	131.253000 o	ppm	0.441368	0.34	65803.400000	Y_R2 488.368
Na H (589.593 nm)	133.437828	ppm	0.315760	0.24	47243.684028	Y_R4
Ni (231.604 nm)	0.138326	ppm	0.002787	2.01	540.194000	Y 377.433
P (213.618 nm)	4.859340	ppm	0.164504	3.39	5632.670000	Y 242.219
Pb (220.353 nm)	0.087473	ppm	0.001990	2.27	209.265000	Y 242.219
S (181.972 nm)	14.666800	ppm	0.513560	3.50	6997.664408	Y 377.433
Sb (206.834 nm)	-0.001679 u	ppm	0.000942	56.12	-3.398250	Y 377.433
Se (196.026 nm)	0.004796	ppm	0.004555	94.98	13.582100	Y 242.219
Si (288.158 nm)	3.631430	ppm	0.140345	3.86	17553.200000	Y 377.433
Sn (189.925 nm)	0.005998	ppm	0.000880	14.67	15.065300	Y 377.433
Sr (421.552 nm)	0.187392	ppm	0.000602	0.32	22031.225972	Y_R 488.368
Th (288.505 nm)	-0.058174 u	ppm	0.003421	5.88	2.241160	Y 377.433
Ti (336.122 nm)	0.065301	ppm	0.002198	3.37	5959.250000	Y 377.433
Tl (190.794 nm)	-0.000257 u	ppm	0.001494	> 100.00	-9.833100	Y 377.433
U (409.013 nm)	-0.011028 u	ppm	0.000216	1.96	88.944300	Y 377.433
V (292.401 nm)	0.012811	ppm	0.000206	1.61	423.804000	Y 377.433
Zn (206.200 nm)	0.400474	ppm	0.014290	3.57	1389.220000	Y 377.433
Zr (343.823 nm)	0.002023	ppm	0.000188	9.30	-36.572800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.091723	11629.242286	0.003301	0.30
Y 377.433	1.089997	503183.332983	0.004713	0.43
Y_R 377.433	1.127920	42621.700000	0.003354	0.30
Y_R 488.368	1.127370	40686.600000	0.006173	0.55
Y_R2 488.368	1.117952	78677.841818	0.000732	0.07
Y_R4	1.122840	34453.300000	0.009525	0.85

Sample Name: 280-116190-D-2-A

Date: 11/5/2018 4:57:37 PM Rack:Tube: 1:19

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000538	ppm	0.000213	39.59	-224.625000	Y 377.433
Al (394.401 nm)	0.005823	ppm	0.002514	43.18	334.607000	Y 377.433
Al H (396.152 nm)	0.018186 u	ppm	0.000077	0.42	10.067000	Y_R 377.433
As (188.980 nm)	0.000547 u	ppm	0.001915	> 100.00	-14.350200	Y 242.219
B (249.678 nm)	0.197571	ppm	0.000189	0.10	839.968000	Y 242.219
Ba (493.408 nm)	0.118540	ppm	0.000178	0.15	11649.700000	Y_R 488.368
Be (234.861 nm)	0.000107	ppm	0.000070	65.19	-1.077310	Y_R 488.368
Bi (223.061 nm)	0.001521 u	ppm	0.004899	> 100.00	45.793000	Y 377.433
Ca (315.887 nm)	76.877269	ppm	0.044315	0.06	50776.570903	Y_R 377.433
Cd (214.439 nm)	0.000246	ppm	0.000201	81.71	-5.022010	Y 377.433
Co (228.615 nm)	0.000286	ppm	0.000082	28.64	-21.121100	Y 242.219
Cr (205.560 nm)	0.001102	ppm	0.000400	36.28	-4.109060	Y 377.433
Cu (324.754 nm)	0.000395	ppm	0.000167	42.35	174.073000	Y 377.433
Fe (238.204 nm)	0.052229	ppm	0.002284	4.37	98.557992	Y_R 377.433
Fe H (259.940 nm)	0.052864 u	ppm	0.004709	8.91	37.503700	Y_R 377.433
K (766.491 nm)	4.808690	ppm	0.120258	2.50	6435.640000	Y_R2 488.368
Li (670.783 nm)	0.013715	ppm	0.003815	27.81	-252.647000	Y_R2 488.368
Mg (279.078 nm)	20.752300	ppm	0.027240	0.13	45221.100000	Y 377.433
Mn (257.610 nm)	0.001015	ppm	0.000031	3.08	235.024000	Y 377.433
Mo (202.032 nm)	0.006681	ppm	0.000229	3.43	94.687900	Y 377.433
Na (589.592 nm)	37.057900	ppm	0.103760	0.28	18480.000000	Y_R2 488.368
Na H (589.593 nm)	38.692607 u	ppm	0.078218	0.20	13413.997778	Y_R4
Ni (231.604 nm)	0.000310 u	ppm	0.001897	> 100.00	10.273100	Y 377.433
P (213.618 nm)	0.030464	ppm	0.002733	8.97	34.221400	Y 242.219
Pb (220.353 nm)	-0.001278 u	ppm	0.001823	> 100.00	11.601100	Y 242.219
S (181.972 nm)	22.006439	ppm	0.002759	0.01	10489.377764	Y 377.433
Sb (206.834 nm)	-0.001512 u	ppm	0.003092	> 100.00	-3.646800	Y 377.433
Se (196.026 nm)	0.005223	ppm	0.000791	15.14	9.484270	Y 242.219
Si (288.158 nm)	12.428400	ppm	0.008837	0.07	56962.900000	Y 377.433
Sn (189.925 nm)	-0.006386 u	ppm	0.000160	2.50	0.607946	Y 377.433
Sr (421.552 nm)	0.660990	ppm	0.000216	0.03	77005.122188	Y_R 488.368
Th (288.505 nm)	-0.015554 u	ppm	0.004328	27.82	-2.867530	Y 377.433
Ti (336.122 nm)	0.000439	ppm	0.000080	18.27	-129.578000	Y 377.433
Tl (190.794 nm)	-0.004642 u	ppm	0.001162	25.04	-12.251400	Y 377.433
U (409.013 nm)	0.009904	ppm	0.009582	96.75	130.119000	Y 377.433
V (292.401 nm)	0.003079	ppm	0.000384	12.48	-46.394300	Y 377.433
Zn (206.200 nm)	0.004387	ppm	0.000134	3.05	19.546900	Y 377.433
Zr (343.823 nm)	0.000492	ppm	0.000031	6.24	-98.585100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.092139	11633.676633	0.003203	0.29
Y 377.433	1.089990	503179.939538	0.003707	0.34
Y_R 377.433	1.128650	42649.000000	0.003729	0.33
Y_R 488.368	1.136420	41013.500000	0.007709	0.68
Y_R2 488.368	1.137146	80028.605985	0.003998	0.35
Y_R4	1.125510	34535.300000	0.007486	0.67

Sample Name: 280-116190-D-3-A

Date: 11/5/2018 5:01:02 PM Rack:Tube: 1:20

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000882	ppm	0.000381	43.16	-214.967000	Y 377.433
Al (394.401 nm)	0.003767	ppm	0.000676	17.96	334.942000	Y 377.433
Al H (396.152 nm)	-0.015065 u	ppm	0.000538	3.57	-18.644600	Y_R 377.433
As (188.980 nm)	-0.001942 u	ppm	0.000139	7.15	-17.841900	Y 242.219
B (249.678 nm)	0.174894	ppm	0.001530	0.87	748.868000	Y 242.219
Ba (493.408 nm)	0.115464	ppm	0.001526	1.32	11368.300000	Y_R 488.368
Be (234.861 nm)	0.000093	ppm	0.000028	29.79	-3.861940	Y_R 488.368
Bi (223.061 nm)	0.003962	ppm	0.003405	85.95	49.836100	Y 377.433
Ca (315.887 nm)	88.843025	ppm	0.157957	0.18	58680.180197	Y_R 377.433
Cd (214.439 nm)	0.000343	ppm	0.000106	30.82	-2.609010	Y 377.433
Co (228.615 nm)	0.000066 u	ppm	0.000209	> 100.00	-26.180600	Y 242.219
Cr (205.560 nm)	0.000469	ppm	0.000016	3.46	-7.119190	Y 377.433
Cu (324.754 nm)	0.000011 u	ppm	0.000289	> 100.00	147.724000	Y 377.433
Fe (238.204 nm)	0.200777	ppm	0.000762	0.38	346.063346	Y_R 377.433
Fe H (259.940 nm)	0.194019 u	ppm	0.000135	0.07	167.035000	Y_R 377.433
K (766.491 nm)	5.191830	ppm	0.021225	0.41	6810.100000	Y_R2 488.368
Li (670.783 nm)	0.014438	ppm	0.001302	9.02	-242.407000	Y_R2 488.368
Mg (279.078 nm)	24.562500	ppm	0.004183	0.02	53520.800000	Y 377.433
Mn (257.610 nm)	0.041614	ppm	0.000003	0.01	8729.200000	Y 377.433
Mo (202.032 nm)	0.002983	ppm	0.000078	2.63	52.617800	Y 377.433
Na (589.592 nm)	36.498400	ppm	0.077900	0.21	18199.000000	Y_R2 488.368
Na H (589.593 nm)	38.083085 u	ppm	0.203398	0.53	13196.617655	Y_R4
Ni (231.604 nm)	0.000239 u	ppm	0.000604	> 100.00	10.022900	Y 377.433
P (213.618 nm)	-0.001350 u	ppm	0.002023	> 100.00	-2.692800	Y 242.219
Pb (220.353 nm)	-0.002269 u	ppm	0.002064	90.96	9.421900	Y 242.219
S (181.972 nm)	23.506940	ppm	0.055683	0.24	11206.824266	Y 377.433
Sb (206.834 nm)	-0.004557 u	ppm	0.000930	20.42	-8.625570	Y 377.433
Se (196.026 nm)	0.003189	ppm	0.000519	16.28	6.441830	Y 242.219
Si (288.158 nm)	12.554100	ppm	0.019030	0.15	57526.100000	Y 377.433
Sn (189.925 nm)	-0.007849 u	ppm	0.000120	1.53	-1.100090	Y 377.433
Sr (421.552 nm)	0.755574	ppm	0.007621	1.01	87984.228022	Y_R 488.368
Th (288.505 nm)	-0.016091 u	ppm	0.001737	10.79	-2.958850	Y 377.433
Ti (336.122 nm)	0.000402	ppm	0.000166	41.26	-102.837000	Y 377.433
Tl (190.794 nm)	-0.008562 u	ppm	0.001510	17.63	-14.618700	Y 377.433
U (409.013 nm)	0.004636	ppm	0.004790	> 100.00	117.024000	Y 377.433
V (292.401 nm)	0.001034	ppm	0.000186	18.02	-145.940000	Y 377.433
Zn (206.200 nm)	0.001415	ppm	0.000440	31.09	9.289330	Y 377.433
Zr (343.823 nm)	0.000271	ppm	0.000247	91.44	-107.571000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.083940	11546.338822	0.002649	0.24
Y 377.433	1.083806	500325.196490	0.003294	0.30
Y_R 377.433	1.115150	42139.000000	0.000326	0.03
Y_R 488.368	1.113990	40203.900000	0.008116	0.73
Y_R2 488.368	1.132470	79699.569640	0.009538	0.84
Y_R4	1.119020	34336.300000	0.006465	0.58

Sample Name: 280-116251-D-1-A

Date: 11/5/2018 5:04:27 PM Rack:Tube: 1:21

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000231 u	ppm	0.000076	33.11	-245.571000	Y 377.433
Al (394.401 nm)	0.006456	ppm	0.000858	13.29	194.662000	Y 377.433
Al H (396.152 nm)	0.116416 u	ppm	0.013434	11.54	4.595600	Y_R 377.433
As (188.980 nm)	-0.000675 u	ppm	0.002746	> 100.00	-16.061800	Y 242.219
B (249.678 nm)	0.017200	ppm	0.000880	5.12	115.754000	Y 242.219
Ba (493.408 nm)	0.104276	ppm	0.000988	0.95	10344.300000	Y_R 488.368
Be (234.861 nm)	0.000251	ppm	0.000006	2.34	6.705170	Y_R 488.368
Bi (223.061 nm)	-0.002039 u	ppm	0.000252	12.35	39.917200	Y 377.433
Ca (315.887 nm)	21.579789	ppm	0.049093	0.23	14251.539224	Y_R 377.433
Cd (214.439 nm)	0.000791	ppm	0.000061	7.75	8.528790	Y 377.433
Co (228.615 nm)	0.000849	ppm	0.000175	20.58	-7.773030	Y 242.219
Cr (205.560 nm)	0.001181	ppm	0.000070	5.97	-3.707000	Y 377.433
Cu (324.754 nm)	0.000097 u	ppm	0.000180	> 100.00	193.236000	Y 377.433
Fe (238.204 nm)	0.029011	ppm	0.001257	4.33	59.872640	Y_R 377.433
Fe H (259.940 nm)	0.033949 u	ppm	0.004003	11.79	20.145800	Y_R 377.433
K (766.491 nm)	1.489010	ppm	0.147425	9.90	3191.180000	Y_R2 488.368
Li (670.783 nm)	0.007911	ppm	0.002920	36.91	-334.856000	Y_R2 488.368
Mg (279.078 nm)	4.426140	ppm	0.000189	0.00	9656.070000	Y 377.433
Mn (257.610 nm)	0.240821	ppm	0.000054	0.02	50408.100000	Y 377.433
Mo (202.032 nm)	-0.000938 u	ppm	0.000118	12.60	8.011740	Y 377.433
Na (589.592 nm)	29.320300	ppm	0.006784	0.02	14592.900000	Y_R2 488.368
Na H (589.593 nm)	30.880064 u	ppm	0.189990	0.62	10625.696484	Y_R4
Ni (231.604 nm)	0.000403 u	ppm	0.000688	> 100.00	10.626500	Y 377.433
P (213.618 nm)	0.011055	ppm	0.005471	49.49	11.744700	Y 242.219
Pb (220.353 nm)	-0.001976 u	ppm	0.000792	40.07	10.067400	Y 242.219
S (181.972 nm)	1.150622	ppm	0.005892	0.51	525.766821	Y 377.433
Sb (206.834 nm)	-0.000303 u	ppm	0.001955	> 100.00	-1.611190	Y 377.433
Se (196.026 nm)	0.003301	ppm	0.001394	42.22	6.929660	Y 242.219
Si (288.158 nm)	8.984400	ppm	0.039657	0.44	41534.000000	Y 377.433
Sn (189.925 nm)	-0.006287 u	ppm	0.000442	7.03	0.723412	Y 377.433
Sr (421.552 nm)	0.101027	ppm	0.000886	0.88	12005.269324	Y_R 488.368
Th (288.505 nm)	-0.004904 u	ppm	0.004398	89.68	11.590200	Y 377.433
Ti (336.122 nm)	0.000424	ppm	0.000065	15.20	-270.447000	Y 377.433
Tl (190.794 nm)	-0.002210 u	ppm	0.002372	> 100.00	-10.295700	Y 377.433
U (409.013 nm)	0.000105 u	ppm	0.014475	> 100.00	113.001000	Y 377.433
V (292.401 nm)	0.000731	ppm	0.000090	12.37	-159.312000	Y 377.433
Zn (206.200 nm)	0.002877	ppm	0.000030	1.06	14.326900	Y 377.433
Zr (343.823 nm)	0.000450	ppm	0.000064	14.20	-100.284000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.108689	11809.970017	0.000382	0.03
Y 377.433	1.098138	506941.705521	0.000220	0.02
Y_R 377.433	1.129100	42666.200000	0.001744	0.15
Y_R 488.368	1.134620	40948.300000	0.010118	0.89
Y_R2 488.368	1.127360	79339.903637	0.006105	0.54
Y_R4	1.122210	34434.100000	0.012542	1.12

Sample Name: 280-116251-D-2-A

Date: 11/5/2018 5:07:52 PM Rack:Tube: 1:22

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000247	ppm	0.000279	> 100.00	-232.165000	Y 377.433
Al (394.401 nm)	0.017408	ppm	0.001416	8.14	302.760000	Y 377.433
Al H (396.152 nm)	0.154636 u	ppm	0.004275	2.76	39.592700	Y_R 377.433
As (188.980 nm)	-0.002496 u	ppm	0.000856	34.28	-18.614800	Y 242.219
B (249.678 nm)	-0.008806 u	ppm	0.000102	1.16	11.323800	Y 242.219
Ba (493.408 nm)	-0.000813 u	ppm	0.000026	3.17	726.659000	Y_R 488.368
Be (234.861 nm)	0.000052	ppm	0.000044	84.82	-4.069370	Y_R 488.368
Bi (223.061 nm)	-0.002941 u	ppm	0.002105	71.58	38.431400	Y 377.433
Ca (315.887 nm)	0.104379	ppm	0.001903	1.82	66.629973	Y_R 377.433
Cd (214.439 nm)	0.000030 u	ppm	0.000071	> 100.00	-10.411000	Y 377.433
Co (228.615 nm)	0.000280	ppm	0.000108	38.47	-21.246700	Y 242.219
Cr (205.560 nm)	0.000688	ppm	0.000390	56.67	-6.061310	Y 377.433
Cu (324.754 nm)	0.000412	ppm	0.000009	2.17	222.307000	Y 377.433
Fe (238.204 nm)	0.061984	ppm	0.000010	0.02	114.810418	Y_R 377.433
Fe H (259.940 nm)	0.069934 u	ppm	0.001652	2.36	53.167800	Y_R 377.433
K (766.491 nm)	-0.183174 u	ppm	0.023918	13.06	1556.890000	Y_R2 488.368
Li (670.783 nm)	0.011781	ppm	0.005721	48.56	-280.037000	Y_R2 488.368
Mg (279.078 nm)	0.006686	ppm	0.002200	32.91	28.737400	Y 377.433
Mn (257.610 nm)	0.000502	ppm	0.000004	0.89	127.634000	Y 377.433
Mo (202.032 nm)	-0.000440 u	ppm	0.000199	45.25	13.674200	Y 377.433
Na (589.592 nm)	0.754073	ppm	0.001788	0.24	242.830000	Y_R2 488.368
Na H (589.593 nm)	2.799905 u	ppm	0.026040	0.93	609.358718	Y_R4
Ni (231.604 nm)	-0.000253 u	ppm	0.000383	> 100.00	8.122490	Y 377.433
P (213.618 nm)	0.003113	ppm	0.002752	88.40	2.522580	Y 242.219
Pb (220.353 nm)	-0.003508 u	ppm	0.002794	79.63	6.635430	Y 242.219
S (181.972 nm)	0.019846	ppm	0.007196	36.26	-16.226033	Y 377.433
Sb (206.834 nm)	0.003565	ppm	0.003844	> 100.00	4.747260	Y 377.433
Se (196.026 nm)	0.002861	ppm	0.000450	15.71	5.928510	Y 242.219
Si (288.158 nm)	-0.025970 u	ppm	0.002248	8.66	1168.470000	Y 377.433
Sn (189.925 nm)	-0.006184 u	ppm	0.000177	2.87	0.844390	Y 377.433
Sr (421.552 nm)	-0.000027 u	ppm	0.000032	> 100.00	275.079374	Y_R 488.368
Th (288.505 nm)	0.000356 u	ppm	0.003199	> 100.00	14.733000	Y 377.433
Ti (336.122 nm)	0.000508	ppm	0.000216	42.54	-316.598000	Y 377.433
Tl (190.794 nm)	0.001842 u	ppm	0.003536	> 100.00	-7.762010	Y 377.433
U (409.013 nm)	-0.004886 u	ppm	0.002504	51.25	103.668000	Y 377.433
V (292.401 nm)	0.000187	ppm	0.000056	30.07	-184.935000	Y 377.433
Zn (206.200 nm)	0.001656	ppm	0.000450	27.17	10.107900	Y 377.433
Zr (343.823 nm)	0.000503	ppm	0.000169	33.52	-98.145500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.118881	11918.531306	0.000182	0.02
Y 377.433	1.111942	513313.860088	0.000688	0.06
Y_R 377.433	1.130990	42737.400000	0.003778	0.33
Y_R 488.368	1.133570	40910.400000	0.010869	0.96
Y_R2 488.368	1.130215	79540.815989	0.000883	0.08
Y_R4	1.104170	33880.600000	0.011310	1.02

Sample Name: MB 280-435440/1-A

Date: 11/5/2018 5:11:07 PM Rack:Tube: 1:23

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000513 u	ppm	0.000822	> 100.00	-253.462000	Y 377.433
Al (394.401 nm)	0.009420	ppm	0.000791	8.40	204.702000	Y 377.433
Al H (396.152 nm)	0.150432 u	ppm	0.004486	2.98	32.670500	Y_R 377.433
As (188.980 nm)	0.000252 u	ppm	0.001344	> 100.00	-14.762900	Y 242.219
B (249.678 nm)	-0.000145 u	ppm	0.000053	36.99	46.114000	Y 242.219
Ba (493.408 nm)	-0.000568 u	ppm	0.000081	14.27	749.064000	Y_R 488.368
Be (234.861 nm)	0.000076	ppm	0.000054	70.64	-2.241210	Y_R 488.368
Bi (223.061 nm)	-0.005376 u	ppm	0.003947	73.41	34.412700	Y 377.433
Ca (315.887 nm)	0.112043	ppm	0.005278	4.71	71.690576	Y_R 377.433
Cd (214.439 nm)	-0.000031 u	ppm	0.000039	> 100.00	-11.941900	Y 377.433
Co (228.615 nm)	0.000325	ppm	0.000060	18.56	-20.213300	Y 242.219
Cr (205.560 nm)	0.000244	ppm	0.000139	56.96	-8.177110	Y 377.433
Cu (324.754 nm)	0.000917	ppm	0.000045	4.89	246.209000	Y 377.433
Fe (238.204 nm)	0.018971	ppm	0.004247	22.39	43.143630	Y_R 377.433
Fe H (259.940 nm)	0.024918 u	ppm	0.006485	26.03	11.858700	Y_R 377.433
K (766.491 nm)	-0.258629 u	ppm	0.042839	16.56	1483.150000	Y_R2 488.368
Li (670.783 nm)	0.006719	ppm	0.001483	22.07	-351.728000	Y_R2 488.368
Mg (279.078 nm)	0.037163	ppm	0.000032	0.09	95.019200	Y 377.433
Mn (257.610 nm)	0.000734	ppm	0.000048	6.55	176.312000	Y 377.433
Mo (202.032 nm)	-0.000575 u	ppm	0.000175	30.40	12.136400	Y 377.433
Na (589.592 nm)	0.231062	ppm	0.057148	24.73	-19.937000	Y_R2 488.368
Na H (589.593 nm)	2.188866 u	ppm	0.045346	2.07	391.132827	Y_R4
Ni (231.604 nm)	-0.000729 u	ppm	0.000008	1.04	6.290480	Y 377.433
P (213.618 nm)	0.012641	ppm	0.001364	10.79	13.561900	Y 242.219
Pb (220.353 nm)	-0.001737 u	ppm	0.003144	> 100.00	10.616900	Y 242.219
S (181.972 nm)	0.021354	ppm	0.000905	4.24	-15.505429	Y 377.433
Sb (206.834 nm)	0.002329	ppm	0.002906	> 100.00	2.703440	Y 377.433
Se (196.026 nm)	0.004388	ppm	0.000563	12.83	8.235370	Y 242.219
Si (288.158 nm)	-0.101471 u	ppm	0.000711	0.70	830.228000	Y 377.433
Sn (189.925 nm)	0.002550 u	ppm	0.003663	> 100.00	11.039500	Y 377.433
Sr (421.552 nm)	0.000047	ppm	0.000060	> 100.00	283.625517	Y_R 488.368
Th (288.505 nm)	0.004527	ppm	0.005388	> 100.00	19.205600	Y 377.433
Ti (336.122 nm)	0.001147	ppm	0.000020	1.76	-255.815000	Y 377.433
Tl (190.794 nm)	0.001155	ppm	0.000809	70.07	-8.154130	Y 377.433
U (409.013 nm)	0.001257 u	ppm	0.010651	> 100.00	117.687000	Y 377.433
V (292.401 nm)	0.000711	ppm	0.000112	15.82	-159.843000	Y 377.433
Zn (206.200 nm)	0.002134	ppm	0.000793	37.15	11.755500	Y 377.433
Zr (343.823 nm)	0.000633	ppm	0.000494	78.06	-92.881600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.138954	12132.361722	0.001067	0.09
Y 377.433	1.121908	517914.889009	0.001778	0.16
Y_R 377.433	1.141810	43146.500000	0.005337	0.47
Y_R 488.368	1.137800	41063.100000	0.006114	0.54
Y_R2 488.368	1.145457	80613.515173	0.001819	0.16
Y_R4	1.134690	34817.100000	0.002171	0.19

Sample Name: LCS 280-435440/2-A

Date: 11/5/2018 5:14:17 PM Rack:Tube: 1:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049123	ppm	0.000194	0.39	1074.140000	Y 377.433
Al (394.401 nm)	1.953860	ppm	0.004322	0.22	24693.700000	Y 377.433
Al H (396.152 nm)	1.892170	ppm	0.001285	0.07	3259.660000	Y_R 377.433
As (188.980 nm)	0.919334	ppm	0.001975	0.21	1272.960000	Y 242.219
B (249.678 nm)	0.987722	ppm	0.000916	0.09	4012.280000	Y 242.219
Ba (493.408 nm)	1.880430	ppm	0.004194	0.22	172897.000000	Y_R 488.368
Be (234.861 nm)	0.047033	ppm	0.000174	0.37	2416.280000	Y_R 488.368
Bi (223.061 nm)	1.818130	ppm	0.003513	0.19	3040.210000	Y 377.433
Ca (315.887 nm)	46.899452	ppm	0.049919	0.11	30976.065103	Y_R 377.433
Cd (214.439 nm)	0.094570	ppm	0.000314	0.33	2343.630000	Y 377.433
Co (228.615 nm)	0.452564	ppm	0.000246	0.05	10750.500000	Y 242.219
Cr (205.560 nm)	0.192189	ppm	0.001480	0.77	904.207000	Y 377.433
Cu (324.754 nm)	0.234970	ppm	0.000509	0.22	11548.300000	Y 377.433
Fe (238.204 nm)	0.962828	ppm	0.005361	0.56	1615.769570	Y_R 377.433
Fe H (259.940 nm)	0.954524 u	ppm	0.001102	0.12	864.914000	Y_R 377.433
K (766.491 nm)	47.514500	ppm	0.168343	0.35	48173.700000	Y_R2 488.368
Li (670.783 nm)	0.953872	ppm	0.002233	0.23	13063.300000	Y_R2 488.368
Mg (279.078 nm)	46.457800	ppm	0.105672	0.23	101197.000000	Y 377.433
Mn (257.610 nm)	0.472762	ppm	0.000728	0.15	98935.700000	Y 377.433
Mo (202.032 nm)	0.976714	ppm	0.004054	0.42	11130.300000	Y 377.433
Na (589.592 nm)	47.110100	ppm	0.111449	0.24	23503.000000	Y_R2 488.368
Na H (589.593 nm)	49.226741 u	ppm	0.240549	0.49	17001.609187	Y_R4
Ni (231.604 nm)	0.460257	ppm	0.002152	0.47	1774.480000	Y 377.433
P (213.618 nm)	9.495710	ppm	0.050320	0.53	11004.100000	Y 242.219
Pb (220.353 nm)	0.467221	ppm	0.003422	0.73	1058.180000	Y 242.219
S (181.972 nm)	1.854060	ppm	0.003735	0.20	863.822720	Y 377.433
Sb (206.834 nm)	0.484307	ppm	0.002350	0.49	785.653000	Y 377.433
Se (196.026 nm)	1.888180	ppm	0.000837	0.04	2840.990000	Y 242.219
Si (288.158 nm)	1.261140	ppm	0.000248	0.02	6934.600000	Y 377.433
Sn (189.925 nm)	1.915140	ppm	0.006547	0.34	2243.730000	Y 377.433
Sr (421.552 nm)	0.945119	ppm	0.003905	0.41	109986.487016	Y_R 488.368
Th (288.505 nm)	0.919503	ppm	0.004120	0.45	970.485000	Y 377.433
Ti (336.122 nm)	0.965816	ppm	0.002178	0.23	91589.500000	Y 377.433
Tl (190.794 nm)	1.911730	ppm	0.004746	0.25	1084.820000	Y 377.433
U (409.013 nm)	1.931840	ppm	0.004259	0.22	4483.750000	Y 377.433
V (292.401 nm)	0.478948	ppm	0.002673	0.56	22940.400000	Y 377.433
Zn (206.200 nm)	0.473917	ppm	0.000311	0.07	1642.380000	Y 377.433
Zr (343.823 nm)	0.479881	ppm	0.001977	0.41	19328.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.086666	11575.373044	0.003209	0.30
Y 377.433	1.077439	497385.997364	0.000265	0.02
Y_R 377.433	1.121880	42393.400000	0.001900	0.17
Y_R 488.368	1.125950	40635.500000	0.004597	0.41
Y_R2 488.368	1.130692	79574.444834	0.000461	0.04
Y_R4	1.118300	34314.000000	0.005020	0.45

Sample Name: LCSD 280-435440/3-A

Date: 11/5/2018 5:17:44 PM Rack:Tube: 1:25

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049079	ppm	0.000131	0.27	1072.840000	Y 377.433
Al (394.401 nm)	1.955880	ppm	0.000990	0.05	24719.100000	Y 377.433
Al H (396.152 nm)	1.877450	ppm	0.008130	0.43	3236.370000	Y_R 377.433
As (188.980 nm)	0.919665	ppm	0.003585	0.39	1273.430000	Y 242.219
B (249.678 nm)	1.003520	ppm	0.001287	0.13	4075.720000	Y 242.219
Ba (493.408 nm)	1.878110	ppm	0.000433	0.02	172685.000000	Y_R 488.368
Be (234.861 nm)	0.047438	ppm	0.000052	0.11	2437.290000	Y_R 488.368
Bi (223.061 nm)	1.822530	ppm	0.001896	0.10	3047.470000	Y 377.433
Ca (315.887 nm)	46.628623	ppm	0.082752	0.18	30797.169928	Y_R 377.433
Cd (214.439 nm)	0.094985	ppm	0.000018	0.02	2353.960000	Y 377.433
Co (228.615 nm)	0.453829	ppm	0.002264	0.50	10780.600000	Y 242.219
Cr (205.560 nm)	0.193347	ppm	0.000759	0.39	909.726000	Y 377.433
Cu (324.754 nm)	0.234979	ppm	0.001086	0.46	11549.300000	Y 377.433
Fe (238.204 nm)	0.961343	ppm	0.004309	0.45	1613.295788	Y_R 377.433
Fe H (259.940 nm)	0.960278 u	ppm	0.001679	0.17	870.195000	Y_R 377.433
K (766.491 nm)	47.764200	ppm	0.014634	0.03	48417.800000	Y_R2 488.368
Li (670.783 nm)	0.958318	ppm	0.004618	0.48	13126.300000	Y_R2 488.368
Mg (279.078 nm)	46.400300	ppm	0.036522	0.08	101072.000000	Y 377.433
Mn (257.610 nm)	0.472601	ppm	0.000242	0.05	98902.100000	Y 377.433
Mo (202.032 nm)	0.979993	ppm	0.003357	0.34	11167.600000	Y 377.433
Na (589.592 nm)	47.206300	ppm	0.087647	0.19	23551.400000	Y_R2 488.368
Na H (589.593 nm)	49.297343 u	ppm	0.051685	0.10	17027.068266	Y_R4
Ni (231.604 nm)	0.459477	ppm	0.000785	0.17	1771.490000	Y 377.433
P (213.618 nm)	9.544910	ppm	0.030500	0.32	11061.200000	Y 242.219
Pb (220.353 nm)	0.468052	ppm	0.004313	0.92	1060.030000	Y 242.219
S (181.972 nm)	1.866563	ppm	0.004577	0.25	869.779575	Y 377.433
Sb (206.834 nm)	0.487013	ppm	0.006993	1.44	790.076000	Y 377.433
Se (196.026 nm)	1.897460	ppm	0.002118	0.11	2854.950000	Y 242.219
Si (288.158 nm)	0.902008	ppm	0.010613	1.18	5325.710000	Y 377.433
Sn (189.925 nm)	1.928230	ppm	0.000447	0.02	2259.000000	Y 377.433
Sr (421.552 nm)	0.944412	ppm	0.000893	0.09	109904.383293	Y_R 488.368
Th (288.505 nm)	0.918414	ppm	0.010532	1.15	969.222000	Y 377.433
Ti (336.122 nm)	0.968713	ppm	0.002622	0.27	91864.300000	Y 377.433
Tl (190.794 nm)	1.913800	ppm	0.003888	0.20	1086.010000	Y 377.433
U (409.013 nm)	1.932400	ppm	0.010045	0.52	4484.880000	Y 377.433
V (292.401 nm)	0.480711	ppm	0.001914	0.40	23025.600000	Y 377.433
Zn (206.200 nm)	0.472670	ppm	0.000067	0.01	1638.070000	Y 377.433
Zr (343.823 nm)	0.481755	ppm	0.002591	0.54	19404.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087798	11587.429782	0.000394	0.04
Y 377.433	1.078350	497806.648864	0.001359	0.13
Y_R 377.433	1.122240	42406.900000	0.000891	0.08
Y_R 488.368	1.119820	40414.300000	0.001184	0.11
Y_R2 488.368	1.113092	78335.791675	0.001877	0.17
Y_R4	1.117910	34302.000000	0.004598	0.41

Sample Name: 280-116189-A-1-A@5

Date: 11/5/2018 5:21:12 PM Rack:Tube: 1:26

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001405 u	ppm	0.000218	15.49	-300.553000	Y 377.433
Al (394.401 nm)	4.992730 o	ppm	0.005289	0.11	62285.100000	Y 377.433
Al H (396.152 nm)	5.075930	ppm	0.007750	0.15	8196.140000	Y_R 377.433
As (188.980 nm)	0.054581	ppm	0.003078	5.64	56.790000	Y 242.219
B (249.678 nm)	0.003474	ppm	0.002277	65.53	2.772070	Y 242.219
Ba (493.408 nm)	0.864259	ppm	0.000700	0.08	80027.500000	Y_R 488.368
Be (234.861 nm)	0.002339	ppm	0.000334	14.29	-2391.410000	Y_R 488.368
Bi (223.061 nm)	0.001515 u	ppm	0.002498	> 100.00	68.942700	Y 377.433
Ca (315.887 nm)	16.694779	ppm	0.022651	0.14	11025.930490	Y_R 377.433
Cd (214.439 nm)	0.002477	ppm	0.000125	5.03	50.512300	Y 377.433
Co (228.615 nm)	0.019934	ppm	0.000230	1.15	647.412000	Y 242.219
Cr (205.560 nm)	0.008474	ppm	0.000084	0.99	30.859900	Y 377.433
Cu (324.754 nm)	0.038999	ppm	0.000138	0.35	2281.910000	Y 377.433
Fe (238.204 nm)	178.306142 o	ppm	0.062495	0.04	297099.776187	Y_R 377.433
Fe H (259.940 nm)	177.535000	ppm	0.043235	0.02	162905.000000	Y_R 377.433
K (766.491 nm)	1.285170	ppm	0.002790	0.22	2991.960000	Y_R2 488.368
Li (670.783 nm)	0.024616	ppm	0.002032	8.26	-98.241200	Y_R2 488.368
Mg (279.078 nm)	5.493550	ppm	0.001056	0.02	11825.700000	Y 377.433
Mn (257.610 nm)	2.464920	ppm	0.000855	0.03	515744.000000	Y 377.433
Mo (202.032 nm)	0.019936	ppm	0.000268	1.34	245.481000	Y 377.433
Na (589.592 nm)	0.537160	ppm	0.054994	10.24	120.510000	Y_R2 488.368
Na H (589.593 nm)	2.519696 u	ppm	0.068962	2.74	424.028479	Y_R4
Ni (231.604 nm)	0.061299	ppm	0.000848	1.38	270.563000	Y 377.433
P (213.618 nm)	1.732100	ppm	0.010339	0.60	2006.820000	Y 242.219
Pb (220.353 nm)	0.026557	ppm	0.000747	2.81	73.010500	Y 242.219
S (181.972 nm)	0.934112	ppm	0.011426	1.22	428.634186	Y 377.433
Sb (206.834 nm)	0.003174	ppm	0.001570	49.45	18.238300	Y 377.433
Se (196.026 nm)	0.010598	ppm	0.001975	18.63	-24.776900	Y 242.219
Si (288.158 nm)	0.222303	ppm	0.005329	2.40	2280.700000	Y 377.433
Sn (189.925 nm)	-0.005716 u	ppm	0.000530	9.28	1.390800	Y 377.433
Sr (421.552 nm)	0.159645	ppm	0.000106	0.07	18830.209504	Y_R 488.368
Th (288.505 nm)	-0.026324 u	ppm	0.001854	7.04	-14.414100	Y 377.433
Ti (336.122 nm)	0.094879	ppm	0.000310	0.33	8698.670000	Y 377.433
Tl (190.794 nm)	0.000288 u	ppm	0.003990	> 100.00	-14.508600	Y 377.433
U (409.013 nm)	-0.000970 u	ppm	0.001429	> 100.00	203.225000	Y 377.433
V (292.401 nm)	0.105814	ppm	0.000194	0.18	4938.150000	Y 377.433
Zn (206.200 nm)	0.219073	ppm	0.000120	0.05	780.579000	Y 377.433
Zr (343.823 nm)	0.023162	ppm	0.000352	1.52	820.133000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.109852	11822.358248	0.000369	0.03
Y 377.433	1.111257	512997.863961	0.000151	0.01
Y_R 377.433	1.143980	43228.500000	0.002959	0.26
Y_R 488.368	1.148530	41450.400000	0.001355	0.12
Y_R2 488.368	1.139988	80228.634386	0.012579	1.10
Y_R4	1.137900	34915.600000	0.004420	0.39

Sample Name: 280-116189-A-1-Asd@25

Date: 11/5/2018 5:24:51 PM Rack:Tube: 1:27

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000482 u	ppm	0.000002	0.36	-256.943000	Y 377.433
Al (394.401 nm)	1.008560	ppm	0.004911	0.49	12654.000000	Y 377.433
Al H (396.152 nm)	1.131860	ppm	0.003354	0.30	1659.270000	Y_R 377.433
As (188.980 nm)	0.013119	ppm	0.000581	4.42	2.333350	Y 242.219
B (249.678 nm)	-0.006890 u	ppm	0.000040	0.59	7.210210	Y 242.219
Ba (493.408 nm)	0.173812	ppm	0.001335	0.77	16734.800000	Y_R 488.368
Be (234.861 nm)	-0.000007 u	ppm	0.000050	> 100.00	-518.427000	Y_R 488.368
Bi (223.061 nm)	-0.002474 u	ppm	0.001190	48.12	43.929400	Y 377.433
Ca (315.887 nm)	3.381561	ppm	0.014826	0.44	2231.470676	Y_R 377.433
Cd (214.439 nm)	0.000441	ppm	0.000001	0.20	-0.186827	Y 377.433
Co (228.615 nm)	0.004576	ppm	0.000275	6.01	121.922000	Y 242.219
Cr (205.560 nm)	0.001908	ppm	0.000351	18.41	-0.287211	Y 377.433
Cu (324.754 nm)	0.008086	ppm	0.000026	0.33	631.385000	Y 377.433
Fe (238.204 nm)	36.431195 o	ppm	0.080347	0.22	60712.078363	Y_R 377.433
Fe H (259.940 nm)	36.165600	ppm	0.075536	0.21	33176.500000	Y_R 377.433
K (766.491 nm)	0.020650	ppm	0.015144	73.34	1756.100000	Y_R2 488.368
Li (670.783 nm)	0.012593	ppm	0.001485	11.79	-268.538000	Y_R2 488.368
Mg (279.078 nm)	1.128100	ppm	0.008622	0.76	2439.660000	Y 377.433
Mn (257.610 nm)	0.510124	ppm	0.001947	0.38	106753.000000	Y 377.433
Mo (202.032 nm)	0.003972	ppm	0.000073	1.85	63.868500	Y 377.433
Na (589.592 nm)	0.201237	ppm	0.007769	3.86	-37.609400	Y_R2 488.368
Na H (589.593 nm)	1.950599 u	ppm	0.040014	2.05	288.870608	Y_R4
Ni (231.604 nm)	0.012653	ppm	0.000590	4.66	63.001100	Y 377.433
P (213.618 nm)	0.349207	ppm	0.004448	1.27	403.788000	Y 242.219
Pb (220.353 nm)	0.003227	ppm	0.000092	2.86	21.563800	Y 242.219
S (181.972 nm)	0.195203	ppm	0.000742	0.38	69.210756	Y 377.433
Sb (206.834 nm)	-0.000191 u	ppm	0.002175	> 100.00	1.451050	Y 377.433
Se (196.026 nm)	0.002605	ppm	0.001664	63.86	-3.086170	Y 242.219
Si (288.158 nm)	-0.121290 u	ppm	0.000529	0.44	741.442000	Y 377.433
Sn (189.925 nm)	-0.006306 u	ppm	0.000374	5.94	0.701895	Y 377.433
Sr (421.552 nm)	0.031741	ppm	0.000051	0.16	3966.842051	Y_R 488.368
Th (288.505 nm)	-0.002343 u	ppm	0.004497	> 100.00	11.952500	Y 377.433
Ti (336.122 nm)	0.019661	ppm	0.000153	0.78	1512.690000	Y 377.433
Tl (190.794 nm)	-0.000680 u	ppm	0.001822	> 100.00	-10.398400	Y 377.433
U (409.013 nm)	-0.002151 u	ppm	0.006921	> 100.00	128.485000	Y 377.433
V (292.401 nm)	0.021863	ppm	0.000054	0.25	865.315000	Y 377.433
Zn (206.200 nm)	0.043666	ppm	0.000147	0.34	159.189000	Y 377.433
Zr (343.823 nm)	0.005026	ppm	0.000069	1.38	85.131000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.106511	11786.770296	0.002739	0.25
Y 377.433	1.107709	511359.847010	0.003783	0.34
Y_R 377.433	1.124090	42476.800000	0.000862	0.08
Y_R 488.368	1.125300	40612.100000	0.005589	0.50
Y_R2 488.368	1.137566	80058.164731	0.000449	0.04
Y_R4	1.116350	34254.300000	0.001971	0.18

Sample Name: CCVH-5408055

Date: 11/5/2018 5:28:25 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000967	ppm	0.000483	49.97	-322.153000	Y 377.433
Al (394.401 nm)	50.922300 o	ppm	0.140222	0.28	634163.000000	Y 377.433
Al H (396.152 nm)	49.650000	ppm	0.132410	0.27	81651.500000	Y_R 377.433
As (188.980 nm)	-0.005094 u	ppm	0.000898	17.64	-24.329400	Y 242.219
B (249.678 nm)	-0.011272 u	ppm	0.000008	0.07	-14.595800	Y 242.219
Ba (493.408 nm)	-0.000064 u	ppm	0.000425	> 100.00	831.238000	Y_R 488.368
Be (234.861 nm)	0.000043 u	ppm	0.000215	> 100.00	-698.204000	Y_R 488.368
Bi (223.061 nm)	0.981041	ppm	0.004565	0.47	1666.690000	Y 377.433
Ca (315.887 nm)	-0.008626 u	ppm	0.000412	4.78	2.267449	Y_R 377.433
Cd (214.439 nm)	0.000227	ppm	0.000242	> 100.00	-5.511500	Y 377.433
Co (228.615 nm)	0.001466	ppm	0.000314	21.42	61.793200	Y 242.219
Cr (205.560 nm)	0.000913	ppm	0.000220	24.07	-5.936380	Y 377.433
Cu (324.754 nm)	-0.000393 u	ppm	0.000009	2.30	639.448000	Y 377.433
Fe (238.204 nm)	49.327328 o	ppm	0.150827	0.31	82199.220977	Y_R 377.433
Fe H (259.940 nm)	49.444400	ppm	0.024748	0.05	45361.800000	Y_R 377.433
K (766.491 nm)	0.018311	ppm	0.006730	36.75	1753.810000	Y_R2 488.368
Li (670.783 nm)	0.011247	ppm	0.001672	14.86	-287.602000	Y_R2 488.368
Mg (279.078 nm)	-0.030945 u	ppm	0.000601	1.94	-203.504000	Y 377.433
Mn (257.610 nm)	0.000382	ppm	0.000039	10.14	102.569000	Y 377.433
Mo (202.032 nm)	-0.001143 u	ppm	0.000171	14.99	5.671890	Y 377.433
Na (589.592 nm)	249.136000 o	ppm	0.073094	0.03	125030.000000	Y_R2 488.368
Na H (589.593 nm)	253.353719	ppm	1.813682	0.72	90075.458972	Y_R4
Ni (231.604 nm)	0.000862	ppm	0.000265	30.72	19.753900	Y 377.433
P (213.618 nm)	-0.016927 u	ppm	0.000567	3.35	-21.967800	Y 242.219
Pb (220.353 nm)	-0.002322 u	ppm	0.001512	65.13	19.517500	Y 242.219
S (181.972 nm)	4.973522	ppm	0.030457	0.61	2349.635929	Y 377.433
Sb (206.834 nm)	0.003250	ppm	0.001041	32.05	8.286400	Y 377.433
Se (196.026 nm)	-0.000027 u	ppm	0.004150	> 100.00	-11.073900	Y 242.219
Si (288.158 nm)	-0.198707 u	ppm	0.000854	0.43	394.619000	Y 377.433
Sn (189.925 nm)	-0.005543 u	ppm	0.000099	1.78	1.592470	Y 377.433
Sr (421.552 nm)	0.000015 u	ppm	0.000068	> 100.00	285.730293	Y_R 488.368
Th (288.505 nm)	4.912290	ppm	0.025537	0.52	5270.340000	Y 377.433
Ti (336.122 nm)	0.000685	ppm	0.000049	7.12	-299.857000	Y 377.433
Tl (190.794 nm)	-0.007331 u	ppm	0.002012	27.44	-16.302800	Y 377.433
U (409.013 nm)	10.157600	ppm	0.067666	0.67	23358.600000	Y 377.433
V (292.401 nm)	-0.004676 u	ppm	0.000077	1.65	-428.050000	Y 377.433
Zn (206.200 nm)	0.000427 u	ppm	0.000915	> 100.00	11.136300	Y 377.433
Zr (343.823 nm)	-0.006594 u	ppm	0.000125	1.89	-385.766000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054102	11228.494972	0.013952	1.32
Y 377.433	1.053204	486198.484050	0.012995	1.23
Y_R 377.433	1.098660	41515.800000	0.000812	0.07
Y_R 488.368	1.093300	39457.100000	0.003115	0.28
Y_R2 488.368	1.104366	77721.699840	0.000790	0.07
Y_R4	1.119390	34347.400000	0.009519	0.85

Sample Name: CCV-5407762

Date: 11/5/2018 5:32:00 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.504079	ppm	0.001370	0.27	13708.600000	Y 377.433
Al (394.401 nm)	0.505649	ppm	0.000951	0.19	6504.060000	Y 377.433
Al H (396.152 nm)	0.551806 u	ppm	0.002815	0.51	887.599000	Y_R 377.433
As (188.980 nm)	0.980850	ppm	0.004127	0.42	1359.140000	Y 242.219
B (249.678 nm)	0.485282	ppm	0.001615	0.33	1994.380000	Y 242.219
Ba (493.408 nm)	0.498714	ppm	0.000023	0.00	46444.700000	Y_R 488.368
Be (234.861 nm)	0.504641	ppm	0.002217	0.44	26091.700000	Y_R 488.368
Bi (223.061 nm)	-0.003366 u	ppm	0.001152	34.23	38.134100	Y 377.433
Ca (315.887 nm)	5.010370	ppm	0.003426	0.07	3307.233032	Y_R 377.433
Cd (214.439 nm)	0.509574	ppm	0.000536	0.11	12677.300000	Y 377.433
Co (228.615 nm)	0.498819	ppm	0.003332	0.67	11829.200000	Y 242.219
Cr (205.560 nm)	0.515806	ppm	0.000064	0.01	2450.330000	Y 377.433
Cu (324.754 nm)	0.507488	ppm	0.000721	0.14	24625.500000	Y 377.433
Fe (238.204 nm)	2.529624	ppm	0.000952	0.04	4226.318011	Y_R 377.433
Fe H (259.940 nm)	2.516730 u	ppm	0.021010	0.83	2298.470000	Y_R 377.433
K (766.491 nm)	49.882800	ppm	0.098367	0.20	50488.400000	Y_R2 488.368
Li (670.783 nm)	1.012970	ppm	0.001782	0.18	13900.300000	Y_R2 488.368
Mg (279.078 nm)	20.208600	ppm	0.013685	0.07	44035.200000	Y 377.433
Mn (257.610 nm)	0.507207	ppm	0.000515	0.10	106143.000000	Y 377.433
Mo (202.032 nm)	0.513134	ppm	0.000756	0.15	5856.380000	Y 377.433
Na (589.592 nm)	25.122200	ppm	0.008017	0.03	12477.700000	Y_R2 488.368
Na H (589.593 nm)	26.926199 u	ppm	0.008075	0.03	9174.972160	Y_R4
Ni (231.604 nm)	0.512066	ppm	0.000760	0.15	1972.460000	Y 377.433
P (213.618 nm)	0.991754	ppm	0.011992	1.21	1126.580000	Y 242.219
Pb (220.353 nm)	0.993688	ppm	0.001756	0.18	2232.130000	Y 242.219
S (181.972 nm)	-0.007735 u	ppm	0.004391	56.76	-27.491062	Y 377.433
Sb (206.834 nm)	1.019320	ppm	0.003372	0.33	1674.810000	Y 377.433
Se (196.026 nm)	1.001730	ppm	0.005039	0.50	1507.830000	Y 242.219
Si (288.158 nm)	4.859740	ppm	0.005291	0.11	23056.000000	Y 377.433
Sn (189.925 nm)	1.018120	ppm	0.003106	0.31	1196.580000	Y 377.433
Sr (421.552 nm)	0.505019	ppm	0.000065	0.01	58900.481598	Y_R 488.368
Th (288.505 nm)	-0.027022 u	ppm	0.002922	10.81	-47.179600	Y 377.433
Ti (336.122 nm)	0.511302	ppm	0.000293	0.06	48267.000000	Y 377.433
Tl (190.794 nm)	1.010150	ppm	0.000256	0.03	569.521000	Y 377.433
U (409.013 nm)	-0.003958 u	ppm	0.006235	> 100.00	60.919800	Y 377.433
V (292.401 nm)	0.505773	ppm	0.000072	0.01	24155.800000	Y 377.433
Zn (206.200 nm)	0.511649	ppm	0.002595	0.51	1772.950000	Y 377.433
Zr (343.823 nm)	0.510715	ppm	0.000276	0.05	20578.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079616	11500.281169	0.003489	0.32
Y 377.433	1.064041	491200.994481	0.002564	0.24
Y_R 377.433	1.092920	41299.200000	0.001042	0.10
Y_R 488.368	1.096690	39579.400000	0.001764	0.16
Y_R2 488.368	1.111736	78240.381722	0.000852	0.08
Y_R4	1.118630	34324.200000	0.000736	0.07

Sample Name: CCB

Date: 11/5/2018 5:35:30 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000017 u	ppm	0.000450	> 100.00	-239.691000	Y 377.433
Al (394.401 nm)	-0.000110 u	ppm	0.000471	> 100.00	86.588100	Y 377.433
Al H (396.152 nm)	0.135683 Zu	ppm	0.001534	1.13	8.278210 Z	Y_R 377.433
As (188.980 nm)	-0.002194 u	ppm	0.000154	7.02	-18.189100	Y 242.219
B (249.678 nm)	-0.007197 u	ppm	0.000424	5.90	17.804000	Y 242.219
Ba (493.408 nm)	-0.000932 u	ppm	0.000095	10.24	715.719000	Y_R 488.368
Be (234.861 nm)	0.000017 u	ppm	0.000055	> 100.00	-4.956760	Y_R 488.368
Bi (223.061 nm)	-0.008208 u	ppm	0.002803	34.15	29.742500	Y 377.433
Ca (315.887 nm)	-0.008254 u	ppm	0.002392	28.98	-7.770728	Y_R 377.433
Cd (214.439 nm)	0.000196	ppm	0.000073	37.04	-6.270700	Y 377.433
Co (228.615 nm)	0.000335	ppm	0.000157	46.88	-20.006500	Y 242.219
Cr (205.560 nm)	0.000021 u	ppm	0.000598	> 100.00	-9.242190	Y 377.433
Cu (324.754 nm)	0.000287	ppm	0.000255	88.90	215.503000	Y 377.433
Fe (238.204 nm)	-0.003528 u	ppm	0.003403	96.44	5.656306	Y_R 377.433
Fe H (259.940 nm)	0.014056 u	ppm	0.004484	31.90	1.891350	Y_R 377.433
K (766.491 nm)	-0.128638 u	ppm	0.121380	94.36	1610.190000	Y_R2 488.368
Li (670.783 nm)	0.009275	ppm	0.005542	59.75	-315.537000	Y_R2 488.368
Mg (279.078 nm)	0.001448 u	ppm	0.002991	> 100.00	17.220200	Y 377.433
Mn (257.610 nm)	0.000013	ppm	0.000009	70.02	25.448300	Y 377.433
Mo (202.032 nm)	-0.000450 u	ppm	0.000181	40.21	13.561500	Y 377.433
Na (589.592 nm)	0.143874	ppm	0.041028	28.52	-63.738600	Y_R2 488.368
Na H (589.593 nm)	2.096808 u	ppm	0.013602	0.65	358.268838	Y_R4
Ni (231.604 nm)	0.000189	ppm	0.000197	> 100.00	9.802020	Y 377.433
P (213.618 nm)	0.003411	ppm	0.001592	46.67	2.862460	Y 242.219
Pb (220.353 nm)	-0.002294 u	ppm	0.001113	48.52	9.376880	Y 242.219
S (181.972 nm)	0.003216 u	ppm	0.006124	> 100.00	-24.174410	Y 377.433
Sb (206.834 nm)	0.000013 u	ppm	0.000766	> 100.00	-1.100870	Y 377.433
Se (196.026 nm)	0.003138	ppm	0.001394	44.43	6.359840	Y 242.219
Si (288.158 nm)	-0.203848 Zu	ppm	0.000997	0.49	371.589000 Z	Y 377.433
Sn (189.925 nm)	-0.006413 u	ppm	0.000696	10.85	0.576751	Y 377.433
Sr (421.552 nm)	-0.000257 u	ppm	0.000036	13.91	248.428435	Y_R 488.368
Th (288.505 nm)	0.000827 u	ppm	0.005393	> 100.00	15.280500	Y 377.433
Ti (336.122 nm)	0.000244	ppm	0.000019	7.97	-341.874000	Y 377.433
Tl (190.794 nm)	-0.004461 u	ppm	0.003082	69.08	-11.371700	Y 377.433
U (409.013 nm)	-0.006228 u	ppm	0.005555	89.19	100.585000	Y 377.433
V (292.401 nm)	0.000275	ppm	0.000270	98.20	-181.281000	Y 377.433
Zn (206.200 nm)	0.000264	ppm	0.000164	62.12	5.292190	Y 377.433
Zr (343.823 nm)	0.000298	ppm	0.000132	44.14	-106.449000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093220	11645.185243	0.007823	0.72
Y 377.433	1.078346	497804.732359	0.006273	0.58
Y_R 377.433	1.100800	41596.600000	0.002659	0.24
Y_R 488.368	1.092730	39436.800000	0.010442	0.96
Y_R2 488.368	1.136367	79973.772307	0.001086	0.10
Y_R4	1.101540	33799.900000	0.004801	0.44

Sample Name: CCVL-5412564

Date: 11/5/2018 5:38:40 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009726	ppm	0.000184	1.90	30.563900	Y 377.433
Al (394.401 nm)	0.098725	ppm	0.001714	1.74	1321.890000	Y 377.433
Al H (396.152 nm)	0.234039 u	ppm	0.000241	0.10	174.837000	Y_R 377.433
As (188.980 nm)	0.011631	ppm	0.001140	9.80	1.177330	Y 242.219
B (249.678 nm)	0.089321	ppm	0.000604	0.68	405.310000	Y 242.219
Ba (493.408 nm)	0.009148	ppm	0.000097	1.06	1638.270000	Y_R 488.368
Be (234.861 nm)	0.001090	ppm	0.000045	4.17	49.205900	Y_R 488.368
Bi (223.061 nm)	0.090576	ppm	0.000637	0.70	192.581000	Y 377.433
Ca (315.887 nm)	0.192489	ppm	0.002417	1.26	124.845062	Y_R 377.433
Cd (214.439 nm)	0.005039	ppm	0.000177	3.52	114.325000	Y 377.433
Co (228.615 nm)	0.010596	ppm	0.000169	1.59	223.950000	Y 242.219
Cr (205.560 nm)	0.010925	ppm	0.000500	4.58	42.685100	Y 377.433
Cu (324.754 nm)	0.015458	ppm	0.000026	0.17	946.010000	Y 377.433
Fe (238.204 nm)	0.097724	ppm	0.001283	1.31	174.360216	Y_R 377.433
Fe H (259.940 nm)	0.103979 u	ppm	0.002315	2.23	84.409300	Y_R 377.433
K (766.491 nm)	2.938180	ppm	0.061701	2.10	4607.520000	Y_R2 488.368
Li (670.783 nm)	0.028187 Q	ppm	0.002458	8.72	-47.670900 Q	Y_R2 488.368
Mg (279.078 nm)	0.205257	ppm	0.003593	1.75	460.649000	Y 377.433
Mn (257.610 nm)	0.010534	ppm	0.000041	0.39	2226.650000	Y 377.433
Mo (202.032 nm)	0.019943	ppm	0.000037	0.19	245.565000	Y 377.433
Na (589.592 nm)	1.209520	ppm	0.049622	4.10	471.495000	Y_R2 488.368
Na H (589.593 nm)	2.945859 u	ppm	0.010005	0.34	660.524707	Y_R4
Ni (231.604 nm)	0.041333	ppm	0.000828	2.00	167.489000	Y 377.433
P (213.618 nm)	2.834240	ppm	0.006406	0.23	3286.230000	Y 242.219
Pb (220.353 nm)	0.007207	ppm	0.001122	15.57	30.606300	Y 242.219
S (181.972 nm)	0.103391	ppm	0.008763	8.48	23.715049	Y 377.433
Sb (206.834 nm)	0.020888	ppm	0.000035	0.17	33.099100	Y 377.433
Se (196.026 nm)	0.024088	ppm	0.001666	6.92	37.849400	Y 242.219
Si (288.158 nm)	0.290417 Q	ppm	0.002192	0.75	2585.850000 Q	Y 377.433
Sn (189.925 nm)	0.095029	ppm	0.001411	1.48	118.997000	Y 377.433
Sr (421.552 nm)	0.009432	ppm	0.000013	0.14	1373.078482	Y_R 488.368
Th (288.505 nm)	0.018357	ppm	0.001739	9.47	33.575100	Y 377.433
Ti (336.122 nm)	0.010624	ppm	0.000034	0.32	645.704000	Y 377.433
Tl (190.794 nm)	0.017874	ppm	0.004968	27.80	1.399550	Y 377.433
U (409.013 nm)	0.059572	ppm	0.016759	28.13	249.721000	Y 377.433
V (292.401 nm)	0.010454	ppm	0.000054	0.51	307.886000	Y 377.433
Zn (206.200 nm)	0.020639	ppm	0.000083	0.40	75.719500	Y 377.433
Zr (343.823 nm)	0.015787	ppm	0.000205	1.30	521.220000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.121816	11949.797910	0.003985	0.36
Y 377.433	1.110830	512800.781722	0.004933	0.44
Y_R 377.433	1.135990	42926.400000	0.005147	0.45
Y_R 488.368	1.120470	40437.900000	0.000846	0.08
Y_R2 488.368	1.112282	78278.748811	0.003376	0.30
Y_R4	1.083130	33235.100000	0.006140	0.57

Sample Name: 280-116189-A-1-B MS@5

Date: 11/5/2018 5:42:05 PM Rack:Tube: 1:28

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.043746	ppm	0.000270	0.62	871.955000	Y 377.433
Al (394.401 nm)	39.888800 o	ppm	0.007362	0.02	497109.000000	Y 377.433
Al H (396.152 nm)	39.290500	ppm	0.078589	0.20	65085.700000	Y_R 377.433
As (188.980 nm)	1.082220	ppm	0.001900	0.18	1491.550000	Y 242.219
B (249.678 nm)	0.969228	ppm	0.002148	0.22	3821.840000	Y 242.219
Ba (493.408 nm)	3.220890	ppm	0.001509	0.05	295836.000000	Y_R 488.368
Be (234.861 nm)	0.051783	ppm	0.000565	1.09	-2369.980000	Y_R 488.368
Bi (223.061 nm)	1.764440	ppm	0.003260	0.18	2998.250000	Y 377.433
Ca (315.887 nm)	157.378896	ppm	0.012773	0.01	103957.635053	Y_R 377.433
Cd (214.439 nm)	0.092139	ppm	0.000540	0.59	2283.120000	Y 377.433
Co (228.615 nm)	0.483088	ppm	0.000604	0.13	11896.800000	Y 242.219
Cr (205.560 nm)	0.231084	ppm	0.000666	0.29	1089.190000	Y 377.433
Cu (324.754 nm)	0.318427	ppm	0.000558	0.18	15927.600000	Y 377.433
Fe (238.204 nm)	358.739734 o	ppm	0.697583	0.19	597732.710053	Y_R 377.433
Fe H (259.940 nm)	362.320000	ppm	0.145507	0.04	332472.000000	Y_R 377.433
K (766.491 nm)	53.308100	ppm	0.147771	0.28	53836.100000	Y_R2 488.368
Li (670.783 nm)	0.963573	ppm	0.002642	0.27	13200.700000	Y_R2 488.368
Mg (279.078 nm)	60.673300	ppm	0.029606	0.05	131853.000000	Y 377.433
Mn (257.610 nm)	7.282620	ppm	0.007018	0.10	1523720.000000	Y 377.433
Mo (202.032 nm)	0.934425	ppm	0.000740	0.08	10649.200000	Y 377.433
Na (589.592 nm)	47.190400	ppm	0.003146	0.01	23522.700000	Y_R2 488.368
Na H (589.593 nm)	48.942021 u	ppm	0.223523	0.46	16767.668020	Y_R4
Ni (231.604 nm)	0.566435	ppm	0.000392	0.07	2234.560000	Y 377.433
P (213.618 nm)	24.947200	ppm	0.188993	0.76	28926.500000	Y 242.219
Pb (220.353 nm)	0.526748	ppm	0.003442	0.65	1185.430000	Y 242.219
S (181.972 nm)	6.019072	ppm	0.002167	0.04	2879.731929	Y 377.433
Sb (206.834 nm)	0.395975	ppm	0.002245	0.57	667.976000	Y 377.433
Se (196.026 nm)	1.806580	ppm	0.010070	0.56	2635.850000	Y 242.219
Si (288.158 nm)	4.009050	ppm	0.001054	0.03	19245.000000	Y 377.433
Sn (189.925 nm)	1.770050	ppm	0.002950	0.17	2074.350000	Y 377.433
Sr (421.552 nm)	1.569965	ppm	0.001895	0.12	182559.303586	Y_R 488.368
Th (288.505 nm)	0.798158	ppm	0.000164	0.02	857.273000	Y 377.433
Ti (336.122 nm)	1.502160	ppm	0.000664	0.04	142867.000000	Y 377.433
Tl (190.794 nm)	1.747890	ppm	0.009862	0.56	977.021000	Y 377.433
U (409.013 nm)	1.861000	ppm	0.008777	0.47	4496.200000	Y 377.433
V (292.401 nm)	0.723288	ppm	0.000133	0.02	34804.800000	Y 377.433
Zn (206.200 nm)	0.921318	ppm	0.001649	0.18	3226.910000	Y 377.433
Zr (343.823 nm)	0.526399	ppm	0.000067	0.01	21214.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122139	11953.240897	0.000967	0.09
Y 377.433	1.142619	527475.492775	0.000812	0.07
Y_R 377.433	1.184880	44773.900000	0.002236	0.19
Y_R 488.368	1.187240	42847.400000	0.004081	0.34
Y_R2 488.368	1.194252	84047.535134	0.017492	1.46
Y_R4	1.186970	36421.200000	0.003584	0.30

Sample Name: 280-116189-A-1-C MSD@5

Date: 11/5/2018 5:45:46 PM Rack:Tube: 1:29

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.042798	ppm	0.000288	0.67	790.974000	Y 377.433
Al (394.401 nm)	48.678200 o	ppm	0.156898	0.32	606778.000000	Y 377.433
Al H (396.152 nm)	48.064700 b	ppm	0.066996	0.14	79793.200000	Y_R 377.433
As (188.980 nm)	1.431840 b	ppm	0.006980	0.49	1975.600000	Y 242.219
B (249.678 nm)	1.015630 b	ppm	0.004518	0.44	3934.860000	Y 242.219
Ba (493.408 nm)	3.658020 b	ppm	0.002357	0.06	336007.000000	Y_R 488.368
Be (234.861 nm)	0.061376 b	ppm	0.000479	0.78	-5047.410000	Y_R 488.368
Bi (223.061 nm)	1.855280 b	ppm	0.008905	0.48	3177.330000	Y 377.433
Ca (315.887 nm)	387.225743	ppm	0.462600	0.12	255777.691511	Y_R 377.433
Cd (214.439 nm)	0.096122	ppm	0.000147	0.15	2382.290000	Y 377.433
Co (228.615 nm)	0.572891 b	ppm	0.002158	0.38	14288.300000	Y 242.219
Cr (205.560 nm)	0.253585	ppm	0.000044	0.02	1196.100000	Y 377.433
Cu (324.754 nm)	0.348512 b	ppm	0.000715	0.21	17508.700000	Y 377.433
Fe (238.204 nm)	584.798363 bo	ppm	0.296960	0.05	974384.684222	Y_R 377.433
Fe H (259.940 nm)	591.217000 bo	ppm	1.802160	0.30	542521.000000	Y_R 377.433
K (766.491 nm)	57.674200	ppm	0.155753	0.27	58103.300000	Y_R2 488.368
Li (670.783 nm)	1.029290	ppm	0.000583	0.06	14131.400000	Y_R2 488.368
Mg (279.078 nm)	65.928200 b	ppm	0.121131	0.18	143101.000000	Y 377.433
Mn (257.610 nm)	11.438400	ppm	0.019634	0.17	2393210.000000	Y 377.433
Mo (202.032 nm)	1.002900	ppm	0.000337	0.03	11428.200000	Y 377.433
Na (589.592 nm)	51.125400	ppm	0.032411	0.06	25492.900000	Y_R2 488.368
Na H (589.593 nm)	53.064503	ppm	0.186379	0.35	18196.508545	Y_R4
Ni (231.604 nm)	0.650320 b	ppm	0.000365	0.06	2589.680000	Y 377.433
P (213.618 nm)	40.475800	ppm	0.158372	0.39	46939.900000	Y 242.219
Pb (220.353 nm)	0.619529	ppm	0.004127	0.67	1391.410000	Y 242.219
S (181.972 nm)	7.795675 b	ppm	0.032596	0.42	3752.860695	Y 377.433
Sb (206.834 nm)	0.387005 b	ppm	0.000717	0.19	670.392000	Y 377.433
Se (196.026 nm)	1.875100 b	ppm	0.003668	0.20	2686.720000	Y 242.219
Si (288.158 nm)	3.868190	ppm	0.014399	0.37	18613.900000	Y 377.433
Sn (189.925 nm)	1.804740	ppm	0.002735	0.15	2114.850000	Y 377.433
Sr (421.552 nm)	2.478718 b	ppm	0.000853	0.03	288072.326930	Y_R 488.368
Th (288.505 nm)	0.789069 b	ppm	0.004708	0.60	848.621000	Y 377.433
Ti (336.122 nm)	1.738860	ppm	0.003010	0.17	165955.000000	Y 377.433
Tl (190.794 nm)	1.770070 b	ppm	0.008770	0.50	980.021000	Y 377.433
U (409.013 nm)	1.997590 b	ppm	0.003442	0.17	4899.570000	Y 377.433
V (292.401 nm)	0.979088	ppm	0.000756	0.08	47207.000000	Y 377.433
Zn (206.200 nm)	1.156700 b	ppm	0.004596	0.40	4064.540000	Y 377.433
Zr (343.823 nm)	0.593983	ppm	0.000992	0.17	23953.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068554	11382.444255	0.000208	0.02
Y 377.433	1.104433	509847.660312	0.002724	0.25
Y_R 377.433	1.161170	43878.200000	0.002232	0.19
Y_R 488.368	1.159390	41842.400000	0.000320	0.03
Y_R2 488.368	1.162756	81830.952314	0.002294	0.20
Y_R4	1.157420	35514.400000	0.008095	0.70

Sample Name: 280-116189-A-1-Apds@5

Date: 11/5/2018 5:49:31 PM Rack:Tube: 1:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.046570	ppm	0.000283	0.61	1021.670000	Y 377.433
Al (394.401 nm)	5.886470 o	ppm	0.004907	0.08	73441.800000	Y 377.433
Al H (396.152 nm)	5.903670	ppm	0.004794	0.08	9575.280000	Y_R 377.433
As (188.980 nm)	0.244556	ppm	0.001156	0.47	323.002000	Y 242.219
B (249.678 nm)	0.099216	ppm	0.000579	0.58	387.727000	Y 242.219
Ba (493.408 nm)	0.940248	ppm	0.002250	0.24	86980.700000	Y_R 488.368
Be (234.861 nm)	0.049686	ppm	0.000178	0.36	83.534300	Y_R 488.368
Bi (223.061 nm)	0.003538	ppm	0.004135	> 100.00	72.097400	Y 377.433
Ca (315.887 nm)	35.631128	ppm	0.037146	0.10	23533.923080	Y_R 377.433
Cd (214.439 nm)	0.051138	ppm	0.000039	0.08	1262.180000	Y 377.433
Co (228.615 nm)	0.068213	ppm	0.000448	0.66	1792.800000	Y 242.219
Cr (205.560 nm)	0.057729	ppm	0.000094	0.16	265.756000	Y 377.433
Cu (324.754 nm)	0.087212	ppm	0.000190	0.22	4597.930000	Y 377.433
Fe (238.204 nm)	176.818131 o	ppm	0.062537	0.04	294620.498509	Y_R 377.433
Fe H (259.940 nm)	175.924000	ppm	0.147216	0.08	161426.000000	Y_R 377.433
K (766.491 nm)	20.919600	ppm	0.025796	0.12	22181.400000	Y_R2 488.368
Li (670.783 nm)	0.124825	ppm	0.001054	0.84	1321.080000	Y_R2 488.368
Mg (279.078 nm)	24.568100	ppm	0.024629	0.10	53374.200000	Y 377.433
Mn (257.610 nm)	2.459230	ppm	0.001879	0.08	514553.000000	Y 377.433
Mo (202.032 nm)	0.068347	ppm	0.000084	0.12	796.238000	Y 377.433
Na (589.592 nm)	19.678100	ppm	0.031561	0.16	9735.720000	Y_R2 488.368
Na H (589.593 nm)	21.306412 u	ppm	0.090342	0.42	7124.650157	Y_R4
Ni (231.604 nm)	0.106647	ppm	0.000507	0.48	444.243000	Y 377.433
P (213.618 nm)	3.621390	ppm	0.017534	0.48	4196.410000	Y 242.219
Pb (220.353 nm)	0.120038	ppm	0.000557	0.46	282.339000	Y 242.219
S (181.972 nm)	0.909405	ppm	0.000139	0.02	417.782933	Y 377.433
Sb (206.834 nm)	0.092079	ppm	0.000623	0.68	164.229000	Y 377.433
Se (196.026 nm)	0.202428	ppm	0.006512	3.22	264.049000	Y 242.219
Si (288.158 nm)	5.113040	ppm	0.023173	0.45	24190.700000	Y 377.433
Sn (189.925 nm)	0.089614	ppm	0.004804	5.36	112.675000	Y 377.433
Sr (421.552 nm)	0.203899	ppm	0.000830	0.41	23966.966442	Y_R 488.368
Th (288.505 nm)	0.164630	ppm	0.008058	4.89	187.024000	Y 377.433
Ti (336.122 nm)	0.142573	ppm	0.000059	0.04	13281.600000	Y 377.433
Tl (190.794 nm)	0.197556	ppm	0.005263	2.66	98.366000	Y 377.433
U (409.013 nm)	0.496973	ppm	0.017170	3.45	1334.410000	Y 377.433
V (292.401 nm)	0.153130	ppm	0.000141	0.09	7211.790000	Y 377.433
Zn (206.200 nm)	0.410474	ppm	0.001131	0.28	1441.900000	Y 377.433
Zr (343.823 nm)	0.071099	ppm	0.000273	0.38	2762.780000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.095724	11671.867308	0.000312	0.03
Y 377.433	1.094944	505467.133372	0.001269	0.12
Y_R 377.433	1.114620	42119.100000	0.003310	0.30
Y_R 488.368	1.118780	40376.800000	0.005679	0.51
Y_R2 488.368	1.125313	79195.842358	0.001308	0.12
Y_R4	1.126300	34559.600000	0.008275	0.73

Sample Name: 280-116189-A-1-Apds

Date: 11/5/2018 5:53:08 PM Rack:Tube: 1:31

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.038554	ppm	0.000162	0.42	716.517000	Y 377.433
Al (394.401 nm)	24.546300 o	ppm	0.004070	0.02	305890.000000	Y 377.433
Al H (396.152 nm)	23.888200 b	ppm	0.003442	0.01	39383.200000	Y_R 377.433
As (188.980 nm)	0.445198 b	ppm	0.000915	0.21	588.874000	Y 242.219
B (249.678 nm)	0.130494 b	ppm	0.000371	0.28	320.480000	Y 242.219
Ba (493.408 nm)	4.067510 b	ppm	0.075661	1.86	373618.000000	Y_R 488.368
Be (234.861 nm)	0.062389 b	ppm	0.001620	2.60	-7610.240000	Y_R 488.368
Bi (223.061 nm)	0.024486 b	ppm	0.008857	36.17	183.836000	Y 377.433
Ca (315.887 nm)	93.481078	ppm	0.039039	0.04	61748.688561	Y_R 377.433
Cd (214.439 nm)	0.054569	ppm	0.000106	0.19	1347.610000	Y 377.433
Co (228.615 nm)	0.139297 b	ppm	0.000039	0.03	4155.360000	Y 242.219
Cr (205.560 nm)	0.084233	ppm	0.000877	1.04	391.416000	Y 377.433
Cu (324.754 nm)	0.232439 b	ppm	0.000583	0.25	12267.800000	Y 377.433
Fe (238.204 nm)	771.100975 bo	ppm	0.907042	0.12	1284796.400890	Y_R 377.433
Fe H (259.940 nm)	777.668000 bo	ppm	3.830170	0.49	713618.000000	Y_R 377.433
K (766.491 nm)	25.297300	ppm	0.030447	0.12	26459.900000	Y_R2 488.368
Li (670.783 nm)	0.181467	ppm	0.003282	1.81	2123.320000	Y_R2 488.368
Mg (279.078 nm)	42.286800 b	ppm	0.007451	0.02	91453.800000	Y 377.433
Mn (257.610 nm)	10.882300	ppm	0.002053	0.02	2276860.000000	Y 377.433
Mo (202.032 nm)	0.137539	ppm	0.000738	0.54	1583.400000	Y 377.433
Na (589.592 nm)	20.116800	ppm	0.042378	0.21	9907.880000	Y_R2 488.368
Na H (589.593 nm)	21.991529 u	ppm	0.234465	1.07	7060.903537	Y_R4
Ni (231.604 nm)	0.310415 b	ppm	0.000402	0.13	1313.640000	Y 377.433
P (213.618 nm)	9.993930	ppm	0.038343	0.38	11583.700000	Y 242.219
Pb (220.353 nm)	0.219753	ppm	0.002073	0.94	502.244000	Y 242.219
S (181.972 nm)	4.363224 b	ppm	0.001620	0.04	2095.541204	Y 377.433
Sb (206.834 nm)	0.093274 b	ppm	0.002910	3.12	213.160000	Y 377.433
Se (196.026 nm)	0.206905 b	ppm	0.002557	1.24	129.964000	Y 242.219
Si (288.158 nm)	6.373370	ppm	0.006085	0.10	29836.900000	Y 377.433
Sn (189.925 nm)	0.089958	ppm	0.004175	4.64	113.076000	Y 377.433
Sr (421.552 nm)	0.783464 b	ppm	0.006497	0.83	91310.938388	Y_R 488.368
Th (288.505 nm)	0.082018 b	ppm	0.000266	0.32	96.523600	Y 377.433
Ti (336.122 nm)	0.484708	ppm	0.000405	0.08	45961.000000	Y 377.433
Tl (190.794 nm)	0.176833 b	ppm	0.005718	3.23	66.841600	Y 377.433
U (409.013 nm)	0.503320 b	ppm	0.006760	1.34	1649.740000	Y 377.433
V (292.401 nm)	0.530890	ppm	0.000058	0.01	25537.000000	Y 377.433
Zn (206.200 nm)	1.154140 b	ppm	0.002768	0.24	4075.600000	Y 377.433
Zr (343.823 nm)	0.149919	ppm	0.000222	0.15	5957.020000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.106157	11782.993314	0.002847	0.26
Y 377.433	1.136641	524716.047842	0.003175	0.28
Y_R 377.433	1.192240	45051.900000	0.001584	0.13
Y_R 488.368	1.199150	43277.100000	0.014656	1.22
Y_R2 488.368	1.193764	84013.209982	0.004231	0.35
Y_R4	1.185560	36378.100000	0.012634	1.07

Sample Name: 280-116189-A-2-A@5

Date: 11/5/2018 5:56:49 PM Rack:Tube: 1:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000386 u	ppm	0.000178	46.15	-266.284000	Y 377.433
Al (394.401 nm)	4.309190 o	ppm	0.388922	9.03	53773.700000	Y 377.433
Al H (396.152 nm)	3.861270	ppm	0.036059	0.93	6179.960000	Y_R 377.433
As (188.980 nm)	0.051169	ppm	0.003747	7.32	54.381000	Y 242.219
B (249.678 nm)	0.002324	ppm	0.001385	59.58	28.481800	Y 242.219
Ba (493.408 nm)	0.238489	ppm	0.000334	0.14	22689.400000	Y_R 488.368
Be (234.861 nm)	-0.001914 u	ppm	0.002307	> 100.00	-1298.220000	Y_R 488.368
Bi (223.061 nm)	0.006669	ppm	0.000347	5.21	65.295000	Y 377.433
Ca (315.887 nm)	78.717449	ppm	0.662693	0.84	51992.825951	Y_R 377.433
Cd (214.439 nm)	0.001857	ppm	0.000273	14.68	35.091200	Y 377.433
Co (228.615 nm)	0.014417	ppm	0.001862	12.91	412.093000	Y 242.219
Cr (205.560 nm)	0.009287	ppm	0.000840	9.04	34.807400	Y 377.433
Cu (324.754 nm)	0.028291	ppm	0.002544	8.99	1615.820000	Y 377.433
Fe (238.204 nm)	84.731616 o	ppm	0.757141	0.89	141188.762851	Y_R 377.433
Fe H (259.940 nm)	84.572200	ppm	0.770910	0.91	77596.900000	Y_R 377.433
K (766.491 nm)	0.597731	ppm	0.043569	7.29	2320.100000	Y_R2 488.368
Li (670.783 nm)	0.014094	ppm	0.001874	13.30	-247.282000	Y_R2 488.368
Mg (279.078 nm)	3.777640	ppm	0.345251	9.14	8169.240000	Y 377.433
Mn (257.610 nm)	2.155440	ppm	0.183048	8.49	450991.000000	Y 377.433
Mo (202.032 nm)	0.015604	ppm	0.001210	7.75	196.201000	Y 377.433
Na (589.592 nm)	0.385969	ppm	0.004342	1.12	54.203200	Y_R2 488.368
Na H (589.593 nm)	2.026637 u	ppm	0.019979	0.99	309.652499	Y_R4
Ni (231.604 nm)	0.041972	ppm	0.004777	11.38	182.572000	Y 377.433
P (213.618 nm)	1.429930	ppm	0.120084	8.40	1656.690000	Y 242.219
Pb (220.353 nm)	0.017918	ppm	0.001775	9.91	53.898200	Y 242.219
S (181.972 nm)	0.380750	ppm	0.036657	9.63	166.899459	Y 377.433
Sb (206.834 nm)	0.000007 u	ppm	0.002062	> 100.00	5.451010	Y 377.433
Se (196.026 nm)	0.004598	ppm	0.002964	64.47	-10.247800	Y 242.219
Si (288.158 nm)	0.313992	ppm	0.053222	16.95	2691.460000	Y 377.433
Sn (189.925 nm)	-0.006305 u	ppm	0.000512	8.12	0.702358	Y 377.433
Sr (421.552 nm)	0.140579	ppm	0.000170	0.12	16606.283396	Y_R 488.368
Th (288.505 nm)	-0.039968 u	ppm	0.004635	11.60	-20.200300	Y 377.433
Ti (336.122 nm)	0.085269	ppm	0.007831	9.18	7941.430000	Y 377.433
Tl (190.794 nm)	0.001367 u	ppm	0.002841	> 100.00	-11.623500	Y 377.433
U (409.013 nm)	0.012020	ppm	0.011163	92.87	178.050000	Y 377.433
V (292.401 nm)	0.079037	ppm	0.007528	9.52	3637.730000	Y 377.433
Zn (206.200 nm)	0.325185	ppm	0.029956	9.21	1137.320000	Y 377.433
Zr (343.823 nm)	0.018657	ppm	0.001606	8.61	637.547000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.094003	11653.530103	0.000258	0.02
Y 377.433	1.094559	505289.575575	0.000064	0.01
Y_R 377.433	1.121870	42393.000000	0.000886	0.08
Y_R 488.368	1.130380	40795.200000	0.009706	0.86
Y_R2 488.368	1.136873	80009.417183	0.008592	0.76
Y_R4	1.124490	34504.000000	0.005221	0.46

Sample Name: 280-116189-A-3-A@5

Date: 11/5/2018 6:00:26 PM Rack:Tube: 1:33

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000593 u	ppm	0.000154	25.99	-266.852000	Y 377.433
Al (394.401 nm)	4.157370 o	ppm	0.192959	4.64	51883.100000	Y 377.433
Al H (396.152 nm)	3.922810	ppm	0.028590	0.73	6292.650000	Y_R 377.433
As (188.980 nm)	0.038625	ppm	0.000178	0.46	37.030600	Y 242.219
B (249.678 nm)	-0.001137 u	ppm	0.000944	83.02	17.507200	Y 242.219
Ba (493.408 nm)	0.370939	ppm	0.001567	0.42	34804.500000	Y_R 488.368
Be (234.861 nm)	-0.000644 u	ppm	0.000838	> 100.00	-1105.830000	Y_R 488.368
Bi (223.061 nm)	0.000693 u	ppm	0.009131	> 100.00	54.275000	Y 377.433
Ca (315.887 nm)	43.537431	ppm	0.263816	0.61	28755.769934	Y_R 377.433
Cd (214.439 nm)	0.001392	ppm	0.000167	11.96	23.514200	Y 377.433
Co (228.615 nm)	0.009548	ppm	0.000747	7.83	285.902000	Y 242.219
Cr (205.560 nm)	0.008107	ppm	0.001037	12.80	29.218300	Y 377.433
Cu (324.754 nm)	0.015848	ppm	0.000778	4.91	1029.180000	Y 377.433
Fe (238.204 nm)	75.767426 o	ppm	0.465540	0.61	126252.903268	Y_R 377.433
Fe H (259.940 nm)	76.033400	ppm	0.420991	0.55	69761.200000	Y_R 377.433
K (766.491 nm)	0.536499	ppm	0.024415	4.55	2260.260000	Y_R2 488.368
Li (670.783 nm)	0.017732	ppm	0.002108	11.89	-195.757000	Y_R2 488.368
Mg (279.078 nm)	3.725820	ppm	0.170993	4.59	8064.550000	Y 377.433
Mn (257.610 nm)	1.810220	ppm	0.080626	4.45	378764.000000	Y 377.433
Mo (202.032 nm)	0.008354	ppm	0.000331	3.97	113.715000	Y 377.433
Na (589.592 nm)	0.493670	ppm	0.021429	4.34	106.272000	Y_R2 488.368
Na H (589.593 nm)	2.071105 u	ppm	0.038881	1.88	312.495989	Y_R4
Ni (231.604 nm)	0.026461	ppm	0.001261	4.76	121.792000	Y 377.433
P (213.618 nm)	2.718140	ppm	0.129866	4.78	3151.700000	Y 242.219
Pb (220.353 nm)	0.013999	ppm	0.002747	19.62	45.109400	Y 242.219
S (181.972 nm)	0.652547	ppm	0.027005	4.14	293.813068	Y 377.433
Sb (206.834 nm)	-0.000377 u	ppm	0.000066	17.50	4.181330	Y 377.433
Se (196.026 nm)	0.004662	ppm	0.003478	74.61	-8.322130	Y 242.219
Si (288.158 nm)	0.185448	ppm	0.010368	5.59	2115.600000	Y 377.433
Sn (189.925 nm)	-0.005070 u	ppm	0.000078	1.54	2.144200	Y 377.433
Sr (421.552 nm)	0.156938	ppm	0.000327	0.21	18504.207425	Y_R 488.368
Th (288.505 nm)	-0.028420 u	ppm	0.007753	27.28	-9.014100	Y 377.433
Ti (336.122 nm)	0.069523	ppm	0.003124	4.49	6355.300000	Y 377.433
Tl (190.794 nm)	-0.001572 u	ppm	0.000415	26.42	-12.665200	Y 377.433
U (409.013 nm)	-0.010473 u	ppm	0.009283	88.63	125.596000	Y 377.433
V (292.401 nm)	0.057310	ppm	0.002366	4.13	2585.720000	Y 377.433
Zn (206.200 nm)	0.098505	ppm	0.005687	5.77	352.934000	Y 377.433
Zr (343.823 nm)	0.014886	ppm	0.000592	3.97	484.710000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.104018	11760.214883	0.008252	0.75
Y 377.433	1.109633	512248.262811	0.009177	0.83
Y_R 377.433	1.139580	43062.300000	0.003087	0.27
Y_R 488.368	1.154090	41651.200000	0.013526	1.17
Y_R2 488.368	1.143827	80498.791781	0.001867	0.16
Y_R4	1.137760	34911.100000	0.003601	0.32

Sample Name: 280-116189-A-4-A@5

Date: 11/5/2018 6:04:02 PM Rack:Tube: 1:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000492 u	ppm	0.000268	54.33	-262.322000	Y 377.433
Al (394.401 nm)	3.616930 o	ppm	0.288698	7.98	45155.800000	Y 377.433
Al H (396.152 nm)	3.362420	ppm	0.026362	0.78	5362.900000	Y_R 377.433
As (188.980 nm)	0.039801	ppm	0.000395	0.99	38.190100	Y 242.219
B (249.678 nm)	-0.002211 u	ppm	0.000429	19.42	6.783500	Y 242.219
Ba (493.408 nm)	0.453393	ppm	0.003829	0.84	42365.000000	Y_R 488.368
Be (234.861 nm)	-0.001146 u	ppm	0.002203	> 100.00	-1409.480000	Y_R 488.368
Bi (223.061 nm)	0.007341	ppm	0.001505	20.50	67.798600	Y 377.433
Ca (315.887 nm)	46.302753	ppm	0.248661	0.54	30582.198119	Y_R 377.433
Cd (214.439 nm)	0.001983	ppm	0.000251	12.66	38.211300	Y 377.433
Co (228.615 nm)	0.016383	ppm	0.001412	8.62	469.474000	Y 242.219
Cr (205.560 nm)	0.009351	ppm	0.000238	2.55	35.139900	Y 377.433
Cu (324.754 nm)	0.016753	ppm	0.000970	5.79	1093.320000	Y 377.433
Fe (238.204 nm)	95.456604 o	ppm	0.725761	0.76	159058.409286	Y_R 377.433
Fe H (259.940 nm)	95.381200	ppm	0.753235	0.79	87515.800000	Y_R 377.433
K (766.491 nm)	0.332427	ppm	0.030951	9.31	2060.810000	Y_R2 488.368
Li (670.783 nm)	0.013844	ppm	0.002440	17.63	-250.818000	Y_R2 488.368
Mg (279.078 nm)	2.768540	ppm	0.229168	8.28	5961.620000	Y 377.433
Mn (257.610 nm)	1.601960	ppm	0.130314	8.13	335191.000000	Y 377.433
Mo (202.032 nm)	0.009886	ppm	0.000558	5.64	131.150000	Y 377.433
Na (589.592 nm)	0.431375	ppm	0.012088	2.80	73.691400	Y_R2 488.368
Na H (589.593 nm)	1.955465 u	ppm	0.018769	0.96	262.998139	Y_R4
Ni (231.604 nm)	0.042381	ppm	0.003853	9.09	185.734000	Y 377.433
P (213.618 nm)	1.934500	ppm	0.158340	8.19	2242.650000	Y 242.219
Pb (220.353 nm)	0.010356	ppm	0.002816	27.19	37.121200	Y 242.219
S (181.972 nm)	0.427095	ppm	0.036184	8.47	185.494116	Y 377.433
Sb (206.834 nm)	-0.000653 u	ppm	0.001090	> 100.00	5.403670	Y 377.433
Se (196.026 nm)	0.002146	ppm	0.000039	1.81	-17.461000	Y 242.219
Si (288.158 nm)	0.155024	ppm	0.022884	14.76	1979.300000	Y 377.433
Sn (189.925 nm)	-0.006300 u	ppm	0.001053	16.72	0.708347	Y 377.433
Sr (421.552 nm)	0.142901	ppm	0.001081	0.76	16877.099124	Y_R 488.368
Th (288.505 nm)	-0.022296 u	ppm	0.004571	20.50	-6.351310	Y 377.433
Ti (336.122 nm)	0.057388	ppm	0.004740	8.26	5208.540000	Y 377.433
Tl (190.794 nm)	-0.011647 u	ppm	0.003410	29.28	-19.025700	Y 377.433
U (409.013 nm)	0.006250	ppm	0.002974	47.59	173.959000	Y 377.433
V (292.401 nm)	0.048759	ppm	0.004304	8.83	2168.430000	Y 377.433
Zn (206.200 nm)	0.233479	ppm	0.019775	8.47	821.526000	Y 377.433
Zr (343.823 nm)	0.014794	ppm	0.001045	7.06	481.007000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.096807	11683.396693	0.000083	0.01
Y 377.433	1.101727	508598.363650	0.004676	0.42
Y_R 377.433	1.122610	42420.800000	0.004283	0.38
Y_R 488.368	1.132460	40870.600000	0.001704	0.15
Y_R2 488.368	1.133443	79768.039293	0.002398	0.21
Y_R4	1.124110	34492.400000	0.006520	0.58

Sample Name: 280-116189-A-5-A

Date: 11/5/2018 6:07:39 PM Rack:Tube: 1:35

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000143 u	ppm	0.000641	> 100.00	-293.132000	Y 377.433
Al (394.401 nm)	45.700900 o	ppm	0.072939	0.16	569091.000000	Y 377.433
Al H (396.152 nm)	45.524800	ppm	0.004246	0.01	74929.200000	Y_R 377.433
As (188.980 nm)	0.030553	ppm	0.001673	5.47	24.885400	Y 242.219
B (249.678 nm)	0.208990	ppm	0.001987	0.95	859.497000	Y 242.219
Ba (493.408 nm)	0.591197	ppm	0.000115	0.02	54966.100000	Y_R 488.368
Be (234.861 nm)	0.001105	ppm	0.000040	3.63	-1089.440000	Y_R 488.368
Bi (223.061 nm)	-0.020952 u	ppm	0.001244	5.94	19.297500	Y 377.433
Ca (315.887 nm)	76.675363	ppm	0.119844	0.16	50652.651417	Y_R 377.433
Cd (214.439 nm)	0.001359	ppm	0.000165	12.11	22.670900	Y 377.433
Co (228.615 nm)	0.038066	ppm	0.000140	0.37	1160.940000	Y 242.219
Cr (205.560 nm)	0.113501	ppm	0.000921	0.81	531.486000	Y 377.433
Cu (324.754 nm)	0.271407	ppm	0.000840	0.31	13274.500000	Y 377.433
Fe (238.204 nm)	81.167727 o	ppm	0.157730	0.19	135250.720259	Y_R 377.433
Fe H (259.940 nm)	80.865700	ppm	0.012659	0.02	74195.500000	Y_R 377.433
K (766.491 nm)	8.219060	ppm	0.064726	0.79	9768.730000	Y_R2 488.368
Li (670.783 nm)	0.058487	ppm	0.000628	1.07	381.492000	Y_R2 488.368
Mg (279.078 nm)	21.177100	ppm	0.044151	0.21	46075.900000	Y 377.433
Mn (257.610 nm)	1.440700	ppm	0.002482	0.17	301451.000000	Y 377.433
Mo (202.032 nm)	0.002698	ppm	0.000060	2.21	49.372400	Y 377.433
Na (589.592 nm)	2.248400	ppm	0.068279	3.04	984.452000	Y_R2 488.368
Na H (589.593 nm)	3.715188 u	ppm	0.013243	0.36	877.850546	Y_R4
Ni (231.604 nm)	0.094842	ppm	0.002407	2.54	384.601000	Y 377.433
P (213.618 nm)	1.982990	ppm	0.020475	1.03	2287.410000	Y 242.219
Pb (220.353 nm)	0.061233	ppm	0.002625	4.29	140.615000	Y 242.219
S (181.972 nm)	23.105008	ppm	0.148379	0.64	11018.469591	Y 377.433
Sb (206.834 nm)	-0.003030 u	ppm	0.001274	42.05	-17.227700	Y 377.433
Se (196.026 nm)	0.004405	ppm	0.003127	70.99	-10.571900	Y 242.219
Si (288.158 nm)	1.722000	ppm	0.023290	1.35	8999.200000	Y 377.433
Sn (189.925 nm)	-0.002203 u	ppm	0.002866	> 100.00	5.491480	Y 377.433
Sr (421.552 nm)	0.298925	ppm	0.000173	0.06	34986.415513	Y_R 488.368
Th (288.505 nm)	-0.029758 u	ppm	0.001635	5.49	-29.680200	Y 377.433
Ti (336.122 nm)	4.374120	ppm	0.014242	0.33	415735.000000	Y 377.433
Tl (190.794 nm)	0.000906 u	ppm	0.004222	> 100.00	-18.441100	Y 377.433
U (409.013 nm)	0.001756 u	ppm	0.003221	> 100.00	149.807000	Y 377.433
V (292.401 nm)	0.235798	ppm	0.000216	0.09	11359.300000	Y 377.433
Zn (206.200 nm)	0.289657	ppm	0.000802	0.28	1014.140000	Y 377.433
Zr (343.823 nm)	0.052489	ppm	0.000018	0.03	2008.620000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.089318	11603.628242	0.004192	0.38
Y 377.433	1.091529	503890.534687	0.002633	0.24
Y_R 377.433	1.119670	42309.700000	0.002055	0.18
Y_R 488.368	1.123720	40555.000000	0.004513	0.40
Y_R2 488.368	1.132222	79682.091155	0.005001	0.44
Y_R4	1.136100	34860.300000	0.008842	0.78

Sample Name: 280-116189-A-6-A

Date: 11/5/2018 6:11:15 PM Rack:Tube: 1:36

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000158	ppm	0.000001	0.39	-263.804000	Y 377.433
Al (394.401 nm)	35.790200 o	ppm	0.349626	0.98	445693.000000	Y 377.433
Al H (396.152 nm)	35.781100	ppm	0.096787	0.27	58844.000000	Y_R 377.433
As (188.980 nm)	0.013765	ppm	0.001917	13.92	2.020750	Y 242.219
B (249.678 nm)	0.176837	ppm	0.000321	0.18	736.753000	Y 242.219
Ba (493.408 nm)	0.292505	ppm	0.001546	0.53	27615.800000	Y_R 488.368
Be (234.861 nm)	0.000615	ppm	0.000085	13.78	-839.483000	Y_R 488.368
Bi (223.061 nm)	-0.018210 u	ppm	0.002602	14.29	21.264100	Y 377.433
Ca (315.887 nm)	48.180570	ppm	0.075481	0.16	31829.271672	Y_R 377.433
Cd (214.439 nm)	0.001194	ppm	0.000135	11.29	18.575200	Y 377.433
Co (228.615 nm)	0.029973	ppm	0.000116	0.39	928.936000	Y 242.219
Cr (205.560 nm)	0.115938	ppm	0.001541	1.33	543.314000	Y 377.433
Cu (324.754 nm)	0.115091	ppm	0.000335	0.29	5748.600000	Y 377.433
Fe (238.204 nm)	61.602603 o	ppm	0.101391	0.16	102651.908189	Y_R 377.433
Fe H (259.940 nm)	61.654200	ppm	0.171909	0.28	56566.100000	Y_R 377.433
K (766.491 nm)	3.752020	ppm	0.125379	3.34	5402.910000	Y_R2 488.368
Li (670.783 nm)	0.044175	ppm	0.001793	4.06	178.777000	Y_R2 488.368
Mg (279.078 nm)	28.574800	ppm	0.120553	0.42	62208.100000	Y 377.433
Mn (257.610 nm)	1.093390	ppm	0.002843	0.26	228787.000000	Y 377.433
Mo (202.032 nm)	0.001164	ppm	0.000181	15.53	31.920800	Y 377.433
Na (589.592 nm)	3.580320	ppm	0.014414	0.40	1658.220000	Y_R2 488.368
Na H (589.593 nm)	4.926504 u	ppm	0.028820	0.58	1339.837321	Y_R4
Ni (231.604 nm)	0.093538	ppm	0.000797	0.85	376.675000	Y 377.433
P (213.618 nm)	1.261360	ppm	0.001965	0.16	1457.230000	Y 242.219
Pb (220.353 nm)	0.082089	ppm	0.000064	0.08	188.939000	Y 242.219
S (181.972 nm)	10.828180	ppm	0.029583	0.27	5152.048788	Y 377.433
Sb (206.834 nm)	-0.005116 u	ppm	0.002569	50.20	-20.446500	Y 377.433
Se (196.026 nm)	0.005956	ppm	0.000602	10.10	-3.693190	Y 242.219
Si (288.158 nm)	1.617090	ppm	0.003410	0.21	8529.230000	Y 377.433
Sn (189.925 nm)	-0.001675 u	ppm	0.000828	49.44	6.107360	Y 377.433
Sr (421.552 nm)	0.222615	ppm	0.001221	0.55	26126.168292	Y_R 488.368
Th (288.505 nm)	-0.024852 u	ppm	0.002106	8.47	-19.570400	Y 377.433
Ti (336.122 nm)	3.967120	ppm	0.006398	0.16	376964.000000	Y 377.433
Tl (190.794 nm)	-0.003401 u	ppm	0.003140	92.32	-19.190600	Y 377.433
U (409.013 nm)	-0.002938 u	ppm	0.007499	> 100.00	132.151000	Y 377.433
V (292.401 nm)	0.147473	ppm	0.000261	0.18	7059.030000	Y 377.433
Zn (206.200 nm)	0.193567	ppm	0.000318	0.16	679.947000	Y 377.433
Zr (343.823 nm)	0.044641	ppm	0.000326	0.73	1690.550000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099405	11711.071543	0.005229	0.48
Y 377.433	1.106975	511021.132429	0.009087	0.82
Y_R 377.433	1.133230	42822.200000	0.002076	0.18
Y_R 488.368	1.135010	40962.400000	0.005802	0.51
Y_R2 488.368	1.139566	80198.936384	0.001013	0.09
Y_R4	1.134540	34812.400000	0.002949	0.26

Sample Name: CCVH-5408055

Date: 11/5/2018 6:14:51 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000634	ppm	0.000861	> 100.00	-331.555000	Y 377.433
Al (394.401 nm)	51.119500 o	ppm	0.123441	0.24	636611.000000	Y 377.433
Al H (396.152 nm)	49.588800	ppm	0.048072	0.10	81550.600000	Y_R 377.433
As (188.980 nm)	-0.003114 u	ppm	0.000898	28.84	-21.551700	Y 242.219
B (249.678 nm)	-0.011928 u	ppm	0.000665	5.58	-17.188700	Y 242.219
Ba (493.408 nm)	0.000086 u	ppm	0.000455	> 100.00	844.893000	Y_R 488.368
Be (234.861 nm)	-0.000220 u	ppm	0.000069	31.18	-710.063000	Y_R 488.368
Bi (223.061 nm)	0.984920	ppm	0.000382	0.04	1673.070000	Y 377.433
Ca (315.887 nm)	-0.007438 u	ppm	0.000814	10.95	3.039844	Y_R 377.433
Cd (214.439 nm)	0.000230	ppm	0.000032	14.09	-5.441890	Y 377.433
Co (228.615 nm)	0.001506	ppm	0.000263	17.44	62.590100	Y 242.219
Cr (205.560 nm)	0.000570	ppm	0.000105	18.35	-7.572880	Y 377.433
Cu (324.754 nm)	-0.000637 u	ppm	0.000003	0.44	633.549000	Y 377.433
Fe (238.204 nm)	49.218027 o	ppm	0.111864	0.23	82017.106703	Y_R 377.433
Fe H (259.940 nm)	49.425700	ppm	0.041895	0.08	45344.600000	Y_R 377.433
K (766.491 nm)	0.194600	ppm	0.084781	43.57	1926.100000	Y_R2 488.368
Li (670.783 nm)	0.010092	ppm	0.006423	63.65	-303.955000	Y_R2 488.368
Mg (279.078 nm)	-0.029418 u	ppm	0.000205	0.70	-200.241000	Y 377.433
Mn (257.610 nm)	0.000393	ppm	0.000055	14.11	104.889000	Y 377.433
Mo (202.032 nm)	-0.001357 u	ppm	0.000021	1.58	3.245180	Y 377.433
Na (589.592 nm)	247.729000 o	ppm	0.762528	0.31	124323.000000	Y_R2 488.368
Na H (589.593 nm)	251.985612	ppm	2.032415	0.81	89586.940158	Y_R4
Ni (231.604 nm)	0.001222	ppm	0.001697	> 100.00	21.118500	Y 377.433
P (213.618 nm)	-0.016352 u	ppm	0.007123	43.56	-21.321100	Y 242.219
Pb (220.353 nm)	-0.001047 u	ppm	0.000966	92.26	22.401700	Y 242.219
S (181.972 nm)	4.998636	ppm	0.003471	0.07	2361.632060	Y 377.433
Sb (206.834 nm)	-0.000926 u	ppm	0.001553	> 100.00	1.405250	Y 377.433
Se (196.026 nm)	0.002587	ppm	0.001467	56.70	-7.111880	Y 242.219
Si (288.158 nm)	-0.197050 u	ppm	0.002828	1.44	402.045000	Y 377.433
Sn (189.925 nm)	-0.005299 u	ppm	0.001018	19.21	1.877420	Y 377.433
Sr (421.552 nm)	-0.000114 u	ppm	0.000240	> 100.00	270.633736	Y_R 488.368
Th (288.505 nm)	4.941290	ppm	0.022744	0.46	5301.290000	Y 377.433
Ti (336.122 nm)	0.001004	ppm	0.000141	14.06	-269.516000	Y 377.433
Tl (190.794 nm)	-0.004273 u	ppm	0.002076	48.58	-14.544000	Y 377.433
U (409.013 nm)	10.172100	ppm	0.003686	0.04	23391.900000	Y 377.433
V (292.401 nm)	-0.004454 u	ppm	0.000146	3.28	-414.666000	Y 377.433
Zn (206.200 nm)	-0.000041 u	ppm	0.000676	> 100.00	9.507690	Y 377.433
Zr (343.823 nm)	-0.006737 u	ppm	0.000117	1.74	-391.573000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054965	11237.689595	0.002960	0.28
Y 377.433	1.051730	485517.975648	0.003605	0.34
Y_R 377.433	1.102540	41662.500000	0.005005	0.45
Y_R 488.368	1.094500	39500.400000	0.003660	0.33
Y_R2 488.368	1.105521	77802.929472	0.004009	0.36
Y_R4	1.121100	34400.100000	0.003825	0.34

Sample Name: CCV-5407762

Date: 11/5/2018 6:18:27 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.509330	ppm	0.006757	1.33	13854.700000	Y 377.433
Al (394.401 nm)	0.509771	ppm	0.006039	1.18	6554.160000	Y 377.433
Al H (396.152 nm)	0.552136 u	ppm	0.000368	0.07	887.876000	Y_R 377.433
As (188.980 nm)	0.993529	ppm	0.013937	1.40	1376.910000	Y 242.219
B (249.678 nm)	0.489802	ppm	0.005923	1.21	2012.530000	Y 242.219
Ba (493.408 nm)	0.499401	ppm	0.000041	0.01	46507.600000	Y_R 488.368
Be (234.861 nm)	0.501004	ppm	0.007559	1.51	25903.600000	Y_R 488.368
Bi (223.061 nm)	-0.000988 u	ppm	0.000284	28.77	42.052000	Y 377.433
Ca (315.887 nm)	5.012648	ppm	0.004648	0.09	3308.739863	Y_R 377.433
Cd (214.439 nm)	0.512290	ppm	0.007064	1.38	12744.900000	Y 377.433
Co (228.615 nm)	0.501581	ppm	0.005175	1.03	11894.900000	Y 242.219
Cr (205.560 nm)	0.521372	ppm	0.006420	1.23	2476.880000	Y 377.433
Cu (324.754 nm)	0.510741	ppm	0.003662	0.72	24782.400000	Y 377.433
Fe (238.204 nm)	2.512839	ppm	0.009256	0.37	4198.351507	Y_R 377.433
Fe H (259.940 nm)	2.526930 u	ppm	0.006262	0.25	2307.840000	Y_R 377.433
K (766.491 nm)	50.194300	ppm	0.254208	0.51	50792.900000	Y_R2 488.368
Li (670.783 nm)	1.011680	ppm	0.006452	0.64	13882.100000	Y_R2 488.368
Mg (279.078 nm)	20.362100	ppm	0.222449	1.09	44369.500000	Y 377.433
Mn (257.610 nm)	0.512033	ppm	0.006442	1.26	107152.000000	Y 377.433
Mo (202.032 nm)	0.518903	ppm	0.006638	1.28	5922.010000	Y 377.433
Na (589.592 nm)	25.144500	ppm	0.053095	0.21	12488.900000	Y_R2 488.368
Na H (589.593 nm)	26.726517 u	ppm	0.145471	0.54	9103.592393	Y_R4
Ni (231.604 nm)	0.512519	ppm	0.005383	1.05	1974.210000	Y 377.433
P (213.618 nm)	1.007330	ppm	0.014927	1.48	1144.530000	Y 242.219
Pb (220.353 nm)	1.004430	ppm	0.009602	0.96	2256.090000	Y 242.219
S (181.972 nm)	-0.011487 u	ppm	0.001933	16.82	-29.266874	Y 377.433
Sb (206.834 nm)	1.030130	ppm	0.014527	1.41	1692.600000	Y 377.433
Se (196.026 nm)	1.012570	ppm	0.009944	0.98	1524.130000	Y 242.219
Si (288.158 nm)	4.842040	ppm	0.091239	1.88	22976.700000	Y 377.433
Sn (189.925 nm)	1.024760	ppm	0.011147	1.09	1204.330000	Y 377.433
Sr (421.552 nm)	0.505524	ppm	0.001955	0.39	58959.124455	Y_R 488.368
Th (288.505 nm)	-0.024632 u	ppm	0.003219	13.07	-44.781700	Y 377.433
Ti (336.122 nm)	0.516845	ppm	0.006788	1.31	48794.000000	Y 377.433
Tl (190.794 nm)	1.025150	ppm	0.016358	1.60	578.111000	Y 377.433
U (409.013 nm)	-0.018211 u	ppm	0.009536	52.36	27.747400	Y 377.433
V (292.401 nm)	0.508691	ppm	0.005665	1.11	24295.300000	Y 377.433
Zn (206.200 nm)	0.512062	ppm	0.004127	0.81	1774.380000	Y 377.433
Zr (343.823 nm)	0.516685	ppm	0.005376	1.04	20820.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.071433	11413.111261	0.005511	0.51
Y 377.433	1.058637	488706.526196	0.005370	0.51
Y_R 377.433	1.106160	41799.400000	0.003449	0.31
Y_R 488.368	1.107700	39976.900000	0.008333	0.75
Y_R2 488.368	1.093062	76926.149382	0.005067	0.46
Y_R4	1.103690	33865.900000	0.006592	0.60

Sample Name: CCB

Date: 11/5/2018 6:21:56 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000001 u	ppm	0.000043	> 100.00	-239.210000	Y 377.433
Al (394.401 nm)	0.000332	ppm	0.000117	35.16	90.959500	Y 377.433
Al H (396.152 nm)	0.140950 Zu	ppm	0.004272	3.03	17.026800 Z	Y_R 377.433
As (188.980 nm)	-0.001219 u	ppm	0.003049	> 100.00	-16.823300	Y 242.219
B (249.678 nm)	-0.008186 u	ppm	0.000439	5.36	13.832100	Y 242.219
Ba (493.408 nm)	-0.000739 u	ppm	0.000065	8.79	733.363000	Y_R 488.368
Be (234.861 nm)	0.000099	ppm	0.000123	> 100.00	-0.689384	Y_R 488.368
Bi (223.061 nm)	-0.003339 u	ppm	0.001090	32.65	37.767700	Y 377.433
Ca (315.887 nm)	0.003978	ppm	0.001019	25.60	0.309449	Y_R 377.433
Cd (214.439 nm)	0.000098 u	ppm	0.000215	> 100.00	-8.706010	Y 377.433
Co (228.615 nm)	0.000371	ppm	0.000172	46.32	-19.149200	Y 242.219
Cr (205.560 nm)	0.000354 u	ppm	0.000821	> 100.00	-7.656770	Y 377.433
Cu (324.754 nm)	0.000150	ppm	0.000087	57.97	209.385000	Y 377.433
Fe (238.204 nm)	-0.003032 u	ppm	0.004435	> 100.00	6.483548	Y_R 377.433
Fe H (259.940 nm)	0.014370 u	ppm	0.004568	31.79	2.179080	Y_R 377.433
K (766.491 nm)	-0.064580 u	ppm	0.066713	> 100.00	1672.800000	Y_R2 488.368
Li (670.783 nm)	0.006522	ppm	0.001239	18.99	-354.528000	Y_R2 488.368
Mg (279.078 nm)	0.001886	ppm	0.001460	77.41	18.268200	Y 377.433
Mn (257.610 nm)	0.000032	ppm	0.000041	> 100.00	29.399800	Y 377.433
Mo (202.032 nm)	-0.000255 u	ppm	0.000253	99.01	15.776500	Y 377.433
Na (589.592 nm)	0.101903	ppm	0.007176	7.04	-84.823700	Y_R2 488.368
Na H (589.593 nm)	1.914795 u	ppm	0.025457	1.33	293.284883	Y_R4
Ni (231.604 nm)	0.000835 u	ppm	0.001269	> 100.00	12.278200	Y 377.433
P (213.618 nm)	0.000813	ppm	0.000866	> 100.00	-0.131358	Y 242.219
Pb (220.353 nm)	-0.001868 u	ppm	0.001067	57.09	10.312100	Y 242.219
S (181.972 nm)	0.002232	ppm	0.000641	28.72	-24.643470	Y 377.433
Sb (206.834 nm)	0.001213	ppm	0.000235	19.40	0.872516	Y 377.433
Se (196.026 nm)	0.005555	ppm	0.000947	17.04	9.994330	Y 242.219
Si (288.158 nm)	-0.203349 Zu	ppm	0.001008	0.50	373.825000 Z	Y 377.433
Sn (189.925 nm)	-0.007312 u	ppm	0.000028	0.38	-0.472824	Y 377.433
Sr (421.552 nm)	-0.000091 u	ppm	0.000122	> 100.00	267.651949	Y_R 488.368
Th (288.505 nm)	0.000823 u	ppm	0.005340	> 100.00	15.240500	Y 377.433
Ti (336.122 nm)	0.000461	ppm	0.000077	16.62	-321.202000	Y 377.433
Tl (190.794 nm)	-0.002829 u	ppm	0.001942	68.64	-10.437100	Y 377.433
U (409.013 nm)	-0.010071 u	ppm	0.000861	8.55	91.813200	Y 377.433
V (292.401 nm)	0.000258	ppm	0.000042	16.20	-181.757000	Y 377.433
Zn (206.200 nm)	0.000056 u	ppm	0.000584	> 100.00	4.571630	Y 377.433
Zr (343.823 nm)	0.000444	ppm	0.000018	4.04	-100.556000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.089424	11604.750489	0.001975	0.18
Y 377.433	1.077681	497497.819218	0.003457	0.32
Y_R 377.433	1.092320	41276.300000	0.001281	0.12
Y_R 488.368	1.098070	39629.300000	0.004472	0.41
Y_R2 488.368	1.091334	76804.528422	0.002556	0.23
Y_R4	1.109270	34037.000000	0.003497	0.32

Sample Name: CCVL-5412564

Date: 11/5/2018 6:25:07 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009879	ppm	0.000470	4.76	34.958600	Y 377.433
Al (394.401 nm)	0.099460	ppm	0.001320	1.33	1329.650000	Y 377.433
Al H (396.152 nm)	0.235249 u	ppm	0.010720	4.56	176.762000	Y_R 377.433
As (188.980 nm)	0.011947	ppm	0.000935	7.83	1.619990	Y 242.219
B (249.678 nm)	0.087689	ppm	0.000459	0.52	398.759000	Y 242.219
Ba (493.408 nm)	0.008919	ppm	0.000385	4.32	1617.350000	Y_R 488.368
Be (234.861 nm)	0.001108	ppm	0.000033	2.95	50.127500	Y_R 488.368
Bi (223.061 nm)	0.093102	ppm	0.000040	0.04	196.744000	Y 377.433
Ca (315.887 nm)	0.199356	ppm	0.005561	2.79	129.382696	Y_R 377.433
Cd (214.439 nm)	0.005245	ppm	0.000078	1.48	119.439000	Y 377.433
Co (228.615 nm)	0.010820	ppm	0.000137	1.27	229.267000	Y 242.219
Cr (205.560 nm)	0.010198	ppm	0.000622	6.10	39.212700	Y 377.433
Cu (324.754 nm)	0.015082	ppm	0.000023	0.15	928.321000	Y 377.433
Fe (238.204 nm)	0.095911	ppm	0.002015	2.10	171.340095	Y_R 377.433
Fe H (259.940 nm)	0.106699 u	ppm	0.002739	2.57	86.905700	Y_R 377.433
K (766.491 nm)	3.018300	ppm	0.059342	1.97	4685.820000	Y_R2 488.368
Li (670.783 nm)	0.030934 Q	ppm	0.003295	10.65	-8.760900 Q	Y_R2 488.368
Mg (279.078 nm)	0.205156	ppm	0.001766	0.86	460.564000	Y 377.433
Mn (257.610 nm)	0.010492	ppm	0.000016	0.16	2217.920000	Y 377.433
Mo (202.032 nm)	0.019676	ppm	0.000362	1.84	242.521000	Y 377.433
Na (589.592 nm)	1.179120	ppm	0.034108	2.89	456.230000	Y_R2 488.368
Na H (589.593 nm)	2.697990 u	ppm	0.032843	1.22	572.044750	Y_R4
Ni (231.604 nm)	0.042148	ppm	0.000787	1.87	170.618000	Y 377.433
P (213.618 nm)	2.825480	ppm	0.015528	0.55	3276.070000	Y 242.219
Pb (220.353 nm)	0.007127	ppm	0.000802	11.26	30.404400	Y 242.219
S (181.972 nm)	0.101409	ppm	0.005018	4.95	22.767020	Y 377.433
Sb (206.834 nm)	0.021284	ppm	0.001551	7.29	33.750400	Y 377.433
Se (196.026 nm)	0.022175	ppm	0.000305	1.38	34.974000	Y 242.219
Si (288.158 nm)	0.286942 Q	ppm	0.002535	0.88	2570.280000 Q	Y 377.433
Sn (189.925 nm)	0.094446	ppm	0.000458	0.48	118.316000	Y 377.433
Sr (421.552 nm)	0.009210	ppm	0.000037	0.40	1347.342591	Y_R 488.368
Th (288.505 nm)	0.016297	ppm	0.002457	15.08	31.363200	Y 377.433
Ti (336.122 nm)	0.010535	ppm	0.000025	0.24	637.164000	Y 377.433
Tl (190.794 nm)	0.018917	ppm	0.000726	3.84	1.997670	Y 377.433
U (409.013 nm)	0.047041	ppm	0.007364	15.66	221.099000	Y 377.433
V (292.401 nm)	0.009994	ppm	0.000048	0.48	286.124000	Y 377.433
Zn (206.200 nm)	0.021506	ppm	0.000353	1.64	78.716300	Y 377.433
Zr (343.823 nm)	0.015521	ppm	0.000255	1.64	510.467000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.121175	11942.973045	0.001835	0.16
Y 377.433	1.113144	513869.068225	0.003553	0.32
Y_R 377.433	1.125240	42520.100000	0.002756	0.24
Y_R 488.368	1.127570	40694.100000	0.006349	0.56
Y_R2 488.368	1.122104	78970.023421	0.006459	0.58
Y_R4	1.109300	34038.000000	0.009428	0.85

Sample Name: MB 280-435263/1-A

Date: 11/5/2018 6:28:31 PM Rack:Tube: 1:37

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000359 u	ppm	0.000233	65.04	-249.062000	Y 377.433
Al (394.401 nm)	0.002449	ppm	0.000013	0.55	117.274000	Y 377.433
Al H (396.152 nm)	0.143963 u	ppm	0.006509	4.52	21.947300	Y_R 377.433
As (188.980 nm)	-0.001357 u	ppm	0.000953	70.25	-17.017100	Y 242.219
B (249.678 nm)	-0.009683 u	ppm	0.000268	2.77	7.815490	Y 242.219
Ba (493.408 nm)	-0.001217 u	ppm	0.000329	27.01	689.668000	Y_R 488.368
Be (234.861 nm)	0.000073	ppm	0.000042	58.60	-2.395220	Y_R 488.368
Bi (223.061 nm)	-0.004014 u	ppm	0.000904	22.53	36.658400	Y 377.433
Ca (315.887 nm)	0.003347	ppm	0.002939	87.82	-0.104182	Y_R 377.433
Cd (214.439 nm)	0.000037	ppm	0.000051	> 100.00	-10.235100	Y 377.433
Co (228.615 nm)	0.000375	ppm	0.000101	26.96	-19.030500	Y 242.219
Cr (205.560 nm)	0.000571	ppm	0.000122	21.30	-6.618710	Y 377.433
Cu (324.754 nm)	0.000272 u	ppm	0.000483	> 100.00	215.307000	Y 377.433
Fe (238.204 nm)	0.018243	ppm	0.001917	10.51	41.931180	Y_R 377.433
Fe H (259.940 nm)	0.028732 u	ppm	0.001190	4.14	15.359200	Y_R 377.433
K (766.491 nm)	-0.135542 u	ppm	0.008811	6.50	1603.440000	Y_R2 488.368
Li (670.783 nm)	0.007207	ppm	0.005009	69.51	-344.827000	Y_R2 488.368
Mg (279.078 nm)	0.001958	ppm	0.000050	2.56	18.405300	Y 377.433
Mn (257.610 nm)	0.000183	ppm	0.000020	10.74	60.856100	Y 377.433
Mo (202.032 nm)	-0.000074 u	ppm	0.000232	> 100.00	17.836500	Y 377.433
Na (589.592 nm)	0.094440	ppm	0.039425	41.75	-88.567900	Y_R2 488.368
Na H (589.593 nm)	1.679814 u	ppm	0.010090	0.60	209.414511	Y_R4
Ni (231.604 nm)	0.000191 u	ppm	0.000580	> 100.00	9.817470	Y 377.433
P (213.618 nm)	0.001906	ppm	0.001248	65.49	1.127600	Y 242.219
Pb (220.353 nm)	-0.002737 u	ppm	0.000687	25.11	8.369830	Y 242.219
S (181.972 nm)	0.004580 u	ppm	0.006983	> 100.00	-23.521920	Y 377.433
Sb (206.834 nm)	-0.000415 u	ppm	0.001222	> 100.00	-1.804430	Y 377.433
Se (196.026 nm)	0.000006 u	ppm	0.000748	> 100.00	1.646200	Y 242.219
Si (288.158 nm)	-0.205861 u	ppm	0.000822	0.40	362.570000	Y 377.433
Sn (189.925 nm)	-0.005541 u	ppm	0.000380	6.86	1.595140	Y 377.433
Sr (421.552 nm)	-0.000262 u	ppm	0.000101	38.54	247.761507	Y_R 488.368
Th (288.505 nm)	0.001450	ppm	0.001372	94.65	15.910400	Y 377.433
Ti (336.122 nm)	0.000532	ppm	0.000023	4.38	-314.478000	Y 377.433
Tl (190.794 nm)	-0.002371 u	ppm	0.001068	45.04	-10.175600	Y 377.433
U (409.013 nm)	-0.015430 u	ppm	0.005752	37.28	79.550500	Y 377.433
V (292.401 nm)	0.000337	ppm	0.000304	90.24	-177.995000	Y 377.433
Zn (206.200 nm)	0.000742	ppm	0.000091	12.29	6.945730	Y 377.433
Zr (343.823 nm)	0.000310	ppm	0.000117	37.83	-105.967000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.114136	11867.988503	0.006256	0.56
Y 377.433	1.100526	508043.941416	0.004238	0.39
Y_R 377.433	1.110220	41952.500000	0.001389	0.13
Y_R 488.368	1.102810	39800.300000	0.001615	0.15
Y_R2 488.368	1.096157	77143.961026	0.008205	0.75
Y_R4	1.107320	33977.200000	0.007975	0.72

Sample Name: LCS 280-435263/2-A

Date: 11/5/2018 6:31:41 PM Rack:Tube: 1:38

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052559	ppm	0.000143	0.27	1165.380000	Y 377.433
Al (394.401 nm)	2.065980	ppm	0.009598	0.46	26116.300000	Y 377.433
Al H (396.152 nm)	1.993900	ppm	0.006447	0.32	3456.720000	Y_R 377.433
As (188.980 nm)	0.992095	ppm	0.000148	0.01	1374.910000	Y 242.219
B (249.678 nm)	1.027210	ppm	0.002572	0.25	4170.810000	Y 242.219
Ba (493.408 nm)	2.035080	ppm	0.001991	0.10	187051.000000	Y_R 488.368
Be (234.861 nm)	0.051172	ppm	0.000209	0.41	2629.640000	Y_R 488.368
Bi (223.061 nm)	1.957520	ppm	0.010430	0.53	3269.980000	Y 377.433
Ca (315.887 nm)	50.469774	ppm	0.003064	0.01	33334.354811	Y_R 377.433
Cd (214.439 nm)	0.101521	ppm	0.000025	0.02	2516.730000	Y 377.433
Co (228.615 nm)	0.485618	ppm	0.000766	0.16	11537.700000	Y 242.219
Cr (205.560 nm)	0.207153	ppm	0.000575	0.28	975.363000	Y 377.433
Cu (324.754 nm)	0.250798	ppm	0.000128	0.05	12310.400000	Y 377.433
Fe (238.204 nm)	1.034045	ppm	0.007171	0.69	1734.429234	Y_R 377.433
Fe H (259.940 nm)	1.026360 u	ppm	0.002427	0.24	930.830000	Y_R 377.433
K (766.491 nm)	51.521600	ppm	0.079023	0.15	52090.000000	Y_R2 488.368
Li (670.783 nm)	1.033130	ppm	0.000771	0.07	14185.800000	Y_R2 488.368
Mg (279.078 nm)	50.171000	ppm	0.122630	0.24	109285.000000	Y 377.433
Mn (257.610 nm)	0.507552	ppm	0.001150	0.23	106215.000000	Y 377.433
Mo (202.032 nm)	1.048920	ppm	0.003497	0.33	11951.800000	Y 377.433
Na (589.592 nm)	50.723000	ppm	0.065022	0.13	25315.800000	Y_R2 488.368
Na H (589.593 nm)	52.144204	ppm	0.151619	0.29	18028.110574	Y_R4
Ni (231.604 nm)	0.490467	ppm	0.000744	0.15	1890.370000	Y 377.433
P (213.618 nm)	10.188900	ppm	0.014111	0.14	11807.600000	Y 242.219
Pb (220.353 nm)	0.502215	ppm	0.002241	0.45	1136.350000	Y 242.219
S (181.972 nm)	1.967616	ppm	0.004573	0.23	918.362305	Y 377.433
Sb (206.834 nm)	0.516232	ppm	0.001795	0.35	837.454000	Y 377.433
Se (196.026 nm)	2.033860	ppm	0.001353	0.07	3060.060000	Y 242.219
Si (288.158 nm)	10.105100	ppm	0.055398	0.55	46554.500000	Y 377.433
Sn (189.925 nm)	2.059160	ppm	0.001504	0.07	2411.850000	Y 377.433
Sr (421.552 nm)	1.021358	ppm	0.000091	0.01	118836.181116	Y_R 488.368
Th (288.505 nm)	0.977936	ppm	0.011516	1.18	1030.920000	Y 377.433
Ti (336.122 nm)	1.036070	ppm	0.002260	0.22	98279.100000	Y 377.433
Tl (190.794 nm)	2.052150	ppm	0.007397	0.36	1165.150000	Y 377.433
U (409.013 nm)	2.087190	ppm	0.000564	0.03	4835.390000	Y 377.433
V (292.401 nm)	0.515356	ppm	0.001819	0.35	24697.600000	Y 377.433
Zn (206.200 nm)	0.506131	ppm	0.000116	0.02	1753.720000	Y 377.433
Zr (343.823 nm)	0.514749	ppm	0.001486	0.29	20742.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074615	11447.003222	0.001841	0.17
Y 377.433	1.068218	493129.227082	0.003322	0.31
Y_R 377.433	1.100700	41593.000000	0.000097	0.01
Y_R 488.368	1.101180	39741.500000	0.001577	0.14
Y_R2 488.368	1.100720	77465.052409	0.005480	0.50
Y_R4	1.089260	33423.100000	0.001908	0.18

Sample Name: 280-116076-P-1-D

Date: 11/5/2018 6:35:11 PM Rack:Tube: 1:39

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002398	ppm	0.000520	21.71	-174.378000	Y 377.433
Al (394.401 nm)	0.366877	ppm	0.000763	0.21	4990.030000	Y 377.433
Al H (396.152 nm)	0.251087 u	ppm	0.010594	4.22	624.987000	Y_R 377.433
As (188.980 nm)	0.049228	ppm	0.000436	0.88	53.676100	Y 242.219
B (249.678 nm)	33.784100	ppm	0.016913	0.05	135694.000000	Y 242.219
Ba (493.408 nm)	0.248653	ppm	0.001625	0.65	23562.700000	Y_R 488.368
Be (234.861 nm)	0.000335	ppm	0.000017	4.95	-88.376400	Y_R 488.368
Bi (223.061 nm)	0.013637	ppm	0.002760	20.24	67.155400	Y 377.433
Ca (315.887 nm)	99.474371	ppm	0.381276	0.38	65702.461852	Y_R 377.433
Cd (214.439 nm)	0.000530	ppm	0.000007	1.39	2.049870	Y 377.433
Co (228.615 nm)	0.023035	ppm	0.000254	1.10	530.803000	Y 242.219
Cr (205.560 nm)	0.057325	ppm	0.000036	0.06	263.973000	Y 377.433
Cu (324.754 nm)	0.017320	ppm	0.000369	2.13	999.409000	Y 377.433
Fe (238.204 nm)	7.099408 o	ppm	0.011977	0.17	11840.351517	Y_R 377.433
Fe H (259.940 nm)	7.121740	ppm	0.010870	0.15	6524.280000	Y_R 377.433
K (766.491 nm)	292.819000	ppm	1.245510	0.43	287920.000000	Y_R2 488.368
Li (670.783 nm)	0.266325	ppm	0.000350	0.13	3325.220000	Y_R2 488.368
Mg (279.078 nm)	271.740000	ppm	0.023238	0.01	591968.000000	Y 377.433
Mn (257.610 nm)	0.185371	ppm	0.000266	0.14	38806.600000	Y 377.433
Mo (202.032 nm)	0.021404	ppm	0.000011	0.05	262.185000	Y 377.433
Na (589.592 nm)	2223.690000 bo	ppm	9.217240	0.41	1117040.000000	Y_R2 488.368
Na H (589.593 nm)	2966.883947 bo	ppm	23.571128	0.79	1058980.893776	Y_R4
Ni (231.604 nm)	0.195062	ppm	0.001406	0.72	757.586000	Y 377.433
P (213.618 nm)	3.515170	ppm	0.004507	0.13	4076.000000	Y 242.219
Pb (220.353 nm)	-0.000303 u	ppm	0.003093	> 100.00	13.240700	Y 242.219
S (181.972 nm)	478.351801 bo	ppm	0.495919	0.10	228459.918972	Y 377.433
Sb (206.834 nm)	-0.008298 u	ppm	0.003404	41.02	-14.243700	Y 377.433
Se (196.026 nm)	0.005617	ppm	0.002054	36.56	8.524170	Y 242.219
Si (288.158 nm)	18.648000	ppm	0.026334	0.14	84826.100000	Y 377.433
Sn (189.925 nm)	-0.008426 u	ppm	0.000392	4.66	-1.773510	Y 377.433
Sr (421.552 nm)	1.410829	ppm	0.005717	0.41	164046.261549	Y_R 488.368
Th (288.505 nm)	-0.009234 u	ppm	0.009541	> 100.00	0.845400	Y 377.433
Ti (336.122 nm)	0.097210	ppm	0.000183	0.19	9130.670000	Y 377.433
Tl (190.794 nm)	-0.013753 u	ppm	0.001787	12.99	-18.034600	Y 377.433
U (409.013 nm)	-0.137440 u	ppm	0.001410	1.03	-209.520000	Y 377.433
V (292.401 nm)	0.052934	ppm	0.000064	0.12	2368.540000	Y 377.433
Zn (206.200 nm)	0.520938	ppm	0.000052	0.01	1805.540000	Y 377.433
Zr (343.823 nm)	0.050468	ppm	0.000053	0.10	1926.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.919451	9794.167504	0.000862	0.09
Y 377.433	0.938339	433172.499734	0.002759	0.29
Y_R 377.433	1.065780	40273.300000	0.000974	0.09
Y_R 488.368	1.065160	38441.700000	0.003366	0.32
Y_R2 488.368	1.052096	74043.059654	0.000008	0.00
Y_R4	1.037100	31822.700000	0.001535	0.15

Sample Name: 280-116076-P-1-D

Date: 11/5/2018 6:39:17 PM Rack:Tube: 1:40

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001016	ppm	0.001194	> 100.00	-210.738000	Y 377.433
Al (394.401 nm)	0.075764	ppm	0.000654	0.86	1085.840000	Y 377.433
Al H (396.152 nm)	0.155975 u	ppm	0.006163	3.95	120.667000	Y_R 377.433
As (188.980 nm)	0.008233	ppm	0.002663	32.34	-3.614580	Y 242.219
B (249.678 nm)	6.416240	ppm	0.090235	1.41	25808.700000	Y 242.219
Ba (493.408 nm)	0.046025	ppm	0.000681	1.48	5014.210000	Y_R 488.368
Be (234.861 nm)	0.000081	ppm	0.000070	86.72	-20.976800	Y_R 488.368
Bi (223.061 nm)	0.005988	ppm	0.000739	12.33	53.406200	Y 377.433
Ca (315.887 nm)	19.299248	ppm	0.041782	0.22	12745.213058	Y_R 377.433
Cd (214.439 nm)	0.000130	ppm	0.000015	11.27	-7.921650	Y 377.433
Co (228.615 nm)	0.004973	ppm	0.000200	4.01	92.373400	Y 242.219
Cr (205.560 nm)	0.012019	ppm	0.000436	3.63	47.961100	Y 377.433
Cu (324.754 nm)	0.003211	ppm	0.000037	1.17	352.005000	Y 377.433
Fe (238.204 nm)	1.369189	ppm	0.006720	0.49	2292.835437	Y_R 377.433
Fe H (259.940 nm)	1.367890 u	ppm	0.001945	0.14	1244.240000	Y_R 377.433
K (766.491 nm)	52.292500	ppm	0.029310	0.06	52843.500000	Y_R2 488.368
Li (670.783 nm)	0.056425	ppm	0.001869	3.31	352.280000	Y_R2 488.368
Mg (279.078 nm)	53.930400	ppm	0.764603	1.42	117496.000000	Y 377.433
Mn (257.610 nm)	0.036746	ppm	0.000494	1.35	7710.680000	Y 377.433
Mo (202.032 nm)	0.004311	ppm	0.000131	3.03	67.719800	Y 377.433
Na (589.592 nm)	547.370000 o	ppm	0.002592	0.00	274861.000000	Y_R2 488.368
Na H (589.593 nm)	588.603276	ppm	0.548523	0.09	209779.670539	Y_R4
Ni (231.604 nm)	0.040286	ppm	0.000971	2.41	163.649000	Y 377.433
P (213.618 nm)	0.660182	ppm	0.009784	1.48	764.610000	Y 242.219
Pb (220.353 nm)	-0.001889 u	ppm	0.001098	58.12	10.076700	Y 242.219
S (181.972 nm)	93.829139	ppm	1.348448	1.44	44791.937335	Y 377.433
Sb (206.834 nm)	-0.005708 u	ppm	0.003657	64.07	-10.424700	Y 377.433
Se (196.026 nm)	0.003991	ppm	0.002325	58.25	7.341710	Y 242.219
Si (288.158 nm)	3.375950	ppm	0.034182	1.01	16408.700000	Y 377.433
Sn (189.925 nm)	-0.007273 u	ppm	0.000829	11.39	-0.427382	Y 377.433
Sr (421.552 nm)	0.260258	ppm	0.001804	0.69	30488.824583	Y_R 488.368
Th (288.505 nm)	-0.003796 u	ppm	0.002544	67.02	9.518150	Y 377.433
Ti (336.122 nm)	0.019236	ppm	0.000014	0.07	1512.770000	Y 377.433
Tl (190.794 nm)	-0.013506 u	ppm	0.002468	18.27	-16.816200	Y 377.433
U (409.013 nm)	-0.058380 u	ppm	0.005104	8.74	-20.530000	Y 377.433
V (292.401 nm)	0.010272	ppm	0.000242	2.35	305.464000	Y 377.433
Zn (206.200 nm)	0.107071	ppm	0.001484	1.39	374.574000	Y 377.433
Zr (343.823 nm)	0.009777	ppm	0.000127	1.30	277.664000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032614	10999.605648	0.004108	0.40
Y 377.433	1.030713	475815.729604	0.003433	0.33
Y_R 377.433	1.090670	41214.100000	0.001967	0.18
Y_R 488.368	1.092570	39430.800000	0.003509	0.32
Y_R2 488.368	1.086644	76474.437583	0.002229	0.21
Y_R4	1.097410	33673.200000	0.005878	0.54

Sample Name: 280-116076-P-1-E MS

Date: 11/5/2018 6:42:45 PM Rack:Tube: 1:41

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.058818	ppm	0.000214	0.36	1341.260000	Y 377.433
Al (394.401 nm)	2.411780	ppm	0.004777	0.20	30770.200000	Y 377.433
Al H (396.152 nm)	2.175410	ppm	0.006433	0.30	4189.900000	Y_R 377.433
As (188.980 nm)	1.094790	ppm	0.004963	0.45	1518.610000	Y 242.219
B (249.678 nm)	36.051700	ppm	0.036206	0.10	144799.000000	Y 242.219
Ba (493.408 nm)	2.297560	ppm	0.002896	0.13	211078.000000	Y_R 488.368
Be (234.861 nm)	0.047503	ppm	0.000577	1.21	2338.510000	Y_R 488.368
Bi (223.061 nm)	1.975520	ppm	0.010422	0.53	3301.070000	Y 377.433
Ca (315.887 nm)	149.241781	ppm	0.019855	0.01	98575.231140	Y_R 377.433
Cd (214.439 nm)	0.093524	ppm	0.000937	1.00	2317.600000	Y 377.433
Co (228.615 nm)	0.502555	ppm	0.000061	0.01	11951.900000	Y 242.219
Cr (205.560 nm)	0.252521	ppm	0.000474	0.19	1191.830000	Y 377.433
Cu (324.754 nm)	0.284181	ppm	0.000076	0.03	13873.900000	Y 377.433
Fe (238.204 nm)	8.206073 o	ppm	0.011582	0.14	13684.242471	Y_R 377.433
Fe H (259.940 nm)	8.226840	ppm	0.002798	0.03	7538.380000	Y_R 377.433
K (766.491 nm)	348.020000	ppm	0.363712	0.10	341869.000000	Y_R2 488.368
Li (670.783 nm)	1.347170	ppm	0.004464	0.33	18633.800000	Y_R2 488.368
Mg (279.078 nm)	324.115000	ppm	0.110364	0.03	706040.000000	Y 377.433
Mn (257.610 nm)	0.672575	ppm	0.000168	0.03	140741.000000	Y 377.433
Mo (202.032 nm)	1.013740	ppm	0.000967	0.10	11551.600000	Y 377.433
Na (589.592 nm)	2253.670000 bo	ppm	4.925480	0.22	1132070.000000	Y_R2 488.368
Na H (589.593 nm)	3031.145745 bo	ppm	14.208792	0.47	1081725.337781	Y_R4
Ni (231.604 nm)	0.659555	ppm	0.001778	0.27	2539.130000	Y 377.433
P (213.618 nm)	14.139500	ppm	0.051366	0.36	16389.000000	Y 242.219
Pb (220.353 nm)	0.475434	ppm	0.001737	0.37	1075.940000	Y 242.219
S (181.972 nm)	490.811927 bo	ppm	0.365360	0.07	234415.543605	Y 377.433
Sb (206.834 nm)	0.521737	ppm	0.002619	0.50	847.422000	Y 377.433
Se (196.026 nm)	2.096180	ppm	0.001468	0.07	3152.130000	Y 242.219
Si (288.158 nm)	25.950900	ppm	0.027154	0.10	117542.000000	Y 377.433
Sn (189.925 nm)	1.873890	ppm	0.005804	0.31	2195.580000	Y 377.433
Sr (421.552 nm)	2.464976	ppm	0.001064	0.04	286410.350385	Y_R 488.368
Th (288.505 nm)	0.934595	ppm	0.016118	1.72	981.784000	Y 377.433
Ti (336.122 nm)	1.130830	ppm	0.001148	0.10	107540.000000	Y 377.433
Tl (190.794 nm)	1.777480	ppm	0.000707	0.04	1006.390000	Y 377.433
U (409.013 nm)	2.013950	ppm	0.006782	0.34	4658.180000	Y 377.433
V (292.401 nm)	0.550732	ppm	0.000298	0.05	26413.400000	Y 377.433
Zn (206.200 nm)	0.992158	ppm	0.002362	0.24	3434.240000	Y 377.433
Zr (343.823 nm)	0.560472	ppm	0.001698	0.30	22594.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.896655	9551.337582	0.002515	0.28
Y 377.433	0.925418	427207.707390	0.002889	0.31
Y_R 377.433	1.052420	39768.600000	0.003678	0.35
Y_R 488.368	1.053380	38016.400000	0.004869	0.46
Y_R2 488.368	1.031882	72620.489862	0.005727	0.55
Y_R4	1.016440	31188.500000	0.005498	0.54

Sample Name: 280-116076-P-1-F MSD

Date: 11/5/2018 6:46:51 PM Rack:Tube: 1:42

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.059714	ppm	0.000716	1.20	1365.320000	Y 377.433
Al (394.401 nm)	2.496910	ppm	0.001052	0.04	31845.900000	Y 377.433
Al H (396.152 nm)	2.212620	ppm	0.008931	0.40	4266.190000	Y_R 377.433
As (188.980 nm)	1.123530	ppm	0.001174	0.10	1558.880000	Y 242.219
B (249.678 nm)	37.190100	ppm	0.021721	0.06	149369.000000	Y 242.219
Ba (493.408 nm)	2.345600	ppm	0.003079	0.13	215474.000000	Y_R 488.368
Be (234.861 nm)	0.047977	ppm	0.000349	0.73	2361.700000	Y_R 488.368
Bi (223.061 nm)	2.025330	ppm	0.000679	0.03	3383.190000	Y 377.433
Ca (315.887 nm)	151.334835	ppm	0.143464	0.09	99957.742959	Y_R 377.433
Cd (214.439 nm)	0.094925	ppm	0.000183	0.19	2352.480000	Y 377.433
Co (228.615 nm)	0.516280	ppm	0.001929	0.37	12278.500000	Y 242.219
Cr (205.560 nm)	0.257281	ppm	0.002156	0.84	1214.500000	Y 377.433
Cu (324.754 nm)	0.293094	ppm	0.000119	0.04	14301.800000	Y 377.433
Fe (238.204 nm)	8.319392 o	ppm	0.016645	0.20	13873.052367	Y_R 377.433
Fe H (259.940 nm)	8.347210	ppm	0.022968	0.28	7648.830000	Y_R 377.433
K (766.491 nm)	351.814000	ppm	0.546564	0.16	345578.000000	Y_R2 488.368
Li (670.783 nm)	1.378900	ppm	0.006877	0.50	19083.300000	Y_R2 488.368
Mg (279.078 nm)	326.411000	ppm	0.732560	0.22	711041.000000	Y 377.433
Mn (257.610 nm)	0.683410	ppm	0.000172	0.03	143008.000000	Y 377.433
Mo (202.032 nm)	1.026680	ppm	0.001283	0.12	11698.800000	Y 377.433
Na (589.592 nm)	2240.820000 bo	ppm	15.469700	0.69	1125610.000000	Y_R2 488.368
Na H (589.593 nm)	3028.756649 bo	ppm	6.582458	0.22	1080867.124401	Y_R4
Ni (231.604 nm)	0.666642	ppm	0.000066	0.01	2566.310000	Y 377.433
P (213.618 nm)	14.548700	ppm	0.008867	0.06	16863.400000	Y 242.219
Pb (220.353 nm)	0.486103	ppm	0.001933	0.40	1099.810000	Y 242.219
S (181.972 nm)	498.978427 bo	ppm	0.337263	0.07	238316.296788	Y 377.433
Sb (206.834 nm)	0.530002	ppm	0.005929	1.12	860.902000	Y 377.433
Se (196.026 nm)	2.165380	ppm	0.003076	0.14	3256.160000	Y 242.219
Si (288.158 nm)	26.610600	ppm	0.058435	0.22	120498.000000	Y 377.433
Sn (189.925 nm)	1.902250	ppm	0.001315	0.07	2228.680000	Y 377.433
Sr (421.552 nm)	2.506482	ppm	0.000821	0.03	291228.388446	Y_R 488.368
Th (288.505 nm)	0.944625	ppm	0.002414	0.26	992.179000	Y 377.433
Ti (336.122 nm)	1.152930	ppm	0.000270	0.02	109644.000000	Y 377.433
Tl (190.794 nm)	1.794860	ppm	0.006194	0.35	1016.320000	Y 377.433
U (409.013 nm)	2.081330	ppm	0.020328	0.98	4811.250000	Y 377.433
V (292.401 nm)	0.558518	ppm	0.000091	0.02	26787.300000	Y 377.433
Zn (206.200 nm)	1.001390	ppm	0.000987	0.10	3466.160000	Y 377.433
Zr (343.823 nm)	0.570372	ppm	0.002329	0.41	22996.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.905188	9642.232470	0.003184	0.35
Y 377.433	0.940931	434369.057761	0.003655	0.39
Y_R 377.433	1.084640	40986.000000	0.005936	0.55
Y_R 488.368	1.087070	39232.200000	0.004758	0.44
Y_R2 488.368	1.064980	74949.813042	0.006229	0.58
Y_R4	1.046840	32121.500000	0.002874	0.27

Sample Name: 280-116076-P-1-D@10

Date: 11/5/2018 6:50:38 PM Rack:Tube: 1:43

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000094 u	ppm	0.000408	> 100.00	-236.072000	Y 377.433
Al (394.401 nm)	0.041251	ppm	0.001223	2.97	627.642000	Y 377.433
Al H (396.152 nm)	0.149360 u	ppm	0.001417	0.95	71.833300	Y_R 377.433
As (188.980 nm)	0.004492	ppm	0.001826	40.65	-8.839770	Y 242.219
B (249.678 nm)	3.269960	ppm	0.009567	0.29	13176.000000	Y 242.219
Ba (493.408 nm)	0.023207	ppm	0.000232	1.00	2925.390000	Y_R 488.368
Be (234.861 nm)	0.000143	ppm	0.000082	57.00	-8.463390	Y_R 488.368
Bi (223.061 nm)	0.000795 u	ppm	0.007621	> 100.00	44.717700	Y 377.433
Ca (315.887 nm)	10.009269	ppm	0.005422	0.05	6609.000607	Y_R 377.433
Cd (214.439 nm)	0.000114 u	ppm	0.000256	> 100.00	-8.310230	Y 377.433
Co (228.615 nm)	0.002733	ppm	0.000122	4.45	38.079900	Y 242.219
Cr (205.560 nm)	0.006169	ppm	0.000064	1.04	20.068200	Y 377.433
Cu (324.754 nm)	0.001935	ppm	0.000271	13.99	293.070000	Y 377.433
Fe (238.204 nm)	0.710473	ppm	0.005676	0.80	1195.304213	Y_R 377.433
Fe H (259.940 nm)	0.706787 u	ppm	0.002613	0.37	637.577000	Y_R 377.433
K (766.491 nm)	26.521200	ppm	0.006164	0.02	27656.200000	Y_R2 488.368
Li (670.783 nm)	0.031676	ppm	0.002289	7.23	1.752670	Y_R2 488.368
Mg (279.078 nm)	27.229700	ppm	0.015773	0.06	59331.500000	Y 377.433
Mn (257.610 nm)	0.018762	ppm	0.000035	0.19	3948.000000	Y 377.433
Mo (202.032 nm)	0.001956	ppm	0.000214	10.94	40.934000	Y 377.433
Na (589.592 nm)	289.000000 o	ppm	0.646003	0.22	145057.000000	Y_R2 488.368
Na H (589.593 nm)	305.651033	ppm	1.339050	0.44	108747.130787	Y_R4
Ni (231.604 nm)	0.020810	ppm	0.001080	5.19	88.929400	Y 377.433
P (213.618 nm)	0.335509	ppm	0.005623	1.68	388.029000	Y 242.219
Pb (220.353 nm)	-0.005914 u	ppm	0.002776	46.94	1.137930	Y 242.219
S (181.972 nm)	47.042039	ppm	0.130118	0.28	22444.013126	Y 377.433
Sb (206.834 nm)	-0.002326 u	ppm	0.002146	92.28	-4.906300	Y 377.433
Se (196.026 nm)	0.004560	ppm	0.001674	36.72	8.340480	Y 242.219
Si (288.158 nm)	1.605540	ppm	0.008487	0.53	8477.480000	Y 377.433
Sn (189.925 nm)	-0.007289 u	ppm	0.000903	12.39	-0.446510	Y 377.433
Sr (421.552 nm)	0.135280	ppm	0.000124	0.09	15981.391990	Y_R 488.368
Th (288.505 nm)	-0.008205 u	ppm	0.001625	19.81	5.177370	Y 377.433
Ti (336.122 nm)	0.010158	ppm	0.000043	0.43	625.853000	Y 377.433
Tl (190.794 nm)	-0.002495 u	ppm	0.002805	> 100.00	-10.377800	Y 377.433
U (409.013 nm)	-0.030748 u	ppm	0.000231	0.75	43.585600	Y 377.433
V (292.401 nm)	0.005170	ppm	0.000082	1.59	57.982500	Y 377.433
Zn (206.200 nm)	0.054885	ppm	0.000141	0.26	194.141000	Y 377.433
Zr (343.823 nm)	0.005164	ppm	0.000092	1.79	90.753900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060199	11293.438793	0.006545	0.62
Y 377.433	1.057404	488137.410898	0.007787	0.74
Y_R 377.433	1.107300	41842.300000	0.001300	0.12
Y_R 488.368	1.110080	40062.900000	0.003400	0.31
Y_R2 488.368	1.110424	78148.024546	0.009745	0.88
Y_R4	1.084010	33262.100000	0.003771	0.35

Sample Name: 280-116076-P-1-Dsd@50

Date: 11/5/2018 6:54:06 PM Rack:Tube: 1:44

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000032 u	ppm	0.000102	> 100.00	-238.052000	Y 377.433
Al (394.401 nm)	0.009615	ppm	0.000985	10.25	211.273000	Y 377.433
Al H (396.152 nm)	0.142191 u	ppm	0.002118	1.49	27.106400	Y_R 377.433
As (188.980 nm)	-0.000103 u	ppm	0.003313	> 100.00	-15.263600	Y 242.219
B (249.678 nm)	0.647410	ppm	0.001756	0.27	2646.130000	Y 242.219
Ba (493.408 nm)	0.003306	ppm	0.000106	3.21	1103.670000	Y_R 488.368
Be (234.861 nm)	0.000127	ppm	0.000026	20.92	-1.358520	Y_R 488.368
Bi (223.061 nm)	-0.002639 u	ppm	0.001344	50.94	38.950000	Y 377.433
Ca (315.887 nm)	2.026409	ppm	0.003836	0.19	1336.165037	Y_R 377.433
Cd (214.439 nm)	-0.000038 u	ppm	0.000112	> 100.00	-12.103100	Y 377.433
Co (228.615 nm)	0.000832	ppm	0.000156	18.78	-7.997650	Y 242.219
Cr (205.560 nm)	0.001856	ppm	0.001009	54.35	-0.493281	Y 377.433
Cu (324.754 nm)	0.000480	ppm	0.000351	73.22	224.803000	Y 377.433
Fe (238.204 nm)	0.142663	ppm	0.002068	1.45	249.235808	Y_R 377.433
Fe H (259.940 nm)	0.146655 u	ppm	0.001037	0.71	123.571000	Y_R 377.433
K (766.491 nm)	5.387320	ppm	0.063616	1.18	7001.160000	Y_R2 488.368
Li (670.783 nm)	0.016960	ppm	0.005542	32.68	-206.685000	Y_R2 488.368
Mg (279.078 nm)	5.474480	ppm	0.030501	0.56	11939.900000	Y 377.433
Mn (257.610 nm)	0.003859	ppm	0.000034	0.89	830.127000	Y 377.433
Mo (202.032 nm)	0.000390	ppm	0.000391	> 100.00	23.119200	Y 377.433
Na (589.592 nm)	60.725100 o	ppm	0.272848	0.45	30372.200000	Y_R2 488.368
Na H (589.593 nm)	67.344811	ppm	0.421359	0.63	23656.284009	Y_R4
Ni (231.604 nm)	0.003717	ppm	0.000100	2.69	23.343600	Y 377.433
P (213.618 nm)	0.067967	ppm	0.003529	5.19	77.730300	Y 242.219
Pb (220.353 nm)	-0.001961 u	ppm	0.003499	> 100.00	10.061400	Y 242.219
S (181.972 nm)	9.289919	ppm	0.021124	0.23	4411.636611	Y 377.433
Sb (206.834 nm)	-0.001493 u	ppm	0.001624	> 100.00	-3.571800	Y 377.433
Se (196.026 nm)	0.003921	ppm	0.002561	65.31	7.505460	Y 242.219
Si (288.158 nm)	0.162194	ppm	0.001437	0.89	2011.420000	Y 377.433
Sn (189.925 nm)	-0.007213 u	ppm	0.000257	3.57	-0.356756	Y 377.433
Sr (421.552 nm)	0.026469	ppm	0.000270	1.02	3350.734594	Y_R 488.368
Th (288.505 nm)	-0.002959 u	ppm	0.000728	24.60	11.116700	Y 377.433
Ti (336.122 nm)	0.002494	ppm	0.000045	1.81	-123.048000	Y 377.433
Tl (190.794 nm)	-0.001106 u	ppm	0.001197	> 100.00	-9.475350	Y 377.433
U (409.013 nm)	-0.010802 u	ppm	0.001066	9.86	89.978600	Y 377.433
V (292.401 nm)	0.001586	ppm	0.000044	2.76	-116.853000	Y 377.433
Zn (206.200 nm)	0.010740	ppm	0.000165	1.53	41.511700	Y 377.433
Zr (343.823 nm)	0.001278	ppm	0.000221	17.30	-66.745400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.086385	11572.380463	0.018610	1.71
Y 377.433	1.077963	497627.959124	0.019710	1.83
Y_R 377.433	1.147340	43355.300000	0.000893	0.08
Y_R 488.368	1.152170	41581.900000	0.006931	0.60
Y_R2 488.368	1.141991	80369.626915	0.003806	0.33
Y_R4	1.096600	33648.200000	0.008822	0.80

Sample Name: 280-116076-P-1-E MS@10

Date: 11/5/2018 6:57:30 PM Rack:Tube: 1:45

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.004785	ppm	0.000020	0.41	-110.357000	Y 377.433
Al (394.401 nm)	0.221202	ppm	0.011840	5.35	2886.810000	Y 377.433
Al H (396.152 nm)	0.295626 u	ppm	0.007649	2.59	338.690000	Y_R 377.433
As (188.980 nm)	0.091497	ppm	0.005572	6.09	113.066000	Y 242.219
B (249.678 nm)	3.056950	ppm	0.168934	5.53	12320.700000	Y 242.219
Ba (493.408 nm)	0.184476	ppm	0.000614	0.33	17684.600000	Y_R 488.368
Be (234.861 nm)	0.004516	ppm	0.000144	3.19	218.329000	Y_R 488.368
Bi (223.061 nm)	0.163214	ppm	0.013994	8.57	312.423000	Y 377.433
Ca (315.887 nm)	12.708869	ppm	0.018466	0.15	8392.170124	Y_R 377.433
Cd (214.439 nm)	0.008933	ppm	0.000458	5.12	211.272000	Y 377.433
Co (228.615 nm)	0.046510	ppm	0.002259	4.86	1080.290000	Y 242.219
Cr (205.560 nm)	0.023411	ppm	0.001484	6.34	102.015000	Y 377.433
Cu (324.754 nm)	0.024648	ppm	0.001123	4.55	1390.690000	Y 377.433
Fe (238.204 nm)	0.687834	ppm	0.001061	0.15	1157.583513	Y_R 377.433
Fe H (259.940 nm)	0.686491 u	ppm	0.002018	0.29	618.953000	Y_R 377.433
K (766.491 nm)	26.942800	ppm	0.022369	0.08	28068.200000	Y_R2 488.368
Li (670.783 nm)	0.111261	ppm	0.005170	4.65	1128.960000	Y_R2 488.368
Mg (279.078 nm)	29.188100	ppm	1.562640	5.35	63595.900000	Y 377.433
Mn (257.610 nm)	0.061251	ppm	0.003335	5.45	12837.900000	Y 377.433
Mo (202.032 nm)	0.092435	ppm	0.005377	5.82	1070.270000	Y 377.433
Na (589.592 nm)	252.509000 o	ppm	0.450690	0.18	126721.000000	Y_R2 488.368
Na H (589.593 nm)	261.656619	ppm	1.537454	0.59	93022.013405	Y_R4
Ni (231.604 nm)	0.062218	ppm	0.002550	4.10	247.729000	Y 377.433
P (213.618 nm)	1.196160	ppm	0.067043	5.60	1385.430000	Y 242.219
Pb (220.353 nm)	0.041243	ppm	0.004132	10.02	106.465000	Y 242.219
S (181.972 nm)	42.785411	ppm	2.337495	5.46	20411.156501	Y 377.433
Sb (206.834 nm)	0.042386	ppm	0.002318	5.47	67.715900	Y 377.433
Se (196.026 nm)	0.179286	ppm	0.009440	5.27	271.112000	Y 242.219
Si (288.158 nm)	1.993680	ppm	0.129720	6.51	10216.300000	Y 377.433
Sn (189.925 nm)	0.169208	ppm	0.008063	4.77	205.590000	Y 377.433
Sr (421.552 nm)	0.198409	ppm	0.001510	0.76	23309.401916	Y_R 488.368
Th (288.505 nm)	0.076678	ppm	0.000338	0.44	93.467700	Y 377.433
Ti (336.122 nm)	0.099080	ppm	0.005560	5.61	9088.000000	Y 377.433
Tl (190.794 nm)	0.172668	ppm	0.003459	2.00	89.849100	Y 377.433
U (409.013 nm)	0.145049	ppm	0.004689	3.23	441.263000	Y 377.433
V (292.401 nm)	0.049410	ppm	0.002603	5.27	2195.590000	Y 377.433
Zn (206.200 nm)	0.093345	ppm	0.005278	5.65	327.061000	Y 377.433
Zr (343.823 nm)	0.048663	ppm	0.002915	5.99	1853.540000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051530	11201.098839	0.002352	0.22
Y 377.433	1.051320	485328.491355	0.001325	0.13
Y_R 377.433	1.096420	41431.400000	0.000442	0.04
Y_R 488.368	1.098520	39645.700000	0.004947	0.45
Y_R2 488.368	1.092344	76875.617000	0.004754	0.44
Y_R4	1.077760	33070.200000	0.009825	0.91

Sample Name: 280-116076-P-1-F MSD@10

Date: 11/5/2018 7:00:57 PM Rack:Tube: 1:46

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.005388	ppm	0.000470	8.73	-94.108100	Y 377.433
Al (394.401 nm)	0.237406	ppm	0.008237	3.47	3091.820000	Y 377.433
Al H (396.152 nm)	0.310600 u	ppm	0.004719	1.52	368.084000	Y_R 377.433
As (188.980 nm)	0.095993	ppm	0.004494	4.68	119.364000	Y 242.219
B (249.678 nm)	3.258710	ppm	0.122762	3.77	13130.800000	Y 242.219
Ba (493.408 nm)	0.199626	ppm	0.000614	0.31	19071.100000	Y_R 488.368
Be (234.861 nm)	0.004973	ppm	0.000051	1.03	241.249000	Y_R 488.368
Bi (223.061 nm)	0.179059	ppm	0.010426	5.82	338.550000	Y 377.433
Ca (315.887 nm)	13.645703	ppm	0.087064	0.64	9010.970923	Y_R 377.433
Cd (214.439 nm)	0.009412	ppm	0.000411	4.37	223.208000	Y 377.433
Co (228.615 nm)	0.049937	ppm	0.001766	3.54	1161.970000	Y 242.219
Cr (205.560 nm)	0.025375	ppm	0.000884	3.48	111.362000	Y 377.433
Cu (324.754 nm)	0.026757	ppm	0.001284	4.80	1492.430000	Y 377.433
Fe (238.204 nm)	0.739265	ppm	0.003224	0.44	1243.275691	Y_R 377.433
Fe H (259.940 nm)	0.732828 u	ppm	0.009421	1.29	661.474000	Y_R 377.433
K (766.491 nm)	28.708000	ppm	0.030834	0.11	29793.400000	Y_R2 488.368
Li (670.783 nm)	0.119355	ppm	0.000931	0.78	1243.590000	Y_R2 488.368
Mg (279.078 nm)	31.224800	ppm	1.005740	3.22	68032.600000	Y 377.433
Mn (257.610 nm)	0.065789	ppm	0.002344	3.56	13787.300000	Y 377.433
Mo (202.032 nm)	0.098741	ppm	0.003042	3.08	1142.010000	Y 377.433
Na (589.592 nm)	268.383000 o	ppm	0.437349	0.16	134696.000000	Y_R2 488.368
Na H (589.593 nm)	279.407405	ppm	0.203991	0.07	99358.845403	Y_R4
Ni (231.604 nm)	0.066291	ppm	0.002441	3.68	263.357000	Y 377.433
P (213.618 nm)	1.281350	ppm	0.056468	4.41	1484.180000	Y 242.219
Pb (220.353 nm)	0.043556	ppm	0.004640	10.65	111.623000	Y 242.219
S (181.972 nm)	45.942953	ppm	1.668733	3.63	21919.387260	Y 377.433
Sb (206.834 nm)	0.042403	ppm	0.003728	8.79	67.682900	Y 377.433
Se (196.026 nm)	0.190615	ppm	0.009055	4.75	288.138000	Y 242.219
Si (288.158 nm)	2.145100	ppm	0.078973	3.68	10894.600000	Y 377.433
Sn (189.925 nm)	0.180866	ppm	0.004705	2.60	219.200000	Y 377.433
Sr (421.552 nm)	0.214507	ppm	0.000219	0.10	25177.954111	Y_R 488.368
Th (288.505 nm)	0.083354	ppm	0.004220	5.06	100.384000	Y 377.433
Ti (336.122 nm)	0.106478	ppm	0.003821	3.59	9793.840000	Y 377.433
Tl (190.794 nm)	0.183106	ppm	0.004139	2.26	95.808800	Y 377.433
U (409.013 nm)	0.169879	ppm	0.000949	0.56	497.704000	Y 377.433
V (292.401 nm)	0.053115	ppm	0.002078	3.91	2374.790000	Y 377.433
Zn (206.200 nm)	0.100644	ppm	0.003661	3.64	352.294000	Y 377.433
Zr (343.823 nm)	0.051835	ppm	0.001576	3.04	1982.090000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063037	11323.678662	0.001981	0.19
Y 377.433	1.057309	488093.357941	0.001581	0.15
Y_R 377.433	1.109860	41939.000000	0.010537	0.95
Y_R 488.368	1.104870	39874.600000	0.006348	0.57
Y_R2 488.368	1.104824	77753.921727	0.002791	0.25
Y_R4	1.089010	33415.500000	0.001527	0.14

Sample Name: CCVH-5408055

Date: 11/5/2018 7:04:25 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000871	ppm	0.000018	2.06	-325.767000	Y 377.433
Al (394.401 nm)	51.963100 o	ppm	0.110573	0.21	647121.000000	Y 377.433
Al H (396.152 nm)	49.964400	ppm	0.005384	0.01	82170.000000	Y_R 377.433
As (188.980 nm)	-0.002714 u	ppm	0.002395	88.25	-21.005300	Y 242.219
B (249.678 nm)	0.002639	ppm	0.002512	95.19	41.196100	Y 242.219
Ba (493.408 nm)	-0.000355 u	ppm	0.000074	20.94	804.776000	Y_R 488.368
Be (234.861 nm)	0.000113	ppm	0.000063	56.16	-697.427000	Y_R 488.368
Bi (223.061 nm)	0.991763	ppm	0.007206	0.73	1684.390000	Y 377.433
Ca (315.887 nm)	-0.009306 u	ppm	0.007638	82.07	1.879601	Y_R 377.433
Cd (214.439 nm)	0.000287	ppm	0.000028	9.69	-4.023850	Y 377.433
Co (228.615 nm)	0.001286	ppm	0.000257	19.97	57.746800	Y 242.219
Cr (205.560 nm)	0.001157	ppm	0.000062	5.37	-4.775950	Y 377.433
Cu (324.754 nm)	-0.000280 u	ppm	0.000045	16.01	648.592000	Y 377.433
Fe (238.204 nm)	49.524696 o	ppm	0.086848	0.18	82528.070182	Y_R 377.433
Fe H (259.940 nm)	49.660900	ppm	0.086769	0.17	45560.400000	Y_R 377.433
K (766.491 nm)	0.359529	ppm	0.057847	16.09	2087.300000	Y_R2 488.368
Li (670.783 nm)	0.010784	ppm	0.000076	0.70	-294.164000	Y_R2 488.368
Mg (279.078 nm)	-0.028706 u	ppm	0.002874	10.01	-199.687000	Y 377.433
Mn (257.610 nm)	0.000318	ppm	0.000024	7.51	89.125600	Y 377.433
Mo (202.032 nm)	-0.000880 u	ppm	0.000286	32.49	8.673750	Y 377.433
Na (589.592 nm)	250.601000 o	ppm	1.565840	0.62	125766.000000	Y_R2 488.368
Na H (589.593 nm)	258.170687	ppm	1.736004	0.67	91795.556578	Y_R4
Ni (231.604 nm)	0.000386 u	ppm	0.000627	> 100.00	17.961500	Y 377.433
P (213.618 nm)	-0.011402 u	ppm	0.001074	9.42	-15.589400	Y 242.219
Pb (220.353 nm)	-0.000854 u	ppm	0.001175	> 100.00	22.896800	Y 242.219
S (181.972 nm)	5.051146	ppm	0.009885	0.20	2386.709830	Y 377.433
Sb (206.834 nm)	0.001283	ppm	0.001230	95.86	5.066870	Y 377.433
Se (196.026 nm)	0.000249 u	ppm	0.000827	> 100.00	-10.710600	Y 242.219
Si (288.158 nm)	-0.199626 u	ppm	0.000285	0.14	390.502000	Y 377.433
Sn (189.925 nm)	-0.005684 u	ppm	0.000072	1.27	1.427070	Y 377.433
Sr (421.552 nm)	-0.000205 u	ppm	0.000211	> 100.00	260.183519	Y_R 488.368
Th (288.505 nm)	4.964980	ppm	0.007110	0.14	5326.660000	Y 377.433
Ti (336.122 nm)	0.000889	ppm	0.000008	0.96	-280.535000	Y 377.433
Tl (190.794 nm)	-0.001009 u	ppm	0.004070	> 100.00	-12.695200	Y 377.433
U (409.013 nm)	10.251900	ppm	0.002881	0.03	23574.300000	Y 377.433
V (292.401 nm)	-0.004338 u	ppm	0.000029	0.68	-411.692000	Y 377.433
Zn (206.200 nm)	-0.000305 u	ppm	0.000667	> 100.00	8.628170	Y 377.433
Zr (343.823 nm)	-0.006948 u	ppm	0.000334	4.80	-400.122000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052498	11211.410867	0.003915	0.37
Y 377.433	1.055845	487417.449289	0.005531	0.52
Y_R 377.433	1.100360	41580.300000	0.005479	0.50
Y_R 488.368	1.110230	40068.000000	0.004007	0.36
Y_R2 488.368	1.099108	77351.643054	0.002288	0.21
Y_R4	1.082170	33205.400000	0.007548	0.70

Sample Name: CCV-5407762

Date: 11/5/2018 7:08:01 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.508240	ppm	0.000552	0.11	13823.800000	Y 377.433
Al (394.401 nm)	0.518203	ppm	0.000861	0.17	6657.570000	Y 377.433
Al H (396.152 nm)	0.554563 u	ppm	0.002939	0.53	893.065000	Y_R 377.433
As (188.980 nm)	0.997279	ppm	0.000966	0.10	1382.160000	Y 242.219
B (249.678 nm)	0.502028	ppm	0.000149	0.03	2061.620000	Y 242.219
Ba (493.408 nm)	0.504333	ppm	0.006564	1.30	46958.900000	Y_R 488.368
Be (234.861 nm)	0.512196	ppm	0.004523	0.88	26482.900000	Y_R 488.368
Bi (223.061 nm)	-0.000798 u	ppm	0.001218	> 100.00	42.367900	Y 377.433
Ca (315.887 nm)	5.034918	ppm	0.010583	0.21	3323.449229	Y_R 377.433
Cd (214.439 nm)	0.512056	ppm	0.001157	0.23	12739.100000	Y 377.433
Co (228.615 nm)	0.500401	ppm	0.000492	0.10	11866.800000	Y 242.219
Cr (205.560 nm)	0.518982	ppm	0.001014	0.20	2465.470000	Y 377.433
Cu (324.754 nm)	0.513240	ppm	0.001221	0.24	24903.700000	Y 377.433
Fe (238.204 nm)	2.531861	ppm	0.004843	0.19	4230.045277	Y_R 377.433
Fe H (259.940 nm)	2.534350 u	ppm	0.002814	0.11	2314.640000	Y_R 377.433
K (766.491 nm)	50.450700	ppm	0.108901	0.22	51043.400000	Y_R2 488.368
Li (670.783 nm)	1.012440	ppm	0.003916	0.39	13892.900000	Y_R2 488.368
Mg (279.078 nm)	20.228800	ppm	0.010413	0.05	44079.200000	Y 377.433
Mn (257.610 nm)	0.509630	ppm	0.000251	0.05	106649.000000	Y 377.433
Mo (202.032 nm)	0.516119	ppm	0.001179	0.23	5890.340000	Y 377.433
Na (589.592 nm)	25.636900	ppm	0.066746	0.26	12736.100000	Y_R2 488.368
Na H (589.593 nm)	30.762013 u	ppm	0.259829	0.84	10544.130092	Y_R4
Ni (231.604 nm)	0.510436	ppm	0.000120	0.02	1966.230000	Y 377.433
P (213.618 nm)	1.005880	ppm	0.010489	1.04	1142.740000	Y 242.219
Pb (220.353 nm)	1.004880	ppm	0.002350	0.23	2257.070000	Y 242.219
S (181.972 nm)	0.024673	ppm	0.003438	13.93	-12.001715	Y 377.433
Sb (206.834 nm)	1.029620	ppm	0.003019	0.29	1691.750000	Y 377.433
Se (196.026 nm)	1.014430	ppm	0.009131	0.90	1526.920000	Y 242.219
Si (288.158 nm)	4.899090	ppm	0.036560	0.75	23232.200000	Y 377.433
Sn (189.925 nm)	1.021430	ppm	0.002698	0.26	1200.440000	Y 377.433
Sr (421.552 nm)	0.507392	ppm	0.004325	0.85	59175.853297	Y_R 488.368
Th (288.505 nm)	-0.030281 u	ppm	0.003278	10.83	-50.926600	Y 377.433
Ti (336.122 nm)	0.513210	ppm	0.000228	0.04	48448.400000	Y 377.433
Tl (190.794 nm)	1.031960	ppm	0.003031	0.29	582.023000	Y 377.433
U (409.013 nm)	-0.031708 u	ppm	0.001012	3.19	-2.638790	Y 377.433
V (292.401 nm)	0.508047	ppm	0.001438	0.28	24266.700000	Y 377.433
Zn (206.200 nm)	0.511443	ppm	0.001402	0.27	1772.240000	Y 377.433
Zr (343.823 nm)	0.512398	ppm	0.001858	0.36	20646.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069532	11392.862710	0.001825	0.17
Y 377.433	1.059541	489123.597911	0.002427	0.23
Y_R 377.433	1.081820	40879.500000	0.000682	0.06
Y_R 488.368	1.083080	39088.400000	0.006888	0.64
Y_R2 488.368	1.081644	76122.584714	0.004905	0.45
Y_R4	1.072810	32918.400000	0.007809	0.73

Sample Name: CCB

Date: 11/5/2018 7:11:31 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000190 u	ppm	0.000059	31.25	-244.386000	Y 377.433
Al (394.401 nm)	-0.001026 u	ppm	0.000145	14.13	72.976700	Y 377.433
Al H (396.152 nm)	0.140574 Zu	ppm	0.004961	3.53	16.329500 Z	Y_R 377.433
As (188.980 nm)	0.000503	ppm	0.000491	97.66	-14.410600	Y 242.219
B (249.678 nm)	-0.001331 u	ppm	0.000112	8.42	41.355400	Y 242.219
Ba (493.408 nm)	-0.000773 u	ppm	0.000272	35.22	730.308000	Y_R 488.368
Be (234.861 nm)	0.000164	ppm	0.000024	14.53	2.605950	Y_R 488.368
Bi (223.061 nm)	-0.004121 u	ppm	0.004133	> 100.00	36.478700	Y 377.433
Ca (315.887 nm)	-0.010569 u	ppm	0.002038	19.28	-9.298375	Y_R 377.433
Cd (214.439 nm)	0.000098	ppm	0.000079	79.83	-8.706590	Y 377.433
Co (228.615 nm)	0.000272	ppm	0.000039	14.50	-21.501400	Y 242.219
Cr (205.560 nm)	0.000123 u	ppm	0.000249	> 100.00	-8.759240	Y 377.433
Cu (324.754 nm)	0.000088 u	ppm	0.000231	> 100.00	206.587000	Y 377.433
Fe (238.204 nm)	-0.001207 u	ppm	0.000503	41.67	9.525009	Y_R 377.433
Fe H (259.940 nm)	0.014077 u	ppm	0.001636	11.62	1.910150	Y_R 377.433
K (766.491 nm)	0.060605 u	ppm	0.097048	> 100.00	1795.150000	Y_R2 488.368
Li (670.783 nm)	0.009259	ppm	0.003567	38.52	-315.764000	Y_R2 488.368
Mg (279.078 nm)	0.002592	ppm	0.002111	81.45	19.932000	Y 377.433
Mn (257.610 nm)	-0.000011 u	ppm	0.000035	> 100.00	20.359700	Y 377.433
Mo (202.032 nm)	-0.000542 u	ppm	0.000388	71.53	12.512100	Y 377.433
Na (589.592 nm)	0.706189 Z	ppm	0.066453	9.41	218.772000 Z	Y_R2 488.368
Na H (589.593 nm)	5.304488 u	ppm	0.015144	0.29	1503.673973	Y_R4
Ni (231.604 nm)	0.000320	ppm	0.000038	11.98	10.310600	Y 377.433
P (213.618 nm)	0.003954	ppm	0.002239	56.63	3.495050	Y 242.219
Pb (220.353 nm)	-0.002136 u	ppm	0.000808	37.84	9.693870	Y 242.219
S (181.972 nm)	0.031377	ppm	0.005445	17.35	-10.723712	Y 377.433
Sb (206.834 nm)	0.001559	ppm	0.000925	59.34	1.442190	Y 377.433
Se (196.026 nm)	0.002005	ppm	0.000526	26.23	4.656310	Y 242.219
Si (288.158 nm)	-0.203933 Zu	ppm	0.000685	0.34	371.209000 Z	Y 377.433
Sn (189.925 nm)	-0.007778 u	ppm	0.000523	6.72	-1.016420	Y 377.433
Sr (421.552 nm)	-0.000330 u	ppm	0.000153	46.43	239.878526	Y_R 488.368
Th (288.505 nm)	0.000738 u	ppm	0.003134	> 100.00	15.097700	Y 377.433
Ti (336.122 nm)	0.000476	ppm	0.000033	6.89	-319.835000	Y 377.433
Tl (190.794 nm)	-0.000450 u	ppm	0.000214	47.47	-9.072490	Y 377.433
U (409.013 nm)	-0.005479 u	ppm	0.006754	> 100.00	102.319000	Y 377.433
V (292.401 nm)	0.000587	ppm	0.000072	12.24	-165.447000	Y 377.433
Zn (206.200 nm)	-0.000529 u	ppm	0.000310	58.65	2.550610	Y 377.433
Zr (343.823 nm)	0.000255	ppm	0.000031	12.04	-108.215000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.083578	11542.480210	0.007441	0.69
Y 377.433	1.074249	495913.421829	0.004893	0.46
Y_R 377.433	1.103840	41711.800000	0.004858	0.44
Y_R 488.368	1.104210	39850.900000	0.000555	0.05
Y_R2 488.368	1.101217	77500.067216	0.004687	0.43
Y_R4	1.080360	33150.100000	0.006779	0.63

Sample Name: CCVL-5412564

Date: 11/5/2018 7:14:42 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010076	ppm	0.000253	2.51	40.280100	Y 377.433
Al (394.401 nm)	0.102158	ppm	0.000964	0.94	1365.140000	Y 377.433
Al H (396.152 nm)	0.233706 u	ppm	0.006975	2.98	174.283000	Y_R 377.433
As (188.980 nm)	0.012550	ppm	0.002627	20.93	2.465570	Y 242.219
B (249.678 nm)	0.096890	ppm	0.000332	0.34	435.701000	Y 242.219
Ba (493.408 nm)	0.008957	ppm	0.000269	3.01	1620.830000	Y_R 488.368
Be (234.861 nm)	0.001072	ppm	0.000024	2.25	48.245000	Y_R 488.368
Bi (223.061 nm)	0.097063	ppm	0.003131	3.23	203.273000	Y 377.433
Ca (315.887 nm)	0.202712	ppm	0.003737	1.84	131.598773	Y_R 377.433
Cd (214.439 nm)	0.005258	ppm	0.000032	0.61	119.764000	Y 377.433
Co (228.615 nm)	0.010434	ppm	0.000146	1.40	220.115000	Y 242.219
Cr (205.560 nm)	0.010887	ppm	0.000019	0.18	42.498700	Y 377.433
Cu (324.754 nm)	0.015991	ppm	0.000462	2.89	971.238000	Y 377.433
Fe (238.204 nm)	0.097738	ppm	0.000469	0.48	174.384076	Y_R 377.433
Fe H (259.940 nm)	0.106838 u	ppm	0.006022	5.64	87.033100	Y_R 377.433
K (766.491 nm)	2.967350	ppm	0.145038	4.89	4636.020000	Y_R2 488.368
Li (670.783 nm)	0.033597 Q	ppm	0.008730	25.99	28.949400 Q	Y_R2 488.368
Mg (279.078 nm)	0.205564	ppm	0.000353	0.17	461.316000	Y 377.433
Mn (257.610 nm)	0.010525	ppm	0.000052	0.49	2224.660000	Y 377.433
Mo (202.032 nm)	0.020204	ppm	0.000204	1.01	248.534000	Y 377.433
Na (589.592 nm)	1.719210 Q	ppm	0.035005	2.04	727.568000 Q	Y_R2 488.368
Na H (589.593 nm)	5.718741 u	ppm	0.015269	0.27	1650.663790	Y_R4
Ni (231.604 nm)	0.042037	ppm	0.000448	1.07	170.186000	Y 377.433
P (213.618 nm)	2.853290	ppm	0.011834	0.41	3308.310000	Y 242.219
Pb (220.353 nm)	0.004540 Q	ppm	0.000891	19.61	24.647300 Q	Y 242.219
S (181.972 nm)	0.118461	ppm	0.002956	2.50	30.913843	Y 377.433
Sb (206.834 nm)	0.021637	ppm	0.000060	0.28	34.326700	Y 377.433
Se (196.026 nm)	0.021381	ppm	0.001600	7.48	33.780000	Y 242.219
Si (288.158 nm)	0.296392 Q	ppm	0.001076	0.36	2612.610000 Q	Y 377.433
Sn (189.925 nm)	0.096180	ppm	0.002550	2.65	120.340000	Y 377.433
Sr (421.552 nm)	0.009350	ppm	0.000108	1.15	1363.609380	Y_R 488.368
Th (288.505 nm)	0.014527	ppm	0.006812	46.90	29.501400	Y 377.433
Ti (336.122 nm)	0.010449	ppm	0.000254	2.43	629.120000	Y 377.433
Tl (190.794 nm)	0.016075	ppm	0.003555	22.12	0.366929	Y 377.433
U (409.013 nm)	0.049358	ppm	0.023140	46.88	226.373000	Y 377.433
V (292.401 nm)	0.010383	ppm	0.000176	1.70	304.323000	Y 377.433
Zn (206.200 nm)	0.021073	ppm	0.000189	0.90	77.219000	Y 377.433
Zr (343.823 nm)	0.015777	ppm	0.000194	1.23	520.824000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.098844	11705.101168	0.002756	0.25
Y 377.433	1.088717	502592.466863	0.003991	0.37
Y_R 377.433	1.133550	42834.200000	0.002215	0.20
Y_R 488.368	1.128520	40728.400000	0.014914	1.32
Y_R2 488.368	1.128969	79453.190184	0.006416	0.57
Y_R4	1.092060	33508.900000	0.009080	0.83

Sample Name: 280-116146-A-1-B

Date: 11/5/2018 7:18:06 PM Rack:Tube: 1:47

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000366	ppm	0.000450	> 100.00	-232.917000	Y 377.433
Al (394.401 nm)	0.081664	ppm	0.001270	1.56	1133.510000	Y 377.433
Al H (396.152 nm)	0.190786 u	ppm	0.000382	0.20	128.800000	Y_R 377.433
As (188.980 nm)	-0.001487 u	ppm	0.001668	> 100.00	-17.202800	Y 242.219
B (249.678 nm)	0.031856	ppm	0.000300	0.94	174.579000	Y 242.219
Ba (493.408 nm)	0.303852	ppm	0.002726	0.90	28609.300000	Y_R 488.368
Be (234.861 nm)	0.000149	ppm	0.000063	42.14	0.493274	Y_R 488.368
Bi (223.061 nm)	0.001834 u	ppm	0.003105	> 100.00	46.308300	Y 377.433
Ca (315.887 nm)	43.082215	ppm	0.030431	0.07	28454.312563	Y_R 377.433
Cd (214.439 nm)	0.000333	ppm	0.000180	54.10	-2.866390	Y 377.433
Co (228.615 nm)	0.000147 u	ppm	0.000236	> 100.00	-24.289400	Y 242.219
Cr (205.560 nm)	0.003614	ppm	0.001000	27.66	7.907030	Y 377.433
Cu (324.754 nm)	0.000622	ppm	0.000236	38.02	206.223000	Y 377.433
Fe (238.204 nm)	0.092502	ppm	0.000939	1.02	165.658703	Y_R 377.433
Fe H (259.940 nm)	0.097886 u	ppm	0.002983	3.05	78.818400	Y_R 377.433
K (766.491 nm)	1.093500	ppm	0.069632	6.37	2804.630000	Y_R2 488.368
Li (670.783 nm)	0.016760	ppm	0.001658	9.89	-209.515000	Y_R2 488.368
Mg (279.078 nm)	19.357100	ppm	0.019706	0.10	42181.900000	Y 377.433
Mn (257.610 nm)	0.001463	ppm	0.000002	0.14	328.817000	Y 377.433
Mo (202.032 nm)	-0.000375 u	ppm	0.000153	40.79	14.410200	Y 377.433
Na (589.592 nm)	34.960100	ppm	0.053646	0.15	17423.200000	Y_R2 488.368
Na H (589.593 nm)	38.018523 u	ppm	0.166100	0.44	13154.977222	Y_R4
Ni (231.604 nm)	0.000567	ppm	0.000204	35.93	11.267200	Y 377.433
P (213.618 nm)	0.007171	ppm	0.006550	91.35	7.177600	Y 242.219
Pb (220.353 nm)	-0.003408 u	ppm	0.000572	16.78	6.817590	Y 242.219
S (181.972 nm)	3.685627	ppm	0.017627	0.48	1736.903896	Y 377.433
Sb (206.834 nm)	-0.002401 u	ppm	0.001360	56.67	-5.048890	Y 377.433
Se (196.026 nm)	0.000845 u	ppm	0.001722	> 100.00	2.889540	Y 242.219
Si (288.158 nm)	6.747230	ppm	0.058400	0.87	31511.700000	Y 377.433
Sn (189.925 nm)	-0.006173 u	ppm	0.000545	8.84	0.856688	Y 377.433
Sr (421.552 nm)	0.118788	ppm	0.000603	0.51	14067.020988	Y_R 488.368
Th (288.505 nm)	-0.013558 u	ppm	0.000343	2.53	-1.566220	Y 377.433
Ti (336.122 nm)	0.002448	ppm	0.000192	7.83	-23.493800	Y 377.433
Tl (190.794 nm)	-0.004092 u	ppm	0.001626	39.74	-11.597600	Y 377.433
U (409.013 nm)	-0.004627 u	ppm	0.000894	19.33	100.164000	Y 377.433
V (292.401 nm)	0.018167	ppm	0.000101	0.56	686.606000	Y 377.433
Zn (206.200 nm)	0.003660	ppm	0.000123	3.36	17.037500	Y 377.433
Zr (343.823 nm)	0.000522	ppm	0.000018	3.54	-97.393100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.076120	11463.040482	0.003867	0.36
Y 377.433	1.067360	492733.169422	0.004588	0.43
Y_R 377.433	1.131920	42772.800000	0.000459	0.04
Y_R 488.368	1.135050	40963.800000	0.008590	0.76
Y_R2 488.368	1.134661	79853.773880	0.007665	0.68
Y_R4	1.108390	34010.100000	0.000133	0.01

Sample Name: 280-116146-A-2-B

Date: 11/5/2018 7:21:30 PM Rack:Tube: 1:48

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000500	ppm	0.000283	56.61	-228.328000	Y 377.433
Al (394.401 nm)	0.729085	ppm	0.002998	0.41	9259.910000	Y 377.433
Al H (396.152 nm)	0.764095 u	ppm	0.007326	0.96	1149.450000	Y_R 377.433
As (188.980 nm)	-0.000669 u	ppm	0.000173	25.86	-16.083400	Y 242.219
B (249.678 nm)	0.085577	ppm	0.000274	0.32	390.074000	Y 242.219
Ba (493.408 nm)	0.162944	ppm	0.000196	0.12	15714.000000	Y_R 488.368
Be (234.861 nm)	0.000178	ppm	0.000019	10.54	-6.894430	Y_R 488.368
Bi (223.061 nm)	0.004978	ppm	0.000835	16.77	51.575300	Y 377.433
Ca (315.887 nm)	72.754247	ppm	0.029941	0.04	48053.381430	Y_R 377.433
Cd (214.439 nm)	0.000216	ppm	0.000027	12.62	-5.772680	Y 377.433
Co (228.615 nm)	0.000693	ppm	0.000098	14.15	-10.272600	Y 242.219
Cr (205.560 nm)	0.002606	ppm	0.000073	2.82	3.076260	Y 377.433
Cu (324.754 nm)	0.000653	ppm	0.000076	11.66	191.177000	Y 377.433
Fe (238.204 nm)	0.725312	ppm	0.002000	0.28	1220.027745	Y_R 377.433
Fe H (259.940 nm)	0.721668 u	ppm	0.002252	0.31	651.233000	Y_R 377.433
K (766.491 nm)	2.206490	ppm	0.064638	2.93	3892.400000	Y_R2 488.368
Li (670.783 nm)	0.039366	ppm	0.004987	12.67	110.666000	Y_R2 488.368
Mg (279.078 nm)	27.356700	ppm	0.061283	0.22	59607.600000	Y 377.433
Mn (257.610 nm)	0.018808	ppm	0.000010	0.05	3957.820000	Y 377.433
Mo (202.032 nm)	0.000561	ppm	0.000437	77.91	25.060900	Y 377.433
Na (589.592 nm)	76.814500 o	ppm	0.212533	0.28	38453.000000	Y_R2 488.368
Na H (589.593 nm)	79.582307	ppm	0.386143	0.49	28010.160550	Y_R4
Ni (231.604 nm)	0.001370	ppm	0.000620	45.29	14.435600	Y 377.433
P (213.618 nm)	0.011414	ppm	0.001586	13.89	12.082500	Y 242.219
Pb (220.353 nm)	-0.004474 u	ppm	0.000607	13.57	4.342620	Y 242.219
S (181.972 nm)	13.264253	ppm	0.067564	0.51	6313.616580	Y 377.433
Sb (206.834 nm)	-0.003963 u	ppm	0.002711	68.40	-7.616030	Y 377.433
Se (196.026 nm)	0.005764	ppm	0.000882	15.30	10.147000	Y 242.219
Si (288.158 nm)	8.420830	ppm	0.029105	0.35	39009.300000	Y 377.433
Sn (189.925 nm)	-0.007111 u	ppm	0.000152	2.13	-0.237978	Y 377.433
Sr (421.552 nm)	0.374101	ppm	0.000215	0.06	43703.461621	Y_R 488.368
Th (288.505 nm)	-0.010905 u	ppm	0.005284	48.46	1.407970	Y 377.433
Ti (336.122 nm)	0.011813	ppm	0.000193	1.63	942.082000	Y 377.433
Tl (190.794 nm)	-0.003066 u	ppm	0.000252	8.22	-11.357900	Y 377.433
U (409.013 nm)	-0.011508 u	ppm	0.003468	30.13	81.907200	Y 377.433
V (292.401 nm)	0.014866	ppm	0.000209	1.40	527.025000	Y 377.433
Zn (206.200 nm)	0.004328	ppm	0.000473	10.93	19.413900	Y 377.433
Zr (343.823 nm)	0.000986	ppm	0.000032	3.27	-78.571500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074492	11445.698445	0.002275	0.21
Y 377.433	1.063568	490982.958950	0.000903	0.08
Y_R 377.433	1.099750	41557.100000	0.008606	0.78
Y_R 488.368	1.101440	39751.100000	0.009612	0.87
Y_R2 488.368	1.106384	77863.672925	0.016165	1.46
Y_R4	1.102390	33825.900000	0.012558	1.14

Sample Name: 280-116146-A-3-B

Date: 11/5/2018 7:24:59 PM Rack:Tube: 1:49

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000219 u	ppm	0.000552	> 100.00	-236.376000	Y 377.433
Al (394.401 nm)	0.028343	ppm	0.000462	1.63	468.509000	Y 377.433
Al H (396.152 nm)	0.137037 u	ppm	0.005771	4.21	35.121600	Y_R 377.433
As (188.980 nm)	-0.000750 u	ppm	0.000590	78.69	-16.166500	Y 242.219
B (249.678 nm)	0.028220	ppm	0.001880	6.66	160.002000	Y 242.219
Ba (493.408 nm)	0.471760	ppm	0.001463	0.31	43976.000000	Y_R 488.368
Be (234.861 nm)	0.000073	ppm	0.000012	16.86	-2.482670	Y_R 488.368
Bi (223.061 nm)	0.002115	ppm	0.000728	34.40	46.763400	Y 377.433
Ca (315.887 nm)	42.404295	ppm	0.016234	0.04	28006.520476	Y_R 377.433
Cd (214.439 nm)	0.000103 u	ppm	0.000146	> 100.00	-8.595470	Y 377.433
Co (228.615 nm)	0.000139	ppm	0.000082	58.67	-24.603400	Y 242.219
Cr (205.560 nm)	0.003070	ppm	0.000485	15.80	5.310300	Y 377.433
Cu (324.754 nm)	-0.000056 u	ppm	0.000147	> 100.00	173.026000	Y 377.433
Fe (238.204 nm)	0.027432	ppm	0.006246	22.77	57.241473	Y_R 377.433
Fe H (259.940 nm)	0.030977 u	ppm	0.000105	0.34	17.419100	Y_R 377.433
K (766.491 nm)	0.870298	ppm	0.129599	14.89	2586.490000	Y_R2 488.368
Li (670.783 nm)	0.023100	ppm	0.003078	13.32	-119.720000	Y_R2 488.368
Mg (279.078 nm)	19.316600	ppm	0.022833	0.12	42093.400000	Y 377.433
Mn (257.610 nm)	0.000462	ppm	0.000055	11.88	119.270000	Y 377.433
Mo (202.032 nm)	-0.000688 u	ppm	0.000122	17.68	10.847800	Y 377.433
Na (589.592 nm)	28.169300	ppm	0.085352	0.30	14008.900000	Y_R2 488.368
Na H (589.593 nm)	31.247348 u	ppm	0.164249	0.53	10720.579343	Y_R4
Ni (231.604 nm)	0.000523	ppm	0.000729	> 100.00	11.085300	Y 377.433
P (213.618 nm)	0.013427	ppm	0.000470	3.50	14.464800	Y 242.219
Pb (220.353 nm)	-0.004282 u	ppm	0.001243	29.03	4.925870	Y 242.219
S (181.972 nm)	2.236121	ppm	0.004186	0.19	1044.521758	Y 377.433
Sb (206.834 nm)	-0.005493 u	ppm	0.001502	27.34	-10.137800	Y 377.433
Se (196.026 nm)	0.003607	ppm	0.000434	12.04	7.058010	Y 242.219
Si (288.158 nm)	6.681970	ppm	0.031834	0.48	31219.400000	Y 377.433
Sn (189.925 nm)	-0.006647 u	ppm	0.001715	25.80	0.303116	Y 377.433
Sr (421.552 nm)	0.101583	ppm	0.000857	0.84	12069.862724	Y_R 488.368
Th (288.505 nm)	-0.011490 u	ppm	0.002063	17.95	0.991129	Y 377.433
Ti (336.122 nm)	0.001018	ppm	0.000099	9.77	-161.318000	Y 377.433
Tl (190.794 nm)	-0.001864 u	ppm	0.003859	> 100.00	-10.306700	Y 377.433
U (409.013 nm)	-0.000479 u	ppm	0.007012	> 100.00	109.690000	Y 377.433
V (292.401 nm)	0.014128	ppm	0.000293	2.07	489.643000	Y 377.433
Zn (206.200 nm)	0.002179	ppm	0.000273	12.53	11.913900	Y 377.433
Zr (343.823 nm)	0.000461	ppm	0.000260	56.36	-99.845400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079910	11503.413347	0.003355	0.31
Y 377.433	1.073516	495574.931902	0.001697	0.16
Y_R 377.433	1.103510	41699.300000	0.003426	0.31
Y_R 488.368	1.105530	39898.400000	0.000129	0.01
Y_R2 488.368	1.121208	78906.970042	0.000446	0.04
Y_R4	1.101340	33793.800000	0.006898	0.63

Sample Name: 280-116146-A-4-B

Date: 11/5/2018 7:28:23 PM Rack:Tube: 1:50

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000583	ppm	0.000004	0.77	-224.066000	Y 377.433
Al (394.401 nm)	0.020084	ppm	0.000035	0.17	427.801000	Y 377.433
Al H (396.152 nm)	0.078567 u	ppm	0.014240	18.12	12.983700	Y_R 377.433
As (188.980 nm)	-0.000317 u	ppm	0.000879	> 100.00	-15.560300	Y 242.219
B (249.678 nm)	0.093103	ppm	0.002187	2.35	420.515000	Y 242.219
Ba (493.408 nm)	0.040270	ppm	0.000294	0.73	4486.540000	Y_R 488.368
Be (234.861 nm)	0.000245	ppm	0.000069	28.16	6.261770	Y_R 488.368
Bi (223.061 nm)	0.001028 u	ppm	0.002131	> 100.00	44.974700	Y 377.433
Ca (315.887 nm)	71.156485	ppm	0.049660	0.07	46997.886232	Y_R 377.433
Cd (214.439 nm)	0.000214	ppm	0.000091	42.35	-5.830140	Y 377.433
Co (228.615 nm)	0.000053 u	ppm	0.000123	> 100.00	-26.647100	Y 242.219
Cr (205.560 nm)	0.000355	ppm	0.000141	39.81	-7.655020	Y 377.433
Cu (324.754 nm)	-0.000459 u	ppm	0.000138	30.06	138.099000	Y 377.433
Fe (238.204 nm)	0.036823	ppm	0.001504	4.08	72.887954	Y_R 377.433
Fe H (259.940 nm)	0.033932 u	ppm	0.002637	7.77	20.130800	Y_R 377.433
K (766.491 nm)	1.995100	ppm	0.006929	0.35	3685.800000	Y_R2 488.368
Li (670.783 nm)	0.039453	ppm	0.007138	18.09	111.895000	Y_R2 488.368
Mg (279.078 nm)	30.094700	ppm	0.021525	0.07	65572.700000	Y 377.433
Mn (257.610 nm)	0.068110	ppm	0.000075	0.11	14272.800000	Y 377.433
Mo (202.032 nm)	0.001089	ppm	0.000216	19.87	31.072200	Y 377.433
Na (589.592 nm)	119.975000 o	ppm	0.269338	0.22	60138.700000	Y_R2 488.368
Na H (589.593 nm)	122.748785	ppm	0.316386	0.26	43435.907831	Y_R4
Ni (231.604 nm)	0.000433 u	ppm	0.000941	> 100.00	10.746400	Y 377.433
P (213.618 nm)	0.003699	ppm	0.003010	81.37	3.186580	Y 242.219
Pb (220.353 nm)	-0.003000 u	ppm	0.000689	22.98	7.740290	Y 242.219
S (181.972 nm)	36.185144	ppm	0.037594	0.10	17261.635442	Y 377.433
Sb (206.834 nm)	-0.005465 u	ppm	0.000273	4.99	-10.120800	Y 377.433
Se (196.026 nm)	0.004983	ppm	0.000824	16.54	9.218300	Y 242.219
Si (288.158 nm)	6.774020	ppm	0.011270	0.17	31631.700000	Y 377.433
Sn (189.925 nm)	-0.008839 u	ppm	0.000371	4.20	-2.255520	Y 377.433
Sr (421.552 nm)	0.353382	ppm	0.001245	0.35	41298.282306	Y_R 488.368
Th (288.505 nm)	-0.012434 u	ppm	0.000776	6.24	0.952714	Y 377.433
Ti (336.122 nm)	0.000655	ppm	0.000133	20.33	-122.837000	Y 377.433
Tl (190.794 nm)	-0.004588 u	ppm	0.002064	44.99	-12.159300	Y 377.433
U (409.013 nm)	-0.009499 u	ppm	0.004894	51.52	86.294900	Y 377.433
V (292.401 nm)	0.006323	ppm	0.000154	2.44	112.862000	Y 377.433
Zn (206.200 nm)	0.002223	ppm	0.001349	60.69	12.066800	Y 377.433
Zr (343.823 nm)	0.000308	ppm	0.000025	8.00	-106.042000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.070391	11402.005320	0.002569	0.24
Y 377.433	1.060831	489719.401610	0.002231	0.21
Y_R 377.433	1.114470	42113.500000	0.019937	1.79
Y_R 488.368	1.113200	40175.300000	0.018116	1.63
Y_R2 488.368	1.124435	79134.078595	0.005755	0.51
Y_R4	1.109460	34043.000000	0.004888	0.44

Sample Name: 280-116146-A-5-B

Date: 11/5/2018 7:31:48 PM Rack:Tube: 1:51

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001025	ppm	0.000569	55.53	-213.550000	Y 377.433
Al (394.401 nm)	0.096131	ppm	0.001567	1.63	1329.750000	Y 377.433
Al H (396.152 nm)	0.197981 u	ppm	0.001118	0.56	162.164000	Y_R 377.433
As (188.980 nm)	0.000759	ppm	0.000279	36.84	-14.057200	Y 242.219
B (249.678 nm)	0.055697	ppm	0.002142	3.85	270.292000	Y 242.219
Ba (493.408 nm)	0.075030	ppm	0.000556	0.74	7667.800000	Y_R 488.368
Be (234.861 nm)	0.000178	ppm	0.000062	34.99	1.496550	Y_R 488.368
Bi (223.061 nm)	0.001068	ppm	0.000773	72.43	45.051300	Y 377.433
Ca (315.887 nm)	48.372372	ppm	0.023275	0.05	31948.564744	Y_R 377.433
Cd (214.439 nm)	0.000267	ppm	0.000167	62.72	-4.510850	Y 377.433
Co (228.615 nm)	0.000291	ppm	0.000142	48.63	-20.825600	Y 242.219
Cr (205.560 nm)	0.002622	ppm	0.000058	2.23	3.169170	Y 377.433
Cu (324.754 nm)	0.000626	ppm	0.000382	61.10	204.761000	Y 377.433
Fe (238.204 nm)	0.131528	ppm	0.002206	1.68	230.682730	Y_R 377.433
Fe H (259.940 nm)	0.130140 u	ppm	0.005011	3.85	108.416000	Y_R 377.433
K (766.491 nm)	1.509980	ppm	0.032383	2.14	3211.680000	Y_R2 488.368
Li (670.783 nm)	0.030950	ppm	0.001743	5.63	-8.541720	Y_R2 488.368
Mg (279.078 nm)	20.152700	ppm	0.023132	0.11	43915.200000	Y 377.433
Mn (257.610 nm)	0.002039	ppm	0.000051	2.49	449.268000	Y 377.433
Mo (202.032 nm)	-0.000070 u	ppm	0.000053	75.81	17.881200	Y 377.433
Na (589.592 nm)	89.314200 o	ppm	0.071216	0.08	44734.200000	Y_R2 488.368
Na H (589.593 nm)	91.665073	ppm	0.344349	0.38	32333.325865	Y_R4
Ni (231.604 nm)	0.000244	ppm	0.000295	> 100.00	10.034100	Y 377.433
P (213.618 nm)	0.006451	ppm	0.001651	25.60	6.344650	Y 242.219
Pb (220.353 nm)	-0.004540 u	ppm	0.000287	6.31	4.271820	Y 242.219
S (181.972 nm)	17.805584	ppm	0.013281	0.07	8481.434154	Y 377.433
Sb (206.834 nm)	-0.005017 u	ppm	0.000520	10.36	-9.362060	Y 377.433
Se (196.026 nm)	0.002610	ppm	0.002146	82.22	5.535710	Y 242.219
Si (288.158 nm)	6.670410	ppm	0.000637	0.01	31167.600000	Y 377.433
Sn (189.925 nm)	-0.006654 u	ppm	0.000207	3.11	0.295097	Y 377.433
Sr (421.552 nm)	0.190378	ppm	0.000018	0.01	22377.070936	Y_R 488.368
Th (288.505 nm)	-0.007608 u	ppm	0.003505	46.07	4.980180	Y 377.433
Ti (336.122 nm)	0.002649	ppm	0.000186	7.01	8.975760	Y 377.433
Tl (190.794 nm)	-0.001975 u	ppm	0.001236	62.55	-10.438800	Y 377.433
U (409.013 nm)	-0.016100 u	ppm	0.000253	1.57	73.448900	Y 377.433
V (292.401 nm)	0.014040	ppm	0.000098	0.70	487.510000	Y 377.433
Zn (206.200 nm)	0.005017	ppm	0.000223	4.45	21.731000	Y 377.433
Zr (343.823 nm)	0.000556	ppm	0.000116	20.89	-96.014200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.083395	11540.533808	0.001410	0.13
Y 377.433	1.072810	495249.013420	0.002863	0.27
Y_R 377.433	1.110170	41951.000000	0.003179	0.29
Y_R 488.368	1.108630	40010.500000	0.005697	0.51
Y_R2 488.368	1.097518	77239.734160	0.005029	0.46
Y_R4	1.095800	33623.800000	0.009218	0.84

Sample Name: 280-116146-A-6-B

Date: 11/5/2018 7:35:13 PM Rack:Tube: 1:52

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000075	ppm	0.000016	21.06	-236.756000	Y 377.433
Al (394.401 nm)	0.008000	ppm	0.000320	4.00	183.248000	Y 377.433
Al H (396.152 nm)	0.144848 u	ppm	0.002170	1.50	23.410500	Y_R 377.433
As (188.980 nm)	-0.001324 u	ppm	0.003225	> 100.00	-16.971500	Y 242.219
B (249.678 nm)	-0.007277 u	ppm	0.001862	25.59	17.472400	Y 242.219
Ba (493.408 nm)	-0.000208 u	ppm	0.000143	68.80	781.998000	Y_R 488.368
Be (234.861 nm)	0.000132	ppm	0.000047	35.47	0.488138	Y_R 488.368
Bi (223.061 nm)	-0.005129 u	ppm	0.000953	18.58	34.821600	Y 377.433
Ca (315.887 nm)	0.071656	ppm	0.002780	3.88	45.013687	Y_R 377.433
Cd (214.439 nm)	0.000103	ppm	0.000017	16.73	-8.582400	Y 377.433
Co (228.615 nm)	0.000411	ppm	0.000075	18.27	-18.171300	Y 242.219
Cr (205.560 nm)	0.000524	ppm	0.000072	13.71	-6.843950	Y 377.433
Cu (324.754 nm)	0.001582	ppm	0.000322	20.33	279.141000	Y 377.433
Fe (238.204 nm)	0.031980	ppm	0.003080	9.63	64.819465	Y_R 377.433
Fe H (259.940 nm)	0.040979 u	ppm	0.001354	3.30	26.597000	Y_R 377.433
K (766.491 nm)	-0.046872 u	ppm	0.019184	40.93	1690.100000	Y_R2 488.368
Li (670.783 nm)	0.009601	ppm	0.000086	0.89	-310.915000	Y_R2 488.368
Mg (279.078 nm)	0.013983	ppm	0.001136	8.13	44.920600	Y 377.433
Mn (257.610 nm)	0.000573	ppm	0.000008	1.36	142.527000	Y 377.433
Mo (202.032 nm)	-0.000628 u	ppm	0.000190	30.24	11.536000	Y 377.433
Na (589.592 nm)	0.710319	ppm	0.014005	1.97	220.838000	Y_R2 488.368
Na H (589.593 nm)	3.975195 u	ppm	0.009787	0.25	1028.957300	Y_R4
Ni (231.604 nm)	0.000588	ppm	0.000009	1.55	11.337600	Y 377.433
P (213.618 nm)	0.004833	ppm	0.005151	> 100.00	4.470520	Y 242.219
Pb (220.353 nm)	-0.003678 u	ppm	0.000637	17.33	6.216160	Y 242.219
S (181.972 nm)	0.047097	ppm	0.003587	7.62	-3.210337	Y 377.433
Sb (206.834 nm)	-0.000804 u	ppm	0.000212	26.34	-2.441370	Y 377.433
Se (196.026 nm)	0.001037	ppm	0.000738	71.17	3.193690	Y 242.219
Si (288.158 nm)	-0.175772 u	ppm	0.002098	1.19	497.369000	Y 377.433
Sn (189.925 nm)	-0.005268 u	ppm	0.000715	13.57	1.913620	Y 377.433
Sr (421.552 nm)	-0.000128 u	ppm	0.000007	5.50	263.383602	Y_R 488.368
Th (288.505 nm)	-0.004083 u	ppm	0.007198	> 100.00	9.923610	Y 377.433
Ti (336.122 nm)	0.000626	ppm	0.000194	30.97	-305.402000	Y 377.433
Tl (190.794 nm)	-0.001538 u	ppm	0.000864	56.21	-9.697980	Y 377.433
U (409.013 nm)	-0.014851 u	ppm	0.002547	17.15	80.900700	Y 377.433
V (292.401 nm)	0.000471	ppm	0.000137	29.11	-170.394000	Y 377.433
Zn (206.200 nm)	0.001938	ppm	0.000470	24.25	11.081000	Y 377.433
Zr (343.823 nm)	0.000486	ppm	0.000026	5.26	-98.849200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099332	11710.297088	0.001787	0.16
Y 377.433	1.095268	505616.654795	0.000571	0.05
Y_R 377.433	1.107960	41867.500000	0.005332	0.48
Y_R 488.368	1.108470	40004.700000	0.005570	0.50
Y_R2 488.368	1.105145	77776.527243	0.010423	0.94
Y_R4	1.098090	33694.000000	0.008586	0.78

Sample Name: 280-116146-A-7-B

Date: 11/5/2018 7:38:23 PM Rack:Tube: 1:53

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001005	ppm	0.000554	55.18	-211.179000	Y 377.433
Al (394.401 nm)	0.094350	ppm	0.000021	0.02	1463.430000	Y 377.433
Al H (396.152 nm)	0.083609 u	ppm	0.005450	6.52	148.451000	Y_R 377.433
As (188.980 nm)	0.016024	ppm	0.001957	12.21	7.282290	Y 242.219
B (249.678 nm)	0.119131	ppm	0.001054	0.88	524.357000	Y 242.219
Ba (493.408 nm)	0.116992	ppm	0.000134	0.11	11509.600000	Y_R 488.368
Be (234.861 nm)	0.000001 u	ppm	0.000002	> 100.00	-35.221300	Y_R 488.368
Bi (223.061 nm)	0.006074	ppm	0.002090	34.42	53.558700	Y 377.433
Ca (315.887 nm)	90.137032	ppm	0.539075	0.60	59534.910617	Y_R 377.433
Cd (214.439 nm)	0.000268	ppm	0.000106	39.39	-4.485190	Y 377.433
Co (228.615 nm)	0.000699	ppm	0.000329	47.03	-8.998630	Y 242.219
Cr (205.560 nm)	0.001024	ppm	0.000095	9.29	-4.476760	Y 377.433
Cu (324.754 nm)	-0.000723 u	ppm	0.000050	6.88	114.484000	Y 377.433
Fe (238.204 nm)	2.087598	ppm	0.004592	0.22	3489.826855	Y_R 377.433
Fe H (259.940 nm)	2.096610 u	ppm	0.004021	0.19	1912.950000	Y_R 377.433
K (766.491 nm)	2.569390	ppm	0.052472	2.04	4247.080000	Y_R2 488.368
Li (670.783 nm)	0.042693	ppm	0.006295	14.74	157.791000	Y_R2 488.368
Mg (279.078 nm)	35.269900	ppm	0.030046	0.09	76844.700000	Y 377.433
Mn (257.610 nm)	0.507420	ppm	0.000082	0.02	106187.000000	Y 377.433
Mo (202.032 nm)	0.004625	ppm	0.000104	2.25	71.301900	Y 377.433
Na (589.592 nm)	47.929600	ppm	0.145466	0.30	23941.900000	Y_R2 488.368
Na H (589.593 nm)	50.220617 u	ppm	0.459017	0.91	17530.473189	Y_R4
Ni (231.604 nm)	0.001567	ppm	0.000995	63.48	15.396900	Y 377.433
P (213.618 nm)	0.200066	ppm	0.003537	1.77	231.014000	Y 242.219
Pb (220.353 nm)	-0.002329 u	ppm	0.000322	13.84	9.220880	Y 242.219
S (181.972 nm)	12.329858	ppm	0.002394	0.02	5869.814552	Y 377.433
Sb (206.834 nm)	-0.004419 u	ppm	0.002146	48.56	-8.257030	Y 377.433
Se (196.026 nm)	0.002676	ppm	0.001339	50.04	5.833240	Y 242.219
Si (288.158 nm)	11.117400	ppm	0.068591	0.62	51089.800000	Y 377.433
Sn (189.925 nm)	-0.005897 u	ppm	0.002059	34.91	1.178660	Y 377.433
Sr (421.552 nm)	0.764466	ppm	0.001030	0.13	89016.615889	Y_R 488.368
Th (288.505 nm)	-0.017345 u	ppm	0.003707	21.37	0.495147	Y 377.433
Ti (336.122 nm)	0.002332	ppm	0.000121	5.20	84.693300	Y 377.433
Tl (190.794 nm)	-0.002441 u	ppm	0.000502	20.56	-11.187500	Y 377.433
U (409.013 nm)	-0.012760 u	ppm	0.016327	> 100.00	78.100100	Y 377.433
V (292.401 nm)	0.001149	ppm	0.000073	6.35	-139.492000	Y 377.433
Zn (206.200 nm)	0.003872	ppm	0.000202	5.22	17.985000	Y 377.433
Zr (343.823 nm)	0.000720	ppm	0.000285	39.52	-89.350600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074726	11448.189655	0.001942	0.18
Y 377.433	1.069880	493896.512882	0.001782	0.17
Y_R 377.433	1.111030	41983.300000	0.003054	0.27
Y_R 488.368	1.100720	39724.900000	0.001904	0.17
Y_R2 488.368	1.097858	77263.698528	0.001317	0.12
Y_R4	1.098510	33706.900000	0.010475	0.95

Sample Name: 280-116146-A-8-B

Date: 11/5/2018 7:41:52 PM Rack:Tube: 1:54

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000937	ppm	0.000246	26.26	-217.007000	Y 377.433
Al (394.401 nm)	0.038058	ppm	0.002683	7.05	588.534000	Y 377.433
Al H (396.152 nm)	0.146784 u	ppm	0.003013	2.05	53.458200	Y_R 377.433
As (188.980 nm)	-0.000179 u	ppm	0.001591	> 100.00	-15.368200	Y 242.219
B (249.678 nm)	0.026503	ppm	0.001346	5.08	153.098000	Y 242.219
Ba (493.408 nm)	0.414440	ppm	0.000076	0.02	38730.200000	Y_R 488.368
Be (234.861 nm)	0.000063	ppm	0.000005	7.43	-3.415620	Y_R 488.368
Bi (223.061 nm)	-0.000166 u	ppm	0.003672	> 100.00	43.006900	Y 377.433
Ca (315.887 nm)	46.012586	ppm	0.027183	0.06	30389.867172	Y_R 377.433
Cd (214.439 nm)	0.000249	ppm	0.000006	2.23	-4.945860	Y 377.433
Co (228.615 nm)	0.000302	ppm	0.000030	9.82	-20.721700	Y 242.219
Cr (205.560 nm)	0.003424	ppm	0.000476	13.89	7.000120	Y 377.433
Cu (324.754 nm)	-0.000084 u	ppm	0.000069	81.75	170.738000	Y 377.433
Fe (238.204 nm)	0.056730	ppm	0.001545	2.72	106.057427	Y_R 377.433
Fe H (259.940 nm)	0.052265 u	ppm	0.000748	1.43	36.953900	Y_R 377.433
K (766.491 nm)	0.944587	ppm	0.044776	4.74	2659.100000	Y_R2 488.368
Li (670.783 nm)	0.021258	ppm	0.002085	9.81	-145.804000	Y_R2 488.368
Mg (279.078 nm)	20.580400	ppm	0.022988	0.11	44846.700000	Y 377.433
Mn (257.610 nm)	0.003010	ppm	0.000066	2.19	652.340000	Y 377.433
Mo (202.032 nm)	-0.000446 u	ppm	0.000040	8.97	13.610100	Y 377.433
Na (589.592 nm)	30.610800	ppm	0.106245	0.35	15236.400000	Y_R2 488.368
Na H (589.593 nm)	32.904843 u	ppm	0.095134	0.29	11318.148003	Y_R4
Ni (231.604 nm)	0.000256 u	ppm	0.000615	> 100.00	10.070300	Y 377.433
P (213.618 nm)	0.010069	ppm	0.002495	24.78	10.573400	Y 242.219
Pb (220.353 nm)	-0.000893 u	ppm	0.001337	> 100.00	12.448000	Y 242.219
S (181.972 nm)	3.423717	ppm	0.007657	0.22	1611.958604	Y 377.433
Sb (206.834 nm)	-0.001475 u	ppm	0.001347	91.38	-3.523510	Y 377.433
Se (196.026 nm)	0.003454	ppm	0.001985	57.46	6.824240	Y 242.219
Si (288.158 nm)	6.655410	ppm	0.005249	0.08	31100.400000	Y 377.433
Sn (189.925 nm)	-0.007866 u	ppm	0.000129	1.64	-1.119750	Y 377.433
Sr (421.552 nm)	0.110676	ppm	0.000062	0.06	13125.298545	Y_R 488.368
Th (288.505 nm)	-0.010291 u	ppm	0.000241	2.34	1.945500	Y 377.433
Ti (336.122 nm)	0.001032	ppm	0.000022	2.14	-150.891000	Y 377.433
Tl (190.794 nm)	-0.005169 u	ppm	0.006909	> 100.00	-12.239500	Y 377.433
U (409.013 nm)	-0.010320 u	ppm	0.004507	43.68	86.858100	Y 377.433
V (292.401 nm)	0.017854	ppm	0.000139	0.78	671.484000	Y 377.433
Zn (206.200 nm)	0.001679	ppm	0.000324	19.27	10.189800	Y 377.433
Zr (343.823 nm)	0.000364	ppm	0.000074	20.29	-103.799000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.084414	11551.390618	0.003136	0.29
Y 377.433	1.081388	499209.245074	0.003636	0.34
Y_R 377.433	1.115030	42134.600000	0.001528	0.14
Y_R 488.368	1.117170	40318.800000	0.002666	0.24
Y_R2 488.368	1.131744	79648.441009	0.003202	0.28
Y_R4	1.109170	34034.000000	0.005264	0.47

Sample Name: 280-116195-E-1-A

Date: 11/5/2018 7:45:18 PM Rack:Tube: 1:55

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001310	ppm	0.000299	22.84	-205.543000	Y 377.433
Al (394.401 nm)	10.308800 o	ppm	0.024719	0.24	128593.000000	Y 377.433
Al H (396.152 nm)	10.055500	ppm	0.027698	0.28	16529.300000	Y_R 377.433
As (188.980 nm)	0.005319	ppm	0.002195	41.27	-8.223030	Y 242.219
B (249.678 nm)	0.126808	ppm	0.000529	0.42	550.821000	Y 242.219
Ba (493.408 nm)	0.139666	ppm	0.000498	0.36	13594.400000	Y_R 488.368
Be (234.861 nm)	0.001139	ppm	0.000195	17.15	-165.105000	Y_R 488.368
Bi (223.061 nm)	0.009577	ppm	0.004454	46.51	61.083900	Y 377.433
Ca (315.887 nm)	261.410396	ppm	0.972647	0.37	172666.278516	Y_R 377.433
Cd (214.439 nm)	0.000497	ppm	0.000038	7.71	1.205280	Y 377.433
Co (228.615 nm)	0.011656	ppm	0.000286	2.45	270.006000	Y 242.219
Cr (205.560 nm)	0.040040	ppm	0.000716	1.79	181.541000	Y 377.433
Cu (324.754 nm)	0.029325	ppm	0.000321	1.09	1478.310000	Y 377.433
Fe (238.204 nm)	15.506843 o	ppm	0.047779	0.31	25848.562512	Y_R 377.433
Fe H (259.940 nm)	15.482500	ppm	0.035286	0.23	14196.500000	Y_R 377.433
K (766.491 nm)	6.165660	ppm	0.028754	0.47	7761.860000	Y_R2 488.368
Li (670.783 nm)	0.043162	ppm	0.002217	5.14	164.430000	Y_R2 488.368
Mg (279.078 nm)	117.477000	ppm	0.047509	0.04	255913.000000	Y 377.433
Mn (257.610 nm)	2.697700	ppm	0.005519	0.20	564446.000000	Y 377.433
Mo (202.032 nm)	0.004305	ppm	0.000501	11.63	67.660900	Y 377.433
Na (589.592 nm)	20.528600	ppm	0.141180	0.69	10175.400000	Y_R2 488.368
Na H (589.593 nm)	23.695588 u	ppm	0.080878	0.34	8056.871993	Y_R4
Ni (231.604 nm)	0.036654	ppm	0.000468	1.28	151.853000	Y 377.433
P (213.618 nm)	0.866364	ppm	0.003998	0.46	1002.590000	Y 242.219
Pb (220.353 nm)	0.015671	ppm	0.002291	14.62	47.894300	Y 242.219
S (181.972 nm)	96.275389	ppm	0.055981	0.06	45981.544758	Y 377.433
Sb (206.834 nm)	-0.008437 u	ppm	0.002584	30.62	-13.782700	Y 377.433
Se (196.026 nm)	0.001510 u	ppm	0.002676	> 100.00	3.676520	Y 242.219
Si (288.158 nm)	26.865300	ppm	0.316004	1.18	121638.000000	Y 377.433
Sn (189.925 nm)	-0.005306 u	ppm	0.001701	32.06	1.868930	Y 377.433
Sr (421.552 nm)	0.666921	ppm	0.002886	0.43	77695.331098	Y_R 488.368
Th (288.505 nm)	-0.032194 u	ppm	0.005517	17.14	5.058600	Y 377.433
Ti (336.122 nm)	0.101521	ppm	0.000034	0.03	9949.690000	Y 377.433
Tl (190.794 nm)	-0.007033 u	ppm	0.004877	69.34	-16.397800	Y 377.433
U (409.013 nm)	0.001010 u	ppm	0.006802	> 100.00	100.055000	Y 377.433
V (292.401 nm)	0.015243	ppm	0.000528	3.46	536.721000	Y 377.433
Zn (206.200 nm)	0.036849	ppm	0.001546	4.20	133.391000	Y 377.433
Zr (343.823 nm)	0.003127	ppm	0.000107	3.41	8.196680	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046762	11150.311921	0.001152	0.11
Y 377.433	1.057674	488262.014892	0.000438	0.04
Y_R 377.433	1.103570	41701.500000	0.005611	0.51
Y_R 488.368	1.099370	39676.300000	0.009150	0.83
Y_R2 488.368	1.094583	77033.192219	0.005414	0.49
Y_R4	1.090760	33469.100000	0.004740	0.43

Sample Name: 280-116195-E-2-A

Date: 11/5/2018 7:48:52 PM Rack:Tube: 1:56

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001949	ppm	0.000179	9.19	-185.376000	Y 377.433
Al (394.401 nm)	1.176310	ppm	0.002251	0.19	14862.600000	Y 377.433
Al H (396.152 nm)	1.160530	ppm	0.001891	0.16	1796.990000	Y_R 377.433
As (188.980 nm)	-0.003043 u	ppm	0.000645	21.20	-19.552500	Y 242.219
B (249.678 nm)	0.121402	ppm	0.000642	0.53	532.159000	Y 242.219
Ba (493.408 nm)	0.037561	ppm	0.000426	1.13	4243.010000	Y_R 488.368
Be (234.861 nm)	0.000385	ppm	0.000073	19.04	-72.260100	Y_R 488.368
Bi (223.061 nm)	0.011418	ppm	0.006046	52.95	62.894200	Y 377.433
Ca (315.887 nm)	347.256339	ppm	0.059274	0.02	229367.294916	Y_R 377.433
Cd (214.439 nm)	0.000307	ppm	0.000300	97.75	-3.523170	Y 377.433
Co (228.615 nm)	0.001191	ppm	0.000312	26.17	7.891190	Y 242.219
Cr (205.560 nm)	0.005943	ppm	0.001786	30.05	18.988900	Y 377.433
Cu (324.754 nm)	0.000560	ppm	0.000437	77.96	30.937600	Y 377.433
Fe (238.204 nm)	6.122032 o	ppm	0.000907	0.01	10211.877491	Y_R 377.433
Fe H (259.940 nm)	6.107730	ppm	0.014580	0.24	5593.770000	Y_R 377.433
K (766.491 nm)	3.174790	ppm	0.041787	1.32	4838.770000	Y_R2 488.368
Li (670.783 nm)	0.037115	ppm	0.005104	13.75	78.780600	Y_R2 488.368
Mg (279.078 nm)	144.499000	ppm	0.489139	0.34	314785.000000	Y 377.433
Mn (257.610 nm)	5.013280	ppm	0.015774	0.31	1048920.000000	Y 377.433
Mo (202.032 nm)	0.001144	ppm	0.000199	17.42	31.692100	Y 377.433
Na (589.592 nm)	31.726500	ppm	0.101994	0.32	15802.800000	Y_R2 488.368
Na H (589.593 nm)	34.709585 u	ppm	0.005617	0.02	11999.748940	Y_R4
Ni (231.604 nm)	0.005813	ppm	0.000603	10.38	32.278500	Y 377.433
P (213.618 nm)	0.110929	ppm	0.004905	4.42	127.469000	Y 242.219
Pb (220.353 nm)	0.001000 u	ppm	0.001916	> 100.00	16.495600	Y 242.219
S (181.972 nm)	173.325859 bo	ppm	0.205594	0.12	82796.041126	Y 377.433
Sb (206.834 nm)	-0.009772 u	ppm	0.004267	43.67	-16.736100	Y 377.433
Se (196.026 nm)	0.006305	ppm	0.004901	77.74	16.511100	Y 242.219
Si (288.158 nm)	16.235000	ppm	0.010535	0.06	74016.000000	Y 377.433
Sn (189.925 nm)	-0.005498 u	ppm	0.000660	12.00	1.645290	Y 377.433
Sr (421.552 nm)	0.508005	ppm	0.004465	0.88	59247.521696	Y_R 488.368
Th (288.505 nm)	-0.062005 u	ppm	0.004966	8.01	0.109103	Y 377.433
Ti (336.122 nm)	0.021745	ppm	0.000054	0.25	2581.000000	Y 377.433
Tl (190.794 nm)	-0.005893 u	ppm	0.003065	52.01	-15.907200	Y 377.433
U (409.013 nm)	0.015435	ppm	0.014917	96.64	120.006000	Y 377.433
V (292.401 nm)	0.003166	ppm	0.000115	3.63	-41.317500	Y 377.433
Zn (206.200 nm)	0.008355	ppm	0.000022	0.27	33.912600	Y 377.433
Zr (343.823 nm)	0.000620	ppm	0.000108	17.39	-93.419900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028309	10953.744740	0.006387	0.62
Y 377.433	1.040387	480281.608795	0.008747	0.84
Y_R 377.433	1.082240	40895.600000	0.008363	0.77
Y_R 488.368	1.093550	39466.200000	0.000822	0.08
Y_R2 488.368	1.084526	76325.378780	0.000677	0.06
Y_R4	1.074310	32964.400000	0.007013	0.65

Sample Name: CCVH-5408055

Date: 11/5/2018 7:52:24 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000763	ppm	0.000038	4.97	-328.640000	Y 377.433
Al (394.401 nm)	51.700400 o	ppm	0.264726	0.51	643850.000000	Y 377.433
Al H (396.152 nm)	50.001000	ppm	0.042837	0.09	82230.400000	Y_R 377.433
As (188.980 nm)	-0.005490 u	ppm	0.000428	7.79	-24.899200	Y 242.219
B (249.678 nm)	-0.011813 u	ppm	0.000976	8.26	-16.880000	Y 242.219
Ba (493.408 nm)	-0.000311 u	ppm	0.000112	36.06	808.954000	Y_R 488.368
Be (234.861 nm)	0.000067 u	ppm	0.000124	> 100.00	-701.792000	Y_R 488.368
Bi (223.061 nm)	0.990223	ppm	0.002925	0.30	1681.870000	Y 377.433
Ca (315.887 nm)	-0.004154 u	ppm	0.002134	51.38	5.291097	Y_R 377.433
Cd (214.439 nm)	0.000219	ppm	0.000092	42.06	-5.705870	Y 377.433
Co (228.615 nm)	0.001396	ppm	0.000201	14.40	60.512400	Y 242.219
Cr (205.560 nm)	0.000105	ppm	0.000137	> 100.00	-9.800760	Y 377.433
Cu (324.754 nm)	-0.000255 u	ppm	0.000136	53.36	650.458000	Y 377.433
Fe (238.204 nm)	49.660750 o	ppm	0.012489	0.03	82754.758955	Y_R 377.433
Fe H (259.940 nm)	49.775600	ppm	0.040706	0.08	45665.600000	Y_R 377.433
K (766.491 nm)	0.007444 u	ppm	0.055427	> 100.00	1743.190000	Y_R2 488.368
Li (670.783 nm)	0.011357	ppm	0.006126	53.94	-286.044000	Y_R2 488.368
Mg (279.078 nm)	-0.027424 u	ppm	0.000542	1.98	-196.934000	Y 377.433
Mn (257.610 nm)	0.000496	ppm	0.000010	2.11	126.440000	Y 377.433
Mo (202.032 nm)	-0.000778 u	ppm	0.000147	18.94	9.832240	Y 377.433
Na (589.592 nm)	250.108000 o	ppm	1.179360	0.47	125518.000000	Y_R2 488.368
Na H (589.593 nm)	255.840372	ppm	1.798216	0.70	90963.412160	Y_R4
Ni (231.604 nm)	0.000508	ppm	0.000145	28.45	18.448500	Y 377.433
P (213.618 nm)	-0.010677 u	ppm	0.004906	45.94	-14.735200	Y 242.219
Pb (220.353 nm)	-0.000335 u	ppm	0.001557	> 100.00	24.037800	Y 242.219
S (181.972 nm)	5.026948	ppm	0.035402	0.70	2375.152763	Y 377.433
Sb (206.834 nm)	-0.000199 u	ppm	0.000493	> 100.00	2.636670	Y 377.433
Se (196.026 nm)	0.001523 u	ppm	0.002771	> 100.00	-8.832640	Y 242.219
Si (288.158 nm)	-0.202250 u	ppm	0.002487	1.23	378.746000	Y 377.433
Sn (189.925 nm)	-0.008215 u	ppm	0.000004	0.05	-1.527070	Y 377.433
Sr (421.552 nm)	0.000005 u	ppm	0.000119	> 100.00	284.501491	Y_R 488.368
Th (288.505 nm)	4.965100	ppm	0.002509	0.05	5326.770000	Y 377.433
Ti (336.122 nm)	0.000788	ppm	0.000063	7.93	-290.048000	Y 377.433
Tl (190.794 nm)	-0.008025 u	ppm	0.003091	38.52	-16.724400	Y 377.433
U (409.013 nm)	10.240700	ppm	0.018030	0.18	23548.800000	Y 377.433
V (292.401 nm)	-0.004278 u	ppm	0.000189	4.42	-408.245000	Y 377.433
Zn (206.200 nm)	-0.000594 u	ppm	0.000140	23.53	7.645630	Y 377.433
Zr (343.823 nm)	-0.007049 u	ppm	0.000311	4.41	-404.202000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.055204	11240.235747	0.000561	0.05
Y 377.433	1.061509	490032.348641	0.002351	0.22
Y_R 377.433	1.107230	41839.800000	0.001361	0.12
Y_R 488.368	1.114950	40238.400000	0.000438	0.04
Y_R2 488.368	1.107246	77924.364702	0.005387	0.49
Y_R4	1.107880	33994.500000	0.012546	1.13

Sample Name: CCV-5407762

Date: 11/5/2018 7:55:59 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.508876	ppm	0.000674	0.13	13841.500000	Y 377.433
Al (394.401 nm)	0.515151	ppm	0.001314	0.26	6620.940000	Y 377.433
Al H (396.152 nm)	0.541346 u	ppm	0.003155	0.58	871.063000	Y_R 377.433
As (188.980 nm)	0.993811	ppm	0.003043	0.31	1377.300000	Y 242.219
B (249.678 nm)	0.490685	ppm	0.002246	0.46	2016.080000	Y 242.219
Ba (493.408 nm)	0.501866	ppm	0.001150	0.23	46733.200000	Y_R 488.368
Be (234.861 nm)	0.506146	ppm	0.000594	0.12	26169.800000	Y_R 488.368
Bi (223.061 nm)	-0.004103 u	ppm	0.004641	> 100.00	36.920100	Y 377.433
Ca (315.887 nm)	5.015307	ppm	0.019114	0.38	3310.494626	Y_R 377.433
Cd (214.439 nm)	0.508126	ppm	0.001786	0.35	12641.200000	Y 377.433
Co (228.615 nm)	0.501910	ppm	0.001913	0.38	11902.500000	Y 242.219
Cr (205.560 nm)	0.515327	ppm	0.002100	0.41	2448.030000	Y 377.433
Cu (324.754 nm)	0.513440	ppm	0.002677	0.52	24912.900000	Y 377.433
Fe (238.204 nm)	2.518940	ppm	0.001083	0.04	4208.516635	Y_R 377.433
Fe H (259.940 nm)	2.521860 u	ppm	0.008182	0.32	2303.180000	Y_R 377.433
K (766.491 nm)	50.246400	ppm	0.345670	0.69	50843.800000	Y_R2 488.368
Li (670.783 nm)	1.020360	ppm	0.003544	0.35	14005.100000	Y_R2 488.368
Mg (279.078 nm)	20.141800	ppm	0.046086	0.23	43889.700000	Y 377.433
Mn (257.610 nm)	0.509092	ppm	0.000651	0.13	106537.000000	Y 377.433
Mo (202.032 nm)	0.514888	ppm	0.001103	0.21	5876.340000	Y 377.433
Na (589.592 nm)	25.490300	ppm	0.183365	0.72	12662.500000	Y_R2 488.368
Na H (589.593 nm)	28.667421 u	ppm	0.129071	0.45	9796.426437	Y_R4
Ni (231.604 nm)	0.509305	ppm	0.000657	0.13	1961.890000	Y 377.433
P (213.618 nm)	0.991440	ppm	0.000802	0.08	1125.970000	Y 242.219
Pb (220.353 nm)	1.003470	ppm	0.003473	0.35	2253.960000	Y 242.219
S (181.972 nm)	-0.002529 u	ppm	0.001541	60.94	-24.997095	Y 377.433
Sb (206.834 nm)	1.025700	ppm	0.000363	0.04	1685.300000	Y 377.433
Se (196.026 nm)	1.009530	ppm	0.002260	0.22	1519.560000	Y 242.219
Si (288.158 nm)	4.881830	ppm	0.025124	0.51	23154.900000	Y 377.433
Sn (189.925 nm)	1.019490	ppm	0.006655	0.65	1198.170000	Y 377.433
Sr (421.552 nm)	0.507052	ppm	0.000901	0.18	59136.391655	Y_R 488.368
Th (288.505 nm)	-0.028916 u	ppm	0.004033	13.95	-49.345600	Y 377.433
Ti (336.122 nm)	0.512916	ppm	0.001160	0.23	48420.400000	Y 377.433
Tl (190.794 nm)	1.018460	ppm	0.011521	1.13	574.284000	Y 377.433
U (409.013 nm)	-0.015532 u	ppm	0.002532	16.30	34.334400	Y 377.433
V (292.401 nm)	0.507454	ppm	0.000135	0.03	24237.900000	Y 377.433
Zn (206.200 nm)	0.508154	ppm	0.002374	0.47	1760.870000	Y 377.433
Zr (343.823 nm)	0.512439	ppm	0.001755	0.34	20648.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.071593	11414.813820	0.000185	0.02
Y 377.433	1.064846	491572.795722	0.002277	0.21
Y_R 377.433	1.097110	41457.300000	0.001341	0.12
Y_R 488.368	1.096300	39565.500000	0.002372	0.22
Y_R2 488.368	1.086182	76441.935475	0.011170	1.03
Y_R4	1.064900	32675.500000	0.012658	1.19

Sample Name: CCB

Date: 11/5/2018 7:59:28 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000459 u	ppm	0.000602	> 100.00	-251.906000	Y 377.433
Al (394.401 nm)	-0.001001 u	ppm	0.001968	> 100.00	76.114900	Y 377.433
Al H (396.152 nm)	0.142964 Zu	ppm	0.002842	1.99	20.326200 Z	Y_R 377.433
As (188.980 nm)	-0.001794 u	ppm	0.002178	> 100.00	-17.628500	Y 242.219
B (249.678 nm)	-0.009146 u	ppm	0.001175	12.85	9.978410	Y 242.219
Ba (493.408 nm)	-0.000853 u	ppm	0.000044	5.21	723.001000	Y_R 488.368
Be (234.861 nm)	-0.000020 u	ppm	0.000016	81.87	-6.893160	Y_R 488.368
Bi (223.061 nm)	-0.002876 u	ppm	0.002705	94.06	38.531000	Y 377.433
Ca (315.887 nm)	-0.004209 u	ppm	0.004363	> 100.00	-5.097878	Y_R 377.433
Cd (214.439 nm)	0.000152	ppm	0.000038	25.16	-7.371200	Y 377.433
Co (228.615 nm)	0.000279	ppm	0.000249	89.33	-21.343000	Y 242.219
Cr (205.560 nm)	0.000548	ppm	0.000185	33.66	-6.728480	Y 377.433
Cu (324.754 nm)	0.000151	ppm	0.000028	18.84	208.141000	Y 377.433
Fe (238.204 nm)	-0.002554 u	ppm	0.000005	0.20	7.280011	Y_R 377.433
Fe H (259.940 nm)	0.013514 u	ppm	0.006997	51.78	1.394320	Y_R 377.433
K (766.491 nm)	-0.112444 u	ppm	0.079645	70.83	1626.020000	Y_R2 488.368
Li (670.783 nm)	0.007933	ppm	0.000301	3.80	-334.536000	Y_R2 488.368
Mg (279.078 nm)	0.003070	ppm	0.001383	45.06	20.838500	Y 377.433
Mn (257.610 nm)	0.000035	ppm	0.000002	7.06	29.892000	Y 377.433
Mo (202.032 nm)	-0.000353 u	ppm	0.000001	0.32	14.658700	Y 377.433
Na (589.592 nm)	0.261340	ppm	0.050950	19.50	-4.720690	Y_R2 488.368
Na H (589.593 nm)	3.210910 u	ppm	0.011431	0.36	756.105529	Y_R4
Ni (231.604 nm)	0.000124 u	ppm	0.000672	> 100.00	9.558910	Y 377.433
P (213.618 nm)	0.000796 u	ppm	0.001665	> 100.00	-0.172571	Y 242.219
Pb (220.353 nm)	-0.003322 u	ppm	0.002338	70.39	7.066460	Y 242.219
S (181.972 nm)	0.011646	ppm	0.002052	17.62	-20.149040	Y 377.433
Sb (206.834 nm)	0.002276	ppm	0.001035	45.50	2.622620	Y 377.433
Se (196.026 nm)	0.001812	ppm	0.000816	45.01	4.366880	Y 242.219
Si (288.158 nm)	-0.202454 Zu	ppm	0.001230	0.61	377.836000 Z	Y 377.433
Sn (189.925 nm)	-0.007434 u	ppm	0.000713	9.60	-0.615114	Y 377.433
Sr (421.552 nm)	-0.000195 u	ppm	0.000053	27.31	255.582362	Y_R 488.368
Th (288.505 nm)	-0.002381 u	ppm	0.000038	1.62	11.833500	Y 377.433
Ti (336.122 nm)	0.000454	ppm	0.000114	25.04	-321.948000	Y 377.433
Tl (190.794 nm)	0.003154	ppm	0.001014	32.15	-7.006510	Y 377.433
U (409.013 nm)	-0.011524 u	ppm	0.004735	41.09	88.487100	Y 377.433
V (292.401 nm)	0.000373	ppm	0.000175	46.96	-176.900000	Y 377.433
Zn (206.200 nm)	0.000710	ppm	0.000190	26.70	6.834320	Y 377.433
Zr (343.823 nm)	0.000326	ppm	0.000133	40.85	-105.304000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079491	11498.942727	0.003017	0.28
Y 377.433	1.072691	495194.149249	0.000969	0.09
Y_R 377.433	1.087740	41103.300000	0.001495	0.14
Y_R 488.368	1.087410	39244.600000	0.011601	1.07
Y_R2 488.368	1.080247	76024.289204	0.007402	0.69
Y_R4	1.057030	32434.000000	0.006455	0.61

Sample Name: CCVL-5412564

Date: 11/5/2018 8:02:39 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010121	ppm	0.000787	7.78	41.642400	Y 377.433
Al (394.401 nm)	0.103926	ppm	0.000698	0.67	1383.620000	Y 377.433
Al H (396.152 nm)	0.242807 u	ppm	0.006469	2.66	189.238000	Y_R 377.433
As (188.980 nm)	0.012499	ppm	0.001454	11.63	2.392710	Y 242.219
B (249.678 nm)	0.090276	ppm	0.003627	4.02	409.146000	Y 242.219
Ba (493.408 nm)	0.009590	ppm	0.000286	2.98	1678.760000	Y_R 488.368
Be (234.861 nm)	0.001068	ppm	0.000037	3.50	48.038300	Y_R 488.368
Bi (223.061 nm)	0.094187	ppm	0.003029	3.22	198.534000	Y 377.433
Ca (315.887 nm)	0.194451	ppm	0.012790	6.58	126.143755	Y_R 377.433
Cd (214.439 nm)	0.005148	ppm	0.000182	3.54	117.027000	Y 377.433
Co (228.615 nm)	0.010779	ppm	0.000155	1.44	228.299000	Y 242.219
Cr (205.560 nm)	0.010361	ppm	0.000421	4.06	39.989200	Y 377.433
Cu (324.754 nm)	0.015651	ppm	0.000168	1.07	957.095000	Y 377.433
Fe (238.204 nm)	0.097718	ppm	0.000504	0.52	174.350267	Y_R 377.433
Fe H (259.940 nm)	0.101839 u	ppm	0.001871	1.84	82.445700	Y_R 377.433
K (766.491 nm)	2.937880	ppm	0.026393	0.90	4607.220000	Y_R2 488.368
Li (670.783 nm)	0.028145 Q	ppm	0.001449	5.15	-48.271200 Q	Y_R2 488.368
Mg (279.078 nm)	0.205823	ppm	0.001436	0.70	461.988000	Y 377.433
Mn (257.610 nm)	0.010598	ppm	0.000067	0.63	2240.030000	Y 377.433
Mo (202.032 nm)	0.019988	ppm	0.000192	0.96	246.072000	Y 377.433
Na (589.592 nm)	1.363970 Q	ppm	0.099692	7.31	549.085000 Q	Y_R2 488.368
Na H (589.593 nm)	3.980210 u	ppm	0.039108	0.98	1029.811338	Y_R4
Ni (231.604 nm)	0.041937	ppm	0.001142	2.72	169.806000	Y 377.433
P (213.618 nm)	2.854950	ppm	0.008258	0.29	3310.210000	Y 242.219
Pb (220.353 nm)	0.006943	ppm	0.000909	13.09	29.996900	Y 242.219
S (181.972 nm)	0.106805	ppm	0.001090	1.02	25.343631	Y 377.433
Sb (206.834 nm)	0.019691	ppm	0.001367	6.94	31.124100	Y 377.433
Se (196.026 nm)	0.018346	ppm	0.000162	0.88	29.216700	Y 242.219
Si (288.158 nm)	0.297335 Q	ppm	0.001265	0.43	2616.840000 Q	Y 377.433
Sn (189.925 nm)	0.093226	ppm	0.001542	1.65	116.891000	Y 377.433
Sr (421.552 nm)	0.009255	ppm	0.000066	0.72	1352.577792	Y_R 488.368
Th (288.505 nm)	0.019128	ppm	0.004814	25.17	34.374000	Y 377.433
Ti (336.122 nm)	0.010506	ppm	0.000161	1.53	634.405000	Y 377.433
Tl (190.794 nm)	0.017817	ppm	0.001809	10.15	1.366210	Y 377.433
U (409.013 nm)	0.048772	ppm	0.001010	2.07	225.038000	Y 377.433
V (292.401 nm)	0.010105	ppm	0.000030	0.30	292.235000	Y 377.433
Zn (206.200 nm)	0.021650	ppm	0.000201	0.93	79.213600	Y 377.433
Zr (343.823 nm)	0.015629	ppm	0.000229	1.46	514.823000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090848	11619.918623	0.003719	0.34
Y 377.433	1.082413	499682.222939	0.003736	0.35
Y_R 377.433	1.099960	41565.000000	0.001246	0.11
Y_R 488.368	1.099460	39679.500000	0.009425	0.86
Y_R2 488.368	1.098431	77304.000122	0.003465	0.32
Y_R4	1.064490	32663.100000	0.011967	1.12

Sample Name: 280-116195-E-3-A

Date: 11/5/2018 8:06:02 PM Rack:Tube: 1:57

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001757	ppm	0.000089	5.06	-190.886000	Y 377.433
Al (394.401 nm)	1.710850	ppm	0.004368	0.26	21523.900000	Y 377.433
Al H (396.152 nm)	1.678270	ppm	0.000047	0.00	2674.120000	Y_R 377.433
As (188.980 nm)	0.000247	ppm	0.000191	77.13	-14.905800	Y 242.219
B (249.678 nm)	0.169959	ppm	0.000081	0.05	727.721000	Y 242.219
Ba (493.408 nm)	0.265611	ppm	0.001880	0.71	25112.600000	Y_R 488.368
Be (234.861 nm)	0.000341	ppm	0.000049	14.32	-48.747700	Y_R 488.368
Bi (223.061 nm)	0.014330	ppm	0.001053	7.35	67.457300	Y 377.433
Ca (315.887 nm)	260.391264	ppm	0.170241	0.07	171991.378266	Y_R 377.433
Cd (214.439 nm)	0.000428	ppm	0.000077	18.10	-0.507065	Y 377.433
Co (228.615 nm)	0.001121	ppm	0.000132	11.80	4.405170	Y 242.219
Cr (205.560 nm)	0.005753	ppm	0.000648	11.26	18.079200	Y 377.433
Cu (324.754 nm)	0.001470	ppm	0.000068	4.65	123.935000	Y 377.433
Fe (238.204 nm)	4.302164	ppm	0.013542	0.31	7179.668692	Y_R 377.433
Fe H (259.940 nm)	4.293520 u	ppm	0.002792	0.07	3928.950000	Y_R 377.433
K (766.491 nm)	4.342510	ppm	0.055672	1.28	5980.030000	Y_R2 488.368
Li (670.783 nm)	0.034214	ppm	0.002885	8.43	37.693800	Y_R2 488.368
Mg (279.078 nm)	172.702000	ppm	0.174620	0.10	376226.000000	Y 377.433
Mn (257.610 nm)	2.559840	ppm	0.000017	0.00	535601.000000	Y 377.433
Mo (202.032 nm)	-0.000228 u	ppm	0.000105	45.89	16.083900	Y 377.433
Na (589.592 nm)	30.132500	ppm	0.272193	0.90	14998.400000	Y_R2 488.368
Na H (589.593 nm)	32.838962 u	ppm	0.356657	1.09	11309.296282	Y_R4
Ni (231.604 nm)	0.005178	ppm	0.000152	2.93	29.574400	Y 377.433
P (213.618 nm)	0.487617	ppm	0.000991	0.20	564.442000	Y 242.219
Pb (220.353 nm)	0.002493	ppm	0.001472	59.06	19.759200	Y 242.219
S (181.972 nm)	61.075590	ppm	0.160173	0.26	29168.244854	Y 377.433
Sb (206.834 nm)	-0.011202 u	ppm	0.001703	15.20	-19.253100	Y 377.433
Se (196.026 nm)	0.002370	ppm	0.000449	18.96	7.654670	Y 242.219
Si (288.158 nm)	14.952200	ppm	0.050847	0.34	68269.300000	Y 377.433
Sn (189.925 nm)	-0.004895 u	ppm	0.000420	8.58	2.348770	Y 377.433
Sr (421.552 nm)	0.532295	ppm	0.001047	0.20	62066.834094	Y_R 488.368
Th (288.505 nm)	-0.033882 u	ppm	0.003878	11.45	3.837750	Y 377.433
Ti (336.122 nm)	0.026663	ppm	0.000122	0.46	2828.800000	Y 377.433
Tl (190.794 nm)	-0.002869 u	ppm	0.001647	57.42	-13.273700	Y 377.433
U (409.013 nm)	0.000980	ppm	0.000154	15.75	94.276500	Y 377.433
V (292.401 nm)	0.004089	ppm	0.000137	3.36	3.642510	Y 377.433
Zn (206.200 nm)	0.008217	ppm	0.001271	15.47	33.236700	Y 377.433
Zr (343.823 nm)	0.001628	ppm	0.000012	0.76	-52.575100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010119	10759.978379	0.010770	1.07
Y 377.433	1.022213	471891.587017	0.008473	0.83
Y_R 377.433	1.068490	40375.700000	0.006925	0.65
Y_R 488.368	1.068700	38569.300000	0.009435	0.88
Y_R2 488.368	1.060416	74628.628352	0.004435	0.42
Y_R4	1.051830	32274.600000	0.010847	1.03

Sample Name: 280-116195-E-4-A

Date: 11/5/2018 8:09:34 PM Rack:Tube: 1:58

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001242	ppm	0.000259	20.87	-205.404000	Y 377.433
Al (394.401 nm)	1.842050	ppm	0.002891	0.16	23088.300000	Y 377.433
Al H (396.152 nm)	1.855910	ppm	0.002462	0.13	2910.980000	Y_R 377.433
As (188.980 nm)	0.017594	ppm	0.003416	19.41	9.335130	Y 242.219
B (249.678 nm)	0.053227	ppm	0.000603	1.13	258.192000	Y 242.219
Ba (493.408 nm)	0.121003	ppm	0.000910	0.75	11880.100000	Y_R 488.368
Be (234.861 nm)	0.000338	ppm	0.000001	0.40	-84.766400	Y_R 488.368
Bi (223.061 nm)	0.000839 u	ppm	0.003159	> 100.00	45.571900	Y 377.433
Ca (315.887 nm)	99.156579	ppm	0.073932	0.07	65492.841172	Y_R 377.433
Cd (214.439 nm)	0.000333	ppm	0.000121	36.29	-2.864000	Y 377.433
Co (228.615 nm)	0.002590	ppm	0.000254	9.80	42.133100	Y 242.219
Cr (205.560 nm)	0.013606	ppm	0.000225	1.65	55.535600	Y 377.433
Cu (324.754 nm)	0.017861	ppm	0.000163	0.91	1010.710000	Y 377.433
Fe (238.204 nm)	6.852433 o	ppm	0.006143	0.09	11428.850326	Y_R 377.433
Fe H (259.940 nm)	6.850970	ppm	0.004442	0.06	6275.800000	Y_R 377.433
K (766.491 nm)	16.235600	ppm	0.010818	0.07	17603.600000	Y_R2 488.368
Li (670.783 nm)	0.026422	ppm	0.001122	4.25	-72.667900	Y_R2 488.368
Mg (279.078 nm)	36.646000	ppm	0.033261	0.09	79837.900000	Y 377.433
Mn (257.610 nm)	0.300906	ppm	0.000057	0.02	62979.500000	Y 377.433
Mo (202.032 nm)	0.006036	ppm	0.000229	3.80	87.348900	Y 377.433
Na (589.592 nm)	4.528980	ppm	0.026243	0.58	2137.460000	Y_R2 488.368
Na H (589.593 nm)	7.167055 u	ppm	0.064619	0.90	2156.751072	Y_R4
Ni (231.604 nm)	0.013969	ppm	0.001054	7.55	63.628600	Y 377.433
P (213.618 nm)	0.342614	ppm	0.002152	0.63	395.533000	Y 242.219
Pb (220.353 nm)	-0.000617 u	ppm	0.000977	> 100.00	12.809600	Y 242.219
S (181.972 nm)	23.805359	ppm	0.110687	0.46	11350.728394	Y 377.433
Sb (206.834 nm)	-0.007538 u	ppm	0.001711	22.70	-12.985300	Y 377.433
Se (196.026 nm)	0.003946	ppm	0.001541	39.04	6.232910	Y 242.219
Si (288.158 nm)	13.806200	ppm	0.013320	0.10	63135.200000	Y 377.433
Sn (189.925 nm)	-0.008008 u	ppm	0.000613	7.65	-1.284970	Y 377.433
Sr (421.552 nm)	0.264428	ppm	0.001114	0.42	30973.477287	Y_R 488.368
Th (288.505 nm)	-0.015321 u	ppm	0.003768	24.59	-0.365596	Y 377.433
Ti (336.122 nm)	0.026132	ppm	0.000251	0.96	2370.420000	Y 377.433
Tl (190.794 nm)	-0.005057 u	ppm	0.003564	70.47	-13.008200	Y 377.433
U (409.013 nm)	0.002828 u	ppm	0.007643	> 100.00	115.328000	Y 377.433
V (292.401 nm)	0.004630	ppm	0.000240	5.18	26.818100	Y 377.433
Zn (206.200 nm)	0.013542	ppm	0.000628	4.63	51.913200	Y 377.433
Zr (343.823 nm)	0.001463	ppm	0.000035	2.40	-59.243100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068249	11379.194472	0.000601	0.06
Y 377.433	1.064661	491487.425795	0.000525	0.05
Y_R 377.433	1.106330	41805.800000	0.004013	0.36
Y_R 488.368	1.101250	39744.200000	0.008199	0.74
Y_R2 488.368	1.096687	77181.266464	0.002233	0.20
Y_R4	1.072230	32900.400000	0.000389	0.04

Sample Name: 280-116195-E-5-A

Date: 11/5/2018 8:13:05 PM Rack:Tube: 1:59

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001889	ppm	0.000498	26.34	-188.036000	Y 377.433
Al (394.401 nm)	2.381510	ppm	0.001468	0.06	30005.200000	Y 377.433
Al H (396.152 nm)	2.250280	ppm	0.012439	0.55	3705.970000	Y_R 377.433
As (188.980 nm)	0.022837	ppm	0.003377	14.79	15.556600	Y 242.219
B (249.678 nm)	0.359234	ppm	0.002407	0.67	1472.500000	Y 242.219
Ba (493.408 nm)	0.033629	ppm	0.000279	0.83	3916.030000	Y_R 488.368
Be (234.861 nm)	0.000191	ppm	0.000125	65.34	-714.755000	Y_R 488.368
Bi (223.061 nm)	0.018221	ppm	0.006223	34.15	79.954800	Y 377.433
Ca (315.887 nm)	608.771596	ppm	1.516331	0.25	402103.312783	Y_R 377.433
Cd (214.439 nm)	0.000677	ppm	0.000029	4.29	5.709570	Y 377.433
Co (228.615 nm)	0.007462	ppm	0.000203	2.72	207.398000	Y 242.219
Cr (205.560 nm)	0.004186	ppm	0.000794	18.98	10.569200	Y 377.433
Cu (324.754 nm)	0.002649	ppm	0.000102	3.84	28.000400	Y 377.433
Fe (238.204 nm)	51.143849 o	ppm	0.057994	0.11	85225.852748	Y_R 377.433
Fe H (259.940 nm)	51.409600	ppm	0.070597	0.14	47165.100000	Y_R 377.433
K (766.491 nm)	3.324940	ppm	0.079199	2.38	4985.510000	Y_R2 488.368
Li (670.783 nm)	0.034656	ppm	0.008182	23.61	43.954500	Y_R2 488.368
Mg (279.078 nm)	248.305000	ppm	0.303535	0.12	540877.000000	Y 377.433
Mn (257.610 nm)	7.250590	ppm	0.003249	0.04	1517020.000000	Y 377.433
Mo (202.032 nm)	0.001766	ppm	0.000183	10.37	38.773900	Y 377.433
Na (589.592 nm)	39.326000	ppm	0.096570	0.25	19620.800000	Y_R2 488.368
Na H (589.593 nm)	42.057588 u	ppm	0.193421	0.46	14623.893024	Y_R4
Ni (231.604 nm)	0.010428	ppm	0.001131	10.85	56.683700	Y 377.433
P (213.618 nm)	0.130374	ppm	0.006436	4.94	149.996000	Y 242.219
Pb (220.353 nm)	0.005568	ppm	0.001713	30.76	26.584100	Y 242.219
S (181.972 nm)	560.176454 bo	ppm	0.338433	0.06	267591.977299	Y 377.433
Sb (206.834 nm)	-0.010876 u	ppm	0.000316	2.91	-14.947900	Y 377.433
Se (196.026 nm)	0.002129	ppm	0.000910	42.73	1.791120	Y 242.219
Si (288.158 nm)	14.814900	ppm	0.023700	0.16	67653.900000	Y 377.433
Sn (189.925 nm)	-0.007560 u	ppm	0.000875	11.58	-0.762429	Y 377.433
Sr (421.552 nm)	1.013059	ppm	0.017672	1.74	117878.732899	Y_R 488.368
Th (288.505 nm)	-0.081998 u	ppm	0.002547	3.11	-3.602700	Y 377.433
Ti (336.122 nm)	0.041549	ppm	0.000224	0.54	5125.930000	Y 377.433
Tl (190.794 nm)	-0.006165 u	ppm	0.006741	> 100.00	-20.090600	Y 377.433
U (409.013 nm)	0.000534 u	ppm	0.007827	> 100.00	84.513500	Y 377.433
V (292.401 nm)	0.006258	ppm	0.000097	1.55	107.312000	Y 377.433
Zn (206.200 nm)	0.018266	ppm	0.000336	1.84	72.974300	Y 377.433
Zr (343.823 nm)	0.002652	ppm	0.000051	1.91	-11.072400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.992424	10571.492508	0.005321	0.54
Y 377.433	1.019638	470702.978788	0.006795	0.67
Y_R 377.433	1.047160	39569.700000	0.004267	0.41
Y_R 488.368	1.056370	38124.500000	0.020434	1.93
Y_R2 488.368	1.054300	74198.205258	0.001356	0.13
Y_R4	1.053040	32311.600000	0.012119	1.15

Sample Name: 280-116195-E-6-A

Date: 11/5/2018 8:16:42 PM Rack:Tube: 1:60

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001394	ppm	0.000177	12.70	-201.209000	Y 377.433
Al (394.401 nm)	1.821910	ppm	0.002779	0.15	22883.900000	Y 377.433
Al H (396.152 nm)	1.799620	ppm	0.010927	0.61	2863.270000	Y_R 377.433
As (188.980 nm)	0.009156	ppm	0.004139	45.20	-2.414150	Y 242.219
B (249.678 nm)	0.209862	ppm	0.000771	0.37	888.077000	Y 242.219
Ba (493.408 nm)	0.085286	ppm	0.000446	0.52	8609.120000	Y_R 488.368
Be (234.861 nm)	0.000310	ppm	0.000045	14.52	-44.442000	Y_R 488.368
Bi (223.061 nm)	0.008342	ppm	0.005480	65.70	57.544100	Y 377.433
Ca (315.887 nm)	170.924393	ppm	0.024769	0.01	112896.834331	Y_R 377.433
Cd (214.439 nm)	0.000448	ppm	0.000279	62.33	-0.005996	Y 377.433
Co (228.615 nm)	0.003360	ppm	0.000207	6.16	57.190900	Y 242.219
Cr (205.560 nm)	0.006839	ppm	0.000535	7.83	23.239200	Y 377.433
Cu (324.754 nm)	0.012901	ppm	0.000150	1.16	726.510000	Y 377.433
Fe (238.204 nm)	3.881532	ppm	0.005188	0.13	6478.826002	Y_R 377.433
Fe H (259.940 nm)	3.872170 u	ppm	0.005056	0.13	3542.300000	Y_R 377.433
K (766.491 nm)	10.699800	ppm	0.126652	1.18	12193.200000	Y_R2 488.368
Li (670.783 nm)	0.028160	ppm	0.003356	11.92	-48.047200	Y_R2 488.368
Mg (279.078 nm)	91.924100	ppm	0.014646	0.02	200258.000000	Y 377.433
Mn (257.610 nm)	0.365620	ppm	0.000046	0.01	76519.100000	Y 377.433
Mo (202.032 nm)	0.004189	ppm	0.000203	4.84	66.331800	Y 377.433
Na (589.592 nm)	20.570200	ppm	0.012149	0.06	10197.100000	Y_R2 488.368
Na H (589.593 nm)	23.216822 u	ppm	0.124408	0.54	7891.279291	Y_R4
Ni (231.604 nm)	0.010121	ppm	0.000269	2.65	48.447800	Y 377.433
P (213.618 nm)	0.685141	ppm	0.000058	0.01	793.078000	Y 242.219
Pb (220.353 nm)	0.002739	ppm	0.001645	60.06	20.291800	Y 242.219
S (181.972 nm)	145.716605 bo	ppm	0.193075	0.13	69584.330723	Y 377.433
Sb (206.834 nm)	-0.006976 u	ppm	0.001858	26.64	-12.372700	Y 377.433
Se (196.026 nm)	0.005250	ppm	0.001247	23.76	9.045290	Y 242.219
Si (288.158 nm)	10.325800	ppm	0.012677	0.12	47543.600000	Y 377.433
Sn (189.925 nm)	-0.007649 u	ppm	0.001032	13.49	-0.866299	Y 377.433
Sr (421.552 nm)	0.449399	ppm	0.002879	0.64	52444.303682	Y_R 488.368
Th (288.505 nm)	-0.015926 u	ppm	0.005872	36.87	-0.536612	Y 377.433
Ti (336.122 nm)	0.029349	ppm	0.000328	1.12	2858.090000	Y 377.433
Tl (190.794 nm)	-0.006676 u	ppm	0.006617	99.13	-14.562300	Y 377.433
U (409.013 nm)	-0.004290 u	ppm	0.000738	17.20	90.574400	Y 377.433
V (292.401 nm)	0.005367	ppm	0.000060	1.12	65.438600	Y 377.433
Zn (206.200 nm)	0.018171	ppm	0.001228	6.76	67.595300	Y 377.433
Zr (343.823 nm)	0.001955	ppm	0.000128	6.55	-39.325400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043792	11118.668080	0.002252	0.22
Y 377.433	1.047494	483562.341416	0.001819	0.17
Y_R 377.433	1.086190	41044.700000	0.004733	0.44
Y_R 488.368	1.086530	39212.900000	0.010302	0.95
Y_R2 488.368	1.091437	76811.795829	0.011706	1.07
Y_R4	1.095790	33623.500000	0.007434	0.68

Sample Name: 280-116195-E-7-A

Date: 11/5/2018 8:20:14 PM Rack:Tube: 1:61

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001778	ppm	0.000059	3.30	-190.312000	Y 377.433
Al (394.401 nm)	1.689260	ppm	0.003936	0.23	21306.600000	Y 377.433
Al H (396.152 nm)	1.628110	ppm	0.018925	1.16	2649.520000	Y_R 377.433
As (188.980 nm)	-0.000342 u	ppm	0.000816	> 100.00	-15.705900	Y 242.219
B (249.678 nm)	0.167152	ppm	0.001696	1.01	716.778000	Y 242.219
Ba (493.408 nm)	0.026034	ppm	0.000267	1.02	3186.050000	Y_R 488.368
Be (234.861 nm)	0.000246	ppm	0.000062	25.39	-39.482100	Y_R 488.368
Bi (223.061 nm)	0.015707	ppm	0.007533	47.96	69.595100	Y 377.433
Ca (315.887 nm)	288.380795	ppm	0.072325	0.03	190478.992034	Y_R 377.433
Cd (214.439 nm)	0.000402	ppm	0.000148	36.86	-1.152260	Y 377.433
Co (228.615 nm)	0.002517	ppm	0.000147	5.84	36.453900	Y 242.219
Cr (205.560 nm)	0.008068	ppm	0.000202	2.50	29.113400	Y 377.433
Cu (324.754 nm)	0.000975	ppm	0.000063	6.47	82.760800	Y 377.433
Fe (238.204 nm)	3.291285	ppm	0.011463	0.35	5495.374019	Y_R 377.433
Fe H (259.940 nm)	3.249190 u	ppm	0.002225	0.07	2970.620000	Y_R 377.433
K (766.491 nm)	4.258180	ppm	0.175593	4.12	5897.610000	Y_R2 488.368
Li (670.783 nm)	0.040804	ppm	0.002475	6.06	131.036000	Y_R2 488.368
Mg (279.078 nm)	206.250000	ppm	0.698830	0.34	449307.000000	Y 377.433
Mn (257.610 nm)	1.266960	ppm	0.004914	0.39	265101.000000	Y 377.433
Mo (202.032 nm)	0.001455	ppm	0.000177	12.14	35.235600	Y 377.433
Na (589.592 nm)	37.931700	ppm	0.067000	0.18	18920.400000	Y_R2 488.368
Na H (589.593 nm)	40.219951 u	ppm	0.046628	0.12	13968.480011	Y_R4
Ni (231.604 nm)	0.012255	ppm	0.000635	5.18	56.537900	Y 377.433
P (213.618 nm)	0.082067	ppm	0.000797	0.97	93.974700	Y 242.219
Pb (220.353 nm)	0.000205 u	ppm	0.001479	> 100.00	14.636400	Y 242.219
S (181.972 nm)	318.059211 bo	ppm	1.127510	0.35	151911.059258	Y 377.433
Sb (206.834 nm)	-0.009360 u	ppm	0.000267	2.85	-16.302200	Y 377.433
Se (196.026 nm)	0.000417 u	ppm	0.001995	> 100.00	3.181990	Y 242.219
Si (288.158 nm)	11.198800	ppm	0.037128	0.33	51454.400000	Y 377.433
Sn (189.925 nm)	-0.007814 u	ppm	0.000074	0.95	-1.058340	Y 377.433
Sr (421.552 nm)	0.733388	ppm	0.005514	0.75	85409.335348	Y_R 488.368
Th (288.505 nm)	-0.021451 u	ppm	0.002530	11.79	2.824470	Y 377.433
Ti (336.122 nm)	0.027975	ppm	0.000255	0.91	3024.280000	Y 377.433
Tl (190.794 nm)	-0.008508 u	ppm	0.001029	12.10	-16.756600	Y 377.433
U (409.013 nm)	-0.005361 u	ppm	0.026247	> 100.00	76.618000	Y 377.433
V (292.401 nm)	0.004209	ppm	0.000019	0.44	9.208440	Y 377.433
Zn (206.200 nm)	0.010171	ppm	0.000583	5.74	39.882300	Y 377.433
Zr (343.823 nm)	0.001236	ppm	0.000316	25.60	-68.434500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034744	11022.294642	0.007572	0.73
Y 377.433	1.047884	483742.277054	0.005070	0.48
Y_R 377.433	1.081120	40852.900000	0.019109	1.77
Y_R 488.368	1.087080	39232.600000	0.009856	0.91
Y_R2 488.368	1.059250	74546.568186	0.013649	1.29
Y_R4	1.057070	32435.300000	0.004831	0.46

Sample Name: 280-116195-E-8-A

Date: 11/5/2018 8:23:44 PM Rack:Tube: 1:62

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002247	ppm	0.000209	9.28	-177.121000	Y 377.433
Al (394.401 nm)	0.581340	ppm	0.001027	0.18	7541.920000	Y 377.433
Al H (396.152 nm)	0.524012 u	ppm	0.025286	4.83	862.319000	Y_R 377.433
As (188.980 nm)	-0.001091 u	ppm	0.000217	19.93	-16.709500	Y 242.219
B (249.678 nm)	0.317429	ppm	0.002405	0.76	1320.510000	Y 242.219
Ba (493.408 nm)	0.029334	ppm	0.000897	3.06	3487.320000	Y_R 488.368
Be (234.861 nm)	0.000123	ppm	0.000152	> 100.00	-31.021000	Y_R 488.368
Bi (223.061 nm)	0.013678	ppm	0.002277	16.65	66.113300	Y 377.433
Ca (315.887 nm)	261.508065	ppm	0.729354	0.28	172728.817583	Y_R 377.433
Cd (214.439 nm)	0.000407	ppm	0.000002	0.56	-1.024550	Y 377.433
Co (228.615 nm)	0.004488	ppm	0.000219	4.89	81.431300	Y 242.219
Cr (205.560 nm)	0.001718	ppm	0.000718	41.78	-1.166370	Y 377.433
Cu (324.754 nm)	-0.000300 u	ppm	0.000244	81.50	33.894300	Y 377.433
Fe (238.204 nm)	2.234713	ppm	0.001538	0.07	3734.946053	Y_R 377.433
Fe H (259.940 nm)	2.214870 u	ppm	0.000546	0.02	2021.480000	Y_R 377.433
K (766.491 nm)	3.232610	ppm	0.001391	0.04	4895.270000	Y_R2 488.368
Li (670.783 nm)	0.028331	ppm	0.002308	8.15	-45.632800	Y_R2 488.368
Mg (279.078 nm)	140.757000	ppm	0.114538	0.08	306638.000000	Y 377.433
Mn (257.610 nm)	4.659930	ppm	0.003964	0.09	974991.000000	Y 377.433
Mo (202.032 nm)	0.000214	ppm	0.000180	84.08	21.111700	Y 377.433
Na (589.592 nm)	36.928800	ppm	0.007346	0.02	18416.500000	Y_R2 488.368
Na H (589.593 nm)	39.187551 u	ppm	0.160422	0.41	13599.513587	Y_R4
Ni (231.604 nm)	0.007944	ppm	0.000344	4.33	39.861700	Y 377.433
P (213.618 nm)	0.047383	ppm	0.003875	8.18	53.790900	Y 242.219
Pb (220.353 nm)	-0.001527 u	ppm	0.002197	> 100.00	10.974200	Y 242.219
S (181.972 nm)	180.781432 bo	ppm	0.001963	0.00	86351.583295	Y 377.433
Sb (206.834 nm)	-0.010108 u	ppm	0.001394	13.79	-17.607900	Y 377.433
Se (196.026 nm)	0.001405	ppm	0.000042	2.96	9.657070	Y 242.219
Si (288.158 nm)	9.864620	ppm	0.018208	0.18	45477.300000	Y 377.433
Sn (189.925 nm)	-0.005346 u	ppm	0.000718	13.43	1.822200	Y 377.433
Sr (421.552 nm)	0.823934	ppm	0.002563	0.31	95919.610536	Y_R 488.368
Th (288.505 nm)	-0.052106 u	ppm	0.001243	2.39	7.904100	Y 377.433
Ti (336.122 nm)	0.013686	ppm	0.000186	1.36	1598.300000	Y 377.433
Tl (190.794 nm)	-0.005809 u	ppm	0.003722	64.07	-14.853300	Y 377.433
U (409.013 nm)	0.005276	ppm	0.004017	76.13	102.918000	Y 377.433
V (292.401 nm)	0.002088	ppm	0.000185	8.88	-93.851800	Y 377.433
Zn (206.200 nm)	0.011033	ppm	0.000316	2.86	42.749800	Y 377.433
Zr (343.823 nm)	0.000879	ppm	0.000422	47.97	-82.895700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.039939	11077.625071	0.002990	0.29
Y 377.433	1.046395	483054.902938	0.001465	0.14
Y_R 377.433	1.090260	41198.400000	0.001702	0.16
Y_R 488.368	1.093220	39454.300000	0.009842	0.90
Y_R2 488.368	1.095868	77123.630025	0.006266	0.57
Y_R4	1.089760	33438.400000	0.008278	0.76

Sample Name: 280-116195-E-9-A

Date: 11/5/2018 8:27:15 PM Rack:Tube: 1:63

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001650	ppm	0.000212	12.87	-193.548000	Y 377.433
Al (394.401 nm)	0.092942	ppm	0.001529	1.65	1537.150000	Y 377.433
Al H (396.152 nm)	0.000155 u	ppm	0.000274	> 100.00	46.196800	Y_R 377.433
As (188.980 nm)	0.017571	ppm	0.001314	7.48	9.123140	Y 242.219
B (249.678 nm)	0.502148	ppm	0.003163	0.63	2058.010000	Y 242.219
Ba (493.408 nm)	0.024120	ppm	0.000417	1.73	3019.530000	Y_R 488.368
Be (234.861 nm)	0.000110 u	ppm	0.000223	> 100.00	-212.711000	Y_R 488.368
Bi (223.061 nm)	0.019244	ppm	0.000922	4.79	76.960000	Y 377.433
Ca (315.887 nm)	504.564496	ppm	1.203465	0.24	333272.080183	Y_R 377.433
Cd (214.439 nm)	0.000491	ppm	0.000019	3.96	1.070300	Y 377.433
Co (228.615 nm)	0.018646	ppm	0.000138	0.74	431.154000	Y 242.219
Cr (205.560 nm)	0.001886	ppm	0.000427	22.65	-0.381062	Y 377.433
Cu (324.754 nm)	0.000683	ppm	0.000007	0.96	-46.842300	Y 377.433
Fe (238.204 nm)	15.074440 o	ppm	0.006284	0.04	25128.105531	Y_R 377.433
Fe H (259.940 nm)	15.103500	ppm	0.008501	0.06	13848.700000	Y_R 377.433
K (766.491 nm)	2.930000	ppm	0.036299	1.24	4599.520000	Y_R2 488.368
Li (670.783 nm)	0.041512	ppm	0.003017	7.27	141.057000	Y_R2 488.368
Mg (279.078 nm)	209.230000	ppm	0.362537	0.17	455788.000000	Y 377.433
Mn (257.610 nm)	5.866950	ppm	0.003114	0.05	1227530.000000	Y 377.433
Mo (202.032 nm)	0.002961	ppm	0.000018	0.60	52.361700	Y 377.433
Na (589.592 nm)	55.210700 o	ppm	0.145842	0.26	27601.400000	Y_R2 488.368
Na H (589.593 nm)	57.516133	ppm	0.045099	0.08	20144.690713	Y_R4
Ni (231.604 nm)	0.018189	ppm	0.001455	8.00	81.042800	Y 377.433
P (213.618 nm)	0.268531	ppm	0.003416	1.27	310.306000	Y 242.219
Pb (220.353 nm)	-0.001875 u	ppm	0.001518	80.94	10.261900	Y 242.219
S (181.972 nm)	472.933017 bo	ppm	0.072531	0.02	225911.232020	Y 377.433
Sb (206.834 nm)	-0.010204 u	ppm	0.000706	6.91	-16.685800	Y 377.433
Se (196.026 nm)	-0.000074 u	ppm	0.002494	> 100.00	5.799220	Y 242.219
Si (288.158 nm)	9.371450	ppm	0.005951	0.06	43268.000000	Y 377.433
Sn (189.925 nm)	-0.005372 u	ppm	0.000734	13.66	1.792220	Y 377.433
Sr (421.552 nm)	1.118526	ppm	0.017159	1.53	130117.016354	Y_R 488.368
Th (288.505 nm)	-0.065826 u	ppm	0.012649	19.22	3.469170	Y 377.433
Ti (336.122 nm)	0.002166	ppm	0.000043	1.96	1116.510000	Y 377.433
Tl (190.794 nm)	-0.006996 u	ppm	0.002794	39.94	-18.300200	Y 377.433
U (409.013 nm)	-0.001473 u	ppm	0.000493	33.47	71.087700	Y 377.433
V (292.401 nm)	0.001503	ppm	0.000007	0.44	-122.732000	Y 377.433
Zn (206.200 nm)	0.037596	ppm	0.001068	2.84	135.931000	Y 377.433
Zr (343.823 nm)	0.000182 u	ppm	0.000331	> 100.00	-111.180000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028770	10958.652439	0.003339	0.32
Y 377.433	1.044845	482339.430848	0.004162	0.40
Y_R 377.433	1.086580	41059.500000	0.005057	0.47
Y_R 488.368	1.093520	39465.100000	0.012533	1.15
Y_R2 488.368	1.085027	76360.667722	0.001698	0.16
Y_R4	1.086350	33333.800000	0.003520	0.32

Sample Name: 280-116195-E-10-A

Date: 11/5/2018 8:30:48 PM Rack:Tube: 1:64

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001610	ppm	0.000210	13.07	-195.133000	Y 377.433
Al (394.401 nm)	2.357030	ppm	0.011126	0.47	29731.700000	Y 377.433
Al H (396.152 nm)	2.204860	ppm	0.008354	0.38	3696.700000	Y_R 377.433
As (188.980 nm)	0.009281	ppm	0.003120	33.62	-2.581420	Y 242.219
B (249.678 nm)	0.673425	ppm	0.000513	0.08	2745.070000	Y 242.219
Ba (493.408 nm)	0.029865	ppm	0.000220	0.74	3546.790000	Y_R 488.368
Be (234.861 nm)	0.000265	ppm	0.000074	27.90	-233.168000	Y_R 488.368
Bi (223.061 nm)	0.023232	ppm	0.006270	26.99	83.802100	Y 377.433
Ca (315.887 nm)	479.181357	ppm	0.494738	0.10	316506.500263	Y_R 377.433
Cd (214.439 nm)	0.000404	ppm	0.000030	7.37	-1.088360	Y 377.433
Co (228.615 nm)	0.013418	ppm	0.000201	1.50	310.821000	Y 242.219
Cr (205.560 nm)	0.004955	ppm	0.000107	2.15	14.235100	Y 377.433
Cu (324.754 nm)	0.001733	ppm	0.000064	3.69	21.618800	Y 377.433
Fe (238.204 nm)	17.101389 o	ppm	0.005040	0.03	28505.347382	Y_R 377.433
Fe H (259.940 nm)	17.105000	ppm	0.029494	0.17	15685.500000	Y_R 377.433
K (766.491 nm)	6.309370	ppm	0.156959	2.49	7902.310000	Y_R2 488.368
Li (670.783 nm)	0.063124	ppm	0.002293	3.63	447.164000	Y_R2 488.368
Mg (279.078 nm)	204.936000	ppm	0.160103	0.08	446431.000000	Y 377.433
Mn (257.610 nm)	3.281650	ppm	0.006282	0.19	686622.000000	Y 377.433
Mo (202.032 nm)	0.001499	ppm	0.000186	12.38	35.727700	Y 377.433
Na (589.592 nm)	60.341000 o	ppm	0.113985	0.19	30178.800000	Y_R2 488.368
Na H (589.593 nm)	62.674152	ppm	0.221066	0.35	21985.903885	Y_R4
Ni (231.604 nm)	0.013683	ppm	0.001085	7.93	64.082400	Y 377.433
P (213.618 nm)	0.139213	ppm	0.000866	0.62	160.236000	Y 242.219
Pb (220.353 nm)	0.002365	ppm	0.003142	> 100.00	19.404700	Y 242.219
S (181.972 nm)	454.814981 bo	ppm	2.528838	0.56	217247.460531	Y 377.433
Sb (206.834 nm)	-0.009920 u	ppm	0.002346	23.65	-16.158200	Y 377.433
Se (196.026 nm)	0.001525 u	ppm	0.004165	> 100.00	4.088090	Y 242.219
Si (288.158 nm)	12.494100	ppm	0.053996	0.43	57257.300000	Y 377.433
Sn (189.925 nm)	-0.008826 u	ppm	0.000347	3.94	-2.239950	Y 377.433
Sr (421.552 nm)	1.149392	ppm	0.004810	0.42	133700.073897	Y_R 488.368
Th (288.505 nm)	-0.038507 u	ppm	0.002219	5.76	3.897420	Y 377.433
Ti (336.122 nm)	0.039806	ppm	0.000358	0.90	4631.370000	Y 377.433
Tl (190.794 nm)	-0.004398 u	ppm	0.003241	73.70	-16.742900	Y 377.433
U (409.013 nm)	0.005450 u	ppm	0.008253	> 100.00	90.183900	Y 377.433
V (292.401 nm)	0.005631	ppm	0.000499	8.86	77.877600	Y 377.433
Zn (206.200 nm)	0.017917	ppm	0.000898	5.01	68.133300	Y 377.433
Zr (343.823 nm)	0.002883	ppm	0.000189	6.55	-1.680910	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010625	10765.370899	0.008207	0.81
Y 377.433	1.029279	475153.465028	0.005897	0.57
Y_R 377.433	1.059180	40024.200000	0.008760	0.83
Y_R 488.368	1.071150	38657.700000	0.007480	0.70
Y_R2 488.368	1.048484	73788.913452	0.006010	0.57
Y_R4	1.061470	32570.400000	0.000903	0.09

Sample Name: CCVH-5408055

Date: 11/5/2018 8:34:24 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000514	ppm	0.000430	83.61	-335.509000	Y 377.433
Al (394.401 nm)	51.383700 o	ppm	0.008800	0.02	639907.000000	Y 377.433
Al H (396.152 nm)	49.949600	ppm	0.089600	0.18	82145.500000	Y_R 377.433
As (188.980 nm)	-0.005730 u	ppm	0.002103	36.70	-25.235200	Y 242.219
B (249.678 nm)	-0.010011 u	ppm	0.000947	9.46	-9.642570	Y 242.219
Ba (493.408 nm)	-0.000183 u	ppm	0.000271	> 100.00	820.632000	Y_R 488.368
Be (234.861 nm)	0.000052	ppm	0.000072	> 100.00	-702.542000	Y_R 488.368
Bi (223.061 nm)	0.999869	ppm	0.007420	0.74	1697.770000	Y 377.433
Ca (315.887 nm)	0.005066 u	ppm	0.008748	> 100.00	11.370924	Y_R 377.433
Cd (214.439 nm)	0.000142	ppm	0.000027	19.17	-7.633780	Y 377.433
Co (228.615 nm)	0.001452	ppm	0.000068	4.66	61.838400	Y 242.219
Cr (205.560 nm)	0.000706	ppm	0.000015	2.07	-6.925610	Y 377.433
Cu (324.754 nm)	-0.000260 u	ppm	0.000596	> 100.00	650.060000	Y 377.433
Fe (238.204 nm)	49.665834 o	ppm	0.140940	0.28	82763.228461	Y_R 377.433
Fe H (259.940 nm)	49.784200	ppm	0.082764	0.17	45673.600000	Y_R 377.433
K (766.491 nm)	0.070614 u	ppm	0.118094	> 100.00	1804.930000	Y_R2 488.368
Li (670.783 nm)	0.010174	ppm	0.000299	2.94	-302.791000	Y_R2 488.368
Mg (279.078 nm)	-0.023802 u	ppm	0.000367	1.54	-188.992000	Y 377.433
Mn (257.610 nm)	0.000446	ppm	0.000083	18.72	115.894000	Y 377.433
Mo (202.032 nm)	-0.001247 u	ppm	0.000377	30.23	4.493620	Y 377.433
Na (589.592 nm)	249.261000 o	ppm	0.912159	0.37	125092.000000	Y_R2 488.368
Na H (589.593 nm)	256.231808	ppm	1.010395	0.39	91103.177582	Y_R4
Ni (231.604 nm)	-0.000408 u	ppm	0.000664	> 100.00	14.937700	Y 377.433
P (213.618 nm)	-0.010709 u	ppm	0.001575	14.71	-14.767900	Y 242.219
Pb (220.353 nm)	-0.002790 u	ppm	0.000953	34.16	18.551900	Y 242.219
S (181.972 nm)	5.065115	ppm	0.019035	0.38	2393.383390	Y 377.433
Sb (206.834 nm)	0.001897	ppm	0.000694	36.60	6.087400	Y 377.433
Se (196.026 nm)	0.000717 u	ppm	0.001734	> 100.00	-10.042400	Y 242.219
Si (288.158 nm)	-0.199945 u	ppm	0.002806	1.40	389.077000	Y 377.433
Sn (189.925 nm)	-0.005490 u	ppm	0.001193	21.73	1.653570	Y 377.433
Sr (421.552 nm)	-0.000022 u	ppm	0.000032	> 100.00	281.446352	Y_R 488.368
Th (288.505 nm)	4.979070	ppm	0.002407	0.05	5341.610000	Y 377.433
Ti (336.122 nm)	0.000835	ppm	0.000027	3.18	-285.583000	Y 377.433
Tl (190.794 nm)	-0.006232 u	ppm	0.003205	51.43	-15.694000	Y 377.433
U (409.013 nm)	10.226100	ppm	0.000828	0.01	23515.400000	Y 377.433
V (292.401 nm)	-0.004410 u	ppm	0.000167	3.79	-414.687000	Y 377.433
Zn (206.200 nm)	-0.000025 u	ppm	0.000301	> 100.00	9.613170	Y 377.433
Zr (343.823 nm)	-0.006971 u	ppm	0.000182	2.61	-401.057000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063365	11327.166709	0.001563	0.15
Y 377.433	1.059907	489292.703805	0.001718	0.16
Y_R 377.433	1.109450	41923.600000	0.002355	0.21
Y_R 488.368	1.111390	40109.900000	0.005546	0.50
Y_R2 488.368	1.091969	76849.221295	0.000387	0.04
Y_R4	1.117040	34275.500000	0.006729	0.60

Sample Name: CCV-5407762

Date: 11/5/2018 8:38:01 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.505245	ppm	0.001254	0.25	13741.200000	Y 377.433
Al (394.401 nm)	0.507145	ppm	0.002806	0.55	6519.430000	Y 377.433
Al H (396.152 nm)	0.554661 u	ppm	0.002703	0.49	893.225000	Y_R 377.433
As (188.980 nm)	0.988197	ppm	0.004884	0.49	1369.440000	Y 242.219
B (249.678 nm)	0.485455	ppm	0.001599	0.33	1995.080000	Y 242.219
Ba (493.408 nm)	0.502673	ppm	0.003801	0.76	46807.000000	Y_R 488.368
Be (234.861 nm)	0.509072	ppm	0.002515	0.49	26321.200000	Y_R 488.368
Bi (223.061 nm)	-0.002926 u	ppm	0.001838	62.82	38.860300	Y 377.433
Ca (315.887 nm)	5.023865	ppm	0.002911	0.06	3316.147319	Y_R 377.433
Cd (214.439 nm)	0.511719	ppm	0.000340	0.07	12730.700000	Y 377.433
Co (228.615 nm)	0.499650	ppm	0.000498	0.10	11848.900000	Y 242.219
Cr (205.560 nm)	0.515722	ppm	0.001948	0.38	2449.920000	Y 377.433
Cu (324.754 nm)	0.510923	ppm	0.001210	0.24	24793.100000	Y 377.433
Fe (238.204 nm)	2.523065	ppm	0.000086	0.00	4215.389414	Y_R 377.433
Fe H (259.940 nm)	2.521090 u	ppm	0.001297	0.05	2302.480000	Y_R 377.433
K (766.491 nm)	50.324400	ppm	0.300189	0.60	50919.900000	Y_R2 488.368
Li (670.783 nm)	1.018160	ppm	0.000935	0.09	13973.900000	Y_R2 488.368
Mg (279.078 nm)	20.265800	ppm	0.024392	0.12	44159.700000	Y 377.433
Mn (257.610 nm)	0.509350	ppm	0.000493	0.10	106591.000000	Y 377.433
Mo (202.032 nm)	0.514974	ppm	0.001074	0.21	5877.310000	Y 377.433
Na (589.592 nm)	25.375100	ppm	0.045107	0.18	12604.600000	Y_R2 488.368
Na H (589.593 nm)	28.122942 u	ppm	0.187891	0.67	9601.826486	Y_R4
Ni (231.604 nm)	0.510187	ppm	0.000892	0.17	1965.260000	Y 377.433
P (213.618 nm)	1.001670	ppm	0.005176	0.52	1137.960000	Y 242.219
Pb (220.353 nm)	1.000350	ppm	0.002085	0.21	2246.990000	Y 242.219
S (181.972 nm)	0.003744	ppm	0.002746	73.36	-21.999668	Y 377.433
Sb (206.834 nm)	1.022760	ppm	0.004641	0.45	1680.460000	Y 377.433
Se (196.026 nm)	1.001490	ppm	0.005962	0.60	1507.480000	Y 242.219
Si (288.158 nm)	4.855420	ppm	0.015120	0.31	23036.600000	Y 377.433
Sn (189.925 nm)	1.022700	ppm	0.003102	0.30	1201.920000	Y 377.433
Sr (421.552 nm)	0.507660	ppm	0.002343	0.46	59206.983735	Y_R 488.368
Th (288.505 nm)	-0.022668 u	ppm	0.009138	40.31	-42.671200	Y 377.433
Ti (336.122 nm)	0.512706	ppm	0.000345	0.07	48400.400000	Y 377.433
Tl (190.794 nm)	1.018480	ppm	0.003940	0.39	574.292000	Y 377.433
U (409.013 nm)	-0.018246 u	ppm	0.001749	9.58	28.061300	Y 377.433
V (292.401 nm)	0.506422	ppm	0.000707	0.14	24188.500000	Y 377.433
Zn (206.200 nm)	0.510198	ppm	0.001326	0.26	1767.940000	Y 377.433
Zr (343.823 nm)	0.511945	ppm	0.001208	0.24	20628.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087105	11580.055925	0.003444	0.32
Y 377.433	1.075593	496533.994217	0.003529	0.33
Y_R 377.433	1.100340	41579.300000	0.003340	0.30
Y_R 488.368	1.099090	39666.200000	0.008103	0.74
Y_R2 488.368	1.093493	76956.456499	0.011424	1.04
Y_R4	1.114700	34203.800000	0.009862	0.88

Sample Name: CCB

Date: 11/5/2018 8:41:31 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000508 u	ppm	0.000372	73.13	-253.279000	Y 377.433
Al (394.401 nm)	0.000908	ppm	0.001206	> 100.00	99.430600	Y 377.433
Al H (396.152 nm)	0.138890 Zu	ppm	0.007761	5.59	13.653300 Z	Y_R 377.433
As (188.980 nm)	-0.000747 u	ppm	0.001459	> 100.00	-16.162000	Y 242.219
B (249.678 nm)	-0.009552 u	ppm	0.000432	4.52	8.348000	Y 242.219
Ba (493.408 nm)	-0.000233 u	ppm	0.000425	> 100.00	779.699000	Y_R 488.368
Be (234.861 nm)	0.000124	ppm	0.000082	65.81	0.578707	Y_R 488.368
Bi (223.061 nm)	-0.002413 u	ppm	0.001538	63.73	39.293400	Y 377.433
Ca (315.887 nm)	0.000221 u	ppm	0.002168	> 100.00	-2.170511	Y_R 377.433
Cd (214.439 nm)	0.000074	ppm	0.000070	94.23	-9.307350	Y 377.433
Co (228.615 nm)	0.000319	ppm	0.000157	49.31	-20.395600	Y 242.219
Cr (205.560 nm)	-0.000058 u	ppm	0.000349	> 100.00	-9.623210	Y 377.433
Cu (324.754 nm)	0.000424	ppm	0.000226	53.36	221.694000	Y 377.433
Fe (238.204 nm)	-0.001806 u	ppm	0.001494	82.72	8.526631	Y_R 377.433
Fe H (259.940 nm)	0.016278 u	ppm	0.003464	21.28	3.930760	Y_R 377.433
K (766.491 nm)	-0.150758 u	ppm	0.174199	> 100.00	1588.570000	Y_R2 488.368
Li (670.783 nm)	0.009628	ppm	0.005579	57.95	-310.534000	Y_R2 488.368
Mg (279.078 nm)	0.002627	ppm	0.002705	> 100.00	19.860800	Y 377.433
Mn (257.610 nm)	0.000051	ppm	0.000041	80.04	33.409100	Y 377.433
Mo (202.032 nm)	-0.000413 u	ppm	0.000302	73.11	13.985200	Y 377.433
Na (589.592 nm)	0.192742	ppm	0.003068	1.59	-39.191000	Y_R2 488.368
Na H (589.593 nm)	2.733007 u	ppm	0.001976	0.07	585.417141	Y_R4
Ni (231.604 nm)	-0.000268 u	ppm	0.001968	> 100.00	8.057110	Y 377.433
P (213.618 nm)	0.001774	ppm	0.002111	> 100.00	0.960124	Y 242.219
Pb (220.353 nm)	-0.002213 u	ppm	0.002301	> 100.00	9.544150	Y 242.219
S (181.972 nm)	0.011480	ppm	0.003003	26.16	-20.226343	Y 377.433
Sb (206.834 nm)	-0.000290 u	ppm	0.000865	> 100.00	-1.604520	Y 377.433
Se (196.026 nm)	0.000655 u	ppm	0.001273	> 100.00	2.627120	Y 242.219
Si (288.158 nm)	-0.201988 Zu	ppm	0.001002	0.50	379.921000 Z	Y 377.433
Sn (189.925 nm)	-0.007348 u	ppm	0.001368	18.62	-0.514895	Y 377.433
Sr (421.552 nm)	-0.000003 u	ppm	0.000107	> 100.00	277.853174	Y_R 488.368
Th (288.505 nm)	0.002992	ppm	0.004023	> 100.00	17.552100	Y 377.433
Ti (336.122 nm)	0.000547	ppm	0.000052	9.43	-313.028000	Y 377.433
Tl (190.794 nm)	-0.000786 u	ppm	0.000996	> 100.00	-9.265840	Y 377.433
U (409.013 nm)	-0.013020 u	ppm	0.001108	8.51	85.061200	Y 377.433
V (292.401 nm)	0.000355	ppm	0.000178	50.14	-177.454000	Y 377.433
Zn (206.200 nm)	-0.000297 u	ppm	0.000112	37.91	3.353600	Y 377.433
Zr (343.823 nm)	0.000359	ppm	0.000123	34.23	-103.997000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099834	11715.641225	0.001567	0.14
Y 377.433	1.081979	499482.137200	0.000411	0.04
Y_R 377.433	1.100740	41594.300000	0.006346	0.58
Y_R 488.368	1.093860	39477.300000	0.004852	0.44
Y_R2 488.368	1.096323	77155.628827	0.003166	0.29
Y_R4	1.114900	34209.700000	0.004884	0.44

Sample Name: CCVL-5412564

Date: 11/5/2018 8:44:43 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009801	ppm	0.000127	1.30	32.618400	Y 377.433
Al (394.401 nm)	0.101585	ppm	0.000797	0.78	1358.930000	Y 377.433
Al H (396.152 nm)	0.232407 u	ppm	0.003376	1.45	172.113000	Y_R 377.433
As (188.980 nm)	0.014466	ppm	0.001262	8.73	5.150110	Y 242.219
B (249.678 nm)	0.089268	ppm	0.001315	1.47	405.099000	Y 242.219
Ba (493.408 nm)	0.009439	ppm	0.000150	1.59	1664.920000	Y_R 488.368
Be (234.861 nm)	0.001097	ppm	0.000071	6.44	49.576900	Y_R 488.368
Bi (223.061 nm)	0.093501	ppm	0.001919	2.05	197.402000	Y 377.433
Ca (315.887 nm)	0.200609	ppm	0.000711	0.35	130.209543	Y_R 377.433
Cd (214.439 nm)	0.005099	ppm	0.000042	0.83	115.819000	Y 377.433
Co (228.615 nm)	0.010873	ppm	0.000273	2.51	230.497000	Y 242.219
Cr (205.560 nm)	0.010210	ppm	0.000342	3.35	39.271700	Y 377.433
Cu (324.754 nm)	0.015527	ppm	0.000116	0.75	947.998000	Y 377.433
Fe (238.204 nm)	0.094998	ppm	0.001132	1.19	169.818816	Y_R 377.433
Fe H (259.940 nm)	0.111814 u	ppm	0.003046	2.72	91.599000	Y_R 377.433
K (766.491 nm)	3.047050	ppm	0.033122	1.09	4713.920000	Y_R2 488.368
Li (670.783 nm)	0.031345 Q	ppm	0.003917	12.50	-2.938040 Q	Y_R2 488.368
Mg (279.078 nm)	0.208463	ppm	0.002614	1.25	467.676000	Y 377.433
Mn (257.610 nm)	0.010615	ppm	0.000021	0.19	2243.550000	Y 377.433
Mo (202.032 nm)	0.020056	ppm	0.000410	2.04	246.842000	Y 377.433
Na (589.592 nm)	1.278320	ppm	0.036998	2.89	506.063000	Y_R2 488.368
Na H (589.593 nm)	3.574567 u	ppm	0.006855	0.19	885.010057	Y_R4
Ni (231.604 nm)	0.042141	ppm	0.000826	1.96	170.583000	Y 377.433
P (213.618 nm)	2.849300	ppm	0.004350	0.15	3303.700000	Y 242.219
Pb (220.353 nm)	0.007022	ppm	0.002045	29.12	30.186200	Y 242.219
S (181.972 nm)	0.104757	ppm	0.002416	2.31	24.367737	Y 377.433
Sb (206.834 nm)	0.021902	ppm	0.001725	7.88	34.761100	Y 377.433
Se (196.026 nm)	0.021119	ppm	0.001682	7.96	33.386500	Y 242.219
Si (288.158 nm)	0.293656 Q	ppm	0.003570	1.22	2600.360000 Q	Y 377.433
Sn (189.925 nm)	0.094329	ppm	0.003283	3.48	118.179000	Y 377.433
Sr (421.552 nm)	0.009254	ppm	0.000138	1.50	1352.414996	Y_R 488.368
Th (288.505 nm)	0.014089	ppm	0.002514	17.84	29.003200	Y 377.433
Ti (336.122 nm)	0.010566	ppm	0.000044	0.41	640.189000	Y 377.433
Tl (190.794 nm)	0.013380	ppm	0.000713	5.33	-1.177670	Y 377.433
U (409.013 nm)	0.050792	ppm	0.003717	7.32	229.657000	Y 377.433
V (292.401 nm)	0.010303	ppm	0.000004	0.04	300.256000	Y 377.433
Zn (206.200 nm)	0.021735	ppm	0.000655	3.01	79.508500	Y 377.433
Zr (343.823 nm)	0.015588	ppm	0.000343	2.20	513.190000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.104707	11767.553467	0.002107	0.19
Y 377.433	1.094917	505454.836757	0.000722	0.07
Y_R 377.433	1.122010	42398.100000	0.000872	0.08
Y_R 488.368	1.118590	40370.000000	0.005448	0.49
Y_R2 488.368	1.116442	78571.564378	0.005277	0.47
Y_R4	1.119760	34358.900000	0.011674	1.04

Sample Name: MB 280-436038/1-A

Date: 11/5/2018 8:48:07 PM Rack:Tube: 1:65

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000024 u	ppm	0.000294	> 100.00	-239.984000	Y 377.433
Al (394.401 nm)	0.000482	ppm	0.000624	> 100.00	94.017600	Y 377.433
Al H (396.152 nm)	0.140213 u	ppm	0.009576	6.83	15.766800	Y_R 377.433
As (188.980 nm)	-0.000839 u	ppm	0.002128	> 100.00	-16.290900	Y 242.219
B (249.678 nm)	-0.009038 u	ppm	0.000166	1.84	10.408800	Y 242.219
Ba (493.408 nm)	-0.000849 u	ppm	0.000546	64.27	723.336000	Y_R 488.368
Be (234.861 nm)	0.000071	ppm	0.000034	47.75	-2.259050	Y_R 488.368
Bi (223.061 nm)	-0.002907 u	ppm	0.001538	52.90	38.480500	Y 377.433
Ca (315.887 nm)	0.004278	ppm	0.003301	77.17	0.507255	Y_R 377.433
Cd (214.439 nm)	0.000117	ppm	0.000022	18.96	-8.255380	Y 377.433
Co (228.615 nm)	0.000583	ppm	0.000061	10.51	-14.133100	Y 242.219
Cr (205.560 nm)	0.000358	ppm	0.000071	19.74	-7.635390	Y 377.433
Cu (324.754 nm)	0.000492	ppm	0.000072	14.74	225.480000	Y 377.433
Fe (238.204 nm)	0.002881	ppm	0.001393	48.36	16.335975	Y_R 377.433
Fe H (259.940 nm)	0.014327 u	ppm	0.003117	21.76	2.140240	Y_R 377.433
K (766.491 nm)	-0.175886 u	ppm	0.064306	36.56	1564.010000	Y_R2 488.368
Li (670.783 nm)	0.006788	ppm	0.000821	12.09	-350.757000	Y_R2 488.368
Mg (279.078 nm)	0.003786	ppm	0.001103	29.13	22.274900	Y 377.433
Mn (257.610 nm)	0.000077	ppm	0.000027	34.55	38.732400	Y 377.433
Mo (202.032 nm)	-0.000561 u	ppm	0.000076	13.61	12.295900	Y 377.433
Na (589.592 nm)	0.179498	ppm	0.009378	5.22	-45.833800	Y_R2 488.368
Na H (589.593 nm)	2.437713 u	ppm	0.011706	0.48	480.044374	Y_R4
Ni (231.604 nm)	0.000075 u	ppm	0.000233	> 100.00	9.366550	Y 377.433
P (213.618 nm)	0.001927 u	ppm	0.004165	> 100.00	1.146160	Y 242.219
Pb (220.353 nm)	-0.003143 u	ppm	0.000355	11.30	7.485760	Y 242.219
S (181.972 nm)	0.006483	ppm	0.002446	37.74	-22.613226	Y 377.433
Sb (206.834 nm)	-0.000768 u	ppm	0.003684	> 100.00	-2.387390	Y 377.433
Se (196.026 nm)	0.004241	ppm	0.000430	10.13	8.017770	Y 242.219
Si (288.158 nm)	-0.202809 u	ppm	0.001094	0.54	376.243000	Y 377.433
Sn (189.925 nm)	-0.005549 u	ppm	0.000151	2.72	1.584940	Y 377.433
Sr (421.552 nm)	-0.000227 u	ppm	0.000000	0.10	251.898352	Y_R 488.368
Th (288.505 nm)	0.003931	ppm	0.000665	16.91	18.580200	Y 377.433
Ti (336.122 nm)	0.000459	ppm	0.000102	22.17	-321.401000	Y 377.433
Tl (190.794 nm)	-0.001735 u	ppm	0.002284	> 100.00	-9.809190	Y 377.433
U (409.013 nm)	-0.003312 u	ppm	0.014391	> 100.00	107.257000	Y 377.433
V (292.401 nm)	0.000490	ppm	0.000208	42.53	-170.863000	Y 377.433
Zn (206.200 nm)	0.001287	ppm	0.000219	17.04	8.826950	Y 377.433
Zr (343.823 nm)	0.000160	ppm	0.000177	> 100.00	-112.052000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.097635	11692.221377	0.002485	0.23
Y 377.433	1.086171	501416.918538	0.000496	0.05
Y_R 377.433	1.110680	41970.300000	0.007653	0.69
Y_R 488.368	1.113850	40198.800000	0.003003	0.27
Y_R2 488.368	1.115087	78476.171827	0.002003	0.18
Y_R4	1.114850	34208.100000	0.000681	0.06

Sample Name: LCS 280-436038/2-A

Date: 11/5/2018 8:51:18 PM Rack:Tube: 1:66

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053450	ppm	0.000331	0.62	1187.730000	Y 377.433
Al (394.401 nm)	2.104440	ppm	0.000550	0.03	26597.200000	Y 377.433
Al H (396.152 nm)	2.014250	ppm	0.007458	0.37	3493.750000	Y_R 377.433
As (188.980 nm)	1.008410	ppm	0.002390	0.24	1397.770000	Y 242.219
B (249.678 nm)	1.032250	ppm	0.000842	0.08	4191.040000	Y 242.219
Ba (493.408 nm)	2.060800	ppm	0.007753	0.38	189404.000000	Y_R 488.368
Be (234.861 nm)	0.051499	ppm	0.000998	1.94	2646.600000	Y_R 488.368
Bi (223.061 nm)	1.991720	ppm	0.006276	0.32	3326.350000	Y 377.433
Ca (315.887 nm)	51.154571	ppm	0.106516	0.21	33786.683353	Y_R 377.433
Cd (214.439 nm)	0.103741	ppm	0.000063	0.06	2572.010000	Y 377.433
Co (228.615 nm)	0.496714	ppm	0.001664	0.34	11801.200000	Y 242.219
Cr (205.560 nm)	0.210836	ppm	0.000358	0.17	992.897000	Y 377.433
Cu (324.754 nm)	0.255026	ppm	0.000334	0.13	12515.400000	Y 377.433
Fe (238.204 nm)	1.029576	ppm	0.003921	0.38	1726.982975	Y_R 377.433
Fe H (259.940 nm)	1.029680 u	ppm	0.002443	0.24	933.880000	Y_R 377.433
K (766.491 nm)	52.103800	ppm	0.169069	0.32	52659.100000	Y_R2 488.368
Li (670.783 nm)	1.035490	ppm	0.001124	0.11	14219.400000	Y_R2 488.368
Mg (279.078 nm)	51.174600	ppm	0.094320	0.18	111471.000000	Y 377.433
Mn (257.610 nm)	0.517299	ppm	0.000019	0.00	108254.000000	Y 377.433
Mo (202.032 nm)	1.058740	ppm	0.001105	0.10	12063.500000	Y 377.433
Na (589.592 nm)	51.339200	ppm	0.296779	0.58	25624.900000	Y_R2 488.368
Na H (589.593 nm)	53.882150	ppm	0.395653	0.73	18646.098281	Y_R4
Ni (231.604 nm)	0.499869	ppm	0.000089	0.02	1926.430000	Y 377.433
P (213.618 nm)	10.339200	ppm	0.024929	0.24	11981.700000	Y 242.219
Pb (220.353 nm)	0.509896	ppm	0.001791	0.35	1153.540000	Y 242.219
S (181.972 nm)	2.007132	ppm	0.003217	0.16	937.301578	Y 377.433
Sb (206.834 nm)	0.520014	ppm	0.000464	0.09	843.617000	Y 377.433
Se (196.026 nm)	2.071640	ppm	0.004728	0.23	3116.870000	Y 242.219
Si (288.158 nm)	10.179600	ppm	0.007011	0.07	46888.500000	Y 377.433
Sn (189.925 nm)	2.083800	ppm	0.001733	0.08	2440.620000	Y 377.433
Sr (421.552 nm)	1.035059	ppm	0.005198	0.50	120426.605911	Y_R 488.368
Th (288.505 nm)	0.991873	ppm	0.001864	0.19	1045.310000	Y 377.433
Ti (336.122 nm)	1.042760	ppm	0.000837	0.08	98916.700000	Y 377.433
Tl (190.794 nm)	2.093100	ppm	0.004971	0.24	1188.620000	Y 377.433
U (409.013 nm)	2.123470	ppm	0.000187	0.01	4918.050000	Y 377.433
V (292.401 nm)	0.524887	ppm	0.000097	0.02	25158.500000	Y 377.433
Zn (206.200 nm)	0.515578	ppm	0.001079	0.21	1786.370000	Y 377.433
Zr (343.823 nm)	0.517416	ppm	0.000002	0.00	20850.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068948	11386.644131	0.004096	0.38
Y 377.433	1.062332	490412.339948	0.002432	0.23
Y_R 377.433	1.103500	41698.700000	0.009449	0.86
Y_R 488.368	1.106940	39949.400000	0.013880	1.25
Y_R2 488.368	1.102895	77618.118874	0.006380	0.58
Y_R4	1.115740	34235.600000	0.000520	0.05

Sample Name: 280-116218-P-4-G

Date: 11/5/2018 8:54:47 PM Rack:Tube: 1:67

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000958 u	ppm	0.000400	41.69	-535.920000	Y 377.433
Al (394.401 nm)	0.502619	ppm	0.000138	0.03	6359.730000	Y 377.433
Al H (396.152 nm)	0.630645 u	ppm	0.000069	0.01	1355.580000	Y_R 377.433
As (188.980 nm)	0.031125	ppm	0.001211	3.89	28.450600	Y 242.219
B (249.678 nm)	1.693400	ppm	0.001073	0.06	6845.630000	Y 242.219
Ba (493.408 nm)	0.004618	ppm	0.000109	2.35	1224.550000	Y_R 488.368
Be (234.861 nm)	0.000349	ppm	0.000036	10.42	-5.721780	Y_R 488.368
Bi (223.061 nm)	-0.000455 u	ppm	0.001320	> 100.00	43.251700	Y 377.433
Ca (315.887 nm)	8.008539	ppm	0.002314	0.03	5287.637474	Y_R 377.433
Cd (214.439 nm)	0.000079	ppm	0.000052	65.56	-9.191530	Y 377.433
Co (228.615 nm)	0.028539	ppm	0.000333	1.17	653.390000	Y 242.219
Cr (205.560 nm)	0.045410	ppm	0.000222	0.49	183.174000	Y 377.433
Cu (324.754 nm)	0.230651	ppm	0.000020	0.01	11414.900000	Y 377.433
Fe (238.204 nm)	1.271443	ppm	0.014343	1.13	2129.975179	Y_R 377.433
Fe H (259.940 nm)	1.271140 u	ppm	0.005718	0.45	1155.460000	Y_R 377.433
K (766.491 nm)	341.860000	ppm	2.799330	0.82	335850.000000	Y_R2 488.368
Li (670.783 nm)	0.191641	ppm	0.002136	1.11	2267.420000	Y_R2 488.368
Mg (279.078 nm)	9.727020	ppm	0.002775	0.03	21204.300000	Y 377.433
Mn (257.610 nm)	0.007661	ppm	0.000026	0.34	1625.430000	Y 377.433
Mo (202.032 nm)	6.873570	ppm	0.006312	0.09	78216.300000	Y 377.433
Na (589.592 nm)	2331.270000 bo	ppm	26.349700	1.13	1171090.000000	Y_R2 488.368
Na H (589.593 nm)	3277.288887 bo	ppm	9.497462	0.29	1169842.354014	Y_R4
Ni (231.604 nm)	1.076840	ppm	0.002595	0.24	4135.530000	Y 377.433
P (213.618 nm)	0.641783	ppm	0.004750	0.74	732.924000	Y 242.219
Pb (220.353 nm)	0.002837	ppm	0.000538	18.95	7.755160	Y 242.219
S (181.972 nm)	1003.652287 bo	ppm	0.994884	0.10	479359.180984	Y 377.433
Sb (206.834 nm)	0.007707	ppm	0.002823	36.62	-31.790900	Y 377.433
Se (196.026 nm)	0.025111	ppm	0.002619	10.43	40.203000	Y 242.219
Si (288.158 nm)	6.859110	ppm	0.015954	0.23	32012.900000	Y 377.433
Sn (189.925 nm)	-0.003883 u	ppm	0.001058	27.24	3.529540	Y 377.433
Sr (421.552 nm)	0.226477	ppm	0.000992	0.44	26567.472809	Y_R 488.368
Th (288.505 nm)	-0.049076 u	ppm	0.004034	8.22	-113.416000	Y 377.433
Ti (336.122 nm)	0.014327	ppm	0.000034	0.24	1023.970000	Y 377.433
Tl (190.794 nm)	-0.007643 u	ppm	0.003305	43.25	-22.514300	Y 377.433
U (409.013 nm)	-0.164235 u	ppm	0.001349	0.82	-261.521000	Y 377.433
V (292.401 nm)	1.096670	ppm	0.000081	0.01	52547.300000	Y 377.433
Zn (206.200 nm)	0.183944	ppm	0.001367	0.74	640.242000	Y 377.433
Zr (343.823 nm)	0.010752	ppm	0.000060	0.56	317.189000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.922218	9823.640046	0.000170	0.02
Y 377.433	0.929898	429275.463323	0.000655	0.07
Y_R 377.433	1.085720	41027.100000	0.004856	0.45
Y_R 488.368	1.078170	38911.200000	0.009085	0.84
Y_R2 488.368	1.068868	75223.438516	0.002772	0.26
Y_R4	1.061390	32567.900000	0.001591	0.15

Sample Name: 280-116218-P-4-Gsd@5

Date: 11/5/2018 8:58:21 PM Rack:Tube: 1:68

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000107 u	ppm	0.000005	5.11	-288.591000	Y 377.433
Al (394.401 nm)	0.092772	ppm	0.004526	4.88	1230.920000	Y 377.433
Al H (396.152 nm)	0.211293 u	ppm	0.009322	4.41	226.980000	Y_R 377.433
As (188.980 nm)	0.004162	ppm	0.003163	75.99	-9.291520	Y 242.219
B (249.678 nm)	0.288031	ppm	0.015020	5.21	1203.130000	Y 242.219
Ba (493.408 nm)	-0.000269 u	ppm	0.000143	53.22	776.552000	Y_R 488.368
Be (234.861 nm)	0.000138	ppm	0.000029	21.34	-1.701900	Y_R 488.368
Bi (223.061 nm)	0.000276 u	ppm	0.005262	> 100.00	43.844500	Y 377.433
Ca (315.887 nm)	1.360975	ppm	0.009378	0.69	896.659190	Y_R 377.433
Cd (214.439 nm)	0.000139	ppm	0.000152	> 100.00	-7.693110	Y 377.433
Co (228.615 nm)	0.005522	ppm	0.000211	3.82	103.777000	Y 242.219
Cr (205.560 nm)	0.008586	ppm	0.001033	12.03	27.288100	Y 377.433
Cu (324.754 nm)	0.040747	ppm	0.001821	4.47	2188.980000	Y 377.433
Fe (238.204 nm)	0.211938	ppm	0.000343	0.16	364.660118	Y_R 377.433
Fe H (259.940 nm)	0.220159 u	ppm	0.002816	1.28	191.023000	Y_R 377.433
K (766.491 nm)	54.699300	ppm	0.038387	0.07	55195.700000	Y_R2 488.368
Li (670.783 nm)	0.039791	ppm	0.002698	6.78	116.682000	Y_R2 488.368
Mg (279.078 nm)	1.802650	ppm	0.067588	3.75	3942.090000	Y 377.433
Mn (257.610 nm)	0.001407	ppm	0.000090	6.37	317.038000	Y 377.433
Mo (202.032 nm)	1.231760	ppm	0.050293	4.08	14031.900000	Y 377.433
Na (589.592 nm)	596.061000 o	ppm	1.634370	0.27	299324.000000	Y_R2 488.368
Na H (589.593 nm)	643.394913	ppm	1.021229	0.16	229348.875391	Y_R4
Ni (231.604 nm)	0.198225	ppm	0.006564	3.31	768.675000	Y 377.433
P (213.618 nm)	0.113114	ppm	0.004278	3.78	128.263000	Y 242.219
Pb (220.353 nm)	-0.001922 u	ppm	0.002070	> 100.00	7.714310	Y 242.219
S (181.972 nm)	186.399908 bo	ppm	7.390223	3.96	89006.407553	Y 377.433
Sb (206.834 nm)	0.000751 u	ppm	0.001082	> 100.00	-7.678180	Y 377.433
Se (196.026 nm)	0.007099	ppm	0.002204	31.05	12.463700	Y 242.219
Si (288.158 nm)	1.005800	ppm	0.054303	5.40	5790.680000	Y 377.433
Sn (189.925 nm)	-0.004562 u	ppm	0.000372	8.15	2.737280	Y 377.433
Sr (421.552 nm)	0.036312	ppm	0.000200	0.55	4493.291884	Y_R 488.368
Th (288.505 nm)	-0.007648 u	ppm	0.003494	45.68	-7.241800	Y 377.433
Ti (336.122 nm)	0.002845	ppm	0.000126	4.45	-90.142600	Y 377.433
Tl (190.794 nm)	-0.004985 u	ppm	0.000237	4.74	-13.340600	Y 377.433
U (409.013 nm)	-0.075725 u	ppm	0.007742	10.22	-58.374000	Y 377.433
V (292.401 nm)	0.195880	ppm	0.008136	4.15	9230.580000	Y 377.433
Zn (206.200 nm)	0.034092	ppm	0.000866	2.54	122.228000	Y 377.433
Zr (343.823 nm)	0.001886	ppm	0.000161	8.52	-42.109800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.049220	11176.491062	0.008103	0.77
Y 377.433	1.043092	481530.074406	0.003006	0.29
Y_R 377.433	1.109680	41932.200000	0.001891	0.17
Y_R 488.368	1.126830	40667.100000	0.000191	0.02
Y_R2 488.368	1.102864	77615.937189	0.002723	0.25
Y_R4	1.101730	33805.800000	0.007167	0.65

Sample Name: 280-116218-P-4-H MS

Date: 11/5/2018 9:01:50 PM Rack:Tube: 1:69

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055544	ppm	0.000816	1.47	1001.510000	Y 377.433
Al (394.401 nm)	2.562140	ppm	0.001355	0.05	32291.200000	Y 377.433
Al H (396.152 nm)	2.588960	ppm	0.005829	0.23	4927.340000	Y_R 377.433
As (188.980 nm)	1.086440	ppm	0.004635	0.43	1507.050000	Y 242.219
B (249.678 nm)	2.665500	ppm	0.008140	0.31	10748.500000	Y 242.219
Ba (493.408 nm)	2.085460	ppm	0.000515	0.02	191662.000000	Y_R 488.368
Be (234.861 nm)	0.046789	ppm	0.000114	0.24	2385.920000	Y_R 488.368
Bi (223.061 nm)	1.986800	ppm	0.007437	0.37	3318.920000	Y 377.433
Ca (315.887 nm)	56.809764	ppm	0.010086	0.02	37522.224499	Y_R 377.433
Cd (214.439 nm)	0.097040	ppm	0.000176	0.18	2405.140000	Y 377.433
Co (228.615 nm)	0.517940	ppm	0.000372	0.07	12309.200000	Y 242.219
Cr (205.560 nm)	0.241105	ppm	0.001445	0.60	1115.290000	Y 377.433
Cu (324.754 nm)	0.484358	ppm	0.002418	0.50	23663.400000	Y 377.433
Fe (238.204 nm)	2.218577	ppm	0.004877	0.22	3708.059861	Y_R 377.433
Fe H (259.940 nm)	2.235110 u	ppm	0.006977	0.31	2040.050000	Y_R 377.433
K (766.491 nm)	369.955000	ppm	0.143868	0.04	363308.000000	Y_R2 488.368
Li (670.783 nm)	1.290260	ppm	0.003979	0.31	17827.800000	Y_R2 488.368
Mg (279.078 nm)	56.334300	ppm	0.177207	0.31	122713.000000	Y 377.433
Mn (257.610 nm)	0.501473	ppm	0.000974	0.19	104943.000000	Y 377.433
Mo (202.032 nm)	7.319380	ppm	0.022457	0.31	83288.000000	Y 377.433
Na (589.592 nm)	2218.410000 bo	ppm	2.970250	0.13	1114360.000000	Y_R2 488.368
Na H (589.593 nm)	3105.697898 bo	ppm	18.517566	0.60	1108366.861642	Y_R4
Ni (231.604 nm)	1.487790	ppm	0.004456	0.30	5711.920000	Y 377.433
P (213.618 nm)	11.386400	ppm	0.047817	0.42	13186.100000	Y 242.219
Pb (220.353 nm)	0.494408	ppm	0.001778	0.36	1106.770000	Y 242.219
S (181.972 nm)	938.735284 bo	ppm	0.739782	0.08	448356.363620	Y 377.433
Sb (206.834 nm)	0.528102	ppm	0.000527	0.10	817.370000	Y 377.433
Se (196.026 nm)	1.835680	ppm	0.013703	0.75	2762.820000	Y 242.219
Si (288.158 nm)	16.298600	ppm	0.058906	0.36	74301.000000	Y 377.433
Sn (189.925 nm)	1.971560	ppm	0.006835	0.35	2309.590000	Y 377.433
Sr (421.552 nm)	1.255014	ppm	0.000419	0.03	145958.910315	Y_R 488.368
Th (288.505 nm)	0.939644	ppm	0.006319	0.67	919.950000	Y 377.433
Ti (336.122 nm)	1.063770	ppm	0.000730	0.07	100935.000000	Y 377.433
Tl (190.794 nm)	1.840640	ppm	0.006488	0.35	1035.370000	Y 377.433
U (409.013 nm)	2.010030	ppm	0.009848	0.49	4657.400000	Y 377.433
V (292.401 nm)	1.523290	ppm	0.002387	0.16	73183.300000	Y 377.433
Zn (206.200 nm)	0.672472	ppm	0.003755	0.56	2328.740000	Y 377.433
Zr (343.823 nm)	0.533452	ppm	0.000947	0.18	21499.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.935503	9965.154795	0.002823	0.30
Y 377.433	0.957622	442074.061072	0.005745	0.60
Y_R 377.433	1.110230	41953.100000	0.000738	0.07
Y_R 488.368	1.107920	39984.700000	0.000303	0.03
Y_R2 488.368	1.099273	77363.252495	0.006294	0.57
Y_R4	1.083730	33253.300000	0.001917	0.18

Sample Name: 280-116218-P-4-I MSD

Date: 11/5/2018 9:05:25 PM Rack:Tube: 1:70

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.057096	ppm	0.001614	2.83	1043.850000	Y 377.433
Al (394.401 nm)	2.584650	ppm	0.002700	0.10	32576.800000	Y 377.433
Al H (396.152 nm)	2.615970	ppm	0.004151	0.16	4978.190000	Y_R 377.433
As (188.980 nm)	1.101180	ppm	0.006226	0.57	1527.700000	Y 242.219
B (249.678 nm)	2.668620	ppm	0.000621	0.02	10761.000000	Y 242.219
Ba (493.408 nm)	2.106350	ppm	0.000890	0.04	193574.000000	Y_R 488.368
Be (234.861 nm)	0.047536	ppm	0.000610	1.28	2424.570000	Y_R 488.368
Bi (223.061 nm)	2.019500	ppm	0.001444	0.07	3372.820000	Y 377.433
Ca (315.887 nm)	57.327201	ppm	0.035833	0.06	37864.005553	Y_R 377.433
Cd (214.439 nm)	0.098631	ppm	0.000169	0.17	2444.770000	Y 377.433
Co (228.615 nm)	0.526846	ppm	0.001637	0.31	12520.600000	Y 242.219
Cr (205.560 nm)	0.243226	ppm	0.000881	0.36	1125.200000	Y 377.433
Cu (324.754 nm)	0.494063	ppm	0.000023	0.00	24130.100000	Y 377.433
Fe (238.204 nm)	2.221945	ppm	0.005614	0.25	3713.672261	Y_R 377.433
Fe H (259.940 nm)	2.244830 u	ppm	0.017711	0.79	2048.970000	Y_R 377.433
K (766.491 nm)	371.431000	ppm	0.572906	0.15	364751.000000	Y_R2 488.368
Li (670.783 nm)	1.304480	ppm	0.006859	0.53	18029.100000	Y_R2 488.368
Mg (279.078 nm)	56.873400	ppm	0.139945	0.25	123887.000000	Y 377.433
Mn (257.610 nm)	0.507187	ppm	0.000564	0.11	106138.000000	Y 377.433
Mo (202.032 nm)	7.375340	ppm	0.014410	0.20	83924.700000	Y 377.433
Na (589.592 nm)	2195.380000 bo	ppm	16.153900	0.74	1102790.000000	Y_R2 488.368
Na H (589.593 nm)	3087.763417 bo	ppm	25.359527	0.82	1101960.548964	Y_R4
Ni (231.604 nm)	1.502140	ppm	0.000967	0.06	5766.950000	Y 377.433
P (213.618 nm)	11.497200	ppm	0.002985	0.03	13314.200000	Y 242.219
Pb (220.353 nm)	0.500614	ppm	0.002109	0.42	1120.590000	Y 242.219
S (181.972 nm)	944.430216 bo	ppm	0.546769	0.06	451076.534962	Y 377.433
Sb (206.834 nm)	0.530770	ppm	0.007687	1.45	821.400000	Y 377.433
Se (196.026 nm)	1.893440	ppm	0.006748	0.36	2849.670000	Y 242.219
Si (288.158 nm)	16.387300	ppm	0.010330	0.06	74698.200000	Y 377.433
Sn (189.925 nm)	1.981270	ppm	0.003802	0.19	2320.920000	Y 377.433
Sr (421.552 nm)	1.263848	ppm	0.000636	0.05	146984.349882	Y_R 488.368
Th (288.505 nm)	0.947355	ppm	0.000165	0.02	928.139000	Y 377.433
Ti (336.122 nm)	1.066150	ppm	0.000255	0.02	101163.000000	Y 377.433
Tl (190.794 nm)	1.867990	ppm	0.004279	0.23	1050.970000	Y 377.433
U (409.013 nm)	2.037940	ppm	0.013889	0.68	4720.960000	Y 377.433
V (292.401 nm)	1.526430	ppm	0.004422	0.29	73330.100000	Y 377.433
Zn (206.200 nm)	0.677029	ppm	0.000743	0.11	2344.480000	Y 377.433
Zr (343.823 nm)	0.535427	ppm	0.000040	0.01	21580.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.936890	9979.932413	0.001834	0.20
Y 377.433	0.957722	442120.318759	0.003302	0.34
Y_R 377.433	1.105000	41755.300000	0.009516	0.86
Y_R 488.368	1.103660	39831.100000	0.011343	1.03
Y_R2 488.368	1.097037	77205.897073	0.002243	0.20
Y_R4	1.079880	33135.100000	0.001742	0.16

Sample Name: 280-116218-P-4-Gpds

Date: 11/5/2018 9:09:06 PM Rack:Tube: 1:71

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052383	ppm	0.000710	1.36	940.241000	Y 377.433
Al (394.401 nm)	1.482860	ppm	0.002447	0.17	18591.000000	Y 377.433
Al H (396.152 nm)	1.630810	ppm	0.002982	0.18	3008.380000	Y_R 377.433
As (188.980 nm)	0.238899	ppm	0.002100	0.88	319.533000	Y 242.219
B (249.678 nm)	1.768570	ppm	0.002119	0.12	7147.130000	Y 242.219
Ba (493.408 nm)	0.106666	ppm	0.000711	0.67	10564.700000	Y_R 488.368
Be (234.861 nm)	0.047077	ppm	0.000012	0.03	2400.260000	Y_R 488.368
Bi (223.061 nm)	0.002218	ppm	0.002316	> 100.00	47.811200	Y 377.433
Ca (315.887 nm)	27.384194	ppm	0.039678	0.14	18085.834415	Y_R 377.433
Cd (214.439 nm)	0.048291	ppm	0.000050	0.10	1191.300000	Y 377.433
Co (228.615 nm)	0.076047	ppm	0.000195	0.26	1783.480000	Y 242.219
Cr (205.560 nm)	0.094791	ppm	0.001217	1.28	419.158000	Y 377.433
Cu (324.754 nm)	0.278727	ppm	0.000025	0.01	13724.600000	Y 377.433
Fe (238.204 nm)	2.253029	ppm	0.007938	0.35	3765.463463	Y_R 377.433
Fe H (259.940 nm)	2.265010 u	ppm	0.004937	0.22	2067.480000	Y_R 377.433
K (766.491 nm)	356.773000	ppm	0.358819	0.10	350424.000000	Y_R2 488.368
Li (670.783 nm)	0.297084	ppm	0.002403	0.81	3760.860000	Y_R2 488.368
Mg (279.078 nm)	28.471300	ppm	0.173354	0.61	62031.300000	Y 377.433
Mn (257.610 nm)	0.056453	ppm	0.000205	0.36	11833.900000	Y 377.433
Mo (202.032 nm)	6.769970	ppm	0.022403	0.33	77037.600000	Y 377.433
Na (589.592 nm)	2392.650000 bo	ppm	6.504360	0.27	1201930.000000	Y_R2 488.368
Na H (589.593 nm)	3281.368679 bo	ppm	39.882506	1.22	1171289.057901	Y_R4
Ni (231.604 nm)	1.113580	ppm	0.003758	0.34	4276.590000	Y 377.433
P (213.618 nm)	2.738840	ppm	0.000399	0.01	3163.480000	Y 242.219
Pb (220.353 nm)	0.097797	ppm	0.002104	2.15	220.566000	Y 242.219
S (181.972 nm)	987.200178 bo	ppm	2.085100	0.21	471502.144703	Y 377.433
Sb (206.834 nm)	0.104216	ppm	0.000612	0.59	127.916000	Y 377.433
Se (196.026 nm)	0.232998	ppm	0.000219	0.09	352.548000	Y 242.219
Si (288.158 nm)	14.392200	ppm	0.061236	0.43	65760.300000	Y 377.433
Sn (189.925 nm)	0.087048	ppm	0.001804	2.07	109.680000	Y 377.433
Sr (421.552 nm)	0.271257	ppm	0.001015	0.37	31765.593210	Y_R 488.368
Th (288.505 nm)	0.145897	ppm	0.001753	1.20	93.381000	Y 377.433
Ti (336.122 nm)	0.065524	ppm	0.000088	0.13	5941.090000	Y 377.433
Tl (190.794 nm)	0.172440	ppm	0.001969	1.14	80.617200	Y 377.433
U (409.013 nm)	0.369688	ppm	0.007463	2.02	952.983000	Y 377.433
V (292.401 nm)	1.127240	ppm	0.003973	0.35	54018.200000	Y 377.433
Zn (206.200 nm)	0.385346	ppm	0.001996	0.52	1336.410000	Y 377.433
Zr (343.823 nm)	0.062081	ppm	0.000083	0.13	2397.340000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.909024	9683.098557	0.009051	1.00
Y 377.433	0.918264	423904.868383	0.011062	1.20
Y_R 377.433	1.025800	38762.600000	0.000902	0.09
Y_R 488.368	1.025940	37026.000000	0.006212	0.61
Y_R2 488.368	1.006007	70799.501402	0.001088	0.11
Y_R4	1.034030	31728.500000	0.007993	0.77

Sample Name: CCVH-5408055

Date: 11/5/2018 9:12:53 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000898	ppm	0.000431	47.97	-324.476000	Y 377.433
Al (394.401 nm)	51.270700 o	ppm	0.106519	0.21	638497.000000	Y 377.433
Al H (396.152 nm)	49.937300	ppm	0.186265	0.37	82125.400000	Y_R 377.433
As (188.980 nm)	0.000701	ppm	0.000646	92.05	-16.219500	Y 242.219
B (249.678 nm)	-0.011510 u	ppm	0.000250	2.17	-15.618000	Y 242.219
Ba (493.408 nm)	-0.000227 u	ppm	0.000184	80.99	816.499000	Y_R 488.368
Be (234.861 nm)	-0.000087 u	ppm	0.000254	> 100.00	-707.807000	Y_R 488.368
Bi (223.061 nm)	0.995079	ppm	0.005623	0.57	1689.860000	Y 377.433
Ca (315.887 nm)	-0.010626 u	ppm	0.002597	24.45	1.004834	Y_R 377.433
Cd (214.439 nm)	0.000153	ppm	0.000111	72.56	-7.339530	Y 377.433
Co (228.615 nm)	0.001595	ppm	0.000020	1.26	65.069300	Y 242.219
Cr (205.560 nm)	0.000149 u	ppm	0.000353	> 100.00	-9.596390	Y 377.433
Cu (324.754 nm)	-0.000586 u	ppm	0.000047	7.97	635.255000	Y 377.433
Fe (238.204 nm)	49.530355 o	ppm	0.053360	0.11	82537.498031	Y_R 377.433
Fe H (259.940 nm)	49.652200	ppm	0.098192	0.20	45552.500000	Y_R 377.433
K (766.491 nm)	0.578680	ppm	0.084136	14.54	2301.480000	Y_R2 488.368
Li (670.783 nm)	0.014537	ppm	0.000785	5.40	-241.007000	Y_R2 488.368
Mg (279.078 nm)	-0.032926 u	ppm	0.000100	0.30	-208.392000	Y 377.433
Mn (257.610 nm)	0.000300	ppm	0.000020	6.57	85.363400	Y 377.433
Mo (202.032 nm)	0.000854	ppm	0.000382	44.66	28.399400	Y 377.433
Na (589.592 nm)	249.680000 o	ppm	1.975220	0.79	125303.000000	Y_R2 488.368
Na H (589.593 nm)	260.818445	ppm	0.489084	0.19	92740.949029	Y_R4
Ni (231.604 nm)	0.000821 u	ppm	0.001422	> 100.00	19.626400	Y 377.433
P (213.618 nm)	-0.014038 u	ppm	0.002151	15.32	-18.635600	Y 242.219
Pb (220.353 nm)	-0.002631 u	ppm	0.000873	33.19	18.848100	Y 242.219
S (181.972 nm)	5.108244	ppm	0.040273	0.79	2413.982647	Y 377.433
Sb (206.834 nm)	0.000120 u	ppm	0.001372	> 100.00	3.137390	Y 377.433
Se (196.026 nm)	0.001637	ppm	0.001007	61.50	-8.624860	Y 242.219
Si (288.158 nm)	-0.171008 u	ppm	0.007632	4.46	518.710000	Y 377.433
Sn (189.925 nm)	-0.006561 u	ppm	0.001273	19.40	0.403654	Y 377.433
Sr (421.552 nm)	-0.000033 u	ppm	0.000166	> 100.00	280.165476	Y_R 488.368
Th (288.505 nm)	4.971140	ppm	0.002280	0.05	5333.090000	Y 377.433
Ti (336.122 nm)	0.000746	ppm	0.000019	2.56	-294.028000	Y 377.433
Tl (190.794 nm)	-0.007567 u	ppm	0.004219	55.76	-16.456900	Y 377.433
U (409.013 nm)	10.200200	ppm	0.051551	0.51	23456.200000	Y 377.433
V (292.401 nm)	-0.004420 u	ppm	0.000281	6.36	-414.099000	Y 377.433
Zn (206.200 nm)	-0.000062 u	ppm	0.000635	> 100.00	9.470210	Y 377.433
Zr (343.823 nm)	-0.006855 u	ppm	0.000143	2.08	-396.342000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053957	11226.955959	0.002343	0.22
Y 377.433	1.049967	484703.850498	0.001146	0.11
Y_R 377.433	1.096600	41438.000000	0.001447	0.13
Y_R 488.368	1.093610	39468.500000	0.000619	0.06
Y_R2 488.368	1.076294	75746.077368	0.007177	0.67
Y_R4	1.104840	33901.200000	0.005661	0.51

Sample Name: CCV-5407762

Date: 11/5/2018 9:16:30 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.505845	ppm	0.001130	0.22	13757.500000	Y 377.433
Al (394.401 nm)	0.508015	ppm	0.001446	0.28	6533.440000	Y 377.433
Al H (396.152 nm)	0.555341 u	ppm	0.005782	1.04	894.644000	Y_R 377.433
As (188.980 nm)	0.992696	ppm	0.001031	0.10	1375.740000	Y 242.219
B (249.678 nm)	0.486535	ppm	0.000925	0.19	1999.410000	Y 242.219
Ba (493.408 nm)	0.505062	ppm	0.000672	0.13	47025.700000	Y_R 488.368
Be (234.861 nm)	0.507972	ppm	0.003042	0.60	26264.200000	Y_R 488.368
Bi (223.061 nm)	0.000001 u	ppm	0.002840	> 100.00	43.686100	Y 377.433
Ca (315.887 nm)	5.056422	ppm	0.021305	0.42	3337.653126	Y_R 377.433
Cd (214.439 nm)	0.512110	ppm	0.000282	0.06	12740.400000	Y 377.433
Co (228.615 nm)	0.501189	ppm	0.000904	0.18	11885.500000	Y 242.219
Cr (205.560 nm)	0.518070	ppm	0.003388	0.65	2461.120000	Y 377.433
Cu (324.754 nm)	0.509142	ppm	0.000022	0.00	24705.200000	Y 377.433
Fe (238.204 nm)	2.531313	ppm	0.002572	0.10	4229.131320	Y_R 377.433
Fe H (259.940 nm)	2.542010 u	ppm	0.010221	0.40	2321.680000	Y_R 377.433
K (766.491 nm)	50.625400	ppm	0.100491	0.20	51214.100000	Y_R2 488.368
Li (670.783 nm)	1.013630	ppm	0.001872	0.18	13909.600000	Y_R2 488.368
Mg (279.078 nm)	20.329100	ppm	0.013319	0.07	44297.600000	Y 377.433
Mn (257.610 nm)	0.509743	ppm	0.000610	0.12	106673.000000	Y 377.433
Mo (202.032 nm)	0.517427	ppm	0.000509	0.10	5905.220000	Y 377.433
Na (589.592 nm)	26.129200	ppm	0.005815	0.02	12983.500000	Y_R2 488.368
Na H (589.593 nm)	35.527019 u	ppm	0.072262	0.20	12245.468244	Y_R4
Ni (231.604 nm)	0.509883	ppm	0.001429	0.28	1964.110000	Y 377.433
P (213.618 nm)	0.996752	ppm	0.005707	0.57	1132.340000	Y 242.219
Pb (220.353 nm)	1.003740	ppm	0.001297	0.13	2254.560000	Y 242.219
S (181.972 nm)	0.044782	ppm	0.002124	4.74	-2.395830	Y 377.433
Sb (206.834 nm)	1.025820	ppm	0.005487	0.53	1685.480000	Y 377.433
Se (196.026 nm)	1.002510	ppm	0.001388	0.14	1509.000000	Y 242.219
Si (288.158 nm)	4.876760	ppm	0.018784	0.39	23132.200000	Y 377.433
Sn (189.925 nm)	1.023720	ppm	0.001906	0.19	1203.120000	Y 377.433
Sr (421.552 nm)	0.507951	ppm	0.003023	0.60	59240.791538	Y_R 488.368
Th (288.505 nm)	-0.026817 u	ppm	0.011350	42.33	-47.173400	Y 377.433
Ti (336.122 nm)	0.513367	ppm	0.000488	0.10	48463.400000	Y 377.433
Tl (190.794 nm)	1.023640	ppm	0.000232	0.02	577.246000	Y 377.433
U (409.013 nm)	-0.016451 u	ppm	0.001311	7.97	32.115800	Y 377.433
V (292.401 nm)	0.507969	ppm	0.001084	0.21	24261.900000	Y 377.433
Zn (206.200 nm)	0.512356	ppm	0.001238	0.24	1775.400000	Y 377.433
Zr (343.823 nm)	0.512956	ppm	0.000139	0.03	20669.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068483	11381.681707	0.003371	0.32
Y 377.433	1.057619	488236.323637	0.003545	0.34
Y_R 377.433	1.082500	40905.400000	0.016446	1.52
Y_R 488.368	1.085230	39165.900000	0.010598	0.98
Y_R2 488.368	1.084371	76314.479592	0.001735	0.16
Y_R4	1.096860	33656.300000	0.009569	0.87

Sample Name: CCB

Date: 11/5/2018 9:20:00 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000145 u	ppm	0.000261	> 100.00	-243.265000	Y 377.433
Al (394.401 nm)	0.000268	ppm	0.000083	30.80	91.683600	Y 377.433
Al H (396.152 nm)	0.131669 Zu	ppm	0.001000	0.76	1.725260 Z	Y_R 377.433
As (188.980 nm)	-0.001363 u	ppm	0.000496	36.39	-17.025400	Y 242.219
B (249.678 nm)	-0.010347 u	ppm	0.000595	5.75	5.156440	Y 242.219
Ba (493.408 nm)	-0.001296 u	ppm	0.000173	13.36	682.395000	Y_R 488.368
Be (234.861 nm)	0.000065	ppm	0.000003	5.37	-2.487010	Y_R 488.368
Bi (223.061 nm)	-0.005800 u	ppm	0.004000	68.97	33.711900	Y 377.433
Ca (315.887 nm)	-0.016905 u	ppm	0.005642	33.37	-13.486002	Y_R 377.433
Cd (214.439 nm)	0.000207	ppm	0.000080	38.82	-6.014830	Y 377.433
Co (228.615 nm)	0.000469	ppm	0.000015	3.09	-16.828800	Y 242.219
Cr (205.560 nm)	0.000020 u	ppm	0.000130	> 100.00	-9.250550	Y 377.433
Cu (324.754 nm)	-0.000062 u	ppm	0.000250	> 100.00	198.541000	Y 377.433
Fe (238.204 nm)	-0.002243 u	ppm	0.004304	> 100.00	7.797507	Y_R 377.433
Fe H (259.940 nm)	0.015546 u	ppm	0.002547	16.38	3.258970	Y_R 377.433
K (766.491 nm)	0.144639	ppm	0.056295	38.92	1877.270000	Y_R2 488.368
Li (670.783 nm)	0.009762	ppm	0.002153	22.06	-308.628000	Y_R2 488.368
Mg (279.078 nm)	0.000373 u	ppm	0.001932	> 100.00	14.863000	Y 377.433
Mn (257.610 nm)	-0.000029 u	ppm	0.000004	12.83	16.543000	Y 377.433
Mo (202.032 nm)	-0.000053 u	ppm	0.000115	> 100.00	18.080600	Y 377.433
Na (589.592 nm)	1.125800 Z	ppm	0.071321	6.34	429.590000 Z	Y_R2 488.368
Na H (589.593 nm)	8.971693 u	ppm	0.034853	0.39	2813.190442	Y_R4
Ni (231.604 nm)	0.000385	ppm	0.000298	77.39	10.557600	Y 377.433
P (213.618 nm)	0.000775 u	ppm	0.001462	> 100.00	-0.182108	Y 242.219
Pb (220.353 nm)	-0.001161 u	ppm	0.001037	89.32	11.910800	Y 242.219
S (181.972 nm)	0.038613	ppm	0.004794	12.41	-7.267684	Y 377.433
Sb (206.834 nm)	0.002064	ppm	0.000084	4.06	2.267120	Y 377.433
Se (196.026 nm)	0.004558	ppm	0.001321	28.98	8.495300	Y 242.219
Si (288.158 nm)	-0.199792 Zu	ppm	0.002331	1.17	389.759000 Z	Y 377.433
Sn (189.925 nm)	-0.004654 u	ppm	0.000544	11.68	2.629790	Y 377.433
Sr (421.552 nm)	-0.000144 u	ppm	0.000031	21.61	261.551508	Y_R 488.368
Th (288.505 nm)	-0.000021 u	ppm	0.001922	> 100.00	14.373500	Y 377.433
Ti (336.122 nm)	0.000423	ppm	0.000023	5.44	-324.882000	Y 377.433
Tl (190.794 nm)	-0.000198 u	ppm	0.000192	97.07	-8.928030	Y 377.433
U (409.013 nm)	-0.007030 u	ppm	0.009031	> 100.00	98.748200	Y 377.433
V (292.401 nm)	0.000221	ppm	0.000136	61.76	-184.042000	Y 377.433
Zn (206.200 nm)	0.000304	ppm	0.000141	46.55	5.428550	Y 377.433
Zr (343.823 nm)	0.000426	ppm	0.000102	23.84	-101.275000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.086892	11577.784112	0.005757	0.53
Y 377.433	1.076335	496876.636311	0.004229	0.39
Y_R 377.433	1.101220	41612.800000	0.004898	0.44
Y_R 488.368	1.101380	39748.700000	0.003480	0.32
Y_R2 488.368	1.093945	76988.267998	0.007867	0.72
Y_R4	1.100870	33779.300000	0.005055	0.46

Sample Name: CCVL-5412564

Date: 11/5/2018 9:23:10 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009649	ppm	0.000262	2.71	28.455400	Y 377.433
Al (394.401 nm)	0.100306	ppm	0.001111	1.11	1343.380000	Y 377.433
Al H (396.152 nm)	0.241631 u	ppm	0.004934	2.04	187.351000	Y_R 377.433
As (188.980 nm)	0.013172	ppm	0.001094	8.31	3.336720	Y 242.219
B (249.678 nm)	0.089239	ppm	0.001017	1.14	404.981000	Y 242.219
Ba (493.408 nm)	0.009687	ppm	0.000004	0.04	1687.610000	Y_R 488.368
Be (234.861 nm)	0.001145	ppm	0.000056	4.85	52.028100	Y_R 488.368
Bi (223.061 nm)	0.096412	ppm	0.002952	3.06	202.202000	Y 377.433
Ca (315.887 nm)	0.200633	ppm	0.005599	2.79	130.227141	Y_R 377.433
Cd (214.439 nm)	0.005566	ppm	0.000145	2.61	127.424000	Y 377.433
Co (228.615 nm)	0.010681	ppm	0.000236	2.21	225.969000	Y 242.219
Cr (205.560 nm)	0.011065	ppm	0.000149	1.35	43.346800	Y 377.433
Cu (324.754 nm)	0.015600	ppm	0.000227	1.45	951.452000	Y 377.433
Fe (238.204 nm)	0.098091	ppm	0.003350	3.42	174.970964	Y_R 377.433
Fe H (259.940 nm)	0.107401 u	ppm	0.000082	0.08	87.550000	Y_R 377.433
K (766.491 nm)	3.149850	ppm	0.154529	4.91	4814.380000	Y_R2 488.368
Li (670.783 nm)	0.027802 Q	ppm	0.003898	14.02	-53.123000 Q	Y_R2 488.368
Mg (279.078 nm)	0.208636	ppm	0.004438	2.13	468.007000	Y 377.433
Mn (257.610 nm)	0.010628	ppm	0.000039	0.37	2246.310000	Y 377.433
Mo (202.032 nm)	0.020357	ppm	0.000611	3.00	250.269000	Y 377.433
Na (589.592 nm)	2.086110 Q	ppm	0.000208	0.01	911.884000 Q	Y_R2 488.368
Na H (589.593 nm)	8.880072 u	ppm	0.140387	1.58	2779.407424	Y_R4
Ni (231.604 nm)	0.041864	ppm	0.000574	1.37	169.526000	Y 377.433
P (213.618 nm)	2.837520	ppm	0.002936	0.10	3290.020000	Y 242.219
Pb (220.353 nm)	0.007924	ppm	0.000375	4.74	32.205100	Y 242.219
S (181.972 nm)	0.129106	ppm	0.002368	1.83	35.998601	Y 377.433
Sb (206.834 nm)	0.021563	ppm	0.000303	1.40	34.201800	Y 377.433
Se (196.026 nm)	0.022637	ppm	0.001120	4.95	35.668200	Y 242.219
Si (288.158 nm)	0.294546 Q	ppm	0.004074	1.38	2604.340000 Q	Y 377.433
Sn (189.925 nm)	0.095040	ppm	0.000333	0.35	119.010000	Y 377.433
Sr (421.552 nm)	0.009310	ppm	0.000073	0.78	1358.966713	Y_R 488.368
Th (288.505 nm)	0.012540	ppm	0.004892	39.01	27.386800	Y 377.433
Ti (336.122 nm)	0.010575	ppm	0.000099	0.94	641.110000	Y 377.433
Tl (190.794 nm)	0.018602	ppm	0.002128	11.44	1.815590	Y 377.433
U (409.013 nm)	0.057097	ppm	0.017779	31.14	244.051000	Y 377.433
V (292.401 nm)	0.010183	ppm	0.000166	1.63	294.183000	Y 377.433
Zn (206.200 nm)	0.020820	ppm	0.000597	2.87	76.346800	Y 377.433
Zr (343.823 nm)	0.015726	ppm	0.000120	0.76	518.768000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.101173	11729.903231	0.000525	0.05
Y 377.433	1.087213	501898.226819	0.001301	0.12
Y_R 377.433	1.104650	41742.100000	0.001912	0.17
Y_R 488.368	1.105900	39912.000000	0.009155	0.83
Y_R2 488.368	1.103320	77648.057692	0.007533	0.68
Y_R4	1.095670	33619.900000	0.008286	0.76

Sample Name: MB 280-436032/1-A

Date: 11/5/2018 9:26:35 PM Rack:Tube: 1:72

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000229 u	ppm	0.000008	3.42	-245.465000	Y 377.433
Al (394.401 nm)	0.000109 u	ppm	0.001253	> 100.00	88.216900	Y 377.433
Al H (396.152 nm)	0.140406 u	ppm	0.005710	4.07	16.136000	Y_R 377.433
As (188.980 nm)	0.001664	ppm	0.002184	> 100.00	-12.783800	Y 242.219
B (249.678 nm)	-0.009280 u	ppm	0.001107	11.93	9.439300	Y 242.219
Ba (493.408 nm)	-0.000765 u	ppm	0.000142	18.52	731.057000	Y_R 488.368
Be (234.861 nm)	0.000125	ppm	0.000145	> 100.00	0.582470	Y_R 488.368
Bi (223.061 nm)	-0.004787 u	ppm	0.002196	45.87	35.381400	Y 377.433
Ca (315.887 nm)	0.000089 u	ppm	0.003442	> 100.00	-2.259483	Y_R 377.433
Cd (214.439 nm)	0.000072	ppm	0.000054	75.42	-9.366280	Y 377.433
Co (228.615 nm)	0.000519	ppm	0.000191	36.89	-15.656100	Y 242.219
Cr (205.560 nm)	-0.000027 u	ppm	0.000041	> 100.00	-9.474380	Y 377.433
Cu (324.754 nm)	-0.000051 u	ppm	0.000271	> 100.00	199.521000	Y 377.433
Fe (238.204 nm)	0.000119	ppm	0.000163	> 100.00	11.733480	Y_R 377.433
Fe H (259.940 nm)	0.015691 u	ppm	0.004862	30.98	3.391560	Y_R 377.433
K (766.491 nm)	0.136925	ppm	0.155352	> 100.00	1869.740000	Y_R2 488.368
Li (670.783 nm)	0.007404	ppm	0.000752	10.16	-342.027000	Y_R2 488.368
Mg (279.078 nm)	0.002751	ppm	0.000664	24.12	20.185900	Y 377.433
Mn (257.610 nm)	0.000080	ppm	0.000006	8.05	39.364900	Y 377.433
Mo (202.032 nm)	-0.000306 u	ppm	0.000067	21.86	15.196000	Y 377.433
Na (589.592 nm)	1.001970	ppm	0.059603	5.95	367.375000	Y_R2 488.368
Na H (589.593 nm)	6.941785 u	ppm	0.084867	1.22	2088.316650	Y_R4
Ni (231.604 nm)	0.000302	ppm	0.000242	80.15	10.246400	Y 377.433
P (213.618 nm)	0.001268	ppm	0.000260	20.48	0.396621	Y 242.219
Pb (220.353 nm)	-0.002390 u	ppm	0.000156	6.52	9.141000	Y 242.219
S (181.972 nm)	0.033654	ppm	0.003510	10.43	-9.636309	Y 377.433
Sb (206.834 nm)	-0.000488 u	ppm	0.001052	> 100.00	-1.927880	Y 377.433
Se (196.026 nm)	0.002926	ppm	0.002280	77.90	6.041410	Y 242.219
Si (288.158 nm)	-0.205722 u	ppm	0.000343	0.17	363.196000	Y 377.433
Sn (189.925 nm)	-0.006451 u	ppm	0.000766	11.87	0.532270	Y 377.433
Sr (421.552 nm)	-0.000104 u	ppm	0.000024	23.53	266.140053	Y_R 488.368
Th (288.505 nm)	-0.000427 u	ppm	0.002967	> 100.00	13.897400	Y 377.433
Ti (336.122 nm)	0.000381	ppm	0.000017	4.56	-328.883000	Y 377.433
Tl (190.794 nm)	0.003649 u	ppm	0.007249	> 100.00	-6.722270	Y 377.433
U (409.013 nm)	-0.003197 u	ppm	0.003834	> 100.00	107.505000	Y 377.433
V (292.401 nm)	0.000474	ppm	0.000101	21.35	-171.309000	Y 377.433
Zn (206.200 nm)	-0.000067 u	ppm	0.000037	56.04	4.148660	Y 377.433
Zr (343.823 nm)	0.000469	ppm	0.000085	18.03	-99.542000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.110718	11831.582532	0.000466	0.04
Y 377.433	1.094218	505131.881218	0.000283	0.03
Y_R 377.433	1.115240	42142.300000	0.002309	0.21
Y_R 488.368	1.111320	40107.400000	0.000901	0.08
Y_R2 488.368	1.097407	77231.949915	0.003990	0.36
Y_R4	1.121230	34404.000000	0.002257	0.20

Sample Name: LCS 280-436032/2-A

Date: 11/5/2018 9:29:44 PM Rack:Tube: 1:73

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053688	ppm	0.000699	1.30	1194.580000	Y 377.433
Al (394.401 nm)	2.137880	ppm	0.000805	0.04	27019.700000	Y 377.433
Al H (396.152 nm)	2.038390	ppm	0.012247	0.60	3540.380000	Y_R 377.433
As (188.980 nm)	1.021680	ppm	0.001191	0.12	1416.360000	Y 242.219
B (249.678 nm)	1.047180	ppm	0.002712	0.26	4250.990000	Y 242.219
Ba (493.408 nm)	2.084260	ppm	0.003891	0.19	191551.000000	Y_R 488.368
Be (234.861 nm)	0.052496	ppm	0.000047	0.09	2698.160000	Y_R 488.368
Bi (223.061 nm)	2.020940	ppm	0.004390	0.22	3374.520000	Y 377.433
Ca (315.887 nm)	51.694382	ppm	0.027386	0.05	34143.242655	Y_R 377.433
Cd (214.439 nm)	0.104811	ppm	0.000303	0.29	2598.660000	Y 377.433
Co (228.615 nm)	0.497754	ppm	0.000516	0.10	11826.800000	Y 242.219
Cr (205.560 nm)	0.214049	ppm	0.000095	0.04	1008.150000	Y 377.433
Cu (324.754 nm)	0.257694	ppm	0.000959	0.37	12644.200000	Y 377.433
Fe (238.204 nm)	1.036015	ppm	0.008541	0.82	1737.711470	Y_R 377.433
Fe H (259.940 nm)	1.026120 u	ppm	0.003661	0.36	930.611000	Y_R 377.433
K (766.491 nm)	52.724900	ppm	0.250478	0.48	53266.100000	Y_R2 488.368
Li (670.783 nm)	1.052090	ppm	0.012767	1.21	14454.400000	Y_R2 488.368
Mg (279.078 nm)	51.709400	ppm	0.041894	0.08	112635.000000	Y 377.433
Mn (257.610 nm)	0.522141	ppm	0.000235	0.05	109267.000000	Y 377.433
Mo (202.032 nm)	1.081990	ppm	0.000932	0.09	12328.000000	Y 377.433
Na (589.592 nm)	52.318900	ppm	0.001537	0.00	26116.800000	Y_R2 488.368
Na H (589.593 nm)	57.999586	ppm	0.183695	0.32	20114.019392	Y_R4
Ni (231.604 nm)	0.503125	ppm	0.002808	0.56	1938.920000	Y 377.433
P (213.618 nm)	10.394900	ppm	0.055967	0.54	12046.300000	Y 242.219
Pb (220.353 nm)	0.512675	ppm	0.001190	0.23	1159.750000	Y 242.219
S (181.972 nm)	2.057480	ppm	0.002610	0.13	961.394237	Y 377.433
Sb (206.834 nm)	0.539056	ppm	0.001172	0.22	874.697000	Y 377.433
Se (196.026 nm)	2.086770	ppm	0.000396	0.02	3139.630000	Y 242.219
Si (288.158 nm)	10.396200	ppm	0.035638	0.34	47858.600000	Y 377.433
Sn (189.925 nm)	2.126270	ppm	0.001239	0.06	2490.200000	Y 377.433
Sr (421.552 nm)	1.050906	ppm	0.001537	0.15	122266.176430	Y_R 488.368
Th (288.505 nm)	1.012450	ppm	0.010066	0.99	1066.930000	Y 377.433
Ti (336.122 nm)	1.063970	ppm	0.001287	0.12	100935.000000	Y 377.433
Tl (190.794 nm)	2.106240	ppm	0.007464	0.35	1196.090000	Y 377.433
U (409.013 nm)	2.168060	ppm	0.017894	0.83	5018.840000	Y 377.433
V (292.401 nm)	0.531184	ppm	0.000154	0.03	25461.800000	Y 377.433
Zn (206.200 nm)	0.520899	ppm	0.002709	0.52	1804.760000	Y 377.433
Zr (343.823 nm)	0.528984	ppm	0.000582	0.11	21318.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.078803	11491.620373	0.001551	0.14
Y 377.433	1.069020	493499.794213	0.001644	0.15
Y_R 377.433	1.108270	41879.000000	0.002003	0.18
Y_R 488.368	1.108410	40002.600000	0.001957	0.18
Y_R2 488.368	1.111747	78241.119337	0.004617	0.42
Y_R4	1.103370	33856.200000	0.004548	0.41

Sample Name: 280-116342-A-1-A

Date: 11/5/2018 9:33:12 PM Rack:Tube: 1:74

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000319	ppm	0.000029	9.18	-232.753000	Y 377.433
Al (394.401 nm)	0.005374	ppm	0.001054	19.62	330.833000	Y 377.433
Al H (396.152 nm)	0.015574 u	ppm	0.004361	28.00	2.708290	Y_R 377.433
As (188.980 nm)	0.007426	ppm	0.000697	9.39	-4.710080	Y 242.219
B (249.678 nm)	0.030252	ppm	0.000030	0.10	168.163000	Y 242.219
Ba (493.408 nm)	0.682764	ppm	0.001338	0.20	63286.900000	Y_R 488.368
Be (234.861 nm)	0.000182	ppm	0.000071	39.26	3.366930	Y_R 488.368
Bi (223.061 nm)	0.005553	ppm	0.003527	63.51	52.439000	Y 377.433
Ca (315.887 nm)	92.337527	ppm	0.016322	0.02	60988.364198	Y_R 377.433
Cd (214.439 nm)	0.000450	ppm	0.000156	34.64	0.035644	Y 377.433
Co (228.615 nm)	0.000291	ppm	0.000200	68.98	-21.056500	Y 242.219
Cr (205.560 nm)	0.001006	ppm	0.000289	28.76	-4.547640	Y 377.433
Cu (324.754 nm)	-0.000566 u	ppm	0.000121	21.32	117.538000	Y 377.433
Fe (238.204 nm)	0.011676	ppm	0.002130	18.24	30.989571	Y_R 377.433
Fe H (259.940 nm)	0.021269 u	ppm	0.001002	4.71	8.510370	Y_R 377.433
K (766.491 nm)	7.784140	ppm	0.007307	0.09	9343.670000	Y_R2 488.368
Li (670.783 nm)	0.032944	ppm	0.002147	6.52	19.699300	Y_R2 488.368
Mg (279.078 nm)	16.210500	ppm	0.000616	0.00	35327.100000	Y 377.433
Mn (257.610 nm)	0.067638	ppm	0.000031	0.05	14174.200000	Y 377.433
Mo (202.032 nm)	0.000063	ppm	0.000075	> 100.00	19.396900	Y 377.433
Na (589.592 nm)	9.538380	ppm	0.055182	0.58	4645.520000	Y_R2 488.368
Na H (589.593 nm)	14.462337 u	ppm	0.161363	1.12	4706.331696	Y_R4
Ni (231.604 nm)	-0.000495 u	ppm	0.000523	> 100.00	7.184930	Y 377.433
P (213.618 nm)	0.178658	ppm	0.004760	2.66	206.164000	Y 242.219
Pb (220.353 nm)	-0.003477 u	ppm	0.000733	21.09	6.715270	Y 242.219
S (181.972 nm)	2.162896	ppm	0.000244	0.01	1012.334730	Y 377.433
Sb (206.834 nm)	-0.002489 u	ppm	0.001534	61.63	-5.219910	Y 377.433
Se (196.026 nm)	0.004049	ppm	0.000887	21.92	7.819430	Y 242.219
Si (288.158 nm)	22.396500	ppm	0.113389	0.51	101619.000000	Y 377.433
Sn (189.925 nm)	-0.007516 u	ppm	0.000127	1.69	-0.710685	Y 377.433
Sr (421.552 nm)	0.662130	ppm	0.002551	0.39	77137.412169	Y_R 488.368
Th (288.505 nm)	-0.021166 u	ppm	0.005787	27.34	-8.730980	Y 377.433
Ti (336.122 nm)	0.000533	ppm	0.000063	11.88	-80.822300	Y 377.433
Tl (190.794 nm)	-0.007026 u	ppm	0.002218	31.58	-13.765400	Y 377.433
U (409.013 nm)	0.005368	ppm	0.004168	77.63	118.222000	Y 377.433
V (292.401 nm)	0.011665	ppm	0.000120	1.03	370.203000	Y 377.433
Zn (206.200 nm)	0.002844	ppm	0.000802	28.21	14.207800	Y 377.433
Zr (343.823 nm)	0.000778	ppm	0.000111	14.22	-86.994300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099818	11715.468286	0.000989	0.09
Y 377.433	1.093113	504621.614216	0.000297	0.03
Y_R 377.433	1.121950	42395.900000	0.000395	0.04
Y_R 488.368	1.124720	40591.300000	0.003706	0.33
Y_R2 488.368	1.112658	78305.260774	0.004894	0.44
Y_R4	1.116200	34249.600000	0.006120	0.55

Sample Name: 280-116342-A-4-A

Date: 11/5/2018 9:36:38 PM Rack:Tube: 1:75

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000394	ppm	0.000162	41.18	-230.576000	Y 377.433
Al (394.401 nm)	0.000559 u	ppm	0.001539	> 100.00	268.280000	Y 377.433
Al H (396.152 nm)	0.019352 u	ppm	0.008416	43.49	6.514600	Y_R 377.433
As (188.980 nm)	0.006096	ppm	0.003271	53.67	-6.574510	Y 242.219
B (249.678 nm)	0.030285	ppm	0.000476	1.57	168.300000	Y 242.219
Ba (493.408 nm)	0.667697	ppm	0.000158	0.02	61908.000000	Y_R 488.368
Be (234.861 nm)	0.000135	ppm	0.000060	44.60	1.050610	Y_R 488.368
Bi (223.061 nm)	0.004726	ppm	0.002332	49.34	51.074700	Y 377.433
Ca (315.887 nm)	90.900836	ppm	0.158893	0.17	60039.401203	Y_R 377.433
Cd (214.439 nm)	0.000246	ppm	0.000057	23.24	-5.034320	Y 377.433
Co (228.615 nm)	0.000109 u	ppm	0.000233	> 100.00	-25.371000	Y 242.219
Cr (205.560 nm)	0.000233 u	ppm	0.001228	> 100.00	-8.234330	Y 377.433
Cu (324.754 nm)	-0.000575 u	ppm	0.000149	25.97	117.853000	Y 377.433
Fe (238.204 nm)	0.004144	ppm	0.001755	42.35	18.440300	Y_R 377.433
Fe H (259.940 nm)	0.011866 u	ppm	0.002800	23.60	-0.117991	Y_R 377.433
K (766.491 nm)	7.687290	ppm	0.060311	0.78	9249.020000	Y_R2 488.368
Li (670.783 nm)	0.037093	ppm	0.000141	0.38	78.465600	Y_R2 488.368
Mg (279.078 nm)	15.999700	ppm	0.039058	0.24	34868.000000	Y 377.433
Mn (257.610 nm)	0.073653	ppm	0.000094	0.13	15432.600000	Y 377.433
Mo (202.032 nm)	-0.000100 u	ppm	0.000210	> 100.00	17.543600	Y 377.433
Na (589.592 nm)	9.432600	ppm	0.002051	0.02	4592.610000	Y_R2 488.368
Na H (589.593 nm)	13.848971 u	ppm	0.014813	0.11	4488.842194	Y_R4
Ni (231.604 nm)	0.001049	ppm	0.000856	81.66	13.101400	Y 377.433
P (213.618 nm)	0.164467	ppm	0.003690	2.24	189.701000	Y 242.219
Pb (220.353 nm)	-0.002221 u	ppm	0.002792	> 100.00	9.510000	Y 242.219
S (181.972 nm)	2.076323	ppm	0.002919	0.14	970.934351	Y 377.433
Sb (206.834 nm)	-0.006892 u	ppm	0.000443	6.43	-12.463800	Y 377.433
Se (196.026 nm)	0.004371	ppm	0.003750	85.80	8.313340	Y 242.219
Si (288.158 nm)	21.834900	ppm	0.264253	1.21	99102.900000	Y 377.433
Sn (189.925 nm)	-0.006824 u	ppm	0.000721	10.57	0.096782	Y 377.433
Sr (421.552 nm)	0.655016	ppm	0.000277	0.04	76311.607808	Y_R 488.368
Th (288.505 nm)	-0.017265 u	ppm	0.009088	52.64	-4.530320	Y 377.433
Ti (336.122 nm)	0.000292	ppm	0.000006	1.91	-107.165000	Y 377.433
Tl (190.794 nm)	-0.003425 u	ppm	0.000473	13.82	-11.686700	Y 377.433
U (409.013 nm)	0.007662	ppm	0.000986	12.87	123.567000	Y 377.433
V (292.401 nm)	0.011469	ppm	0.000134	1.17	360.801000	Y 377.433
Zn (206.200 nm)	0.002985	ppm	0.001039	34.80	14.697700	Y 377.433
Zr (343.823 nm)	0.000641	ppm	0.000064	10.05	-92.557200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.095998	11674.776127	0.002091	0.19
Y 377.433	1.086391	501518.549454	0.003339	0.31
Y_R 377.433	1.122340	42410.600000	0.004214	0.38
Y_R 488.368	1.117480	40329.700000	0.001965	0.18
Y_R2 488.368	1.114650	78445.398741	0.002263	0.20
Y_R4	1.130450	34686.900000	0.006974	0.62

Sample Name: 280-116342-A-4-Asd@5

Date: 11/5/2018 9:40:04 PM Rack:Tube: 1:76

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000266	ppm	0.000053	19.89	-232.066000	Y 377.433
Al (394.401 nm)	0.002198	ppm	0.000139	6.34	150.093000	Y 377.433
Al H (396.152 nm)	0.109352 u	ppm	0.001281	1.17	2.561860	Y_R 377.433
As (188.980 nm)	0.000098 u	ppm	0.000148	> 100.00	-14.977200	Y 242.219
B (249.678 nm)	-0.002192 u	ppm	0.001303	59.41	37.898300	Y 242.219
Ba (493.408 nm)	0.131778	ppm	0.000673	0.51	12861.200000	Y_R 488.368
Be (234.861 nm)	0.000079 u	ppm	0.000241	> 100.00	-1.792500	Y_R 488.368
Bi (223.061 nm)	-0.001693 u	ppm	0.003049	> 100.00	40.482900	Y 377.433
Ca (315.887 nm)	18.272590	ppm	0.002490	0.01	12067.071406	Y_R 377.433
Cd (214.439 nm)	0.000267	ppm	0.000046	17.26	-4.500060	Y 377.433
Co (228.615 nm)	0.000518	ppm	0.000226	43.68	-15.676400	Y 242.219
Cr (205.560 nm)	0.000811	ppm	0.000060	7.45	-5.470620	Y 377.433
Cu (324.754 nm)	-0.000266 u	ppm	0.000371	> 100.00	176.786000	Y 377.433
Fe (238.204 nm)	-0.001303 u	ppm	0.001325	> 100.00	9.365194	Y_R 377.433
Fe H (259.940 nm)	0.015185 u	ppm	0.003070	20.22	2.927460	Y_R 377.433
K (766.491 nm)	1.403830	ppm	0.034609	2.47	3107.930000	Y_R2 488.368
Li (670.783 nm)	0.012812	ppm	0.001662	12.97	-265.440000	Y_R2 488.368
Mg (279.078 nm)	3.239220	ppm	0.003662	0.11	7070.550000	Y 377.433
Mn (257.610 nm)	0.015054	ppm	0.000033	0.22	3172.210000	Y 377.433
Mo (202.032 nm)	-0.000543 u	ppm	0.000171	31.42	12.499300	Y 377.433
Na (589.592 nm)	2.398580	ppm	0.008024	0.33	1066.990000	Y_R2 488.368
Na H (589.593 nm)	6.537157 u	ppm	0.019803	0.30	1930.814205	Y_R4
Ni (231.604 nm)	-0.000174 u	ppm	0.000651	> 100.00	8.413770	Y 377.433
P (213.618 nm)	0.031427	ppm	0.000670	2.13	35.378100	Y 242.219
Pb (220.353 nm)	-0.003165 u	ppm	0.000812	25.67	7.404250	Y 242.219
S (181.972 nm)	0.425957	ppm	0.004915	1.15	178.723501	Y 377.433
Sb (206.834 nm)	-0.001338 u	ppm	0.000531	39.68	-3.320850	Y 377.433
Se (196.026 nm)	0.004375	ppm	0.000339	7.74	8.239570	Y 242.219
Si (288.158 nm)	4.123490	ppm	0.026312	0.64	19757.600000	Y 377.433
Sn (189.925 nm)	-0.005144 u	ppm	0.000644	12.52	2.058200	Y 377.433
Sr (421.552 nm)	0.129276	ppm	0.000314	0.24	15284.367981	Y_R 488.368
Th (288.505 nm)	-0.009795 u	ppm	0.004387	44.79	3.846320	Y 377.433
Ti (336.122 nm)	0.000578	ppm	0.000057	9.85	-264.221000	Y 377.433
Tl (190.794 nm)	-0.002243 u	ppm	0.004351	> 100.00	-10.281300	Y 377.433
U (409.013 nm)	-0.008082 u	ppm	0.001065	13.18	94.586300	Y 377.433
V (292.401 nm)	0.002619	ppm	0.000096	3.66	-68.044000	Y 377.433
Zn (206.200 nm)	0.001506	ppm	0.000065	4.31	9.583850	Y 377.433
Zr (343.823 nm)	0.000545	ppm	0.000330	60.59	-96.433900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.117799	11907.011449	0.001227	0.11
Y 377.433	1.105314	510254.439340	0.002007	0.18
Y_R 377.433	1.138100	43006.400000	0.001835	0.16
Y_R 488.368	1.143600	41272.400000	0.006237	0.55
Y_R2 488.368	1.141643	80345.116195	0.007433	0.65
Y_R4	1.115730	34235.200000	0.009973	0.89

Sample Name: 280-116342-A-4-B MS

Date: 11/5/2018 9:43:19 PM Rack:Tube: 1:77

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053373	ppm	0.000139	0.26	1184.720000	Y 377.433
Al (394.401 nm)	2.047400	ppm	0.001668	0.08	26053.600000	Y 377.433
Al H (396.152 nm)	1.848530	ppm	0.005422	0.29	3405.120000	Y_R 377.433
As (188.980 nm)	1.011000	ppm	0.003947	0.39	1401.400000	Y 242.219
B (249.678 nm)	1.076840	ppm	0.001671	0.16	4370.090000	Y 242.219
Ba (493.408 nm)	2.685590	ppm	0.004457	0.17	246585.000000	Y_R 488.368
Be (234.861 nm)	0.051001	ppm	0.000028	0.05	2621.240000	Y_R 488.368
Bi (223.061 nm)	1.984620	ppm	0.001814	0.09	3314.650000	Y 377.433
Ca (315.887 nm)	139.302735	ppm	0.121807	0.09	92010.203310	Y_R 377.433
Cd (214.439 nm)	0.100671	ppm	0.000073	0.07	2495.550000	Y 377.433
Co (228.615 nm)	0.483475	ppm	0.001393	0.29	11486.500000	Y 242.219
Cr (205.560 nm)	0.205502	ppm	0.000231	0.11	967.507000	Y 377.433
Cu (324.754 nm)	0.251159	ppm	0.000380	0.15	12275.700000	Y 377.433
Fe (238.204 nm)	0.995626	ppm	0.000829	0.08	1670.416542	Y_R 377.433
Fe H (259.940 nm)	0.984757 u	ppm	0.002878	0.29	892.657000	Y_R 377.433
K (766.491 nm)	59.556400	ppm	0.071114	0.12	59942.800000	Y_R2 488.368
Li (670.783 nm)	1.069530	ppm	0.000777	0.07	14701.500000	Y_R2 488.368
Mg (279.078 nm)	65.556700	ppm	0.001684	0.00	142801.000000	Y 377.433
Mn (257.610 nm)	0.572233	ppm	0.000726	0.13	119747.000000	Y 377.433
Mo (202.032 nm)	1.042220	ppm	0.000253	0.02	11875.500000	Y 377.433
Na (589.592 nm)	59.933400 o	ppm	0.248120	0.41	29933.000000	Y_R2 488.368
Na H (589.593 nm)	64.310883	ppm	0.641007	1.00	22308.371995	Y_R4
Ni (231.604 nm)	0.485674	ppm	0.000572	0.12	1871.970000	Y 377.433
P (213.618 nm)	10.410800	ppm	0.001036	0.01	12065.000000	Y 242.219
Pb (220.353 nm)	0.499241	ppm	0.000236	0.05	1129.720000	Y 242.219
S (181.972 nm)	4.115241	ppm	0.022040	0.54	1948.919805	Y 377.433
Sb (206.834 nm)	0.517172	ppm	0.000946	0.18	839.083000	Y 377.433
Se (196.026 nm)	2.055000	ppm	0.004785	0.23	3091.940000	Y 242.219
Si (288.158 nm)	31.700900	ppm	0.140235	0.44	143302.000000	Y 377.433
Sn (189.925 nm)	2.061590	ppm	0.000980	0.05	2414.690000	Y 377.433
Sr (421.552 nm)	1.678493	ppm	0.002739	0.16	195115.581905	Y_R 488.368
Th (288.505 nm)	0.974557	ppm	0.000106	0.01	1026.810000	Y 377.433
Ti (336.122 nm)	1.029340	ppm	0.000057	0.01	97863.700000	Y 377.433
Tl (190.794 nm)	2.026250	ppm	0.004283	0.21	1149.430000	Y 377.433
U (409.013 nm)	2.091410	ppm	0.002069	0.10	4837.000000	Y 377.433
V (292.401 nm)	0.524250	ppm	0.000628	0.12	25129.700000	Y 377.433
Zn (206.200 nm)	0.500706	ppm	0.001459	0.29	1734.970000	Y 377.433
Zr (343.823 nm)	0.509262	ppm	0.000660	0.13	20519.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063544	11329.072575	0.000283	0.03
Y 377.433	1.065190	491731.692059	0.000509	0.05
Y_R 377.433	1.106260	41803.000000	0.002191	0.20
Y_R 488.368	1.106330	39927.600000	0.000461	0.04
Y_R2 488.368	1.113924	78394.310675	0.001757	0.16
Y_R4	1.120950	34395.500000	0.015397	1.37

Sample Name: 280-116342-A-4-C MSD

Date: 11/5/2018 9:46:48 PM Rack:Tube: 1:78

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054710	ppm	0.000323	0.59	1220.740000	Y 377.433
Al (394.401 nm)	2.094590	ppm	0.002011	0.10	26652.400000	Y 377.433
Al H (396.152 nm)	1.879220	ppm	0.002816	0.15	3469.120000	Y_R 377.433
As (188.980 nm)	1.029690	ppm	0.002414	0.23	1427.580000	Y 242.219
B (249.678 nm)	1.102010	ppm	0.003378	0.31	4471.150000	Y 242.219
Ba (493.408 nm)	2.747970	ppm	0.002577	0.09	252294.000000	Y_R 488.368
Be (234.861 nm)	0.052206	ppm	0.000274	0.53	2683.390000	Y_R 488.368
Bi (223.061 nm)	2.031310	ppm	0.005625	0.28	3391.620000	Y 377.433
Ca (315.887 nm)	143.001977	ppm	0.246706	0.17	94453.629801	Y_R 377.433
Cd (214.439 nm)	0.102704	ppm	0.000081	0.08	2546.170000	Y 377.433
Co (228.615 nm)	0.492578	ppm	0.000354	0.07	11703.500000	Y 242.219
Cr (205.560 nm)	0.212160	ppm	0.000622	0.29	999.184000	Y 377.433
Cu (324.754 nm)	0.256852	ppm	0.000636	0.25	12549.500000	Y 377.433
Fe (238.204 nm)	1.019145	ppm	0.003363	0.33	1709.603245	Y_R 377.433
Fe H (259.940 nm)	1.010010 u	ppm	0.009170	0.91	915.835000	Y_R 377.433
K (766.491 nm)	60.965100	ppm	0.091504	0.15	61319.500000	Y_R2 488.368
Li (670.783 nm)	1.084220	ppm	0.001474	0.14	14909.500000	Y_R2 488.368
Mg (279.078 nm)	67.269200	ppm	0.077401	0.12	146531.000000	Y 377.433
Mn (257.610 nm)	0.586918	ppm	0.000131	0.02	122820.000000	Y 377.433
Mo (202.032 nm)	1.069730	ppm	0.000812	0.08	12188.500000	Y 377.433
Na (589.592 nm)	61.420900 o	ppm	0.083858	0.14	30679.400000	Y_R2 488.368
Na H (589.593 nm)	65.679276	ppm	0.091585	0.14	22791.026617	Y_R4
Ni (231.604 nm)	0.495839	ppm	0.003594	0.72	1910.960000	Y 377.433
P (213.618 nm)	10.582300	ppm	0.026486	0.25	12263.600000	Y 242.219
Pb (220.353 nm)	0.510978	ppm	0.000384	0.08	1155.950000	Y 242.219
S (181.972 nm)	4.227391	ppm	0.014318	0.34	2002.733176	Y 377.433
Sb (206.834 nm)	0.528422	ppm	0.004431	0.84	857.320000	Y 377.433
Se (196.026 nm)	2.091800	ppm	0.010390	0.50	3147.280000	Y 242.219
Si (288.158 nm)	32.821000	ppm	0.055132	0.17	148320.000000	Y 377.433
Sn (189.925 nm)	2.110120	ppm	0.001000	0.05	2471.340000	Y 377.433
Sr (421.552 nm)	1.723149	ppm	0.000218	0.01	200299.219670	Y_R 488.368
Th (288.505 nm)	0.998371	ppm	0.006079	0.61	1051.610000	Y 377.433
Ti (336.122 nm)	1.054830	ppm	0.000296	0.03	100296.000000	Y 377.433
Tl (190.794 nm)	2.064500	ppm	0.002183	0.11	1171.270000	Y 377.433
U (409.013 nm)	2.136770	ppm	0.001523	0.07	4939.050000	Y 377.433
V (292.401 nm)	0.536335	ppm	0.000470	0.09	25713.100000	Y 377.433
Zn (206.200 nm)	0.512228	ppm	0.000883	0.17	1774.790000	Y 377.433
Zr (343.823 nm)	0.523926	ppm	0.000055	0.01	21113.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054604	11233.842476	0.001251	0.12
Y 377.433	1.052234	485750.391683	0.000785	0.07
Y_R 377.433	1.099940	41564.200000	0.005096	0.46
Y_R 488.368	1.096120	39558.900000	0.001320	0.12
Y_R2 488.368	1.080957	76074.244602	0.004520	0.42
Y_R4	1.105400	33918.300000	0.001701	0.15

Sample Name: 280-116342-A-4-Apds

Date: 11/5/2018 9:50:16 PM Rack:Tube: 1:79

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049877	ppm	0.000618	1.24	1132.720000	Y 377.433
Al (394.401 nm)	1.027910	ppm	0.003138	0.31	13085.200000	Y 377.433
Al H (396.152 nm)	1.013970	ppm	0.001029	0.10	1656.580000	Y_R 377.433
As (188.980 nm)	0.205526	ppm	0.000565	0.28	272.818000	Y 242.219
B (249.678 nm)	0.132021	ppm	0.001646	1.25	576.465000	Y 242.219
Ba (493.408 nm)	0.750172	ppm	0.000995	0.13	69456.700000	Y_R 488.368
Be (234.861 nm)	0.050812	ppm	0.000316	0.62	2611.260000	Y_R 488.368
Bi (223.061 nm)	0.006183	ppm	0.002128	34.43	53.639400	Y 377.433
Ca (315.887 nm)	108.740251	ppm	0.103004	0.09	71822.880127	Y_R 377.433
Cd (214.439 nm)	0.050708	ppm	0.000204	0.40	1251.470000	Y 377.433
Co (228.615 nm)	0.048214	ppm	0.000173	0.36	1118.800000	Y 242.219
Cr (205.560 nm)	0.052099	ppm	0.000582	1.12	239.082000	Y 377.433
Cu (324.754 nm)	0.049757	ppm	0.000124	0.25	2539.500000	Y 377.433
Fe (238.204 nm)	1.004616	ppm	0.003264	0.32	1685.396376	Y_R 377.433
Fe H (259.940 nm)	1.001740 u	ppm	0.000841	0.08	908.244000	Y_R 377.433
K (766.491 nm)	27.953800	ppm	0.053535	0.19	29056.200000	Y_R2 488.368
Li (670.783 nm)	0.135926	ppm	0.003975	2.92	1478.300000	Y_R2 488.368
Mg (279.078 nm)	35.428700	ppm	0.024851	0.07	77186.100000	Y 377.433
Mn (257.610 nm)	0.122275	ppm	0.000057	0.05	25605.600000	Y 377.433
Mo (202.032 nm)	0.051344	ppm	0.000144	0.28	602.797000	Y 377.433
Na (589.592 nm)	29.213800	ppm	0.237756	0.81	14529.400000	Y_R2 488.368
Na H (589.593 nm)	32.824159 u	ppm	0.208452	0.64	11256.239203	Y_R4
Ni (231.604 nm)	0.049621	ppm	0.001753	3.53	199.536000	Y 377.433
P (213.618 nm)	2.198220	ppm	0.000008	0.00	2546.720000	Y 242.219
Pb (220.353 nm)	0.095519	ppm	0.000762	0.80	228.336000	Y 242.219
S (181.972 nm)	2.053817	ppm	0.004271	0.21	961.255943	Y 377.433
Sb (206.834 nm)	0.096062	ppm	0.001003	1.04	156.875000	Y 377.433
Se (196.026 nm)	0.208183	ppm	0.000863	0.41	314.553000	Y 242.219
Si (288.158 nm)	26.209900	ppm	0.514864	1.96	118702.000000	Y 377.433
Sn (189.925 nm)	0.088471	ppm	0.000162	0.18	111.341000	Y 377.433
Sr (421.552 nm)	0.685259	ppm	0.001900	0.28	79822.310374	Y_R 488.368
Th (288.505 nm)	0.188494	ppm	0.005207	2.76	212.527000	Y 377.433
Ti (336.122 nm)	0.050998	ppm	0.000023	0.04	4759.500000	Y 377.433
Tl (190.794 nm)	0.200959	ppm	0.000195	0.10	105.190000	Y 377.433
U (409.013 nm)	0.524909	ppm	0.007486	1.43	1300.290000	Y 377.433
V (292.401 nm)	0.062496	ppm	0.000341	0.55	2813.060000	Y 377.433
Zn (206.200 nm)	0.204800	ppm	0.001036	0.51	712.291000	Y 377.433
Zr (343.823 nm)	0.050668	ppm	0.000098	0.19	1934.820000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090645	11617.760931	0.000389	0.04
Y 377.433	1.086051	501361.587447	0.000921	0.08
Y_R 377.433	1.118550	42267.300000	0.000196	0.02
Y_R 488.368	1.123050	40531.000000	0.001562	0.14
Y_R2 488.368	1.124276	79122.869031	0.008265	0.74
Y_R4	1.125530	34536.100000	0.013545	1.20

Sample Name: CCVH-5408055

Date: 11/5/2018 9:53:43 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000912	ppm	0.000334	36.62	-324.443000	Y 377.433
Al (394.401 nm)	51.079400 o	ppm	0.006891	0.01	636117.000000	Y 377.433
Al H (396.152 nm)	49.834100	ppm	0.005850	0.01	81955.000000	Y_R 377.433
As (188.980 nm)	-0.002971 u	ppm	0.000464	15.63	-21.361000	Y 242.219
B (249.678 nm)	-0.011097 u	ppm	0.001138	10.26	-13.927800	Y 242.219
Ba (493.408 nm)	0.000005 u	ppm	0.000444	> 100.00	837.634000	Y_R 488.368
Be (234.861 nm)	-0.000087 u	ppm	0.000028	31.66	-706.455000	Y_R 488.368
Bi (223.061 nm)	0.989671	ppm	0.003946	0.40	1680.930000	Y 377.433
Ca (315.887 nm)	0.001350 u	ppm	0.016554	> 100.00	8.894124	Y_R 377.433
Cd (214.439 nm)	0.000355	ppm	0.000161	45.42	-2.321490	Y 377.433
Co (228.615 nm)	0.001555	ppm	0.000171	11.03	64.019200	Y 242.219
Cr (205.560 nm)	0.000601	ppm	0.000520	86.50	-7.424860	Y 377.433
Cu (324.754 nm)	-0.000530 u	ppm	0.000044	8.28	638.118000	Y 377.433
Fe (238.204 nm)	49.460574 o	ppm	0.015490	0.03	82421.231650	Y_R 377.433
Fe H (259.940 nm)	49.484900	ppm	0.098289	0.20	45398.900000	Y_R 377.433
K (766.491 nm)	0.286395	ppm	0.019801	6.91	2015.820000	Y_R2 488.368
Li (670.783 nm)	0.007961	ppm	0.003247	40.78	-334.137000	Y_R2 488.368
Mg (279.078 nm)	-0.031042 u	ppm	0.002089	6.73	-204.540000	Y 377.433
Mn (257.610 nm)	0.000306	ppm	0.000012	3.80	86.670500	Y 377.433
Mo (202.032 nm)	-0.001146 u	ppm	0.000192	16.78	5.642430	Y 377.433
Na (589.592 nm)	250.857000 o	ppm	0.125263	0.05	125894.000000	Y_R2 488.368
Na H (589.593 nm)	256.029719	ppm	0.450573	0.18	91031.014469	Y_R4
Ni (231.604 nm)	0.000317 u	ppm	0.002325	> 100.00	17.681300	Y 377.433
P (213.618 nm)	-0.014450 u	ppm	0.005763	39.88	-19.108800	Y 242.219
Pb (220.353 nm)	-0.001304 u	ppm	0.002819	> 100.00	21.882700	Y 242.219
S (181.972 nm)	5.030376	ppm	0.012441	0.25	2376.791376	Y 377.433
Sb (206.834 nm)	0.003043	ppm	0.003753	> 100.00	7.954430	Y 377.433
Se (196.026 nm)	-0.000097 u	ppm	0.004269	> 100.00	-11.206800	Y 242.219
Si (288.158 nm)	-0.195795 u	ppm	0.001357	0.69	407.664000	Y 377.433
Sn (189.925 nm)	-0.004518 u	ppm	0.000057	1.27	2.788760	Y 377.433
Sr (421.552 nm)	-0.000038 u	ppm	0.000232	> 100.00	279.491168	Y_R 488.368
Th (288.505 nm)	4.947020	ppm	0.015355	0.31	5307.520000	Y 377.433
Ti (336.122 nm)	0.000887	ppm	0.000137	15.40	-280.627000	Y 377.433
Tl (190.794 nm)	-0.005531 u	ppm	0.000381	6.90	-15.281100	Y 377.433
U (409.013 nm)	10.245600	ppm	0.025615	0.25	23559.800000	Y 377.433
V (292.401 nm)	-0.004208 u	ppm	0.000180	4.29	-404.215000	Y 377.433
Zn (206.200 nm)	-0.001002 u	ppm	0.000502	50.07	6.209720	Y 377.433
Zr (343.823 nm)	-0.006774 u	ppm	0.000087	1.28	-393.066000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067759	11373.975741	0.002465	0.23
Y 377.433	1.070961	494395.664723	0.002396	0.22
Y_R 377.433	1.111700	42008.600000	0.005495	0.49
Y_R 488.368	1.114600	40225.900000	0.002211	0.20
Y_R2 488.368	1.098903	77337.237827	0.002562	0.23
Y_R4	1.120400	34378.600000	0.002451	0.22

Sample Name: CCV-5407762

Date: 11/5/2018 9:57:20 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.507479	ppm	0.000297	0.06	13802.800000	Y 377.433
Al (394.401 nm)	0.506421	ppm	0.000468	0.09	6512.420000	Y 377.433
Al H (396.152 nm)	0.548439 u	ppm	0.006701	1.22	883.686000	Y_R 377.433
As (188.980 nm)	0.991203	ppm	0.000725	0.07	1373.650000	Y 242.219
B (249.678 nm)	0.483966	ppm	0.002684	0.55	1989.100000	Y 242.219
Ba (493.408 nm)	0.503069	ppm	0.000881	0.18	46843.200000	Y_R 488.368
Be (234.861 nm)	0.512112	ppm	0.000627	0.12	26478.700000	Y_R 488.368
Bi (223.061 nm)	-0.002955 u	ppm	0.001370	46.38	38.811800	Y 377.433
Ca (315.887 nm)	5.033154	ppm	0.018855	0.37	3322.282407	Y_R 377.433
Cd (214.439 nm)	0.511789	ppm	0.000136	0.03	12732.400000	Y 377.433
Co (228.615 nm)	0.498833	ppm	0.001844	0.37	11829.600000	Y 242.219
Cr (205.560 nm)	0.516557	ppm	0.001862	0.36	2453.890000	Y 377.433
Cu (324.754 nm)	0.508174	ppm	0.001489	0.29	24660.100000	Y 377.433
Fe (238.204 nm)	2.520885	ppm	0.012995	0.52	4211.756734	Y_R 377.433
Fe H (259.940 nm)	2.518600 u	ppm	0.000746	0.03	2300.190000	Y_R 377.433
K (766.491 nm)	50.430800	ppm	0.068880	0.14	51024.000000	Y_R2 488.368
Li (670.783 nm)	1.015770	ppm	0.004559	0.45	13940.000000	Y_R2 488.368
Mg (279.078 nm)	20.289600	ppm	0.038734	0.19	44211.700000	Y 377.433
Mn (257.610 nm)	0.510017	ppm	0.000018	0.00	106730.000000	Y 377.433
Mo (202.032 nm)	0.516383	ppm	0.000180	0.03	5893.340000	Y 377.433
Na (589.592 nm)	25.520300	ppm	0.045369	0.18	12677.600000	Y_R2 488.368
Na H (589.593 nm)	29.162500 u	ppm	0.151855	0.52	9973.109997	Y_R4
Ni (231.604 nm)	0.512947	ppm	0.000750	0.15	1975.840000	Y 377.433
P (213.618 nm)	0.995096	ppm	0.001233	0.12	1130.440000	Y 242.219
Pb (220.353 nm)	0.998246	ppm	0.005689	0.57	2242.290000	Y 242.219
S (181.972 nm)	0.007234	ppm	0.000992	13.71	-20.329866	Y 377.433
Sb (206.834 nm)	1.028150	ppm	0.004766	0.46	1689.330000	Y 377.433
Se (196.026 nm)	1.003580	ppm	0.000826	0.08	1510.610000	Y 242.219
Si (288.158 nm)	4.871340	ppm	0.026294	0.54	23107.900000	Y 377.433
Sn (189.925 nm)	1.022120	ppm	0.000191	0.02	1201.250000	Y 377.433
Sr (421.552 nm)	0.512554	ppm	0.000571	0.11	59775.160336	Y_R 488.368
Th (288.505 nm)	-0.027565 u	ppm	0.000277	1.00	-47.887800	Y 377.433
Ti (336.122 nm)	0.514075	ppm	0.000187	0.04	48530.600000	Y 377.433
Tl (190.794 nm)	1.020660	ppm	0.000476	0.05	575.540000	Y 377.433
U (409.013 nm)	-0.016244 u	ppm	0.000971	5.98	32.723100	Y 377.433
V (292.401 nm)	0.507133	ppm	0.000638	0.13	24221.800000	Y 377.433
Zn (206.200 nm)	0.512105	ppm	0.002122	0.41	1774.530000	Y 377.433
Zr (343.823 nm)	0.512161	ppm	0.000370	0.07	20637.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.094386	11657.613917	0.001424	0.13
Y 377.433	1.077804	497554.813559	0.001888	0.18
Y_R 377.433	1.099420	41544.500000	0.002079	0.19
Y_R 488.368	1.096680	39579.000000	0.000548	0.05
Y_R2 488.368	1.100818	77472.014979	0.000562	0.05
Y_R4	1.125530	34535.900000	0.000916	0.08

Sample Name: CCB

Date: 11/5/2018 10:00:50 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000026 u	ppm	0.000424	> 100.00	-239.921000	Y 377.433
Al (394.401 nm)	-0.001367 u	ppm	0.001099	80.36	71.342000	Y 377.433
Al H (396.152 nm)	0.133870 Zu	ppm	0.006813	5.09	5.313740 Z	Y_R 377.433
As (188.980 nm)	-0.000171 u	ppm	0.000181	> 100.00	-15.354400	Y 242.219
B (249.678 nm)	-0.008107 u	ppm	0.001605	19.80	14.151600	Y 242.219
Ba (493.408 nm)	-0.000935 u	ppm	0.000052	5.57	715.408000	Y_R 488.368
Be (234.861 nm)	0.000146	ppm	0.000068	46.41	1.710740	Y_R 488.368
Bi (223.061 nm)	-0.002300 u	ppm	0.003950	> 100.00	39.480300	Y 377.433
Ca (315.887 nm)	-0.004796 u	ppm	0.006755	> 100.00	-5.487563	Y_R 377.433
Cd (214.439 nm)	0.000132	ppm	0.000068	51.27	-7.863860	Y 377.433
Co (228.615 nm)	0.000428	ppm	0.000087	20.35	-17.807900	Y 242.219
Cr (205.560 nm)	0.000111	ppm	0.000031	28.30	-8.815220	Y 377.433
Cu (324.754 nm)	0.000365	ppm	0.000012	3.18	218.805000	Y 377.433
Fe (238.204 nm)	-0.001562 u	ppm	0.000052	3.35	8.933092	Y_R 377.433
Fe H (259.940 nm)	0.015441 u	ppm	0.003625	23.47	3.161870	Y_R 377.433
K (766.491 nm)	-0.053846 u	ppm	0.007349	13.65	1683.290000	Y_R2 488.368
Li (670.783 nm)	0.008188	ppm	0.004565	55.75	-330.923000	Y_R2 488.368
Mg (279.078 nm)	0.001297	ppm	0.000019	1.48	16.923200	Y 377.433
Mn (257.610 nm)	-0.000014 u	ppm	0.000009	64.85	19.622200	Y 377.433
Mo (202.032 nm)	-0.000397 u	ppm	0.000100	25.08	14.162000	Y 377.433
Na (589.592 nm)	0.434337 Z	ppm	0.019493	4.49	82.198200 Z	Y_R2 488.368
Na H (589.593 nm)	3.727571 u	ppm	0.037482	1.01	940.626260	Y_R4
Ni (231.604 nm)	-0.000136 u	ppm	0.000420	> 100.00	8.559170	Y 377.433
P (213.618 nm)	0.001736	ppm	0.000417	24.03	0.924746	Y 242.219
Pb (220.353 nm)	-0.002300 u	ppm	0.000548	23.82	9.360090	Y 242.219
S (181.972 nm)	0.017158	ppm	0.004513	26.30	-17.514802	Y 377.433
Sb (206.834 nm)	0.003402	ppm	0.001916	56.33	4.472570	Y 377.433
Se (196.026 nm)	0.001882	ppm	0.001218	64.69	4.472130	Y 242.219
Si (288.158 nm)	-0.204992 Zu	ppm	0.002254	1.10	366.462000 Z	Y 377.433
Sn (189.925 nm)	-0.006542 u	ppm	0.000428	6.54	0.426245	Y 377.433
Sr (421.552 nm)	-0.000241 u	ppm	0.000078	32.31	250.283902	Y_R 488.368
Th (288.505 nm)	-0.003869 u	ppm	0.002079	53.73	10.258500	Y 377.433
Ti (336.122 nm)	0.000499	ppm	0.000042	8.32	-317.568000	Y 377.433
Tl (190.794 nm)	-0.002837 u	ppm	0.003421	> 100.00	-10.441400	Y 377.433
U (409.013 nm)	-0.006839 u	ppm	0.004178	61.08	99.181000	Y 377.433
V (292.401 nm)	0.000527	ppm	0.000242	45.79	-169.178000	Y 377.433
Zn (206.200 nm)	-0.000355 u	ppm	0.000186	52.36	3.151000	Y 377.433
Zr (343.823 nm)	0.000634	ppm	0.000314	49.53	-92.839000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102256	11741.437503	0.002714	0.25
Y 377.433	1.089856	503118.131727	0.002312	0.21
Y_R 377.433	1.115920	42168.000000	0.001943	0.17
Y_R 488.368	1.119260	40394.100000	0.009448	0.84
Y_R2 488.368	1.119756	78804.770367	0.000187	0.02
Y_R4	1.131670	34724.400000	0.003611	0.32

Sample Name: CCVL-5412564

Date: 11/5/2018 10:04:00 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009759	ppm	0.000048	0.50	31.482400	Y 377.433
Al (394.401 nm)	0.099877	ppm	0.000158	0.16	1336.890000	Y 377.433
Al H (396.152 nm)	0.238342 u	ppm	0.007894	3.31	181.978000	Y_R 377.433
As (188.980 nm)	0.013269	ppm	0.001179	8.88	3.472520	Y 242.219
B (249.678 nm)	0.088368	ppm	0.000313	0.35	401.485000	Y 242.219
Ba (493.408 nm)	0.009367	ppm	0.000230	2.45	1658.340000	Y_R 488.368
Be (234.861 nm)	0.001075	ppm	0.000080	7.47	48.384500	Y_R 488.368
Bi (223.061 nm)	0.094402	ppm	0.005198	5.51	198.888000	Y 377.433
Ca (315.887 nm)	0.200589	ppm	0.005107	2.55	130.197069	Y_R 377.433
Cd (214.439 nm)	0.005273	ppm	0.000378	7.17	120.137000	Y 377.433
Co (228.615 nm)	0.010784	ppm	0.000346	3.21	228.415000	Y 242.219
Cr (205.560 nm)	0.011043	ppm	0.000320	2.90	43.246000	Y 377.433
Cu (324.754 nm)	0.015847	ppm	0.000039	0.25	964.043000	Y 377.433
Fe (238.204 nm)	0.099109	ppm	0.000572	0.58	176.668074	Y_R 377.433
Fe H (259.940 nm)	0.106082 u	ppm	0.004944	4.66	86.339000	Y_R 377.433
K (766.491 nm)	2.986850	ppm	0.109599	3.67	4655.080000	Y_R2 488.368
Li (670.783 nm)	0.032874 Q	ppm	0.002355	7.16	18.721700 Q	Y_R2 488.368
Mg (279.078 nm)	0.209555	ppm	0.003839	1.83	470.049000	Y 377.433
Mn (257.610 nm)	0.010524	ppm	0.000010	0.10	2224.570000	Y 377.433
Mo (202.032 nm)	0.020293	ppm	0.000116	0.57	249.542000	Y 377.433
Na (589.592 nm)	1.492650 Q	ppm	0.011458	0.77	613.737000 Q	Y_R2 488.368
Na H (589.593 nm)	4.495610 u	ppm	0.040137	0.89	1213.885540	Y_R4
Ni (231.604 nm)	0.041774	ppm	0.000465	1.11	169.175000	Y 377.433
P (213.618 nm)	2.833330	ppm	0.002965	0.10	3285.170000	Y 242.219
Pb (220.353 nm)	0.007868	ppm	0.000514	6.54	32.074800	Y 242.219
S (181.972 nm)	0.110235	ppm	0.000247	0.22	26.983868	Y 377.433
Sb (206.834 nm)	0.020459	ppm	0.001807	8.83	32.392500	Y 377.433
Se (196.026 nm)	0.018844	ppm	0.002005	10.64	29.964600	Y 242.219
Si (288.158 nm)	0.293167 Q	ppm	0.001899	0.65	2598.170000 Q	Y 377.433
Sn (189.925 nm)	0.093921	ppm	0.000012	0.01	117.703000	Y 377.433
Sr (421.552 nm)	0.009475	ppm	0.000193	2.04	1378.026160	Y_R 488.368
Th (288.505 nm)	0.015209	ppm	0.000150	0.99	30.212300	Y 377.433
Ti (336.122 nm)	0.010558	ppm	0.000117	1.11	639.467000	Y 377.433
Tl (190.794 nm)	0.014922	ppm	0.001933	12.96	-0.293930	Y 377.433
U (409.013 nm)	0.051108	ppm	0.004273	8.36	230.385000	Y 377.433
V (292.401 nm)	0.010464	ppm	0.000036	0.35	308.137000	Y 377.433
Zn (206.200 nm)	0.021500	ppm	0.001233	5.74	78.697200	Y 377.433
Zr (343.823 nm)	0.015595	ppm	0.000030	0.19	513.441000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122550	11957.613513	0.004369	0.39
Y 377.433	1.107783	511394.181217	0.003525	0.32
Y_R 377.433	1.129390	42677.000000	0.002857	0.25
Y_R 488.368	1.128420	40724.800000	0.012206	1.08
Y_R2 488.368	1.136286	79968.075098	0.003254	0.29
Y_R4	1.120590	34384.300000	0.004351	0.39

Sample Name: MB 280-435537/1-A

Date: 11/5/2018 10:07:24 PM Rack:Tube: 1:80

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000107 u	ppm	0.000302	> 100.00	-236.095000	Y 377.433
Al (394.401 nm)	0.000960	ppm	0.000203	21.10	97.993600	Y 377.433
Al H (396.152 nm)	0.135778 u	ppm	0.006714	4.94	8.455450	Y_R 377.433
As (188.980 nm)	0.001217	ppm	0.000939	77.16	-13.409600	Y 242.219
B (249.678 nm)	-0.010040 u	ppm	0.000151	1.51	6.389600	Y 242.219
Ba (493.408 nm)	-0.001020 u	ppm	0.000019	1.82	707.690000	Y_R 488.368
Be (234.861 nm)	0.000114	ppm	0.000026	22.96	0.060420	Y_R 488.368
Bi (223.061 nm)	-0.002015 u	ppm	0.000096	4.77	39.950600	Y 377.433
Ca (315.887 nm)	-0.000226 u	ppm	0.002894	> 100.00	-2.467259	Y_R 377.433
Cd (214.439 nm)	0.000070 u	ppm	0.000192	> 100.00	-9.403970	Y 377.433
Co (228.615 nm)	0.000616	ppm	0.000137	22.26	-13.358600	Y 242.219
Cr (205.560 nm)	0.000548	ppm	0.000014	2.48	-6.726600	Y 377.433
Cu (324.754 nm)	0.000232	ppm	0.000210	90.48	213.581000	Y 377.433
Fe (238.204 nm)	-0.001582 u	ppm	0.003497	> 100.00	8.899713	Y_R 377.433
Fe H (259.940 nm)	0.016842 u	ppm	0.001119	6.64	4.448280	Y_R 377.433
K (766.491 nm)	-0.164409 u	ppm	0.001095	0.67	1575.230000	Y_R2 488.368
Li (670.783 nm)	0.012094	ppm	0.004655	38.49	-275.604000	Y_R2 488.368
Mg (279.078 nm)	0.000088 u	ppm	0.001827	> 100.00	14.418900	Y 377.433
Mn (257.610 nm)	0.000094	ppm	0.000013	13.86	42.322000	Y 377.433
Mo (202.032 nm)	-0.000337 u	ppm	0.000409	> 100.00	14.841000	Y 377.433
Na (589.592 nm)	0.370105	ppm	0.008972	2.42	49.925200	Y_R2 488.368
Na H (589.593 nm)	3.318331 u	ppm	0.085232	2.57	794.479914	Y_R4
Ni (231.604 nm)	0.000139	ppm	0.000103	74.38	9.615440	Y 377.433
P (213.618 nm)	0.006032	ppm	0.002396	39.72	5.910460	Y 242.219
Pb (220.353 nm)	-0.002317 u	ppm	0.002469	> 100.00	9.297820	Y 242.219
S (181.972 nm)	0.010353	ppm	0.003159	30.51	-20.764600	Y 377.433
Sb (206.834 nm)	0.000492 u	ppm	0.000958	> 100.00	-0.314113	Y 377.433
Se (196.026 nm)	0.000193 u	ppm	0.004218	> 100.00	1.932720	Y 242.219
Si (288.158 nm)	-0.204654 u	ppm	0.000869	0.42	367.979000	Y 377.433
Sn (189.925 nm)	-0.006056 u	ppm	0.000551	9.10	0.992814	Y 377.433
Sr (421.552 nm)	-0.000265 u	ppm	0.000020	7.42	247.468210	Y_R 488.368
Th (288.505 nm)	0.000927 u	ppm	0.004188	> 100.00	15.332700	Y 377.433
Ti (336.122 nm)	0.000428	ppm	0.000065	15.12	-324.322000	Y 377.433
Tl (190.794 nm)	0.001993	ppm	0.002130	> 100.00	-7.672170	Y 377.433
U (409.013 nm)	-0.013834 u	ppm	0.002050	14.82	83.192500	Y 377.433
V (292.401 nm)	0.000425	ppm	0.000012	2.89	-173.440000	Y 377.433
Zn (206.200 nm)	0.000686	ppm	0.000380	55.47	6.748970	Y 377.433
Zr (343.823 nm)	0.000367	ppm	0.000308	84.11	-103.672000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113269	11858.760052	0.000451	0.04
Y 377.433	1.099282	507469.825040	0.000624	0.06
Y_R 377.433	1.122960	42434.100000	0.000559	0.05
Y_R 488.368	1.116240	40284.900000	0.016555	1.48
Y_R2 488.368	1.127826	79372.744596	0.001653	0.15
Y_R4	1.133060	34767.100000	0.014998	1.32

Sample Name: LCS 280-435537/2-A

Date: 11/5/2018 10:10:35 PM Rack:Tube: 1:81

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052795	ppm	0.000413	0.78	1171.190000	Y 377.433
Al (394.401 nm)	2.070760	ppm	0.003616	0.17	26178.800000	Y 377.433
Al H (396.152 nm)	2.007100	ppm	0.006321	0.31	3480.410000	Y_R 377.433
As (188.980 nm)	0.994474	ppm	0.002665	0.27	1378.240000	Y 242.219
B (249.678 nm)	1.023320	ppm	0.001106	0.11	4155.190000	Y 242.219
Ba (493.408 nm)	2.049690	ppm	0.004390	0.21	188388.000000	Y_R 488.368
Be (234.861 nm)	0.051391	ppm	0.000107	0.21	2640.910000	Y_R 488.368
Bi (223.061 nm)	1.967880	ppm	0.000367	0.02	3287.060000	Y 377.433
Ca (315.887 nm)	50.768514	ppm	0.020155	0.04	33531.683340	Y_R 377.433
Cd (214.439 nm)	0.102169	ppm	0.000160	0.16	2532.870000	Y 377.433
Co (228.615 nm)	0.491765	ppm	0.000128	0.03	11683.800000	Y 242.219
Cr (205.560 nm)	0.209411	ppm	0.000469	0.22	986.096000	Y 377.433
Cu (324.754 nm)	0.252056	ppm	0.000090	0.04	12370.100000	Y 377.433
Fe (238.204 nm)	1.034153	ppm	0.003247	0.31	1734.609644	Y_R 377.433
Fe H (259.940 nm)	1.031550 u	ppm	0.000565	0.05	935.599000	Y_R 377.433
K (766.491 nm)	51.938900	ppm	0.120108	0.23	52497.900000	Y_R2 488.368
Li (670.783 nm)	1.037680	ppm	0.007389	0.71	14250.300000	Y_R2 488.368
Mg (279.078 nm)	50.442700	ppm	0.061047	0.12	109876.000000	Y 377.433
Mn (257.610 nm)	0.510195	ppm	0.000109	0.02	106768.000000	Y 377.433
Mo (202.032 nm)	1.060870	ppm	0.001776	0.17	12087.800000	Y 377.433
Na (589.592 nm)	51.403400	ppm	0.099577	0.19	25657.400000	Y_R2 488.368
Na H (589.593 nm)	54.257657	ppm	0.296893	0.55	18781.341581	Y_R4
Ni (231.604 nm)	0.494727	ppm	0.001734	0.35	1906.700000	Y 377.433
P (213.618 nm)	10.251800	ppm	0.040190	0.39	11880.500000	Y 242.219
Pb (220.353 nm)	0.504509	ppm	0.000832	0.16	1141.480000	Y 242.219
S (181.972 nm)	1.983990	ppm	0.003770	0.19	926.212062	Y 377.433
Sb (206.834 nm)	0.521634	ppm	0.002350	0.45	846.239000	Y 377.433
Se (196.026 nm)	2.038030	ppm	0.002422	0.12	3066.330000	Y 242.219
Si (288.158 nm)	10.074300	ppm	0.037011	0.37	46416.800000	Y 377.433
Sn (189.925 nm)	2.090180	ppm	0.002623	0.13	2448.070000	Y 377.433
Sr (421.552 nm)	1.029565	ppm	0.001888	0.18	119788.955151	Y_R 488.368
Th (288.505 nm)	0.987006	ppm	0.004358	0.44	1040.370000	Y 377.433
Ti (336.122 nm)	1.043110	ppm	0.001078	0.10	98949.400000	Y 377.433
Tl (190.794 nm)	2.054510	ppm	0.000624	0.03	1166.480000	Y 377.433
U (409.013 nm)	2.110630	ppm	0.000053	0.00	4888.680000	Y 377.433
V (292.401 nm)	0.519230	ppm	0.000658	0.13	24883.800000	Y 377.433
Zn (206.200 nm)	0.508251	ppm	0.000607	0.12	1761.050000	Y 377.433
Zr (343.823 nm)	0.518058	ppm	0.000139	0.03	20876.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.078377	11487.079722	0.002295	0.21
Y 377.433	1.074564	496058.828096	0.000749	0.07
Y_R 377.433	1.104050	41719.600000	0.002650	0.24
Y_R 488.368	1.105310	39890.800000	0.000520	0.05
Y_R2 488.368	1.108815	78034.792322	0.001219	0.11
Y_R4	1.115710	34234.700000	0.010931	0.98

Sample Name: LCSD 280-435537/3-A

Date: 11/5/2018 10:14:02 PM Rack:Tube: 1:82

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053264	ppm	0.000061	0.11	1183.700000	Y 377.433
Al (394.401 nm)	2.097590	ppm	0.000611	0.03	26514.800000	Y 377.433
Al H (396.152 nm)	2.028720	ppm	0.009907	0.49	3519.990000	Y_R 377.433
As (188.980 nm)	1.008360	ppm	0.001520	0.15	1397.690000	Y 242.219
B (249.678 nm)	1.040110	ppm	0.002939	0.28	4222.620000	Y 242.219
Ba (493.408 nm)	2.067450	ppm	0.003438	0.17	190012.000000	Y_R 488.368
Be (234.861 nm)	0.052251	ppm	0.000071	0.14	2685.530000	Y_R 488.368
Bi (223.061 nm)	1.994840	ppm	0.006855	0.34	3331.490000	Y 377.433
Ca (315.887 nm)	51.351198	ppm	0.064197	0.13	33916.559054	Y_R 377.433
Cd (214.439 nm)	0.103901	ppm	0.000308	0.30	2575.990000	Y 377.433
Co (228.615 nm)	0.496648	ppm	0.000295	0.06	11800.300000	Y 242.219
Cr (205.560 nm)	0.212329	ppm	0.000558	0.26	999.961000	Y 377.433
Cu (324.754 nm)	0.255191	ppm	0.000024	0.01	12522.300000	Y 377.433
Fe (238.204 nm)	1.035951	ppm	0.001843	0.18	1737.605778	Y_R 377.433
Fe H (259.940 nm)	1.034770 u	ppm	0.003175	0.31	938.554000	Y_R 377.433
K (766.491 nm)	52.391600	ppm	0.213029	0.41	52940.300000	Y_R2 488.368
Li (670.783 nm)	1.046090	ppm	0.001672	0.16	14369.400000	Y_R2 488.368
Mg (279.078 nm)	51.147000	ppm	0.030115	0.06	111410.000000	Y 377.433
Mn (257.610 nm)	0.516741	ppm	0.000822	0.16	108137.000000	Y 377.433
Mo (202.032 nm)	1.078210	ppm	0.000393	0.04	12285.000000	Y 377.433
Na (589.592 nm)	51.841100	ppm	0.242801	0.47	25877.000000	Y_R2 488.368
Na H (589.593 nm)	54.915372	ppm	0.313900	0.57	19014.371109	Y_R4
Ni (231.604 nm)	0.501456	ppm	0.000090	0.02	1932.510000	Y 377.433
P (213.618 nm)	10.336200	ppm	0.030217	0.29	11978.200000	Y 242.219
Pb (220.353 nm)	0.510887	ppm	0.001127	0.22	1155.720000	Y 242.219
S (181.972 nm)	2.034918	ppm	0.003550	0.17	950.587315	Y 377.433
Sb (206.834 nm)	0.531071	ppm	0.002376	0.45	861.596000	Y 377.433
Se (196.026 nm)	2.069330	ppm	0.001090	0.05	3113.400000	Y 242.219
Si (288.158 nm)	10.320100	ppm	0.024065	0.23	47517.700000	Y 377.433
Sn (189.925 nm)	2.117810	ppm	0.002981	0.14	2480.310000	Y 377.433
Sr (421.552 nm)	1.037574	ppm	0.001178	0.11	120718.518071	Y_R 488.368
Th (288.505 nm)	0.996686	ppm	0.007795	0.78	1050.360000	Y 377.433
Ti (336.122 nm)	1.058810	ppm	0.000467	0.04	100444.000000	Y 377.433
Tl (190.794 nm)	2.080370	ppm	0.006727	0.32	1181.270000	Y 377.433
U (409.013 nm)	2.139920	ppm	0.000762	0.04	4954.900000	Y 377.433
V (292.401 nm)	0.525991	ppm	0.000142	0.03	25210.500000	Y 377.433
Zn (206.200 nm)	0.514487	ppm	0.000451	0.09	1782.600000	Y 377.433
Zr (343.823 nm)	0.525376	ppm	0.000396	0.08	21172.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072677	11426.356608	0.003836	0.36
Y 377.433	1.067641	492863.145684	0.004487	0.42
Y_R 377.433	1.095190	41384.700000	0.000150	0.01
Y_R 488.368	1.097010	39591.200000	0.001373	0.13
Y_R2 488.368	1.097121	77211.822274	0.003807	0.35
Y_R4	1.101040	33784.600000	0.002245	0.20

Sample Name: 280-116186-C-1-A

Date: 11/5/2018 10:17:31 PM Rack:Tube: 1:83

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000701	ppm	0.000250	35.65	-219.858000	Y 377.433
Al (394.401 nm)	0.016738	ppm	0.002372	14.17	323.639000	Y 377.433
Al H (396.152 nm)	0.121028 u	ppm	0.009130	7.54	1.343290	Y_R 377.433
As (188.980 nm)	0.003369	ppm	0.002563	76.08	-10.423300	Y 242.219
B (249.678 nm)	0.030849	ppm	0.001262	4.09	170.193000	Y 242.219
Ba (493.408 nm)	0.008198	ppm	0.000417	5.09	1552.110000	Y_R 488.368
Be (234.861 nm)	0.000135	ppm	0.000095	70.04	-14.915100	Y_R 488.368
Bi (223.061 nm)	0.003289	ppm	0.000397	12.07	48.843400	Y 377.433
Ca (315.887 nm)	72.432293	ppm	0.047078	0.06	47840.580341	Y_R 377.433
Cd (214.439 nm)	0.000156	ppm	0.000066	42.11	-7.262880	Y 377.433
Co (228.615 nm)	0.000616	ppm	0.000281	45.66	-12.067500	Y 242.219
Cr (205.560 nm)	0.000417	ppm	0.000068	16.22	-7.358590	Y 377.433
Cu (324.754 nm)	-0.000810 u	ppm	0.000290	35.76	119.118000	Y 377.433
Fe (238.204 nm)	1.139636	ppm	0.000061	0.01	1910.362144	Y_R 377.433
Fe H (259.940 nm)	1.128790 u	ppm	0.003208	0.28	1024.830000	Y_R 377.433
K (766.491 nm)	0.990443	ppm	0.009449	0.95	2703.910000	Y_R2 488.368
Li (670.783 nm)	0.021852	ppm	0.000303	1.39	-137.396000	Y_R2 488.368
Mg (279.078 nm)	21.053000	ppm	0.031042	0.15	45875.100000	Y 377.433
Mn (257.610 nm)	0.276167	ppm	0.000149	0.05	57803.300000	Y 377.433
Mo (202.032 nm)	0.000464	ppm	0.000062	13.41	23.962400	Y 377.433
Na (589.592 nm)	6.105530	ppm	0.069139	1.13	2931.260000	Y_R2 488.368
Na H (589.593 nm)	8.838609 u	ppm	0.027642	0.31	2764.770110	Y_R4
Ni (231.604 nm)	0.001454	ppm	0.000759	52.23	14.823100	Y 377.433
P (213.618 nm)	0.038945	ppm	0.000668	1.72	44.096300	Y 242.219
Pb (220.353 nm)	-0.003889 u	ppm	0.000288	7.40	5.799200	Y 242.219
S (181.972 nm)	10.353294	ppm	0.009477	0.09	4924.058843	Y 377.433
Sb (206.834 nm)	-0.004314 u	ppm	0.000865	20.05	-8.134600	Y 377.433
Se (196.026 nm)	0.003148	ppm	0.003260	> 100.00	6.464550	Y 242.219
Si (288.158 nm)	3.959380	ppm	0.021401	0.54	19022.400000	Y 377.433
Sn (189.925 nm)	-0.008445 u	ppm	0.000020	0.23	-1.795510	Y 377.433
Sr (421.552 nm)	0.094800	ppm	0.000251	0.27	11282.639583	Y_R 488.368
Th (288.505 nm)	-0.018053 u	ppm	0.002411	13.36	-2.462700	Y 377.433
Ti (336.122 nm)	0.000449	ppm	0.000008	1.83	-139.249000	Y 377.433
Tl (190.794 nm)	-0.001178 u	ppm	0.000635	53.85	-10.248200	Y 377.433
U (409.013 nm)	0.001204 u	ppm	0.005101	> 100.00	111.235000	Y 377.433
V (292.401 nm)	0.000962	ppm	0.000070	7.29	-148.941000	Y 377.433
Zn (206.200 nm)	0.001489	ppm	0.000126	8.47	9.648240	Y 377.433
Zr (343.823 nm)	0.000150	ppm	0.000039	25.78	-112.476000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.085055	11558.215817	0.002997	0.28
Y 377.433	1.075180	496343.195480	0.003108	0.29
Y_R 377.433	1.103070	41682.400000	0.009678	0.88
Y_R 488.368	1.094020	39483.300000	0.006945	0.63
Y_R2 488.368	1.104925	77761.008498	0.006391	0.58
Y_R4	1.109150	34033.200000	0.004802	0.43

Sample Name: 280-116186-C-1-Asd@5

Date: 11/5/2018 10:20:59 PM Rack:Tube: 1:84

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000292	ppm	0.000133	45.68	-231.052000	Y 377.433
Al (394.401 nm)	0.003653	ppm	0.000046	1.26	137.157000	Y 377.433
Al H (396.152 nm)	0.137198 u	ppm	0.007140	5.20	13.624200	Y_R 377.433
As (188.980 nm)	0.000112 u	ppm	0.001771	> 100.00	-14.963600	Y 242.219
B (249.678 nm)	-0.001952 u	ppm	0.000982	50.31	38.801000	Y 242.219
Ba (493.408 nm)	0.000802	ppm	0.000108	13.44	874.575000	Y_R 488.368
Be (234.861 nm)	0.000057 u	ppm	0.000118	> 100.00	-5.696840	Y_R 488.368
Bi (223.061 nm)	-0.002714 u	ppm	0.003749	> 100.00	38.823300	Y 377.433
Ca (315.887 nm)	12.876756	ppm	0.091483	0.71	8503.021438	Y_R 377.433
Cd (214.439 nm)	0.000125	ppm	0.000066	52.76	-8.052740	Y 377.433
Co (228.615 nm)	0.000407	ppm	0.000067	16.36	-18.093600	Y 242.219
Cr (205.560 nm)	0.000021 u	ppm	0.000188	> 100.00	-9.245670	Y 377.433
Cu (324.754 nm)	-0.000183 u	ppm	0.000153	83.39	185.523000	Y 377.433
Fe (238.204 nm)	0.195088	ppm	0.001219	0.62	336.584681	Y_R 377.433
Fe H (259.940 nm)	0.198449 u	ppm	0.003508	1.77	171.100000	Y_R 377.433
K (766.491 nm)	0.061915	ppm	0.033613	54.29	1796.430000	Y_R2 488.368
Li (670.783 nm)	0.009595	ppm	0.004744	49.44	-310.994000	Y_R2 488.368
Mg (279.078 nm)	3.932670	ppm	0.063464	1.61	8580.930000	Y 377.433
Mn (257.610 nm)	0.051771	ppm	0.000828	1.60	10854.300000	Y 377.433
Mo (202.032 nm)	0.000020 u	ppm	0.000252	> 100.00	18.911100	Y 377.433
Na (589.592 nm)	1.382890	ppm	0.040824	2.95	558.716000	Y_R2 488.368
Na H (589.593 nm)	4.091819 u	ppm	0.025560	0.62	1070.472624	Y_R4
Ni (231.604 nm)	0.000184 u	ppm	0.000851	> 100.00	9.816520	Y 377.433
P (213.618 nm)	0.006260	ppm	0.001160	18.53	6.198200	Y 242.219
Pb (220.353 nm)	-0.002372 u	ppm	0.002107	88.85	9.186550	Y 242.219
S (181.972 nm)	1.900568	ppm	0.028130	1.48	882.898963	Y 377.433
Sb (206.834 nm)	-0.000624 u	ppm	0.002494	> 100.00	-2.135470	Y 377.433
Se (196.026 nm)	0.003672	ppm	0.001530	41.67	7.184300	Y 242.219
Si (288.158 nm)	0.555064	ppm	0.015158	2.73	3771.440000	Y 377.433
Sn (189.925 nm)	-0.006012 u	ppm	0.000467	7.77	1.044730	Y 377.433
Sr (421.552 nm)	0.015962	ppm	0.000187	1.17	2131.132067	Y_R 488.368
Th (288.505 nm)	-0.003264 u	ppm	0.002640	80.88	11.341900	Y 377.433
Ti (336.122 nm)	0.000506	ppm	0.000058	11.41	-284.735000	Y 377.433
Tl (190.794 nm)	-0.000796 u	ppm	0.005223	> 100.00	-9.404640	Y 377.433
U (409.013 nm)	-0.005873 u	ppm	0.001620	27.58	100.274000	Y 377.433
V (292.401 nm)	0.000530	ppm	0.000190	35.96	-168.909000	Y 377.433
Zn (206.200 nm)	-0.000175 u	ppm	0.000649	> 100.00	3.796230	Y 377.433
Zr (343.823 nm)	0.000449	ppm	0.000132	29.46	-100.354000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102451	11743.521642	0.002327	0.21
Y 377.433	1.086148	501406.399978	0.001141	0.11
Y_R 377.433	1.101640	41628.500000	0.003132	0.28
Y_R 488.368	1.097240	39599.400000	0.020036	1.83
Y_R2 488.368	1.104570	77736.022473	0.005911	0.54
Y_R4	1.099230	33729.100000	0.004745	0.43

Sample Name: 280-116186-C-1-G MS

Date: 11/5/2018 10:24:24 PM Rack:Tube: 1:85

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054055	ppm	0.000315	0.58	1205.120000	Y 377.433
Al (394.401 nm)	2.118200	ppm	0.007563	0.36	26796.900000	Y 377.433
Al H (396.152 nm)	2.006100	ppm	0.012897	0.64	3500.750000	Y_R 377.433
As (188.980 nm)	1.023870	ppm	0.000499	0.05	1419.400000	Y 242.219
B (249.678 nm)	1.086740	ppm	0.000752	0.07	4409.460000	Y 242.219
Ba (493.408 nm)	2.070380	ppm	0.000910	0.04	190281.000000	Y_R 488.368
Be (234.861 nm)	0.052596	ppm	0.000214	0.41	2687.040000	Y_R 488.368
Bi (223.061 nm)	1.993940	ppm	0.010287	0.52	3330.160000	Y 377.433
Ca (315.887 nm)	123.508355	ppm	0.136459	0.11	81577.727514	Y_R 377.433
Cd (214.439 nm)	0.102401	ppm	0.000622	0.61	2538.630000	Y 377.433
Co (228.615 nm)	0.490881	ppm	0.001712	0.35	11664.500000	Y 242.219
Cr (205.560 nm)	0.211112	ppm	0.000045	0.02	994.179000	Y 377.433
Cu (324.754 nm)	0.255056	ppm	0.000318	0.12	12474.900000	Y 377.433
Fe (238.204 nm)	2.183678	ppm	0.001591	0.07	3649.913384	Y_R 377.433
Fe H (259.940 nm)	2.186900 u	ppm	0.014330	0.66	1995.810000	Y_R 377.433
K (766.491 nm)	54.067000	ppm	0.056252	0.10	54577.800000	Y_R2 488.368
Li (670.783 nm)	1.069070	ppm	0.004103	0.38	14694.900000	Y_R2 488.368
Mg (279.078 nm)	71.954500	ppm	0.237322	0.33	156736.000000	Y 377.433
Mn (257.610 nm)	0.787922	ppm	0.002636	0.33	164875.000000	Y 377.433
Mo (202.032 nm)	1.072290	ppm	0.004554	0.42	12217.600000	Y 377.433
Na (589.592 nm)	58.142300 o	ppm	0.075407	0.13	29042.700000	Y_R2 488.368
Na H (589.593 nm)	61.068249	ppm	0.303771	0.50	21211.161465	Y_R4
Ni (231.604 nm)	0.494472	ppm	0.000260	0.05	1905.900000	Y 377.433
P (213.618 nm)	10.496500	ppm	0.028274	0.27	12164.200000	Y 242.219
Pb (220.353 nm)	0.510198	ppm	0.002218	0.43	1154.200000	Y 242.219
S (181.972 nm)	12.704151	ppm	0.030402	0.24	6051.238977	Y 377.433
Sb (206.834 nm)	0.527412	ppm	0.000963	0.18	855.741000	Y 377.433
Se (196.026 nm)	2.076710	ppm	0.003466	0.17	3124.580000	Y 242.219
Si (288.158 nm)	14.491200	ppm	0.041862	0.29	66204.100000	Y 377.433
Sn (189.925 nm)	2.106790	ppm	0.005904	0.28	2467.460000	Y 377.433
Sr (421.552 nm)	1.131729	ppm	0.002256	0.20	131648.111545	Y_R 488.368
Th (288.505 nm)	0.984917	ppm	0.001467	0.15	1040.270000	Y 377.433
Ti (336.122 nm)	1.052590	ppm	0.003787	0.36	100034.000000	Y 377.433
Tl (190.794 nm)	2.060280	ppm	0.011699	0.57	1169.010000	Y 377.433
U (409.013 nm)	2.139180	ppm	0.011642	0.54	4947.200000	Y 377.433
V (292.401 nm)	0.525407	ppm	0.001796	0.34	25182.800000	Y 377.433
Zn (206.200 nm)	0.507766	ppm	0.000737	0.15	1759.500000	Y 377.433
Zr (343.823 nm)	0.521489	ppm	0.002451	0.47	21015.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046829	11151.020466	0.000453	0.04
Y 377.433	1.048423	483991.415254	0.003710	0.35
Y_R 377.433	1.080390	40825.500000	0.001635	0.15
Y_R 488.368	1.076840	38863.100000	0.002931	0.27
Y_R2 488.368	1.071779	75428.316948	0.005667	0.53
Y_R4	1.082710	33222.200000	0.015928	1.47

Sample Name: 280-116186-C-1-C MSD

Date: 11/5/2018 10:27:54 PM Rack:Tube: 1:86

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054341	ppm	0.000302	0.55	1212.880000	Y 377.433
Al (394.401 nm)	2.114640	ppm	0.005674	0.27	26748.900000	Y 377.433
Al H (396.152 nm)	2.010010	ppm	0.002016	0.10	3506.570000	Y_R 377.433
As (188.980 nm)	1.023590	ppm	0.002456	0.24	1419.010000	Y 242.219
B (249.678 nm)	1.090110	ppm	0.001979	0.18	4423.010000	Y 242.219
Ba (493.408 nm)	2.066280	ppm	0.002136	0.10	189906.000000	Y_R 488.368
Be (234.861 nm)	0.052508	ppm	0.000419	0.80	2683.070000	Y_R 488.368
Bi (223.061 nm)	1.996010	ppm	0.001063	0.05	3333.570000	Y 377.433
Ca (315.887 nm)	121.342064	ppm	0.210463	0.17	80146.850941	Y_R 377.433
Cd (214.439 nm)	0.103232	ppm	0.000074	0.07	2559.330000	Y 377.433
Co (228.615 nm)	0.492244	ppm	0.001296	0.26	11697.000000	Y 242.219
Cr (205.560 nm)	0.212363	ppm	0.000357	0.17	1000.130000	Y 377.433
Cu (324.754 nm)	0.255973	ppm	0.000464	0.18	12522.000000	Y 377.433
Fe (238.204 nm)	2.148533	ppm	0.007850	0.37	3591.355942	Y_R 377.433
Fe H (259.940 nm)	2.142780 u	ppm	0.007705	0.36	1955.320000	Y_R 377.433
K (766.491 nm)	54.100800	ppm	0.051404	0.10	54610.800000	Y_R2 488.368
Li (670.783 nm)	1.062520	ppm	0.002107	0.20	14602.200000	Y_R2 488.368
Mg (279.078 nm)	71.654900	ppm	0.161381	0.23	156084.000000	Y 377.433
Mn (257.610 nm)	0.783164	ppm	0.002000	0.26	163879.000000	Y 377.433
Mo (202.032 nm)	1.078080	ppm	0.005053	0.47	12283.600000	Y 377.433
Na (589.592 nm)	57.758200 o	ppm	0.222447	0.39	28849.800000	Y_R2 488.368
Na H (589.593 nm)	60.929287	ppm	0.376298	0.62	21162.183167	Y_R4
Ni (231.604 nm)	0.493699	ppm	0.004059	0.82	1902.940000	Y 377.433
P (213.618 nm)	10.530700	ppm	0.022245	0.21	12203.800000	Y 242.219
Pb (220.353 nm)	0.509024	ppm	0.000494	0.10	1151.550000	Y 242.219
S (181.972 nm)	12.485761	ppm	0.003598	0.03	5946.803670	Y 377.433
Sb (206.834 nm)	0.532746	ppm	0.001626	0.31	864.442000	Y 377.433
Se (196.026 nm)	2.074420	ppm	0.000322	0.02	3121.140000	Y 242.219
Si (288.158 nm)	14.440800	ppm	0.046159	0.32	65978.000000	Y 377.433
Sn (189.925 nm)	2.114790	ppm	0.005376	0.25	2476.790000	Y 377.433
Sr (421.552 nm)	1.127338	ppm	0.001153	0.10	131138.346070	Y_R 488.368
Th (288.505 nm)	0.997046	ppm	0.028254	2.83	1052.960000	Y 377.433
Ti (336.122 nm)	1.058790	ppm	0.002626	0.25	100618.000000	Y 377.433
Tl (190.794 nm)	2.075680	ppm	0.005301	0.26	1177.850000	Y 377.433
U (409.013 nm)	2.139790	ppm	0.006527	0.31	4948.570000	Y 377.433
V (292.401 nm)	0.527209	ppm	0.001819	0.34	25271.000000	Y 377.433
Zn (206.200 nm)	0.511679	ppm	0.001058	0.21	1773.020000	Y 377.433
Zr (343.823 nm)	0.524485	ppm	0.001929	0.37	21136.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046646	11149.070581	0.002610	0.25
Y 377.433	1.044400	482134.256914	0.004107	0.39
Y_R 377.433	1.080960	40847.100000	0.003296	0.30
Y_R 488.368	1.079840	38971.200000	0.001844	0.17
Y_R2 488.368	1.073573	75554.534298	0.000670	0.06
Y_R4	1.085590	33310.600000	0.010409	0.96

Sample Name: 280-116186-C-1-Apds

Date: 11/5/2018 10:31:23 PM Rack:Tube: 1:87

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049710	ppm	0.000263	0.53	1130.810000	Y 377.433
Al (394.401 nm)	1.036790	ppm	0.003300	0.32	13053.600000	Y 377.433
Al H (396.152 nm)	1.121830	ppm	0.010676	0.95	1666.990000	Y_R 377.433
As (188.980 nm)	0.200615	ppm	0.000987	0.49	265.909000	Y 242.219
B (249.678 nm)	0.132629	ppm	0.000838	0.63	578.545000	Y 242.219
Ba (493.408 nm)	0.108015	ppm	0.000438	0.41	10688.000000	Y_R 488.368
Be (234.861 nm)	0.050837	ppm	0.000329	0.65	2597.000000	Y_R 488.368
Bi (223.061 nm)	0.003055	ppm	0.001119	36.61	48.618500	Y 377.433
Ca (315.887 nm)	90.281987	ppm	0.101319	0.11	59630.848026	Y_R 377.433
Cd (214.439 nm)	0.050812	ppm	0.000157	0.31	1254.050000	Y 377.433
Co (228.615 nm)	0.048390	ppm	0.000091	0.19	1124.240000	Y 242.219
Cr (205.560 nm)	0.053370	ppm	0.000115	0.22	245.147000	Y 377.433
Cu (324.754 nm)	0.049129	ppm	0.000135	0.28	2521.750000	Y 377.433
Fe (238.204 nm)	2.111050	ppm	0.005909	0.28	3528.901844	Y_R 377.433
Fe H (259.940 nm)	2.103040 u	ppm	0.007049	0.34	1918.860000	Y_R 377.433
K (766.491 nm)	21.646400	ppm	0.055538	0.26	22891.800000	Y_R2 488.368
Li (670.783 nm)	0.118739	ppm	0.000512	0.43	1234.870000	Y_R2 488.368
Mg (279.078 nm)	40.282400	ppm	0.116218	0.29	87758.500000	Y 377.433
Mn (257.610 nm)	0.318749	ppm	0.001122	0.35	66712.500000	Y 377.433
Mo (202.032 nm)	0.051721	ppm	0.000511	0.99	607.084000	Y 377.433
Na (589.592 nm)	26.257800	ppm	0.047364	0.18	13054.200000	Y_R2 488.368
Na H (589.593 nm)	28.650473 u	ppm	0.125067	0.44	9829.181753	Y_R4
Ni (231.604 nm)	0.050653	ppm	0.000165	0.33	203.656000	Y 377.433
P (213.618 nm)	2.064220	ppm	0.011725	0.57	2391.330000	Y 242.219
Pb (220.353 nm)	0.098655	ppm	0.000727	0.74	235.341000	Y 242.219
S (181.972 nm)	10.150812	ppm	0.068770	0.68	4828.392183	Y 377.433
Sb (206.834 nm)	0.098327	ppm	0.004480	4.56	160.677000	Y 377.433
Se (196.026 nm)	0.204109	ppm	0.001861	0.91	308.416000	Y 242.219
Si (288.158 nm)	8.929780	ppm	0.035657	0.40	41289.300000	Y 377.433
Sn (189.925 nm)	0.091459	ppm	0.004549	4.97	114.829000	Y 377.433
Sr (421.552 nm)	0.142656	ppm	0.000158	0.11	16837.757673	Y_R 488.368
Th (288.505 nm)	0.184485	ppm	0.002505	1.36	211.150000	Y 377.433
Ti (336.122 nm)	0.051276	ppm	0.000120	0.23	4738.810000	Y 377.433
Tl (190.794 nm)	0.203563	ppm	0.004882	2.40	106.834000	Y 377.433
U (409.013 nm)	0.517677	ppm	0.013609	2.63	1286.120000	Y 377.433
V (292.401 nm)	0.051687	ppm	0.000161	0.31	2288.970000	Y 377.433
Zn (206.200 nm)	0.202268	ppm	0.000935	0.46	703.659000	Y 377.433
Zr (343.823 nm)	0.050937	ppm	0.000119	0.23	1945.710000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.048377	11167.508007	0.001659	0.16
Y 377.433	1.043171	481566.843934	0.002133	0.20
Y_R 377.433	1.069000	40395.000000	0.002088	0.20
Y_R 488.368	1.066110	38475.900000	0.004830	0.45
Y_R2 488.368	1.072274	75463.153508	0.001609	0.15
Y_R4	1.083810	33255.900000	0.005004	0.46

Sample Name: 280-116186-C-2-A

Date: 11/5/2018 10:34:54 PM Rack:Tube: 1:88

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000779	ppm	0.000325	41.65	-217.712000	Y 377.433
Al (394.401 nm)	0.014000	ppm	0.000139	0.99	298.012000	Y 377.433
Al H (396.152 nm)	0.114433 u	ppm	0.000844	0.74	4.950480	Y_R 377.433
As (188.980 nm)	0.001119 u	ppm	0.002963	> 100.00	-13.558600	Y 242.219
B (249.678 nm)	0.029854	ppm	0.000573	1.92	166.432000	Y 242.219
Ba (493.408 nm)	0.126553	ppm	0.000190	0.15	12383.400000	Y_R 488.368
Be (234.861 nm)	0.000171	ppm	0.000105	61.39	-3.048180	Y_R 488.368
Bi (223.061 nm)	0.007361	ppm	0.002660	36.13	55.463500	Y 377.433
Ca (315.887 nm)	68.326609	ppm	0.172600	0.25	45128.698564	Y_R 377.433
Cd (214.439 nm)	0.000186	ppm	0.000159	85.22	-6.520880	Y 377.433
Co (228.615 nm)	0.000558	ppm	0.000378	67.66	-14.226600	Y 242.219
Cr (205.560 nm)	0.000886	ppm	0.000419	47.30	-5.117310	Y 377.433
Cu (324.754 nm)	-0.000877 u	ppm	0.000268	30.51	119.527000	Y 377.433
Fe (238.204 nm)	0.425733	ppm	0.005589	1.31	720.878880	Y_R 377.433
Fe H (259.940 nm)	0.426214 u	ppm	0.010467	2.46	380.110000	Y_R 377.433
K (766.491 nm)	1.768220	ppm	0.020707	1.17	3464.070000	Y_R2 488.368
Li (670.783 nm)	0.030001	ppm	0.002967	9.89	-21.982000	Y_R2 488.368
Mg (279.078 nm)	27.112800	ppm	0.010103	0.04	59076.400000	Y 377.433
Mn (257.610 nm)	0.333139	ppm	0.000529	0.16	69723.300000	Y 377.433
Mo (202.032 nm)	-0.000176 u	ppm	0.000047	26.71	16.673000	Y 377.433
Na (589.592 nm)	12.422100	ppm	0.141135	1.14	6102.890000	Y_R2 488.368
Na H (589.593 nm)	14.849284 u	ppm	0.003090	0.02	4899.320973	Y_R4
Ni (231.604 nm)	0.000362 u	ppm	0.000910	> 100.00	10.529300	Y 377.433
P (213.618 nm)	0.031606	ppm	0.000818	2.59	35.573900	Y 242.219
Pb (220.353 nm)	-0.002899 u	ppm	0.000919	31.69	8.004930	Y 242.219
S (181.972 nm)	6.724634	ppm	0.002033	0.03	3190.849706	Y 377.433
Sb (206.834 nm)	-0.005195 u	ppm	0.000766	14.75	-9.634290	Y 377.433
Se (196.026 nm)	0.003872	ppm	0.002190	56.55	7.815490	Y 242.219
Si (288.158 nm)	5.676260	ppm	0.011584	0.20	26713.900000	Y 377.433
Sn (189.925 nm)	-0.006243 u	ppm	0.000268	4.29	0.775471	Y 377.433
Sr (421.552 nm)	0.138062	ppm	0.000295	0.21	16304.346892	Y_R 488.368
Th (288.505 nm)	-0.008596 u	ppm	0.004903	57.04	8.302570	Y 377.433
Ti (336.122 nm)	0.000460	ppm	0.000111	24.23	-148.439000	Y 377.433
Tl (190.794 nm)	-0.007484 u	ppm	0.002805	37.48	-13.801100	Y 377.433
U (409.013 nm)	-0.002598 u	ppm	0.005025	> 100.00	102.548000	Y 377.433
V (292.401 nm)	0.000803	ppm	0.000022	2.76	-155.688000	Y 377.433
Zn (206.200 nm)	0.001179	ppm	0.000241	20.41	8.500020	Y 377.433
Zr (343.823 nm)	0.000498	ppm	0.000116	23.25	-98.336100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.069401	11391.464596	0.001432	0.13
Y 377.433	1.058087	488452.329738	0.000702	0.07
Y_R 377.433	1.086340	41050.400000	0.002717	0.25
Y_R 488.368	1.086970	39228.700000	0.004825	0.44
Y_R2 488.368	1.084275	76307.723003	0.013996	1.29
Y_R4	1.086450	33336.800000	0.006370	0.59

Sample Name: 280-116186-E-5-A

Date: 11/5/2018 10:38:22 PM Rack:Tube: 1:89

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000150	ppm	0.000084	55.60	-235.128000	Y 377.433
Al (394.401 nm)	0.012854	ppm	0.002685	20.89	263.100000	Y 377.433
Al H (396.152 nm)	0.127149 u	ppm	0.004060	3.19	8.954780	Y_R 377.433
As (188.980 nm)	0.001518 u	ppm	0.003097	> 100.00	-13.107600	Y 242.219
B (249.678 nm)	0.028485	ppm	0.000002	0.01	159.543000	Y 242.219
Ba (493.408 nm)	0.016966	ppm	0.000328	1.94	2357.170000	Y_R 488.368
Be (234.861 nm)	0.000102	ppm	0.000084	82.14	-66.955800	Y_R 488.368
Bi (223.061 nm)	-0.001010 u	ppm	0.001183	> 100.00	42.223600	Y 377.433
Ca (315.887 nm)	18.225550	ppm	0.017007	0.09	12036.000521	Y_R 377.433
Cd (214.439 nm)	0.000161 u	ppm	0.000261	> 100.00	-7.137860	Y 377.433
Co (228.615 nm)	0.003486	ppm	0.000031	0.88	59.999500	Y 242.219
Cr (205.560 nm)	0.000091 u	ppm	0.000156	> 100.00	-8.924840	Y 377.433
Cu (324.754 nm)	0.000045 u	ppm	0.000182	> 100.00	198.719000	Y 377.433
Fe (238.204 nm)	4.718140	ppm	0.011725	0.25	7872.756019	Y_R 377.433
Fe H (259.940 nm)	4.699320	ppm	0.008601	0.18	4301.340000	Y_R 377.433
K (766.491 nm)	1.469320	ppm	0.064920	4.42	3171.930000	Y_R2 488.368
Li (670.783 nm)	0.013108	ppm	0.006664	50.84	-261.244000	Y_R2 488.368
Mg (279.078 nm)	6.942670	ppm	0.008165	0.12	15133.900000	Y 377.433
Mn (257.610 nm)	0.577152	ppm	0.000839	0.15	120777.000000	Y 377.433
Mo (202.032 nm)	-0.000617 u	ppm	0.000442	71.74	11.664700	Y 377.433
Na (589.592 nm)	4.307310	ppm	0.020372	0.47	2027.700000	Y_R2 488.368
Na H (589.593 nm)	6.695712 u	ppm	0.004998	0.07	1998.716899	Y_R4
Ni (231.604 nm)	0.011280	ppm	0.002522	22.36	53.004600	Y 377.433
P (213.618 nm)	0.010123	ppm	0.003492	34.50	10.687400	Y 242.219
Pb (220.353 nm)	-0.003109 u	ppm	0.000872	28.05	7.553830	Y 242.219
S (181.972 nm)	11.685515	ppm	0.038980	0.33	5558.571590	Y 377.433
Sb (206.834 nm)	-0.001509 u	ppm	0.001132	75.01	-3.221880	Y 377.433
Se (196.026 nm)	0.001863	ppm	0.000298	15.98	4.030920	Y 242.219
Si (288.158 nm)	4.104260	ppm	0.012581	0.31	19671.500000	Y 377.433
Sn (189.925 nm)	-0.006459 u	ppm	0.001407	21.79	0.523246	Y 377.433
Sr (421.552 nm)	0.057357	ppm	0.000297	0.52	6936.632974	Y_R 488.368
Th (288.505 nm)	-0.005048 u	ppm	0.001214	24.04	14.656600	Y 377.433
Ti (336.122 nm)	0.000555	ppm	0.000176	31.77	-266.467000	Y 377.433
Tl (190.794 nm)	-0.004126 u	ppm	0.001825	44.24	-11.500400	Y 377.433
U (409.013 nm)	-0.005109 u	ppm	0.008985	> 100.00	103.909000	Y 377.433
V (292.401 nm)	0.000380	ppm	0.000092	24.32	-176.157000	Y 377.433
Zn (206.200 nm)	0.023369	ppm	0.000312	1.34	85.650000	Y 377.433
Zr (343.823 nm)	0.000275	ppm	0.000075	27.22	-107.407000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.088321	11593.004879	0.001362	0.13
Y 377.433	1.078456	497855.764499	0.003827	0.35
Y_R 377.433	1.100900	41600.500000	0.000966	0.09
Y_R 488.368	1.095600	39540.400000	0.006660	0.61
Y_R2 488.368	1.090533	76748.177156	0.000536	0.05
Y_R4	1.090550	33462.600000	0.008312	0.76

Sample Name: CCVH-5408055

Date: 11/5/2018 10:41:54 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000719	ppm	0.000428	59.43	-329.277000	Y 377.433
Al (394.401 nm)	51.100600 o	ppm	0.146883	0.29	636385.000000	Y 377.433
Al H (396.152 nm)	49.850000	ppm	0.068251	0.14	81981.400000	Y_R 377.433
As (188.980 nm)	-0.005523 u	ppm	0.003237	58.60	-24.938000	Y 242.219
B (249.678 nm)	-0.011006 u	ppm	0.001037	9.43	-13.572500	Y 242.219
Ba (493.408 nm)	0.000086 u	ppm	0.000216	> 100.00	845.107000	Y_R 488.368
Be (234.861 nm)	-0.000199 u	ppm	0.000110	55.18	-712.634000	Y_R 488.368
Bi (223.061 nm)	0.989412	ppm	0.007467	0.75	1680.510000	Y 377.433
Ca (315.887 nm)	0.007735	ppm	0.002415	31.22	13.114288	Y_R 377.433
Cd (214.439 nm)	0.000198	ppm	0.000103	52.21	-6.227530	Y 377.433
Co (228.615 nm)	0.001175	ppm	0.000081	6.90	55.023300	Y 242.219
Cr (205.560 nm)	0.000342	ppm	0.000201	58.71	-8.666020	Y 377.433
Cu (324.754 nm)	-0.000129 u	ppm	0.000039	30.63	651.783000	Y 377.433
Fe (238.204 nm)	49.464166 o	ppm	0.137560	0.28	82427.216044	Y_R 377.433
Fe H (259.940 nm)	49.488500	ppm	0.033989	0.07	45402.300000	Y_R 377.433
K (766.491 nm)	0.089606	ppm	0.112655	> 100.00	1823.490000	Y_R2 488.368
Li (670.783 nm)	0.007806	ppm	0.003775	48.36	-336.337000	Y_R2 488.368
Mg (279.078 nm)	-0.032100 u	ppm	0.000640	1.99	-206.383000	Y 377.433
Mn (257.610 nm)	0.000321	ppm	0.000024	7.38	89.864800	Y 377.433
Mo (202.032 nm)	-0.000641 u	ppm	0.000366	57.16	11.393000	Y 377.433
Na (589.592 nm)	250.752000 o	ppm	0.848968	0.34	125842.000000	Y_R2 488.368
Na H (589.593 nm)	256.202666	ppm	0.848907	0.33	91092.717908	Y_R4
Ni (231.604 nm)	0.001312	ppm	0.000638	48.63	21.491900	Y 377.433
P (213.618 nm)	-0.009761 u	ppm	0.000850	8.71	-13.668900	Y 242.219
Pb (220.353 nm)	-0.001803 u	ppm	0.001155	64.08	20.688800	Y 242.219
S (181.972 nm)	4.983350	ppm	0.000446	0.01	2354.329649	Y 377.433
Sb (206.834 nm)	0.000803	ppm	0.000655	81.61	4.268790	Y 377.433
Se (196.026 nm)	0.001873	ppm	0.001224	65.33	-8.252530	Y 242.219
Si (288.158 nm)	-0.199429 u	ppm	0.000436	0.22	391.384000	Y 377.433
Sn (189.925 nm)	-0.008664 u	ppm	0.000403	4.65	-2.050720	Y 377.433
Sr (421.552 nm)	0.000076	ppm	0.000048	63.43	292.726935	Y_R 488.368
Th (288.505 nm)	4.933190	ppm	0.043538	0.88	5292.650000	Y 377.433
Ti (336.122 nm)	0.000802	ppm	0.000284	35.36	-288.700000	Y 377.433
Tl (190.794 nm)	-0.009825 u	ppm	0.000002	0.02	-17.745100	Y 377.433
U (409.013 nm)	10.185800	ppm	0.022962	0.23	23423.300000	Y 377.433
V (292.401 nm)	-0.004344 u	ppm	0.000087	2.00	-412.692000	Y 377.433
Zn (206.200 nm)	-0.000210 u	ppm	0.000057	27.34	8.951780	Y 377.433
Zr (343.823 nm)	-0.007086 u	ppm	0.000142	2.00	-405.685000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051021	11195.672916	0.001017	0.10
Y 377.433	1.053317	486250.556714	0.001551	0.15
Y_R 377.433	1.090830	41219.900000	0.002492	0.23
Y_R 488.368	1.088220	39273.700000	0.001101	0.10
Y_R2 488.368	1.099733	77395.648153	0.005467	0.50
Y_R4	1.099510	33737.600000	0.003334	0.30

Sample Name: CCV-5407762

Date: 11/5/2018 10:45:32 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.507958	ppm	0.001054	0.21	13815.900000	Y 377.433
Al (394.401 nm)	0.507258	ppm	0.000191	0.04	6524.350000	Y 377.433
Al H (396.152 nm)	0.549862 u	ppm	0.004064	0.74	885.043000	Y_R 377.433
As (188.980 nm)	0.995309	ppm	0.000068	0.01	1379.400000	Y 242.219
B (249.678 nm)	0.483453	ppm	0.002690	0.56	1987.040000	Y 242.219
Ba (493.408 nm)	0.500879	ppm	0.000507	0.10	46642.800000	Y_R 488.368
Be (234.861 nm)	0.505731	ppm	0.004836	0.96	26148.000000	Y_R 488.368
Bi (223.061 nm)	-0.000953 u	ppm	0.003232	> 100.00	42.113100	Y 377.433
Ca (315.887 nm)	5.031205	ppm	0.008390	0.17	3320.995119	Y_R 377.433
Cd (214.439 nm)	0.513128	ppm	0.000620	0.12	12765.800000	Y 377.433
Co (228.615 nm)	0.500839	ppm	0.001495	0.30	11877.200000	Y 242.219
Cr (205.560 nm)	0.520323	ppm	0.002393	0.46	2471.870000	Y 377.433
Cu (324.754 nm)	0.507435	ppm	0.000710	0.14	24623.200000	Y 377.433
Fe (238.204 nm)	2.539293	ppm	0.001065	0.04	4242.427746	Y_R 377.433
Fe H (259.940 nm)	2.532010 u	ppm	0.004820	0.19	2312.490000	Y_R 377.433
K (766.491 nm)	50.300900	ppm	0.035173	0.07	50897.000000	Y_R2 488.368
Li (670.783 nm)	1.016800	ppm	0.003706	0.36	13954.600000	Y_R2 488.368
Mg (279.078 nm)	20.339800	ppm	0.016146	0.08	44320.900000	Y 377.433
Mn (257.610 nm)	0.510408	ppm	0.000149	0.03	106812.000000	Y 377.433
Mo (202.032 nm)	0.518276	ppm	0.000736	0.14	5914.880000	Y 377.433
Na (589.592 nm)	25.374900	ppm	0.158311	0.62	12604.600000	Y_R2 488.368
Na H (589.593 nm)	28.115863 u	ppm	0.054259	0.19	9599.559961	Y_R4
Ni (231.604 nm)	0.512315	ppm	0.002567	0.50	1973.430000	Y 377.433
P (213.618 nm)	0.996326	ppm	0.001588	0.16	1131.910000	Y 242.219
Pb (220.353 nm)	1.003200	ppm	0.000773	0.08	2253.370000	Y 242.219
S (181.972 nm)	0.001120 u	ppm	0.003719	> 100.00	-23.246228	Y 377.433
Sb (206.834 nm)	1.027190	ppm	0.001688	0.16	1687.740000	Y 377.433
Se (196.026 nm)	1.009130	ppm	0.000438	0.04	1518.960000	Y 242.219
Si (288.158 nm)	4.856790	ppm	0.011175	0.23	23042.700000	Y 377.433
Sn (189.925 nm)	1.025210	ppm	0.000499	0.05	1204.860000	Y 377.433
Sr (421.552 nm)	0.507817	ppm	0.000515	0.10	59225.295903	Y_R 488.368
Th (288.505 nm)	-0.028615 u	ppm	0.004443	15.53	-49.001100	Y 377.433
Ti (336.122 nm)	0.514039	ppm	0.000666	0.13	48527.300000	Y 377.433
Tl (190.794 nm)	1.023400	ppm	0.006179	0.60	577.112000	Y 377.433
U (409.013 nm)	-0.005816 u	ppm	0.002246	38.62	56.452400	Y 377.433
V (292.401 nm)	0.508084	ppm	0.000303	0.06	24267.200000	Y 377.433
Zn (206.200 nm)	0.517119	ppm	0.002638	0.51	1791.860000	Y 377.433
Zr (343.823 nm)	0.512810	ppm	0.001453	0.28	20663.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.080437	11509.020240	0.003593	0.33
Y 377.433	1.068750	493374.971244	0.002233	0.21
Y_R 377.433	1.102450	41659.100000	0.005577	0.51
Y_R 488.368	1.104110	39847.400000	0.005699	0.52
Y_R2 488.368	1.105648	77811.869003	0.005809	0.53
Y_R4	1.112410	34133.400000	0.002621	0.24

Sample Name: CCB

Date: 11/5/2018 10:49:02 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000043 u	ppm	0.000063	> 100.00	-240.402000	Y 377.433
Al (394.401 nm)	-0.000143 u	ppm	0.001978	> 100.00	86.093200	Y 377.433
Al H (396.152 nm)	0.133629 Zu	ppm	0.002033	1.52	4.920280 Z	Y_R 377.433
As (188.980 nm)	-0.000683 u	ppm	0.000459	67.16	-16.072600	Y 242.219
B (249.678 nm)	-0.009490 u	ppm	0.001000	10.54	8.598470	Y 242.219
Ba (493.408 nm)	-0.000875 u	ppm	0.000103	11.83	720.947000	Y_R 488.368
Be (234.861 nm)	0.000104	ppm	0.000013	12.96	-0.446090	Y_R 488.368
Bi (223.061 nm)	0.000578 u	ppm	0.003673	> 100.00	44.223200	Y 377.433
Ca (315.887 nm)	-0.007926 u	ppm	0.001456	18.37	-7.554936	Y_R 377.433
Cd (214.439 nm)	0.000036 u	ppm	0.000054	> 100.00	-10.265900	Y 377.433
Co (228.615 nm)	0.000541	ppm	0.000105	19.30	-15.122100	Y 242.219
Cr (205.560 nm)	0.000169 u	ppm	0.000393	> 100.00	-8.536510	Y 377.433
Cu (324.754 nm)	0.000144 u	ppm	0.000215	> 100.00	208.487000	Y 377.433
Fe (238.204 nm)	-0.004666 u	ppm	0.002228	47.75	3.761236	Y_R 377.433
Fe H (259.940 nm)	0.015634 u	ppm	0.000599	3.83	3.339300	Y_R 377.433
K (766.491 nm)	-0.085399 u	ppm	0.035008	40.99	1652.450000	Y_R2 488.368
Li (670.783 nm)	0.011281 Z	ppm	0.002712	24.04	-287.116000 Z	Y_R2 488.368
Mg (279.078 nm)	0.001378 u	ppm	0.002067	> 100.00	17.119800	Y 377.433
Mn (257.610 nm)	-0.000011 u	ppm	0.000032	> 100.00	20.367300	Y 377.433
Mo (202.032 nm)	-0.000600 u	ppm	0.000041	6.75	11.848300	Y 377.433
Na (589.592 nm)	0.220547	ppm	0.024501	11.11	-25.214900	Y_R2 488.368
Na H (589.593 nm)	2.773940 u	ppm	0.015407	0.56	600.076244	Y_R4
Ni (231.604 nm)	-0.000074 u	ppm	0.000874	> 100.00	8.798180	Y 377.433
P (213.618 nm)	0.002083	ppm	0.000544	26.13	1.339200	Y 242.219
Pb (220.353 nm)	-0.002160 u	ppm	0.000068	3.14	9.669520	Y 242.219
S (181.972 nm)	0.011640	ppm	0.001231	10.57	-20.150540	Y 377.433
Sb (206.834 nm)	0.002365	ppm	0.002219	93.85	2.765100	Y 377.433
Se (196.026 nm)	0.001474	ppm	0.001601	> 100.00	3.859640	Y 242.219
Si (288.158 nm)	-0.204469 Zu	ppm	0.001841	0.90	368.805000 Z	Y 377.433
Sn (189.925 nm)	-0.007414 u	ppm	0.001027	13.85	-0.591852	Y 377.433
Sr (421.552 nm)	-0.000133 u	ppm	0.000169	> 100.00	262.782641	Y_R 488.368
Th (288.505 nm)	0.003565	ppm	0.002986	83.75	18.167700	Y 377.433
Ti (336.122 nm)	0.000509	ppm	0.000103	20.19	-316.655000	Y 377.433
Tl (190.794 nm)	0.001148 u	ppm	0.001813	> 100.00	-8.155620	Y 377.433
U (409.013 nm)	-0.008882 u	ppm	0.000050	0.57	94.509100	Y 377.433
V (292.401 nm)	0.000377	ppm	0.000209	55.46	-176.299000	Y 377.433
Zn (206.200 nm)	-0.000419 u	ppm	0.000555	> 100.00	2.930360	Y 377.433
Zr (343.823 nm)	0.000389	ppm	0.000259	66.60	-102.770000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102533	11744.390058	0.002258	0.20
Y 377.433	1.092693	504427.961072	0.000582	0.05
Y_R 377.433	1.104570	41739.200000	0.007614	0.69
Y_R 488.368	1.101810	39764.300000	0.001458	0.13
Y_R2 488.368	1.102777	77609.830330	0.001320	0.12
Y_R4	1.101880	33810.300000	0.004195	0.38

Sample Name: CCVL-5412564

Date: 11/5/2018 10:52:12 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009942	ppm	0.000139	1.40	36.388000	Y 377.433
Al (394.401 nm)	0.099629	ppm	0.000337	0.34	1334.720000	Y 377.433
Al H (396.152 nm)	0.241904 u	ppm	0.008720	3.60	187.788000	Y_R 377.433
As (188.980 nm)	0.014603	ppm	0.002793	19.13	5.341270	Y 242.219
B (249.678 nm)	0.088530	ppm	0.001120	1.27	402.133000	Y 242.219
Ba (493.408 nm)	0.009163	ppm	0.000189	2.06	1639.660000	Y_R 488.368
Be (234.861 nm)	0.001064	ppm	0.000051	4.80	47.809500	Y_R 488.368
Bi (223.061 nm)	0.097011	ppm	0.000815	0.84	203.187000	Y 377.433
Ca (315.887 nm)	0.194856	ppm	0.003622	1.86	126.411104	Y_R 377.433
Cd (214.439 nm)	0.005197	ppm	0.000393	7.57	118.237000	Y 377.433
Co (228.615 nm)	0.010774	ppm	0.000002	0.01	228.173000	Y 242.219
Cr (205.560 nm)	0.010565	ppm	0.000588	5.56	40.964300	Y 377.433
Cu (324.754 nm)	0.015839	ppm	0.000288	1.82	963.588000	Y 377.433
Fe (238.204 nm)	0.099994	ppm	0.000664	0.66	178.141781	Y_R 377.433
Fe H (259.940 nm)	0.105340 u	ppm	0.000793	0.75	85.658500	Y_R 377.433
K (766.491 nm)	3.047000	ppm	0.035947	1.18	4713.870000	Y_R2 488.368
Li (670.783 nm)	0.027678 Q	ppm	0.003389	12.24	-54.876200 Q	Y_R2 488.368
Mg (279.078 nm)	0.206740	ppm	0.002558	1.24	463.782000	Y 377.433
Mn (257.610 nm)	0.010609	ppm	0.000049	0.46	2242.210000	Y 377.433
Mo (202.032 nm)	0.019661	ppm	0.000117	0.60	242.350000	Y 377.433
Na (589.592 nm)	1.345450 Q	ppm	0.019909	1.48	539.792000 Q	Y_R2 488.368
Na H (589.593 nm)	3.619182 u	ppm	0.008222	0.23	900.960379	Y_R4
Ni (231.604 nm)	0.042682	ppm	0.000173	0.41	172.661000	Y 377.433
P (213.618 nm)	2.847880	ppm	0.020086	0.71	3302.030000	Y 242.219
Pb (220.353 nm)	0.009259	ppm	0.001465	15.83	35.204800	Y 242.219
S (181.972 nm)	0.099563	ppm	0.003304	3.32	21.886831	Y 377.433
Sb (206.834 nm)	0.020219	ppm	0.001156	5.72	31.993100	Y 377.433
Se (196.026 nm)	0.021813	ppm	0.003579	16.41	34.428100	Y 242.219
Si (288.158 nm)	0.293852 Q	ppm	0.005886	2.00	2601.230000 Q	Y 377.433
Sn (189.925 nm)	0.096286	ppm	0.001538	1.60	120.464000	Y 377.433
Sr (421.552 nm)	0.009406	ppm	0.000056	0.59	1370.050088	Y_R 488.368
Th (288.505 nm)	0.013189	ppm	0.006022	45.66	28.086800	Y 377.433
Ti (336.122 nm)	0.010607	ppm	0.000052	0.49	644.146000	Y 377.433
Tl (190.794 nm)	0.016319	ppm	0.001887	11.56	0.507659	Y 377.433
U (409.013 nm)	0.056343	ppm	0.010051	17.84	242.339000	Y 377.433
V (292.401 nm)	0.010591	ppm	0.000050	0.47	314.247000	Y 377.433
Zn (206.200 nm)	0.021055	ppm	0.000300	1.42	77.156400	Y 377.433
Zr (343.823 nm)	0.015698	ppm	0.000251	1.60	517.618000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.107650	11798.903442	0.001646	0.15
Y 377.433	1.093717	504900.596992	0.001839	0.17
Y_R 377.433	1.131580	42759.800000	0.008452	0.75
Y_R 488.368	1.132470	40870.600000	0.009472	0.84
Y_R2 488.368	1.119543	78789.794806	0.004268	0.38
Y_R4	1.118460	34319.000000	0.014748	1.32

Sample Name: 280-116186-C-9-A

Date: 11/5/2018 10:55:38 PM Rack:Tube: 1:90

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001584	ppm	0.000243	15.37	-195.358000	Y 377.433
Al (394.401 nm)	0.032333	ppm	0.001534	4.75	790.919000	Y 377.433
Al H (396.152 nm)	-0.074495 u	ppm	0.000855	1.15	-22.873000	Y_R 377.433
As (188.980 nm)	-0.004878 u	ppm	0.003128	64.12	-21.956000	Y 242.219
B (249.678 nm)	0.042536	ppm	0.001824	4.29	217.422000	Y 242.219
Ba (493.408 nm)	0.010497	ppm	0.000443	4.22	1761.860000	Y_R 488.368
Be (234.861 nm)	0.000142	ppm	0.000074	52.57	-1.477740	Y_R 488.368
Bi (223.061 nm)	0.013465	ppm	0.001425	10.58	65.498200	Y 377.433
Ca (315.887 nm)	271.057504	ppm	0.724675	0.27	179036.282383	Y_R 377.433
Cd (214.439 nm)	0.000294	ppm	0.000012	4.20	-3.833700	Y 377.433
Co (228.615 nm)	0.000733	ppm	0.000090	12.22	-10.334000	Y 242.219
Cr (205.560 nm)	0.001827	ppm	0.000192	10.51	-0.634550	Y 377.433
Cu (324.754 nm)	-0.001142 u	ppm	0.000005	0.45	-13.289700	Y 377.433
Fe (238.204 nm)	0.206546	ppm	0.003456	1.67	355.676006	Y_R 377.433
Fe H (259.940 nm)	0.166780 u	ppm	0.004098	2.46	142.039000	Y_R 377.433
K (766.491 nm)	3.539400	ppm	0.009155	0.26	5195.120000	Y_R2 488.368
Li (670.783 nm)	0.114674	ppm	0.003800	3.31	1177.290000	Y_R2 488.368
Mg (279.078 nm)	248.080000	ppm	0.602744	0.24	540431.000000	Y 377.433
Mn (257.610 nm)	0.549677	ppm	0.001255	0.23	115028.000000	Y 377.433
Mo (202.032 nm)	0.001234	ppm	0.000180	14.56	32.714500	Y 377.433
Na (589.592 nm)	43.901700	ppm	0.179009	0.41	21920.000000	Y_R2 488.368
Na H (589.593 nm)	45.456827 u	ppm	0.176395	0.39	15839.953267	Y_R4
Ni (231.604 nm)	0.002278	ppm	0.001250	54.86	17.844300	Y 377.433
P (213.618 nm)	0.014079	ppm	0.001551	11.01	15.198300	Y 242.219
Pb (220.353 nm)	-0.003390 u	ppm	0.001476	43.53	6.889320	Y 242.219
S (181.972 nm)	427.562080 bo	ppm	0.269923	0.06	204210.774025	Y 377.433
Sb (206.834 nm)	-0.009902 u	ppm	0.003516	35.50	-17.391500	Y 377.433
Se (196.026 nm)	0.000397	ppm	0.000245	61.84	2.948940	Y 242.219
Si (288.158 nm)	8.088970	ppm	0.000754	0.01	37522.600000	Y 377.433
Sn (189.925 nm)	-0.007047 u	ppm	0.001390	19.72	-0.163876	Y 377.433
Sr (421.552 nm)	1.155476	ppm	0.000000	0.00	134404.349560	Y_R 488.368
Th (288.505 nm)	-0.017552 u	ppm	0.002089	11.90	-0.193587	Y 377.433
Ti (336.122 nm)	0.000324	ppm	0.000048	14.74	351.819000	Y 377.433
Tl (190.794 nm)	-0.010907 u	ppm	0.002444	22.41	-17.782100	Y 377.433
U (409.013 nm)	0.009785	ppm	0.005287	54.03	111.282000	Y 377.433
V (292.401 nm)	0.001302	ppm	0.000165	12.70	-131.761000	Y 377.433
Zn (206.200 nm)	0.002783	ppm	0.000020	0.71	14.018600	Y 377.433
Zr (343.823 nm)	0.000103	ppm	0.000019	17.98	-114.356000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041677	11096.141634	0.008060	0.77
Y 377.433	1.051903	485597.598371	0.009770	0.93
Y_R 377.433	1.094130	41344.800000	0.007643	0.70
Y_R 488.368	1.089440	39317.700000	0.005012	0.46
Y_R2 488.368	1.083358	76243.209908	0.018309	1.69
Y_R4	1.081730	33192.000000	0.003040	0.28

Sample Name: 280-116186-C-10-A

Date: 11/5/2018 10:59:06 PM Rack:Tube: 2:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000257	ppm	0.000141	54.90	-232.183000	Y 377.433
Al (394.401 nm)	0.012664	ppm	0.000998	7.88	263.592000	Y 377.433
Al H (396.152 nm)	0.143347 u	ppm	0.005003	3.49	37.630800	Y_R 377.433
As (188.980 nm)	-0.000800 u	ppm	0.001123	> 100.00	-16.236000	Y 242.219
B (249.678 nm)	0.030479	ppm	0.000779	2.56	169.079000	Y 242.219
Ba (493.408 nm)	0.015646	ppm	0.000319	2.04	2232.950000	Y_R 488.368
Be (234.861 nm)	0.000020 u	ppm	0.000051	> 100.00	-4.955610	Y_R 488.368
Bi (223.061 nm)	-0.000077 u	ppm	0.000451	> 100.00	43.147600	Y 377.433
Ca (315.887 nm)	23.037765	ppm	0.051633	0.22	15214.564178	Y_R 377.433
Cd (214.439 nm)	0.000174 u	ppm	0.000315	> 100.00	-6.817110	Y 377.433
Co (228.615 nm)	0.000281	ppm	0.000012	4.10	-21.285300	Y 242.219
Cr (205.560 nm)	0.000884	ppm	0.000576	65.23	-5.130780	Y 377.433
Cu (324.754 nm)	-0.000222 u	ppm	0.000649	> 100.00	176.496000	Y 377.433
Fe (238.204 nm)	0.005885	ppm	0.003351	56.94	21.340717	Y_R 377.433
Fe H (259.940 nm)	0.018498 u	ppm	0.002410	13.03	5.967530	Y_R 377.433
K (766.491 nm)	1.314210	ppm	0.002204	0.17	3020.350000	Y_R2 488.368
Li (670.783 nm)	0.012610	ppm	0.001946	15.43	-268.294000	Y_R2 488.368
Mg (279.078 nm)	7.310920	ppm	0.012905	0.18	15940.300000	Y 377.433
Mn (257.610 nm)	0.000586	ppm	0.000010	1.66	145.346000	Y 377.433
Mo (202.032 nm)	0.000209	ppm	0.000254	> 100.00	21.056600	Y 377.433
Na (589.592 nm)	3.462360	ppm	0.011795	0.34	1603.230000	Y_R2 488.368
Na H (589.593 nm)	5.693711 u	ppm	0.001633	0.03	1641.089092	Y_R4
Ni (231.604 nm)	0.001205	ppm	0.000467	38.77	13.700500	Y 377.433
P (213.618 nm)	0.012852	ppm	0.003482	27.09	13.838600	Y 242.219
Pb (220.353 nm)	-0.002726 u	ppm	0.000055	2.01	8.393450	Y 242.219
S (181.972 nm)	10.991225	ppm	0.002688	0.02	5225.316022	Y 377.433
Sb (206.834 nm)	-0.000199 u	ppm	0.002714	> 100.00	-1.449270	Y 377.433
Se (196.026 nm)	0.003039	ppm	0.000036	1.19	6.210560	Y 242.219
Si (288.158 nm)	4.770880	ppm	0.016349	0.34	22657.800000	Y 377.433
Sn (189.925 nm)	-0.004487 u	ppm	0.000989	22.05	2.825460	Y 377.433
Sr (421.552 nm)	0.065607	ppm	0.000560	0.85	7893.735982	Y_R 488.368
Th (288.505 nm)	-0.007309 u	ppm	0.005798	79.33	6.404000	Y 377.433
Ti (336.122 nm)	0.000575	ppm	0.000066	11.47	-252.404000	Y 377.433
Tl (190.794 nm)	-0.001163 u	ppm	0.001098	94.37	-9.711720	Y 377.433
U (409.013 nm)	-0.000663 u	ppm	0.007781	> 100.00	111.124000	Y 377.433
V (292.401 nm)	0.000679	ppm	0.000089	13.06	-162.287000	Y 377.433
Zn (206.200 nm)	0.002768	ppm	0.000898	32.43	13.946600	Y 377.433
Zr (343.823 nm)	0.000305	ppm	0.000072	23.71	-106.158000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113177	11857.771946	0.003647	0.33
Y 377.433	1.099112	507391.308419	0.002503	0.23
Y_R 377.433	1.124770	42502.600000	0.004094	0.36
Y_R 488.368	1.125580	40622.300000	0.001518	0.13
Y_R2 488.368	1.110697	78167.212062	0.002787	0.25
Y_R4	1.120540	34382.800000	0.004006	0.36

Sample Name: 280-116186-C-11-A

Date: 11/5/2018 11:02:30 PM Rack:Tube: 2:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000080	ppm	0.000046	57.59	-237.066000	Y 377.433
Al (394.401 nm)	0.008882	ppm	0.000279	3.14	221.213000	Y 377.433
Al H (396.152 nm)	0.130847 u	ppm	0.002712	2.07	19.329700	Y_R 377.433
As (188.980 nm)	0.001524 u	ppm	0.004295	> 100.00	-12.981000	Y 242.219
B (249.678 nm)	0.037984	ppm	0.001113	2.93	199.206000	Y 242.219
Ba (493.408 nm)	0.001601	ppm	0.000023	1.41	947.592000	Y_R 488.368
Be (234.861 nm)	0.000106	ppm	0.000022	21.11	-0.658358	Y_R 488.368
Bi (223.061 nm)	0.001964	ppm	0.000241	12.25	46.512500	Y 377.433
Ca (315.887 nm)	27.727281	ppm	0.016260	0.06	18312.074171	Y_R 377.433
Cd (214.439 nm)	0.000120	ppm	0.000061	50.71	-8.174330	Y 377.433
Co (228.615 nm)	0.000750	ppm	0.000230	30.64	-10.127100	Y 242.219
Cr (205.560 nm)	0.000912	ppm	0.000169	18.53	-4.997810	Y 377.433
Cu (324.754 nm)	-0.000154 u	ppm	0.000173	> 100.00	176.082000	Y 377.433
Fe (238.204 nm)	0.018069	ppm	0.002337	12.93	41.642081	Y_R 377.433
Fe H (259.940 nm)	0.030065 u	ppm	0.004047	13.46	16.581800	Y_R 377.433
K (766.491 nm)	0.714453	ppm	0.019315	2.70	2434.180000	Y_R2 488.368
Li (670.783 nm)	0.025084	ppm	0.000220	0.88	-91.617300	Y_R2 488.368
Mg (279.078 nm)	11.728200	ppm	0.002355	0.02	25562.800000	Y 377.433
Mn (257.610 nm)	0.125859	ppm	0.000147	0.12	26355.300000	Y 377.433
Mo (202.032 nm)	-0.000625 u	ppm	0.000033	5.24	11.569200	Y 377.433
Na (589.592 nm)	3.314290	ppm	0.004409	0.13	1529.040000	Y_R2 488.368
Na H (589.593 nm)	5.451703 u	ppm	0.020711	0.38	1555.989014	Y_R4
Ni (231.604 nm)	0.005569	ppm	0.000891	15.99	30.419500	Y 377.433
P (213.618 nm)	0.018486	ppm	0.002052	11.10	20.357300	Y 242.219
Pb (220.353 nm)	-0.003022 u	ppm	0.001076	35.60	7.759290	Y 242.219
S (181.972 nm)	6.144114	ppm	0.003210	0.05	2910.797063	Y 377.433
Sb (206.834 nm)	-0.001189 u	ppm	0.002664	> 100.00	-3.076610	Y 377.433
Se (196.026 nm)	0.002413	ppm	0.000098	4.07	5.439230	Y 242.219
Si (288.158 nm)	8.921920	ppm	0.037737	0.42	41254.100000	Y 377.433
Sn (189.925 nm)	-0.004784 u	ppm	0.001706	35.65	2.477880	Y 377.433
Sr (421.552 nm)	0.075703	ppm	0.000156	0.21	9065.748006	Y_R 488.368
Th (288.505 nm)	-0.006432 u	ppm	0.003043	47.30	8.747830	Y 377.433
Ti (336.122 nm)	0.000356	ppm	0.000162	45.48	-261.274000	Y 377.433
Tl (190.794 nm)	-0.005826 u	ppm	0.006192	> 100.00	-12.430900	Y 377.433
U (409.013 nm)	0.003497 u	ppm	0.019220	> 100.00	120.166000	Y 377.433
V (292.401 nm)	0.000382	ppm	0.000155	40.59	-177.205000	Y 377.433
Zn (206.200 nm)	0.001157	ppm	0.000190	16.40	8.381080	Y 377.433
Zr (343.823 nm)	0.000153	ppm	0.000009	6.02	-112.322000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102981	11749.167114	0.000137	0.01
Y 377.433	1.089600	503000.249655	0.000009	0.00
Y_R 377.433	1.107550	41851.600000	0.000268	0.02
Y_R 488.368	1.108790	40016.300000	0.000055	0.00
Y_R2 488.368	1.103635	77670.234822	0.003789	0.34
Y_R4	1.113300	34160.800000	0.011592	1.04

Sample Name: 280-116186-C-12-A

Date: 11/5/2018 11:05:53 PM Rack:Tube: 2:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000943	ppm	0.000658	69.75	-213.215000	Y 377.433
Al (394.401 nm)	0.067274	ppm	0.000013	0.02	945.557000	Y 377.433
Al H (396.152 nm)	0.192947 u	ppm	0.006998	3.63	116.392000	Y_R 377.433
As (188.980 nm)	0.001889	ppm	0.001195	63.24	-12.528100	Y 242.219
B (249.678 nm)	0.018126	ppm	0.000809	4.46	118.716000	Y 242.219
Ba (493.408 nm)	0.019139	ppm	0.000137	0.71	2554.310000	Y_R 488.368
Be (234.861 nm)	0.000083	ppm	0.000077	92.48	-34.674500	Y_R 488.368
Bi (223.061 nm)	-0.003065 u	ppm	0.000451	14.72	38.526300	Y 377.433
Ca (315.887 nm)	31.839651	ppm	0.014660	0.05	21028.384869	Y_R 377.433
Cd (214.439 nm)	0.000259	ppm	0.000124	47.74	-4.697350	Y 377.433
Co (228.615 nm)	0.003918	ppm	0.000037	0.93	67.640700	Y 242.219
Cr (205.560 nm)	0.000756	ppm	0.000287	37.89	-5.739020	Y 377.433
Cu (324.754 nm)	-0.000152 u	ppm	0.000074	48.32	175.376000	Y 377.433
Fe (238.204 nm)	2.348971	ppm	0.000170	0.01	3925.319134	Y_R 377.433
Fe H (259.940 nm)	2.348540 u	ppm	0.000454	0.02	2144.140000	Y_R 377.433
K (766.491 nm)	0.633164	ppm	0.014728	2.33	2354.730000	Y_R2 488.368
Li (670.783 nm)	0.027694	ppm	0.000716	2.58	-54.652600	Y_R2 488.368
Mg (279.078 nm)	14.129400	ppm	0.017220	0.12	30791.400000	Y 377.433
Mn (257.610 nm)	0.598793	ppm	0.000514	0.09	125305.000000	Y 377.433
Mo (202.032 nm)	-0.000483 u	ppm	0.000136	28.16	13.183900	Y 377.433
Na (589.592 nm)	7.588510	ppm	0.053977	0.71	3676.140000	Y_R2 488.368
Na H (589.593 nm)	9.599793 u	ppm	0.010791	0.11	3035.496542	Y_R4
Ni (231.604 nm)	0.001950	ppm	0.000776	39.79	16.904400	Y 377.433
P (213.618 nm)	0.007660	ppm	0.001721	22.47	7.809520	Y 242.219
Pb (220.353 nm)	-0.001690 u	ppm	0.000637	37.73	10.718500	Y 242.219
S (181.972 nm)	15.370026	ppm	0.047891	0.31	7319.230905	Y 377.433
Sb (206.834 nm)	-0.003195 u	ppm	0.000623	19.50	-6.192170	Y 377.433
Se (196.026 nm)	0.001308 u	ppm	0.003742	> 100.00	3.836360	Y 242.219
Si (288.158 nm)	7.026270	ppm	0.006123	0.09	32761.800000	Y 377.433
Sn (189.925 nm)	-0.006113 u	ppm	0.000163	2.66	0.926488	Y 377.433
Sr (421.552 nm)	0.061267	ppm	0.000676	1.10	7390.287479	Y_R 488.368
Th (288.505 nm)	-0.014932 u	ppm	0.001230	8.24	4.561420	Y 377.433
Ti (336.122 nm)	0.001634	ppm	0.000066	4.06	-129.280000	Y 377.433
Tl (190.794 nm)	-0.005148 u	ppm	0.001000	19.43	-12.154700	Y 377.433
U (409.013 nm)	0.000836 u	ppm	0.006539	> 100.00	114.938000	Y 377.433
V (292.401 nm)	0.000664	ppm	0.000457	68.83	-163.926000	Y 377.433
Zn (206.200 nm)	0.002331	ppm	0.001351	57.97	12.687100	Y 377.433
Zr (343.823 nm)	0.000532	ppm	0.000146	27.46	-96.990300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.098346	11699.796151	0.004022	0.37
Y 377.433	1.089101	502769.712100	0.002987	0.27
Y_R 377.433	1.117520	42228.600000	0.002121	0.19
Y_R 488.368	1.115260	40249.600000	0.009247	0.83
Y_R2 488.368	1.118435	78711.804926	0.006746	0.60
Y_R4	1.116070	34245.700000	0.002888	0.26

Sample Name: 280-116270-E-1-A

Date: 11/5/2018 11:09:24 PM Rack:Tube: 2:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001277	ppm	0.000057	4.50	-203.909000	Y 377.433
Al (394.401 nm)	0.011550	ppm	0.000110	0.95	326.680000	Y 377.433
Al H (396.152 nm)	0.068617 u	ppm	0.005191	7.57	-6.267610	Y_R 377.433
As (188.980 nm)	0.025569	ppm	0.001401	5.48	20.697200	Y 242.219
B (249.678 nm)	0.048917	ppm	0.002254	4.61	242.933000	Y 242.219
Ba (493.408 nm)	0.074962	ppm	0.002147	2.86	7661.840000	Y_R 488.368
Be (234.861 nm)	0.000125	ppm	0.000039	31.23	-7.109600	Y_R 488.368
Bi (223.061 nm)	0.002805	ppm	0.002481	88.43	47.970400	Y 377.433
Ca (315.887 nm)	91.103820	ppm	0.005831	0.01	60173.477081	Y_R 377.433
Cd (214.439 nm)	0.000394	ppm	0.000090	22.92	-1.355810	Y 377.433
Co (228.615 nm)	0.002489	ppm	0.000258	10.38	31.685400	Y 242.219
Cr (205.560 nm)	0.000526	ppm	0.000109	20.67	-6.849610	Y 377.433
Cu (324.754 nm)	-0.000879 u	ppm	0.000364	41.38	104.911000	Y 377.433
Fe (238.204 nm)	0.544408	ppm	0.005707	1.05	918.610927	Y_R 377.433
Fe H (259.940 nm)	0.538711 u	ppm	0.003233	0.60	483.343000	Y_R 377.433
K (766.491 nm)	2.175530	ppm	0.008066	0.37	3862.150000	Y_R2 488.368
Li (670.783 nm)	0.030175	ppm	0.000745	2.47	-19.509100	Y_R2 488.368
Mg (279.078 nm)	27.281400	ppm	0.019834	0.07	59443.400000	Y 377.433
Mn (257.610 nm)	0.180137	ppm	0.000187	0.10	37711.600000	Y 377.433
Mo (202.032 nm)	0.002173	ppm	0.000052	2.39	43.403200	Y 377.433
Na (589.592 nm)	16.947900	ppm	0.116821	0.69	8377.430000	Y_R2 488.368
Na H (589.593 nm)	18.668987 u	ppm	0.012582	0.07	6268.320211	Y_R4
Ni (231.604 nm)	0.003375	ppm	0.000569	16.87	22.094300	Y 377.433
P (213.618 nm)	0.011663	ppm	0.000435	3.73	12.429200	Y 242.219
Pb (220.353 nm)	-0.001560 u	ppm	0.001683	> 100.00	11.009500	Y 242.219
S (181.972 nm)	26.051894	ppm	0.015368	0.06	12422.967055	Y 377.433
Sb (206.834 nm)	-0.004168 u	ppm	0.004982	> 100.00	-7.951280	Y 377.433
Se (196.026 nm)	0.002219 u	ppm	0.004423	> 100.00	5.086870	Y 242.219
Si (288.158 nm)	7.389140	ppm	0.012910	0.17	34387.400000	Y 377.433
Sn (189.925 nm)	-0.006884 u	ppm	0.000735	10.68	0.027058	Y 377.433
Sr (421.552 nm)	0.355466	ppm	0.006205	1.75	41540.291892	Y_R 488.368
Th (288.505 nm)	-0.015834 u	ppm	0.004781	30.19	-1.190050	Y 377.433
Ti (336.122 nm)	0.000215	ppm	0.000079	36.93	-114.998000	Y 377.433
Tl (190.794 nm)	-0.002759 u	ppm	0.002216	80.33	-11.320200	Y 377.433
U (409.013 nm)	0.011777	ppm	0.013206	> 100.00	133.297000	Y 377.433
V (292.401 nm)	0.000921	ppm	0.000422	45.76	-150.929000	Y 377.433
Zn (206.200 nm)	0.001805	ppm	0.000014	0.80	10.676600	Y 377.433
Zr (343.823 nm)	0.000163 u	ppm	0.000248	> 100.00	-111.911000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065471	11349.600534	0.002576	0.24
Y 377.433	1.059783	489235.459801	0.004492	0.42
Y_R 377.433	1.085850	41031.700000	0.006411	0.59
Y_R 488.368	1.087380	39243.400000	0.014537	1.34
Y_R2 488.368	1.074831	75643.114972	0.004572	0.43
Y_R4	1.114110	34185.400000	0.003629	0.33

Sample Name: 280-116270-C-8-A

Date: 11/5/2018 11:12:51 PM Rack:Tube: 2:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001019	ppm	0.000088	8.62	-210.999000	Y 377.433
Al (394.401 nm)	0.013533	ppm	0.001520	11.23	331.612000	Y 377.433
Al H (396.152 nm)	0.086205 u	ppm	0.001330	1.54	-3.403460	Y_R 377.433
As (188.980 nm)	0.003585	ppm	0.000441	12.31	-10.109300	Y 242.219
B (249.678 nm)	0.062850	ppm	0.000433	0.69	298.834000	Y 242.219
Ba (493.408 nm)	0.055382	ppm	0.000060	0.11	5870.040000	Y_R 488.368
Be (234.861 nm)	0.000130	ppm	0.000068	52.19	-8.735240	Y_R 488.368
Bi (223.061 nm)	0.001061 u	ppm	0.002883	> 100.00	45.113100	Y 377.433
Ca (315.887 nm)	103.829090	ppm	0.017752	0.02	68578.756114	Y_R 377.433
Cd (214.439 nm)	0.000245	ppm	0.000299	> 100.00	-5.065580	Y 377.433
Co (228.615 nm)	0.000172 u	ppm	0.000265	> 100.00	-23.117400	Y 242.219
Cr (205.560 nm)	0.001042	ppm	0.000324	31.07	-4.374300	Y 377.433
Cu (324.754 nm)	-0.000532 u	ppm	0.000092	17.24	113.875000	Y 377.433
Fe (238.204 nm)	0.675055	ppm	0.001274	0.19	1136.291772	Y_R 377.433
Fe H (259.940 nm)	0.664182 u	ppm	0.002647	0.40	598.481000	Y_R 377.433
K (766.491 nm)	2.207810	ppm	0.085105	3.85	3893.700000	Y_R2 488.368
Li (670.783 nm)	0.026961	ppm	0.000966	3.58	-65.027500	Y_R2 488.368
Mg (279.078 nm)	28.125600	ppm	0.026413	0.09	61282.400000	Y 377.433
Mn (257.610 nm)	0.214120	ppm	0.000128	0.06	44821.600000	Y 377.433
Mo (202.032 nm)	0.000465	ppm	0.000174	37.46	23.964500	Y 377.433
Na (589.592 nm)	11.582100	ppm	0.105570	0.91	5681.960000	Y_R2 488.368
Na H (589.593 nm)	13.488062 u	ppm	0.024866	0.18	4420.348628	Y_R4
Ni (231.604 nm)	-0.000463 u	ppm	0.000266	57.55	7.408260	Y 377.433
P (213.618 nm)	0.016326	ppm	0.002737	16.77	17.839500	Y 242.219
Pb (220.353 nm)	-0.002432 u	ppm	0.000419	17.25	9.054910	Y 242.219
S (181.972 nm)	34.636274	ppm	0.171759	0.50	16523.975795	Y 377.433
Sb (206.834 nm)	-0.005822 u	ppm	0.003503	60.16	-10.648300	Y 377.433
Se (196.026 nm)	0.002608	ppm	0.001502	57.59	5.685840	Y 242.219
Si (288.158 nm)	7.253840	ppm	0.038295	0.53	33781.300000	Y 377.433
Sn (189.925 nm)	-0.007147 u	ppm	0.000909	12.71	-0.280519	Y 377.433
Sr (421.552 nm)	0.280704	ppm	0.001081	0.39	32862.046564	Y_R 488.368
Th (288.505 nm)	-0.018439 u	ppm	0.004539	24.62	-3.706260	Y 377.433
Ti (336.122 nm)	0.000047 u	ppm	0.000154	> 100.00	-98.766500	Y 377.433
Tl (190.794 nm)	-0.004718 u	ppm	0.003204	67.91	-12.574400	Y 377.433
U (409.013 nm)	-0.003344 u	ppm	0.008311	> 100.00	97.592200	Y 377.433
V (292.401 nm)	0.000821	ppm	0.000039	4.78	-155.803000	Y 377.433
Zn (206.200 nm)	0.001721	ppm	0.000303	17.60	10.399100	Y 377.433
Zr (343.823 nm)	0.000201 u	ppm	0.000385	> 100.00	-110.395000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067715	11373.501870	0.001955	0.18
Y 377.433	1.066842	492494.279789	0.001789	0.17
Y_R 377.433	1.085970	41036.200000	0.002222	0.20
Y_R 488.368	1.082390	39063.400000	0.001790	0.17
Y_R2 488.368	1.080050	76010.415474	0.008557	0.79
Y_R4	1.081710	33191.400000	0.003233	0.30

Sample Name: 280-116270-E-9-A

Date: 11/5/2018 11:16:18 PM Rack:Tube: 2:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001656	ppm	0.000044	2.63	-193.391000	Y 377.433
Al (394.401 nm)	0.012369	ppm	0.000493	3.99	385.414000	Y 377.433
Al H (396.152 nm)	0.024704 u	ppm	0.004844	19.61	-21.003100	Y_R 377.433
As (188.980 nm)	0.028331	ppm	0.002136	7.54	24.558900	Y 242.219
B (249.678 nm)	0.155218	ppm	0.000621	0.40	669.640000	Y 242.219
Ba (493.408 nm)	0.083626	ppm	0.001019	1.22	8455.000000	Y_R 488.368
Be (234.861 nm)	0.000201	ppm	0.000048	23.83	-8.088560	Y_R 488.368
Bi (223.061 nm)	0.004891	ppm	0.002076	42.45	51.457200	Y 377.433
Ca (315.887 nm)	101.250508	ppm	0.027352	0.03	66875.556773	Y_R 377.433
Cd (214.439 nm)	0.000416	ppm	0.000046	11.14	-0.792321	Y 377.433
Co (228.615 nm)	0.004462	ppm	0.000251	5.63	78.867800	Y 242.219
Cr (205.560 nm)	0.000868	ppm	0.000115	13.27	-5.217270	Y 377.433
Cu (324.754 nm)	-0.000736 u	ppm	0.000085	11.51	106.654000	Y 377.433
Fe (238.204 nm)	0.891844	ppm	0.001310	0.15	1497.499085	Y_R 377.433
Fe H (259.940 nm)	0.895899 u	ppm	0.002737	0.31	811.116000	Y_R 377.433
K (766.491 nm)	4.405310	ppm	0.008923	0.20	6041.400000	Y_R2 488.368
Li (670.783 nm)	0.055121	ppm	0.000845	1.53	333.806000	Y_R2 488.368
Mg (279.078 nm)	33.573000	ppm	0.032240	0.10	73148.800000	Y 377.433
Mn (257.610 nm)	0.077624	ppm	0.000077	0.10	16263.500000	Y 377.433
Mo (202.032 nm)	0.002210	ppm	0.000083	3.77	43.823900	Y 377.433
Na (589.592 nm)	16.257600	ppm	0.007907	0.05	8030.510000	Y_R2 488.368
Na H (589.593 nm)	18.182133 u	ppm	0.064569	0.36	6093.642453	Y_R4
Ni (231.604 nm)	0.001815	ppm	0.000457	25.19	16.170600	Y 377.433
P (213.618 nm)	0.009475	ppm	0.001402	14.80	9.888190	Y 242.219
Pb (220.353 nm)	-0.002814 u	ppm	0.001312	46.62	8.207140	Y 242.219
S (181.972 nm)	24.138687	ppm	0.013215	0.05	11509.346530	Y 377.433
Sb (206.834 nm)	-0.006063 u	ppm	0.000638	10.52	-11.036800	Y 377.433
Se (196.026 nm)	0.002723	ppm	0.001390	51.06	5.612520	Y 242.219
Si (288.158 nm)	7.216240	ppm	0.010416	0.14	33612.800000	Y 377.433
Sn (189.925 nm)	-0.006675 u	ppm	0.001587	23.78	0.271272	Y 377.433
Sr (421.552 nm)	0.541169	ppm	0.003776	0.70	63096.495644	Y_R 488.368
Th (288.505 nm)	-0.010015 u	ppm	0.009564	95.51	3.784080	Y 377.433
Ti (336.122 nm)	0.000303	ppm	0.000032	10.40	-79.715900	Y 377.433
Tl (190.794 nm)	-0.005167 u	ppm	0.002633	50.96	-12.815300	Y 377.433
U (409.013 nm)	0.012480	ppm	0.015620	> 100.00	134.091000	Y 377.433
V (292.401 nm)	0.000504	ppm	0.000303	60.12	-170.954000	Y 377.433
Zn (206.200 nm)	0.003364	ppm	0.000313	9.30	16.100100	Y 377.433
Zr (343.823 nm)	0.000102 u	ppm	0.000366	> 100.00	-114.391000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067023	11366.138105	0.001227	0.11
Y 377.433	1.057424	488146.616860	0.001381	0.13
Y_R 377.433	1.083640	40948.400000	0.003547	0.33
Y_R 488.368	1.084500	39139.700000	0.009535	0.88
Y_R2 488.368	1.078662	75912.686728	0.000575	0.05
Y_R4	1.090250	33453.300000	0.008765	0.80

Sample Name: 280-116270-G-12-A

Date: 11/5/2018 11:19:46 PM Rack:Tube: 2:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000294	ppm	0.000366	> 100.00	-231.031000	Y 377.433
Al (394.401 nm)	0.012722	ppm	0.000703	5.52	262.442000	Y 377.433
Al H (396.152 nm)	0.128704 u	ppm	0.000261	0.20	13.005600	Y_R 377.433
As (188.980 nm)	-0.000567 u	ppm	0.003061	> 100.00	-15.910500	Y 242.219
B (249.678 nm)	0.026491	ppm	0.000138	0.52	153.064000	Y 242.219
Ba (493.408 nm)	0.016087	ppm	0.000362	2.25	2273.250000	Y_R 488.368
Be (234.861 nm)	0.000079	ppm	0.000063	79.45	-1.898830	Y_R 488.368
Bi (223.061 nm)	-0.002030 u	ppm	0.003636	> 100.00	39.928700	Y 377.433
Ca (315.887 nm)	22.808372	ppm	0.007643	0.03	15063.041323	Y_R 377.433
Cd (214.439 nm)	0.000228	ppm	0.000008	3.71	-5.483490	Y 377.433
Co (228.615 nm)	0.000192	ppm	0.000240	> 100.00	-23.398600	Y 242.219
Cr (205.560 nm)	0.000767	ppm	0.000105	13.66	-5.683850	Y 377.433
Cu (324.754 nm)	0.000227	ppm	0.000293	> 100.00	199.032000	Y 377.433
Fe (238.204 nm)	0.008147	ppm	0.000237	2.91	25.109368	Y_R 377.433
Fe H (259.940 nm)	0.019946 u	ppm	0.001361	6.82	7.296060	Y_R 377.433
K (766.491 nm)	1.318900	ppm	0.050329	3.82	3024.930000	Y_R2 488.368
Li (670.783 nm)	0.007623	ppm	0.002158	28.31	-338.928000	Y_R2 488.368
Mg (279.078 nm)	7.368900	ppm	0.004763	0.06	16066.600000	Y 377.433
Mn (257.610 nm)	0.000487	ppm	0.000073	15.05	124.621000	Y 377.433
Mo (202.032 nm)	-0.000796 u	ppm	0.000307	38.51	9.620340	Y 377.433
Na (589.592 nm)	3.466920	ppm	0.033694	0.97	1605.500000	Y_R2 488.368
Na H (589.593 nm)	5.385484 u	ppm	0.016863	0.31	1530.940054	Y_R4
Ni (231.604 nm)	0.000539	ppm	0.000341	63.16	11.148700	Y 377.433
P (213.618 nm)	0.016717	ppm	0.002231	13.34	18.293600	Y 242.219
Pb (220.353 nm)	-0.002451 u	ppm	0.000447	18.25	9.002090	Y 242.219
S (181.972 nm)	10.603521	ppm	0.019916	0.19	5040.121920	Y 377.433
Sb (206.834 nm)	-0.001505 u	ppm	0.000388	25.82	-3.591490	Y 377.433
Se (196.026 nm)	0.003137	ppm	0.003441	> 100.00	6.356720	Y 242.219
Si (288.158 nm)	4.611500	ppm	0.010260	0.22	21943.900000	Y 377.433
Sn (189.925 nm)	-0.007016 u	ppm	0.001764	25.14	-0.127053	Y 377.433
Sr (421.552 nm)	0.064096	ppm	0.000308	0.48	7718.398875	Y_R 488.368
Th (288.505 nm)	-0.008969 u	ppm	0.001229	13.70	4.630980	Y 377.433
Ti (336.122 nm)	0.000536	ppm	0.000118	21.97	-256.693000	Y 377.433
Tl (190.794 nm)	-0.004291 u	ppm	0.002557	59.60	-11.501200	Y 377.433
U (409.013 nm)	-0.003806 u	ppm	0.002731	71.76	103.958000	Y 377.433
V (292.401 nm)	0.000659	ppm	0.000157	23.90	-162.593000	Y 377.433
Zn (206.200 nm)	0.004024	ppm	0.000033	0.82	18.286800	Y 377.433
Zr (343.823 nm)	0.000379	ppm	0.000224	59.11	-103.189000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.096083	11675.686837	0.003428	0.31
Y 377.433	1.088655	502563.661756	0.005252	0.48
Y_R 377.433	1.112580	42041.900000	0.001939	0.17
Y_R 488.368	1.091380	39388.000000	0.009789	0.90
Y_R2 488.368	1.107021	77908.499921	0.002187	0.20
Y_R4	1.114330	34192.200000	0.013007	1.17

Sample Name: 280-116270-G-13-A

Date: 11/5/2018 11:23:09 PM Rack:Tube: 2:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001873	ppm	0.000338	18.04	-187.389000	Y 377.433
Al (394.401 nm)	0.031107	ppm	0.001197	3.85	630.779000	Y 377.433
Al H (396.152 nm)	0.044411 u	ppm	0.001721	3.88	12.592400	Y_R 377.433
As (188.980 nm)	-0.001814 u	ppm	0.000825	45.51	-17.657800	Y 242.219
B (249.678 nm)	0.100134	ppm	0.000080	0.08	448.746000	Y 242.219
Ba (493.408 nm)	0.056613	ppm	0.000242	0.43	5982.190000	Y_R 488.368
Be (234.861 nm)	0.000222	ppm	0.000115	51.76	5.092370	Y_R 488.368
Bi (223.061 nm)	0.008248	ppm	0.005722	69.37	56.875900	Y 377.433
Ca (315.887 nm)	170.159052	ppm	0.086780	0.05	112390.951934	Y_R 377.433
Cd (214.439 nm)	0.000352	ppm	0.000151	42.93	-2.384840	Y 377.433
Co (228.615 nm)	0.000024 u	ppm	0.000206	> 100.00	-27.347500	Y 242.219
Cr (205.560 nm)	0.001148	ppm	0.000083	7.27	-3.865600	Y 377.433
Cu (324.754 nm)	0.002902	ppm	0.000073	2.51	239.015000	Y 377.433
Fe (238.204 nm)	0.037920	ppm	0.001430	3.77	74.715700	Y_R 377.433
Fe H (259.940 nm)	0.029960 u	ppm	0.000683	2.28	16.485600	Y_R 377.433
K (766.491 nm)	2.789460	ppm	0.058464	2.10	4462.160000	Y_R2 488.368
Li (670.783 nm)	0.041489	ppm	0.002207	5.32	140.734000	Y_R2 488.368
Mg (279.078 nm)	66.573400	ppm	0.048263	0.07	145038.000000	Y 377.433
Mn (257.610 nm)	0.821601	ppm	0.001001	0.12	171921.000000	Y 377.433
Mo (202.032 nm)	-0.000440 u	ppm	0.000252	57.31	13.675200	Y 377.433
Na (589.592 nm)	12.883200	ppm	0.117112	0.91	6335.590000	Y_R2 488.368
Na H (589.593 nm)	14.825565 u	ppm	0.107159	0.72	4897.782376	Y_R4
Ni (231.604 nm)	0.001074	ppm	0.001035	96.39	13.200400	Y 377.433
P (213.618 nm)	0.042787	ppm	0.001206	2.82	48.348900	Y 242.219
Pb (220.353 nm)	0.002763	ppm	0.000895	32.40	20.657900	Y 242.219
S (181.972 nm)	134.513305 bo	ppm	0.295227	0.22	64234.661362	Y 377.433
Sb (206.834 nm)	-0.007612 u	ppm	0.000313	4.11	-13.637200	Y 377.433
Se (196.026 nm)	0.004128	ppm	0.002555	61.88	8.981600	Y 242.219
Si (288.158 nm)	6.423450	ppm	0.047463	0.74	30061.200000	Y 377.433
Sn (189.925 nm)	-0.006475 u	ppm	0.001167	18.02	0.504694	Y 377.433
Sr (421.552 nm)	0.587489	ppm	0.004390	0.75	68473.158406	Y_R 488.368
Th (288.505 nm)	-0.018887 u	ppm	0.002213	11.72	2.108150	Y 377.433
Ti (336.122 nm)	0.000541	ppm	0.000109	20.19	115.981000	Y 377.433
Tl (190.794 nm)	-0.008788 u	ppm	0.000920	10.46	-15.549500	Y 377.433
U (409.013 nm)	0.000698 u	ppm	0.007043	> 100.00	100.131000	Y 377.433
V (292.401 nm)	0.000830	ppm	0.000041	4.98	-155.507000	Y 377.433
Zn (206.200 nm)	0.047741	ppm	0.000317	0.66	169.382000	Y 377.433
Zr (343.823 nm)	0.000487	ppm	0.000101	20.64	-98.796800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.055902	11247.669115	0.006719	0.64
Y 377.433	1.056303	487628.801478	0.008509	0.81
Y_R 377.433	1.097340	41466.200000	0.000871	0.08
Y_R 488.368	1.093790	39474.900000	0.007614	0.70
Y_R2 488.368	1.076689	75773.865473	0.003343	0.31
Y_R4	1.077630	33066.300000	0.010465	0.97

Sample Name: 280-116270-E-14-A

Date: 11/5/2018 11:26:36 PM Rack:Tube: 2:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001686	ppm	0.000021	1.27	-192.553000	Y 377.433
Al (394.401 nm)	0.054906	ppm	0.000792	1.44	844.370000	Y 377.433
Al H (396.152 nm)	0.109316 u	ppm	0.006742	6.17	27.539500	Y_R 377.433
As (188.980 nm)	-0.000696 u	ppm	0.000707	> 100.00	-16.094600	Y 242.219
B (249.678 nm)	0.020477	ppm	0.000679	3.32	128.873000	Y 242.219
Ba (493.408 nm)	0.025577	ppm	0.000191	0.75	3141.890000	Y_R 488.368
Be (234.861 nm)	0.000132	ppm	0.000016	11.75	-1.008460	Y_R 488.368
Bi (223.061 nm)	0.004881	ppm	0.004386	89.85	51.337100	Y 377.433
Ca (315.887 nm)	128.891912	ppm	0.089924	0.07	85133.226193	Y_R 377.433
Cd (214.439 nm)	0.000569	ppm	0.000165	29.01	3.019460	Y 377.433
Co (228.615 nm)	0.000271	ppm	0.000042	15.47	-21.352600	Y 242.219
Cr (205.560 nm)	0.001925	ppm	0.000248	12.90	-0.164114	Y 377.433
Cu (324.754 nm)	-0.000280 u	ppm	0.000147	52.44	110.603000	Y 377.433
Fe (238.204 nm)	0.138812	ppm	0.000439	0.32	242.819286	Y_R 377.433
Fe H (259.940 nm)	0.130556 u	ppm	0.010656	8.16	108.798000	Y_R 377.433
K (766.491 nm)	0.917542	ppm	0.082711	9.01	2632.660000	Y_R2 488.368
Li (670.783 nm)	0.034823	ppm	0.005118	14.70	46.321200	Y_R2 488.368
Mg (279.078 nm)	41.657900	ppm	0.131441	0.32	90761.500000	Y 377.433
Mn (257.610 nm)	0.150592	ppm	0.000239	0.16	31530.200000	Y 377.433
Mo (202.032 nm)	0.000852	ppm	0.000175	20.60	28.369500	Y 377.433
Na (589.592 nm)	14.437800	ppm	0.052410	0.36	7117.110000	Y_R2 488.368
Na H (589.593 nm)	16.153666 u	ppm	0.099996	0.62	5375.072993	Y_R4
Ni (231.604 nm)	0.002617	ppm	0.000129	4.93	19.128300	Y 377.433
P (213.618 nm)	0.007628	ppm	0.003451	45.24	7.726810	Y 242.219
Pb (220.353 nm)	-0.003108 u	ppm	0.000928	29.85	7.547060	Y 242.219
S (181.972 nm)	76.525369	ppm	0.150305	0.20	36532.970236	Y 377.433
Sb (206.834 nm)	-0.009208 u	ppm	0.001230	13.36	-16.257600	Y 377.433
Se (196.026 nm)	0.000471 u	ppm	0.001612	> 100.00	2.522810	Y 242.219
Si (288.158 nm)	4.962150	ppm	0.001532	0.03	23514.700000	Y 377.433
Sn (189.925 nm)	-0.006240 u	ppm	0.002293	36.75	0.778650	Y 377.433
Sr (421.552 nm)	0.271166	ppm	0.002355	0.87	31754.819424	Y_R 488.368
Th (288.505 nm)	-0.016528 u	ppm	0.002471	14.95	-2.472610	Y 377.433
Ti (336.122 nm)	0.000852	ppm	0.000465	54.55	41.623200	Y 377.433
Tl (190.794 nm)	-0.005018 u	ppm	0.001317	26.25	-12.983000	Y 377.433
U (409.013 nm)	0.013439	ppm	0.007173	53.38	133.231000	Y 377.433
V (292.401 nm)	0.000761	ppm	0.000066	8.70	-159.043000	Y 377.433
Zn (206.200 nm)	0.003817	ppm	0.000057	1.48	17.585200	Y 377.433
Zr (343.823 nm)	0.000522	ppm	0.000194	37.15	-97.366400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060880	11300.694251	0.007851	0.74
Y 377.433	1.054292	486700.413641	0.010769	1.02
Y_R 377.433	1.093880	41335.200000	0.001976	0.18
Y_R 488.368	1.089190	39308.800000	0.010235	0.94
Y_R2 488.368	1.091141	76790.964619	0.015244	1.40
Y_R4	1.179960	36206.000000	0.006920	0.59

Sample Name: CCVH-5408055

Date: 11/5/2018 11:30:04 PM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001011	ppm	0.000539	53.30	-323.027000	Y 377.433
Al (394.401 nm)	51.285500 o	ppm	0.013820	0.03	638695.000000	Y 377.433
Al H (396.152 nm)	50.108800	ppm	0.061065	0.12	82408.000000	Y_R 377.433
As (188.980 nm)	-0.003881 u	ppm	0.002190	56.43	-22.647100	Y 242.219
B (249.678 nm)	-0.014428 u	ppm	0.002590	17.95	-27.379600	Y 242.219
Ba (493.408 nm)	-0.000397 u	ppm	0.000254	64.02	801.076000	Y_R 488.368
Be (234.861 nm)	0.000109 u	ppm	0.000157	> 100.00	-699.675000	Y_R 488.368
Bi (223.061 nm)	1.001110	ppm	0.003739	0.37	1699.810000	Y 377.433
Ca (315.887 nm)	-0.006410 u	ppm	0.002954	46.08	3.827222	Y_R 377.433
Cd (214.439 nm)	0.000345	ppm	0.000046	13.25	-2.565420	Y 377.433
Co (228.615 nm)	0.001630	ppm	0.000259	15.89	66.045700	Y 242.219
Cr (205.560 nm)	0.000683	ppm	0.000732	> 100.00	-7.042230	Y 377.433
Cu (324.754 nm)	0.000095	ppm	0.000046	48.36	665.444000	Y 377.433
Fe (238.204 nm)	49.485474 o	ppm	0.009506	0.02	82462.719474	Y_R 377.433
Fe H (259.940 nm)	49.726500	ppm	0.095869	0.19	45620.600000	Y_R 377.433
K (766.491 nm)	-0.026524 u	ppm	0.109012	> 100.00	1709.990000	Y_R2 488.368
Li (670.783 nm)	0.012770	ppm	0.007622	59.69	-266.032000	Y_R2 488.368
Mg (279.078 nm)	-0.033048 u	ppm	0.004267	12.91	-210.499000	Y 377.433
Mn (257.610 nm)	0.000299	ppm	0.000013	4.49	85.234900	Y 377.433
Mo (202.032 nm)	-0.001278 u	ppm	0.000225	17.63	4.138810	Y 377.433
Na (589.592 nm)	251.301000 o	ppm	0.432354	0.17	126118.000000	Y_R2 488.368
Na H (589.593 nm)	254.220760	ppm	0.438032	0.17	90385.123407	Y_R4
Ni (231.604 nm)	0.000524 u	ppm	0.001033	> 100.00	18.510100	Y 377.433
P (213.618 nm)	-0.012543 u	ppm	0.001042	8.31	-16.908200	Y 242.219
Pb (220.353 nm)	-0.000997 u	ppm	0.001688	> 100.00	22.750900	Y 242.219
S (181.972 nm)	5.108733	ppm	0.014257	0.28	2414.215955	Y 377.433
Sb (206.834 nm)	0.003478	ppm	0.002160	62.11	8.694730	Y 377.433
Se (196.026 nm)	0.002777	ppm	0.001385	49.87	-6.947430	Y 242.219
Si (288.158 nm)	-0.201880 u	ppm	0.000366	0.18	380.406000	Y 377.433
Sn (189.925 nm)	-0.005226 u	ppm	0.000391	7.49	1.962460	Y 377.433
Sr (421.552 nm)	-0.000060 u	ppm	0.000063	> 100.00	277.059939	Y_R 488.368
Th (288.505 nm)	4.974630	ppm	0.046031	0.93	5337.310000	Y 377.433
Ti (336.122 nm)	0.000965	ppm	0.000084	8.67	-273.242000	Y 377.433
Tl (190.794 nm)	-0.005319 u	ppm	0.001518	28.54	-15.176300	Y 377.433
U (409.013 nm)	10.401700	ppm	0.026246	0.25	23916.900000	Y 377.433
V (292.401 nm)	-0.004066 u	ppm	0.000205	5.05	-401.377000	Y 377.433
Zn (206.200 nm)	-0.000571 u	ppm	0.001048	> 100.00	7.725620	Y 377.433
Zr (343.823 nm)	-0.006503 u	ppm	0.000360	5.53	-382.066000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.100926	11727.271426	0.002315	0.21
Y 377.433	1.104511	509883.492408	0.004264	0.39
Y_R 377.433	1.156470	43700.300000	0.001281	0.11
Y_R 488.368	1.158770	41820.100000	0.009057	0.78
Y_R2 488.368	1.144948	80577.695787	0.005223	0.46
Y_R4	1.174060	36025.100000	0.000240	0.02

Sample Name: CCV-5407762

Date: 11/5/2018 11:33:42 PM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.514083	ppm	0.000415	0.08	13985.600000	Y 377.433
Al (394.401 nm)	0.509319	ppm	0.001455	0.29	6549.770000	Y 377.433
Al H (396.152 nm)	0.552967 u	ppm	0.012020	2.17	891.262000	Y_R 377.433
As (188.980 nm)	1.005040	ppm	0.006644	0.66	1393.030000	Y 242.219
B (249.678 nm)	0.487421	ppm	0.000333	0.07	2002.970000	Y 242.219
Ba (493.408 nm)	0.504711	ppm	0.000730	0.14	46993.600000	Y_R 488.368
Be (234.861 nm)	0.512567	ppm	0.000906	0.18	26502.000000	Y_R 488.368
Bi (223.061 nm)	-0.004180 u	ppm	0.004831	> 100.00	36.796200	Y 377.433
Ca (315.887 nm)	5.037658	ppm	0.013013	0.26	3325.258871	Y_R 377.433
Cd (214.439 nm)	0.517298	ppm	0.000575	0.11	12869.600000	Y 377.433
Co (228.615 nm)	0.504758	ppm	0.003643	0.72	11970.300000	Y 242.219
Cr (205.560 nm)	0.526365	ppm	0.001878	0.36	2500.710000	Y 377.433
Cu (324.754 nm)	0.514716	ppm	0.000898	0.17	24973.700000	Y 377.433
Fe (238.204 nm)	2.534910	ppm	0.010152	0.40	4235.125635	Y_R 377.433
Fe H (259.940 nm)	2.535180 u	ppm	0.001488	0.06	2315.400000	Y_R 377.433
K (766.491 nm)	50.487900	ppm	0.128266	0.25	51079.700000	Y_R2 488.368
Li (670.783 nm)	1.029970	ppm	0.003469	0.34	14141.100000	Y_R2 488.368
Mg (279.078 nm)	20.423900	ppm	0.014060	0.07	44504.200000	Y 377.433
Mn (257.610 nm)	0.513350	ppm	0.000411	0.08	107428.000000	Y 377.433
Mo (202.032 nm)	0.519313	ppm	0.003115	0.60	5926.670000	Y 377.433
Na (589.592 nm)	25.554300	ppm	0.029302	0.11	12694.700000	Y_R2 488.368
Na H (589.593 nm)	27.545218 u	ppm	0.107689	0.39	9395.450772	Y_R4
Ni (231.604 nm)	0.517859	ppm	0.002071	0.40	1994.680000	Y 377.433
P (213.618 nm)	1.011360	ppm	0.003232	0.32	1148.990000	Y 242.219
Pb (220.353 nm)	1.010310	ppm	0.000698	0.07	2269.210000	Y 242.219
S (181.972 nm)	0.005470	ppm	0.003430	62.70	-21.154220	Y 377.433
Sb (206.834 nm)	1.035270	ppm	0.001454	0.14	1701.080000	Y 377.433
Se (196.026 nm)	1.023440	ppm	0.001560	0.15	1540.470000	Y 242.219
Si (288.158 nm)	4.902060	ppm	0.023411	0.48	23245.500000	Y 377.433
Sn (189.925 nm)	1.038340	ppm	0.004047	0.39	1220.190000	Y 377.433
Sr (421.552 nm)	0.512266	ppm	0.000600	0.12	59741.640157	Y_R 488.368
Th (288.505 nm)	-0.023441 u	ppm	0.002765	11.80	-43.727100	Y 377.433
Ti (336.122 nm)	0.518177	ppm	0.000513	0.10	48920.800000	Y 377.433
Tl (190.794 nm)	1.026390	ppm	0.008633	0.84	578.824000	Y 377.433
U (409.013 nm)	-0.012044 u	ppm	0.009587	79.59	41.987900	Y 377.433
V (292.401 nm)	0.510560	ppm	0.000100	0.02	24385.500000	Y 377.433
Zn (206.200 nm)	0.515619	ppm	0.000971	0.19	1786.670000	Y 377.433
Zr (343.823 nm)	0.515915	ppm	0.000517	0.10	20789.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115090	11878.152286	0.003371	0.30
Y 377.433	1.103109	509236.159902	0.004450	0.40
Y_R 377.433	1.142870	43186.300000	0.000165	0.01
Y_R 488.368	1.141030	41179.900000	0.000567	0.05
Y_R2 488.368	1.153318	81166.753156	0.008876	0.77
Y_R4	1.165610	35765.700000	0.004504	0.39

Sample Name: CCB

Date: 11/5/2018 11:37:12 PM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000296	ppm	0.000098	33.22	-230.939000	Y 377.433
Al (394.401 nm)	-0.001597 u	ppm	0.001639	> 100.00	68.359400	Y 377.433
Al H (396.152 nm)	0.143172 Zu	ppm	0.013974	9.76	20.582700 Z	Y_R 377.433
As (188.980 nm)	-0.001860 u	ppm	0.002783	> 100.00	-17.721100	Y 242.219
B (249.678 nm)	-0.011402 u	ppm	0.000000	0.00	0.922142	Y 242.219
Ba (493.408 nm)	-0.001467 u	ppm	0.000041	2.76	666.806000	Y_R 488.368
Be (234.861 nm)	0.000152	ppm	0.000034	22.67	2.010530	Y_R 488.368
Bi (223.061 nm)	-0.005882 u	ppm	0.001019	17.33	33.577100	Y 377.433
Ca (315.887 nm)	-0.010338 u	ppm	0.007890	76.32	-9.144307	Y_R 377.433
Cd (214.439 nm)	0.000067 u	ppm	0.000109	> 100.00	-9.496910	Y 377.433
Co (228.615 nm)	0.000357	ppm	0.000034	9.43	-19.480000	Y 242.219
Cr (205.560 nm)	0.000832	ppm	0.000266	31.98	-5.375420	Y 377.433
Cu (324.754 nm)	0.000572	ppm	0.000395	69.08	228.498000	Y 377.433
Fe (238.204 nm)	-0.002142 u	ppm	0.001779	83.02	7.966011	Y_R 377.433
Fe H (259.940 nm)	0.015314 u	ppm	0.001331	8.69	3.045690	Y_R 377.433
K (766.491 nm)	-0.227940 u	ppm	0.145785	63.96	1513.140000	Y_R2 488.368
Li (670.783 nm)	0.012278 Z	ppm	0.000835	6.80	-272.995000 Z	Y_R2 488.368
Mg (279.078 nm)	0.002836	ppm	0.000583	20.55	20.342500	Y 377.433
Mn (257.610 nm)	0.000005 u	ppm	0.000027	> 100.00	23.604200	Y 377.433
Mo (202.032 nm)	-0.000297 u	ppm	0.000247	83.43	15.306000	Y 377.433
Na (589.592 nm)	0.207060	ppm	0.017056	8.24	-31.982400	Y_R2 488.368
Na H (589.593 nm)	2.376385 u	ppm	0.050919	2.14	458.174079	Y_R4
Ni (231.604 nm)	0.000108 u	ppm	0.000450	> 100.00	9.496140	Y 377.433
P (213.618 nm)	0.002870	ppm	0.000725	25.27	2.240990	Y 242.219
Pb (220.353 nm)	-0.001748 u	ppm	0.000743	42.52	10.578300	Y 242.219
S (181.972 nm)	0.013187	ppm	0.004493	34.07	-19.411827	Y 377.433
Sb (206.834 nm)	-0.000498 u	ppm	0.000050	10.13	-1.939770	Y 377.433
Se (196.026 nm)	0.001726	ppm	0.000100	5.79	4.236940	Y 242.219
Si (288.158 nm)	-0.208140 Zu	ppm	0.000849	0.41	352.363000 Z	Y 377.433
Sn (189.925 nm)	-0.005239 u	ppm	0.000781	14.91	1.947440	Y 377.433
Sr (421.552 nm)	-0.000435 u	ppm	0.000194	44.52	227.689622	Y_R 488.368
Th (288.505 nm)	-0.002056 u	ppm	0.000600	29.19	12.172200	Y 377.433
Ti (336.122 nm)	0.000516	ppm	0.000053	10.23	-316.043000	Y 377.433
Tl (190.794 nm)	0.002431	ppm	0.001153	47.44	-7.421150	Y 377.433
U (409.013 nm)	-0.012460 u	ppm	0.006181	49.60	86.336500	Y 377.433
V (292.401 nm)	0.000345	ppm	0.000112	32.40	-178.230000	Y 377.433
Zn (206.200 nm)	0.000592 u	ppm	0.001001	> 100.00	6.425620	Y 377.433
Zr (343.823 nm)	0.000524	ppm	0.000285	54.44	-97.307700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.134019	12079.788434	0.003985	0.35
Y 377.433	1.125185	519427.627845	0.006373	0.57
Y_R 377.433	1.150730	43483.500000	0.000850	0.07
Y_R 488.368	1.154360	41660.700000	0.003641	0.32
Y_R2 488.368	1.148959	80859.985362	0.001447	0.13
Y_R4	1.139560	34966.300000	0.004806	0.42

Sample Name: CCVL-5412564

Date: 11/5/2018 11:40:23 PM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010055	ppm	0.000235	2.34	39.712000	Y 377.433
Al (394.401 nm)	0.099423	ppm	0.000821	0.83	1330.560000	Y 377.433
Al H (396.152 nm)	0.240410 u	ppm	0.008609	3.58	185.347000	Y_R 377.433
As (188.980 nm)	0.014811	ppm	0.001073	7.24	5.632770	Y 242.219
B (249.678 nm)	0.088417	ppm	0.001833	2.07	401.681000	Y 242.219
Ba (493.408 nm)	0.009200	ppm	0.000137	1.49	1643.090000	Y_R 488.368
Be (234.861 nm)	0.001067	ppm	0.000039	3.68	47.919600	Y_R 488.368
Bi (223.061 nm)	0.093977	ppm	0.001772	1.89	198.188000	Y 377.433
Ca (315.887 nm)	0.199054	ppm	0.006814	3.42	129.183474	Y_R 377.433
Cd (214.439 nm)	0.005272	ppm	0.000318	6.04	120.115000	Y 377.433
Co (228.615 nm)	0.011027	ppm	0.000117	1.06	234.179000	Y 242.219
Cr (205.560 nm)	0.010766	ppm	0.000131	1.22	41.924000	Y 377.433
Cu (324.754 nm)	0.015781	ppm	0.000080	0.51	961.406000	Y 377.433
Fe (238.204 nm)	0.101141	ppm	0.000827	0.82	180.053148	Y_R 377.433
Fe H (259.940 nm)	0.108130 u	ppm	0.002220	2.05	88.218900	Y_R 377.433
K (766.491 nm)	2.842290	ppm	0.006962	0.24	4513.800000	Y_R2 488.368
Li (670.783 nm)	0.033005 Q	ppm	0.000394	1.19	20.563400 Q	Y_R2 488.368
Mg (279.078 nm)	0.208067	ppm	0.000193	0.09	466.804000	Y 377.433
Mn (257.610 nm)	0.010620	ppm	0.000005	0.04	2244.690000	Y 377.433
Mo (202.032 nm)	0.020010	ppm	0.000002	0.01	246.320000	Y 377.433
Na (589.592 nm)	1.280500	ppm	0.044073	3.44	507.158000	Y_R2 488.368
Na H (589.593 nm)	3.216600 u	ppm	0.008995	0.28	757.190852	Y_R4
Ni (231.604 nm)	0.041311	ppm	0.000587	1.42	167.402000	Y 377.433
P (213.618 nm)	2.872030	ppm	0.000006	0.00	3330.060000	Y 242.219
Pb (220.353 nm)	0.007386	ppm	0.002652	35.90	30.998400	Y 242.219
S (181.972 nm)	0.104705	ppm	0.005655	5.40	24.343169	Y 377.433
Sb (206.834 nm)	0.017829	ppm	0.003164	17.75	28.059700	Y 377.433
Se (196.026 nm)	0.020716	ppm	0.002712	13.09	32.778900	Y 242.219
Si (288.158 nm)	0.292754 Q	ppm	0.000631	0.22	2596.320000 Q	Y 377.433
Sn (189.925 nm)	0.096129	ppm	0.001177	1.22	120.280000	Y 377.433
Sr (421.552 nm)	0.009344	ppm	0.000036	0.39	1362.916498	Y_R 488.368
Th (288.505 nm)	0.017552	ppm	0.002709	15.43	32.704600	Y 377.433
Ti (336.122 nm)	0.010669	ppm	0.000160	1.50	650.034000	Y 377.433
Tl (190.794 nm)	0.011474	ppm	0.000090	0.78	-2.270540	Y 377.433
U (409.013 nm)	0.059221	ppm	0.011264	19.02	248.914000	Y 377.433
V (292.401 nm)	0.010483	ppm	0.000228	2.17	309.463000	Y 377.433
Zn (206.200 nm)	0.021322	ppm	0.000460	2.16	78.080000	Y 377.433
Zr (343.823 nm)	0.015829	ppm	0.000245	1.55	522.926000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.143186	12177.440391	0.003748	0.33
Y 377.433	1.133754	523383.327261	0.002909	0.26
Y_R 377.433	1.169670	44199.200000	0.001751	0.15
Y_R 488.368	1.161140	41905.700000	0.005943	0.51
Y_R2 488.368	1.176977	82831.812910	0.006913	0.59
Y_R4	1.172190	35967.600000	0.008898	0.76

Sample Name: MB 280-434676/1-A

Date: 11/5/2018 11:43:49 PM Rack:Tube: 2:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000052 u	ppm	0.000158	> 100.00	-240.525000	Y 377.433
Al (394.401 nm)	0.000843	ppm	0.000312	37.02	97.525700	Y 377.433
Al H (396.152 nm)	0.140104 u	ppm	0.000228	0.16	15.514500	Y_R 377.433
As (188.980 nm)	0.000060 u	ppm	0.000363	> 100.00	-15.031800	Y 242.219
B (249.678 nm)	-0.009514 u	ppm	0.000088	0.93	8.498060	Y 242.219
Ba (493.408 nm)	-0.001195 u	ppm	0.000071	5.98	691.672000	Y_R 488.368
Be (234.861 nm)	0.000003 u	ppm	0.000057	> 100.00	-5.791620	Y_R 488.368
Bi (223.061 nm)	-0.002265 u	ppm	0.000118	5.20	39.538400	Y 377.433
Ca (315.887 nm)	0.000554 u	ppm	0.006276	> 100.00	-1.953139	Y_R 377.433
Cd (214.439 nm)	0.000079	ppm	0.000009	11.80	-9.184820	Y 377.433
Co (228.615 nm)	0.000422	ppm	0.000053	12.54	-17.950000	Y 242.219
Cr (205.560 nm)	-0.000432 u	ppm	0.000355	82.06	-11.410400	Y 377.433
Cu (324.754 nm)	0.000521	ppm	0.000166	31.85	226.944000	Y 377.433
Fe (238.204 nm)	0.003106	ppm	0.002099	67.59	16.709928	Y_R 377.433
Fe H (259.940 nm)	0.015295 u	ppm	0.000412	2.69	3.028070	Y_R 377.433
K (766.491 nm)	-0.237070 u	ppm	0.175856	74.18	1504.220000	Y_R2 488.368
Li (670.783 nm)	0.016393	ppm	0.005441	33.19	-214.716000	Y_R2 488.368
Mg (279.078 nm)	0.001105	ppm	0.000481	43.55	16.582100	Y 377.433
Mn (257.610 nm)	0.000051	ppm	0.000038	75.08	33.330100	Y 377.433
Mo (202.032 nm)	-0.000555 u	ppm	0.000308	55.44	12.361900	Y 377.433
Na (589.592 nm)	0.161821	ppm	0.026366	16.29	-54.710000	Y_R2 488.368
Na H (589.593 nm)	2.179857 u	ppm	0.060399	2.77	388.000870	Y_R4
Ni (231.604 nm)	-0.000650 u	ppm	0.000553	85.08	6.588070	Y 377.433
P (213.618 nm)	0.003033	ppm	0.001105	36.42	2.438110	Y 242.219
Pb (220.353 nm)	-0.001354 u	ppm	0.001665	> 100.00	11.460100	Y 242.219
S (181.972 nm)	0.013881	ppm	0.002801	20.18	-19.081792	Y 377.433
Sb (206.834 nm)	-0.000205 u	ppm	0.000005	2.37	-1.464550	Y 377.433
Se (196.026 nm)	0.005125	ppm	0.000307	5.99	9.345970	Y 242.219
Si (288.158 nm)	-0.205508 u	ppm	0.000161	0.08	364.153000	Y 377.433
Sn (189.925 nm)	-0.006903 u	ppm	0.000148	2.14	0.004579	Y 377.433
Sr (421.552 nm)	-0.000478 u	ppm	0.000141	29.52	222.741059	Y_R 488.368
Th (288.505 nm)	0.002371 u	ppm	0.005765	> 100.00	16.889600	Y 377.433
Ti (336.122 nm)	0.000502	ppm	0.000009	1.72	-317.373000	Y 377.433
Tl (190.794 nm)	0.000421 u	ppm	0.001073	> 100.00	-8.572660	Y 377.433
U (409.013 nm)	-0.009089 u	ppm	0.003900	42.91	94.035800	Y 377.433
V (292.401 nm)	0.000532	ppm	0.000054	10.16	-168.408000	Y 377.433
Zn (206.200 nm)	0.000834	ppm	0.000170	20.41	7.261670	Y 377.433
Zr (343.823 nm)	0.000640	ppm	0.000153	23.86	-92.590500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.142938	12174.800047	0.004109	0.36
Y 377.433	1.133398	523218.862552	0.003188	0.28
Y_R 377.433	1.165460	44040.000000	0.002942	0.25
Y_R 488.368	1.165830	42074.600000	0.000347	0.03
Y_R2 488.368	1.158411	81525.159696	0.004633	0.40
Y_R4	1.161980	35654.300000	0.007186	0.62

Sample Name: LCS 280-434676/2-A

Date: 11/5/2018 11:47:00 PM Rack:Tube: 2:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053274	ppm	0.000791	1.48	1185.040000	Y 377.433
Al (394.401 nm)	2.076310	ppm	0.003872	0.19	26244.800000	Y 377.433
Al H (396.152 nm)	1.991950	ppm	0.008780	0.44	3457.170000	Y_R 377.433
As (188.980 nm)	1.000860	ppm	0.000419	0.04	1387.190000	Y 242.219
B (249.678 nm)	1.028250	ppm	0.002259	0.22	4175.010000	Y 242.219
Ba (493.408 nm)	2.046380	ppm	0.006037	0.29	188084.000000	Y_R 488.368
Be (234.861 nm)	0.051317	ppm	0.000100	0.19	2637.180000	Y_R 488.368
Bi (223.061 nm)	1.981320	ppm	0.008421	0.43	3309.210000	Y 377.433
Ca (315.887 nm)	50.349001	ppm	0.169281	0.34	33254.582021	Y_R 377.433
Cd (214.439 nm)	0.102601	ppm	0.000047	0.05	2543.620000	Y 377.433
Co (228.615 nm)	0.491656	ppm	0.000722	0.15	11681.600000	Y 242.219
Cr (205.560 nm)	0.211277	ppm	0.000464	0.22	994.974000	Y 377.433
Cu (324.754 nm)	0.253999	ppm	0.000108	0.04	12467.700000	Y 377.433
Fe (238.204 nm)	1.024648	ppm	0.000143	0.01	1718.773129	Y_R 377.433
Fe H (259.940 nm)	1.024660 u	ppm	0.005595	0.55	929.274000	Y_R 377.433
K (766.491 nm)	51.829700	ppm	0.178384	0.34	52391.100000	Y_R2 488.368
Li (670.783 nm)	1.047190	ppm	0.006190	0.59	14385.000000	Y_R2 488.368
Mg (279.078 nm)	50.516400	ppm	0.055942	0.11	110037.000000	Y 377.433
Mn (257.610 nm)	0.511645	ppm	0.000267	0.05	107071.000000	Y 377.433
Mo (202.032 nm)	1.071210	ppm	0.000120	0.01	12205.400000	Y 377.433
Na (589.592 nm)	51.464200	ppm	0.239135	0.46	25688.000000	Y_R2 488.368
Na H (589.593 nm)	52.761807	ppm	0.230450	0.44	18247.723387	Y_R4
Ni (231.604 nm)	0.495144	ppm	0.000663	0.13	1908.320000	Y 377.433
P (213.618 nm)	10.279700	ppm	0.018129	0.18	11912.800000	Y 242.219
Pb (220.353 nm)	0.506047	ppm	0.001347	0.27	1144.910000	Y 242.219
S (181.972 nm)	2.024840	ppm	0.007405	0.37	945.696214	Y 377.433
Sb (206.834 nm)	0.531085	ppm	0.001921	0.36	861.684000	Y 377.433
Se (196.026 nm)	2.065510	ppm	0.001224	0.06	3107.650000	Y 242.219
Si (288.158 nm)	10.206500	ppm	0.018576	0.18	47008.800000	Y 377.433
Sn (189.925 nm)	2.112670	ppm	0.003655	0.17	2474.320000	Y 377.433
Sr (421.552 nm)	1.028391	ppm	0.004102	0.40	119652.633682	Y_R 488.368
Th (288.505 nm)	0.987611	ppm	0.000287	0.03	1041.010000	Y 377.433
Ti (336.122 nm)	1.052810	ppm	0.000728	0.07	99869.100000	Y 377.433
Tl (190.794 nm)	2.072750	ppm	0.013642	0.66	1176.930000	Y 377.433
U (409.013 nm)	2.129860	ppm	0.001135	0.05	4932.250000	Y 377.433
V (292.401 nm)	0.520209	ppm	0.000234	0.05	24932.200000	Y 377.433
Zn (206.200 nm)	0.511208	ppm	0.002547	0.50	1771.270000	Y 377.433
Zr (343.823 nm)	0.522158	ppm	0.001157	0.22	21042.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103639	11756.177869	0.004750	0.43
Y 377.433	1.099961	507783.328048	0.004636	0.42
Y_R 377.433	1.151410	43509.200000	0.002748	0.24
Y_R 488.368	1.145440	41339.000000	0.006279	0.55
Y_R2 488.368	1.144396	80538.830743	0.012356	1.08
Y_R4	1.164980	35746.500000	0.001024	0.09

Sample Name: 280-115724-A-5-A

Date: 11/5/2018 11:50:29 PM Rack:Tube: 2:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000413	ppm	0.000175	42.40	-233.123000	Y 377.433
Al (394.401 nm)	0.006113	ppm	0.001108	18.13	223.291000	Y 377.433
Al H (396.152 nm)	0.102782 u	ppm	0.013142	12.79	19.470600	Y_R 377.433
As (188.980 nm)	0.011770	ppm	0.002351	19.97	1.375480	Y 242.219
B (249.678 nm)	0.012282	ppm	0.000909	7.40	96.000100	Y 242.219
Ba (493.408 nm)	0.016834	ppm	0.000016	0.09	2341.710000	Y_R 488.368
Be (234.861 nm)	0.000162	ppm	0.000031	19.38	1.858050	Y_R 488.368
Bi (223.061 nm)	0.000194 u	ppm	0.002335	> 100.00	43.608600	Y 377.433
Ca (315.887 nm)	30.810562	ppm	0.044156	0.14	20348.640683	Y_R 377.433
Cd (214.439 nm)	0.000264	ppm	0.000027	10.38	-4.584750	Y 377.433
Co (228.615 nm)	0.000540	ppm	0.000306	56.62	-15.094000	Y 242.219
Cr (205.560 nm)	0.008009	ppm	0.000117	1.47	28.869500	Y 377.433
Cu (324.754 nm)	0.000028 u	ppm	0.000067	> 100.00	184.174000	Y 377.433
Fe (238.204 nm)	0.044688	ppm	0.005062	11.33	85.992613	Y_R 377.433
Fe H (259.940 nm)	0.043515 u	ppm	0.001884	4.33	28.924300	Y_R 377.433
K (766.491 nm)	6.615680	ppm	0.083227	1.26	8201.680000	Y_R2 488.368
Li (670.783 nm)	0.024813	ppm	0.003217	12.96	-95.461300	Y_R2 488.368
Mg (279.078 nm)	9.897140	ppm	0.000933	0.01	21574.000000	Y 377.433
Mn (257.610 nm)	0.001099	ppm	0.000013	1.17	252.632000	Y 377.433
Mo (202.032 nm)	0.005477	ppm	0.000460	8.40	80.994000	Y 377.433
Na (589.592 nm)	26.567900	ppm	0.060827	0.23	13211.400000	Y_R2 488.368
Na H (589.593 nm)	27.764156 u	ppm	0.017395	0.06	9521.744250	Y_R4
Ni (231.604 nm)	0.000360 u	ppm	0.001148	> 100.00	10.464700	Y 377.433
P (213.618 nm)	0.025749	ppm	0.000326	1.26	28.778200	Y 242.219
Pb (220.353 nm)	-0.003838 u	ppm	0.001013	26.39	5.899460	Y 242.219
S (181.972 nm)	10.777102	ppm	0.042684	0.40	5123.448470	Y 377.433
Sb (206.834 nm)	-0.003556 u	ppm	0.002318	65.19	-6.949090	Y 377.433
Se (196.026 nm)	0.005080	ppm	0.000671	13.21	9.270790	Y 242.219
Si (288.158 nm)	20.048800	ppm	0.048263	0.24	91101.600000	Y 377.433
Sn (189.925 nm)	-0.007210 u	ppm	0.000229	3.18	-0.354211	Y 377.433
Sr (421.552 nm)	0.222360	ppm	0.001344	0.60	26089.497489	Y_R 488.368
Th (288.505 nm)	-0.008677 u	ppm	0.001324	15.26	3.462920	Y 377.433
Ti (336.122 nm)	0.000735	ppm	0.000093	12.64	-217.274000	Y 377.433
Tl (190.794 nm)	-0.003146 u	ppm	0.001480	47.06	-10.935000	Y 377.433
U (409.013 nm)	0.000737 u	ppm	0.004778	> 100.00	113.571000	Y 377.433
V (292.401 nm)	0.023443	ppm	0.000145	0.62	940.195000	Y 377.433
Zn (206.200 nm)	0.001373	ppm	0.000070	5.08	9.129550	Y 377.433
Zr (343.823 nm)	0.000378	ppm	0.000218	57.80	-103.225000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.137045	12112.023307	0.002550	0.22
Y 377.433	1.130921	522075.191567	0.002073	0.18
Y_R 377.433	1.165950	44058.600000	0.002096	0.18
Y_R 488.368	1.159560	41848.700000	0.007574	0.65
Y_R2 488.368	1.161786	81762.685112	0.003623	0.31
Y_R4	1.155990	35470.500000	0.014859	1.29

Sample Name: 280-115724-A-5-Asd@5

Date: 11/5/2018 11:53:53 PM Rack:Tube: 2:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000194	ppm	0.000237	> 100.00	-234.500000	Y 377.433
Al (394.401 nm)	0.000402	ppm	0.000284	70.58	101.656000	Y 377.433
Al H (396.152 nm)	0.124387 u	ppm	0.004802	3.86	2.729750	Y_R 377.433
As (188.980 nm)	0.002503	ppm	0.000398	15.91	-11.607900	Y 242.219
B (249.678 nm)	-0.005448 u	ppm	0.001930	35.43	24.821300	Y 242.219
Ba (493.408 nm)	0.002447	ppm	0.000337	13.78	1024.940000	Y_R 488.368
Be (234.861 nm)	0.000076	ppm	0.000077	> 100.00	-2.101280	Y_R 488.368
Bi (223.061 nm)	-0.005235 u	ppm	0.000584	11.16	34.646600	Y 377.433
Ca (315.887 nm)	6.265349	ppm	0.000674	0.01	4136.060670	Y_R 377.433
Cd (214.439 nm)	0.000011 u	ppm	0.000021	> 100.00	-10.879400	Y 377.433
Co (228.615 nm)	0.000465	ppm	0.000158	33.90	-16.929300	Y 242.219
Cr (205.560 nm)	0.001775	ppm	0.000595	33.53	-0.872808	Y 377.433
Cu (324.754 nm)	0.000400	ppm	0.000255	63.74	218.463000	Y 377.433
Fe (238.204 nm)	0.009576	ppm	0.001509	15.76	27.490316	Y_R 377.433
Fe H (259.940 nm)	0.019191 u	ppm	0.000459	2.39	6.603480	Y_R 377.433
K (766.491 nm)	1.107330	ppm	0.018347	1.66	2818.150000	Y_R2 488.368
Li (670.783 nm)	0.012341	ppm	0.001232	9.98	-272.107000	Y_R2 488.368
Mg (279.078 nm)	2.023170	ppm	0.005706	0.28	4421.580000	Y 377.433
Mn (257.610 nm)	0.000205	ppm	0.000005	2.66	65.576700	Y 377.433
Mo (202.032 nm)	0.000792	ppm	0.000272	34.34	27.690500	Y 377.433
Na (589.592 nm)	5.618450	ppm	0.069981	1.25	2686.640000	Y_R2 488.368
Na H (589.593 nm)	7.301706 u	ppm	0.003170	0.04	2216.549857	Y_R4
Ni (231.604 nm)	-0.000059 u	ppm	0.000864	> 100.00	8.852320	Y 377.433
P (213.618 nm)	0.010473	ppm	0.003286	31.38	11.069000	Y 242.219
Pb (220.353 nm)	-0.003029 u	ppm	0.001784	58.88	7.693670	Y 242.219
S (181.972 nm)	2.156373	ppm	0.009837	0.46	1004.576866	Y 377.433
Sb (206.834 nm)	0.001579	ppm	0.000587	37.18	1.475450	Y 377.433
Se (196.026 nm)	0.003230	ppm	0.000575	17.80	6.495680	Y 242.219
Si (288.158 nm)	3.844750	ppm	0.013189	0.34	18508.900000	Y 377.433
Sn (189.925 nm)	-0.006435 u	ppm	0.001141	17.74	0.550835	Y 377.433
Sr (421.552 nm)	0.044694	ppm	0.000356	0.80	5466.213506	Y_R 488.368
Th (288.505 nm)	0.001208 u	ppm	0.004941	> 100.00	15.328900	Y 377.433
Ti (336.122 nm)	0.000524	ppm	0.000103	19.67	-299.694000	Y 377.433
Tl (190.794 nm)	-0.003330 u	ppm	0.003470	> 100.00	-10.787100	Y 377.433
U (409.013 nm)	0.003095 u	ppm	0.011045	> 100.00	121.316000	Y 377.433
V (292.401 nm)	0.005132	ppm	0.000002	0.05	55.032900	Y 377.433
Zn (206.200 nm)	0.000213	ppm	0.000107	50.09	5.115890	Y 377.433
Zr (343.823 nm)	0.000266	ppm	0.000305	> 100.00	-107.755000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.144767	12194.278085	0.005962	0.52
Y 377.433	1.135411	524148.208500	0.006680	0.59
Y_R 377.433	1.169740	44202.000000	0.001433	0.12
Y_R 488.368	1.164950	42043.000000	0.008276	0.71
Y_R2 488.368	1.171353	82436.027041	0.004420	0.38
Y_R4	1.155430	35453.500000	0.005627	0.49

Sample Name: 280-115724-A-5-B MS

Date: 11/5/2018 11:57:04 PM Rack:Tube: 2:14

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054511	ppm	0.000397	0.73	1212.400000	Y 377.433
Al (394.401 nm)	2.104680	ppm	0.001192	0.06	26662.900000	Y 377.433
Al H (396.152 nm)	1.978630	ppm	0.003525	0.18	3506.710000	Y_R 377.433
As (188.980 nm)	1.041740	ppm	0.005361	0.51	1444.460000	Y 242.219
B (249.678 nm)	1.081070	ppm	0.001935	0.18	4386.990000	Y 242.219
Ba (493.408 nm)	2.100990	ppm	0.004245	0.20	193083.000000	Y_R 488.368
Be (234.861 nm)	0.052061	ppm	0.000251	0.48	2671.820000	Y_R 488.368
Bi (223.061 nm)	2.031100	ppm	0.000261	0.01	3391.310000	Y 377.433
Ca (315.887 nm)	82.085951	ppm	0.151050	0.18	54217.444341	Y_R 377.433
Cd (214.439 nm)	0.103592	ppm	0.000330	0.32	2568.290000	Y 377.433
Co (228.615 nm)	0.499900	ppm	0.003084	0.62	11877.800000	Y 242.219
Cr (205.560 nm)	0.220789	ppm	0.001160	0.53	1040.340000	Y 377.433
Cu (324.754 nm)	0.260402	ppm	0.000055	0.02	12757.000000	Y 377.433
Fe (238.204 nm)	1.302601	ppm	0.011042	0.85	2181.889104	Y_R 377.433
Fe H (259.940 nm)	1.297130 u	ppm	0.004158	0.32	1179.310000	Y_R 377.433
K (766.491 nm)	59.638300	ppm	0.039813	0.07	60022.800000	Y_R2 488.368
Li (670.783 nm)	1.071040	ppm	0.007467	0.70	14722.800000	Y_R2 488.368
Mg (279.078 nm)	61.173600	ppm	0.047451	0.08	133252.000000	Y 377.433
Mn (257.610 nm)	0.520080	ppm	0.000152	0.03	108836.000000	Y 377.433
Mo (202.032 nm)	1.081640	ppm	0.000866	0.08	12324.100000	Y 377.433
Na (589.592 nm)	78.567700 o	ppm	0.046309	0.06	39303.900000	Y_R2 488.368
Na H (589.593 nm)	80.327711	ppm	0.125477	0.16	28085.210490	Y_R4
Ni (231.604 nm)	0.500113	ppm	0.000837	0.17	1927.410000	Y 377.433
P (213.618 nm)	10.517100	ppm	0.060814	0.58	12187.900000	Y 242.219
Pb (220.353 nm)	0.511507	ppm	0.001099	0.21	1157.090000	Y 242.219
S (181.972 nm)	13.065774	ppm	0.042615	0.33	6220.947139	Y 377.433
Sb (206.834 nm)	0.542016	ppm	0.001750	0.32	879.676000	Y 377.433
Se (196.026 nm)	2.097500	ppm	0.007985	0.38	3155.690000	Y 242.219
Si (288.158 nm)	30.717900	ppm	0.183261	0.60	138898.000000	Y 377.433
Sn (189.925 nm)	2.139600	ppm	0.004021	0.19	2505.750000	Y 377.433
Sr (421.552 nm)	1.269687	ppm	0.002687	0.21	147661.976559	Y_R 488.368
Th (288.505 nm)	1.002410	ppm	0.007295	0.73	1054.630000	Y 377.433
Ti (336.122 nm)	1.061860	ppm	0.000515	0.05	100811.000000	Y 377.433
Tl (190.794 nm)	2.086030	ppm	0.013108	0.63	1184.200000	Y 377.433
U (409.013 nm)	2.155140	ppm	0.010008	0.46	4986.820000	Y 377.433
V (292.401 nm)	0.549342	ppm	0.000616	0.11	26341.300000	Y 377.433
Zn (206.200 nm)	0.515235	ppm	0.002327	0.45	1785.210000	Y 377.433
Zr (343.823 nm)	0.526335	ppm	0.000120	0.02	21211.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093353	11646.608068	0.001299	0.12
Y 377.433	1.093348	504730.131054	0.001296	0.12
Y_R 377.433	1.140110	43082.100000	0.003814	0.33
Y_R 488.368	1.139080	41109.400000	0.006158	0.54
Y_R2 488.368	1.138666	80135.578790	0.009008	0.79
Y_R4	1.163900	35713.400000	0.007953	0.68

Sample Name: 280-115724-A-5-C MSD

Date: 11/6/2018 12:00:34 AM Rack:Tube: 2:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053732	ppm	0.000296	0.55	1192.240000	Y 377.433
Al (394.401 nm)	2.057260	ppm	0.000638	0.03	26067.400000	Y 377.433
Al H (396.152 nm)	1.935480	ppm	0.009744	0.50	3428.600000	Y_R 377.433
As (188.980 nm)	1.019410	ppm	0.003281	0.32	1413.180000	Y 242.219
B (249.678 nm)	1.069500	ppm	0.001546	0.14	4340.590000	Y 242.219
Ba (493.408 nm)	2.054890	ppm	0.000065	0.00	188864.000000	Y_R 488.368
Be (234.861 nm)	0.050811	ppm	0.000016	0.03	2610.580000	Y_R 488.368
Bi (223.061 nm)	2.004280	ppm	0.001708	0.09	3347.070000	Y 377.433
Ca (315.887 nm)	81.289483	ppm	0.143332	0.18	53691.352285	Y_R 377.433
Cd (214.439 nm)	0.102156	ppm	0.000196	0.19	2532.540000	Y 377.433
Co (228.615 nm)	0.487251	ppm	0.000569	0.12	11576.900000	Y 242.219
Cr (205.560 nm)	0.217158	ppm	0.000828	0.38	1023.060000	Y 377.433
Cu (324.754 nm)	0.254346	ppm	0.000189	0.07	12463.500000	Y 377.433
Fe (238.204 nm)	1.059120	ppm	0.010946	1.03	1776.208168	Y_R 377.433
Fe H (259.940 nm)	1.052690 u	ppm	0.006342	0.60	954.996000	Y_R 377.433
K (766.491 nm)	59.061000	ppm	0.164660	0.28	59458.600000	Y_R2 488.368
Li (670.783 nm)	1.050290	ppm	0.003381	0.32	14429.000000	Y_R2 488.368
Mg (279.078 nm)	60.299200	ppm	0.052985	0.09	131348.000000	Y 377.433
Mn (257.610 nm)	0.508371	ppm	0.000242	0.05	106386.000000	Y 377.433
Mo (202.032 nm)	1.069830	ppm	0.001052	0.10	12189.600000	Y 377.433
Na (589.592 nm)	77.988200 o	ppm	0.146602	0.19	39013.500000	Y_R2 488.368
Na H (589.593 nm)	79.693339	ppm	0.459086	0.58	27863.486464	Y_R4
Ni (231.604 nm)	0.490509	ppm	0.002817	0.57	1890.540000	Y 377.433
P (213.618 nm)	10.285600	ppm	0.011376	0.11	11919.500000	Y 242.219
Pb (220.353 nm)	0.501667	ppm	0.000538	0.11	1135.080000	Y 242.219
S (181.972 nm)	13.298434	ppm	0.021878	0.16	6332.009212	Y 377.433
Sb (206.834 nm)	0.530576	ppm	0.002046	0.39	860.945000	Y 377.433
Se (196.026 nm)	2.065170	ppm	0.003548	0.17	3107.130000	Y 242.219
Si (288.158 nm)	31.130000	ppm	0.126170	0.41	140744.000000	Y 377.433
Sn (189.925 nm)	2.115480	ppm	0.000867	0.04	2477.600000	Y 377.433
Sr (421.552 nm)	1.248231	ppm	0.000732	0.06	145171.373301	Y_R 488.368
Th (288.505 nm)	0.978274	ppm	0.003692	0.38	1029.330000	Y 377.433
Ti (336.122 nm)	1.048690	ppm	0.000311	0.03	99556.600000	Y 377.433
Tl (190.794 nm)	2.055670	ppm	0.005966	0.29	1166.830000	Y 377.433
U (409.013 nm)	2.113720	ppm	0.000447	0.02	4892.660000	Y 377.433
V (292.401 nm)	0.540257	ppm	0.000884	0.16	25902.100000	Y 377.433
Zn (206.200 nm)	0.504252	ppm	0.000619	0.12	1747.230000	Y 377.433
Zr (343.823 nm)	0.519868	ppm	0.001025	0.20	20949.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099012	11706.883082	0.002607	0.24
Y 377.433	1.095636	505786.707760	0.002657	0.24
Y_R 377.433	1.149840	43449.800000	0.001606	0.14
Y_R 488.368	1.149040	41469.000000	0.000249	0.02
Y_R2 488.368	1.147856	80782.336815	0.008793	0.77
Y_R4	1.180210	36213.800000	0.002294	0.19

Sample Name: 280-115724-A-5-Apds

Date: 11/6/2018 12:04:02 AM Rack:Tube: 2:16

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049571	ppm	0.000446	0.90	1121.370000	Y 377.433
Al (394.401 nm)	1.018150	ppm	0.000084	0.01	12851.800000	Y 377.433
Al H (396.152 nm)	1.074030	ppm	0.015598	1.45	1635.050000	Y_R 377.433
As (188.980 nm)	0.212817	ppm	0.001908	0.90	283.033000	Y 242.219
B (249.678 nm)	0.114526	ppm	0.001047	0.91	506.207000	Y 242.219
Ba (493.408 nm)	0.116791	ppm	0.000436	0.37	11490.400000	Y_R 488.368
Be (234.861 nm)	0.050334	ppm	0.000439	0.87	2585.990000	Y_R 488.368
Bi (223.061 nm)	0.004489	ppm	0.002351	52.36	50.851500	Y 377.433
Ca (315.887 nm)	49.702483	ppm	0.059323	0.12	32827.313003	Y_R 377.433
Cd (214.439 nm)	0.050674	ppm	0.000193	0.38	1250.630000	Y 377.433
Co (228.615 nm)	0.048650	ppm	0.000140	0.29	1129.240000	Y 242.219
Cr (205.560 nm)	0.058781	ppm	0.000120	0.20	270.964000	Y 377.433
Cu (324.754 nm)	0.050444	ppm	0.000224	0.44	2609.590000	Y 377.433
Fe (238.204 nm)	1.043460	ppm	0.003435	0.33	1750.115710	Y_R 377.433
Fe H (259.940 nm)	1.038240 u	ppm	0.007807	0.75	941.732000	Y_R 377.433
K (766.491 nm)	26.824600	ppm	0.160468	0.60	27952.600000	Y_R2 488.368
Li (670.783 nm)	0.121125	ppm	0.001492	1.23	1268.670000	Y_R2 488.368
Mg (279.078 nm)	29.632800	ppm	0.018284	0.06	64560.500000	Y 377.433
Mn (257.610 nm)	0.051658	ppm	0.000033	0.06	10830.700000	Y 377.433
Mo (202.032 nm)	0.056527	ppm	0.000111	0.20	661.762000	Y 377.433
Na (589.592 nm)	46.132100	ppm	0.133808	0.29	23038.900000	Y_R2 488.368
Na H (589.593 nm)	47.248460 u	ppm	0.203551	0.43	16469.245089	Y_R4
Ni (231.604 nm)	0.049199	ppm	0.001010	2.05	197.924000	Y 377.433
P (213.618 nm)	2.031540	ppm	0.010788	0.53	2353.370000	Y 242.219
Pb (220.353 nm)	0.098288	ppm	0.002120	2.16	234.502000	Y 242.219
S (181.972 nm)	10.689834	ppm	0.018799	0.18	5082.882835	Y 377.433
Sb (206.834 nm)	0.099733	ppm	0.001350	1.35	162.939000	Y 377.433
Se (196.026 nm)	0.208014	ppm	0.001014	0.49	314.191000	Y 242.219
Si (288.158 nm)	24.809600	ppm	0.123803	0.50	112429.000000	Y 377.433
Sn (189.925 nm)	0.094475	ppm	0.001886	2.00	118.350000	Y 377.433
Sr (421.552 nm)	0.268620	ppm	0.000505	0.19	31459.386325	Y_R 488.368
Th (288.505 nm)	0.191497	ppm	0.003205	1.67	214.545000	Y 377.433
Ti (336.122 nm)	0.051447	ppm	0.000027	0.05	4651.950000	Y 377.433
Tl (190.794 nm)	0.204725	ppm	0.001095	0.54	107.933000	Y 377.433
U (409.013 nm)	0.523463	ppm	0.009760	1.86	1302.730000	Y 377.433
V (292.401 nm)	0.074106	ppm	0.000068	0.09	3375.120000	Y 377.433
Zn (206.200 nm)	0.203842	ppm	0.000734	0.36	708.986000	Y 377.433
Zr (343.823 nm)	0.050861	ppm	0.000097	0.19	1942.650000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.126405	11998.686930	0.000443	0.04
Y 377.433	1.121776	517853.910124	0.001724	0.15
Y_R 377.433	1.164850	44017.200000	0.003082	0.26
Y_R 488.368	1.159600	41850.000000	0.001541	0.13
Y_R2 488.368	1.176124	82771.789753	0.005330	0.45
Y_R4	1.185630	36380.200000	0.003949	0.33

Sample Name: 280-115724-A-6-A

Date: 11/6/2018 12:07:29 AM Rack:Tube: 2:17

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000115 u	ppm	0.000299	> 100.00	-241.614000	Y 377.433
Al (394.401 nm)	0.011256	ppm	0.000769	6.83	286.067000	Y 377.433
Al H (396.152 nm)	0.096020 u	ppm	0.002541	2.65	8.013580	Y_R 377.433
As (188.980 nm)	0.006423	ppm	0.000008	0.12	-6.202100	Y 242.219
B (249.678 nm)	0.013138	ppm	0.000795	6.05	98.344500	Y 242.219
Ba (493.408 nm)	0.017843	ppm	0.000023	0.13	2436.470000	Y_R 488.368
Be (234.861 nm)	0.000146	ppm	0.000148	> 100.00	-46.373700	Y_R 488.368
Bi (223.061 nm)	0.002129 u	ppm	0.006108	> 100.00	47.236200	Y 377.433
Ca (315.887 nm)	31.047493	ppm	0.014889	0.05	20505.136053	Y_R 377.433
Cd (214.439 nm)	0.000137	ppm	0.000114	83.20	-7.743810	Y 377.433
Co (228.615 nm)	0.000239	ppm	0.000163	68.17	-18.492400	Y 242.219
Cr (205.560 nm)	0.008663	ppm	0.000592	6.83	32.005200	Y 377.433
Cu (324.754 nm)	-0.000173 u	ppm	0.000017	9.67	178.731000	Y 377.433
Fe (238.204 nm)	3.405193	ppm	0.012705	0.37	5685.163477	Y_R 377.433
Fe H (259.940 nm)	3.418840 u	ppm	0.007907	0.23	3126.300000	Y_R 377.433
K (766.491 nm)	6.646340	ppm	0.045774	0.69	8231.650000	Y_R2 488.368
Li (670.783 nm)	0.022769	ppm	0.001082	4.75	-124.411000	Y_R2 488.368
Mg (279.078 nm)	9.995470	ppm	0.003898	0.04	21785.400000	Y 377.433
Mn (257.610 nm)	0.012976	ppm	0.000012	0.09	2737.460000	Y 377.433
Mo (202.032 nm)	0.001772	ppm	0.000646	36.49	38.836200	Y 377.433
Na (589.592 nm)	26.739000	ppm	0.033639	0.13	13297.400000	Y_R2 488.368
Na H (589.593 nm)	27.830763 u	ppm	0.055052	0.20	9545.439138	Y_R4
Ni (231.604 nm)	-0.000188 u	ppm	0.000293	> 100.00	8.875400	Y 377.433
P (213.618 nm)	0.030652	ppm	0.000676	2.21	34.519800	Y 242.219
Pb (220.353 nm)	-0.002800 u	ppm	0.000200	7.15	8.203870	Y 242.219
S (181.972 nm)	10.805156	ppm	0.002462	0.02	5136.883973	Y 377.433
Sb (206.834 nm)	-0.000968 u	ppm	0.000844	87.23	-2.382970	Y 377.433
Se (196.026 nm)	0.004660	ppm	0.000160	3.44	7.788870	Y 242.219
Si (288.158 nm)	20.461700	ppm	0.128457	0.63	92951.000000	Y 377.433
Sn (189.925 nm)	-0.007691 u	ppm	0.000481	6.26	-0.914796	Y 377.433
Sr (421.552 nm)	0.222187	ppm	0.001462	0.66	26069.743554	Y_R 488.368
Th (288.505 nm)	-0.011729 u	ppm	0.000273	2.33	-0.171910	Y 377.433
Ti (336.122 nm)	0.000717	ppm	0.000120	16.69	-218.405000	Y 377.433
Tl (190.794 nm)	0.003200	ppm	0.003527	> 100.00	-7.395650	Y 377.433
U (409.013 nm)	0.001976 u	ppm	0.004829	> 100.00	118.182000	Y 377.433
V (292.401 nm)	0.024885	ppm	0.000278	1.12	1010.630000	Y 377.433
Zn (206.200 nm)	0.008817	ppm	0.000588	6.67	35.217200	Y 377.433
Zr (343.823 nm)	0.000449	ppm	0.000096	21.31	-100.323000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.146331	12210.941897	0.000646	0.06
Y 377.433	1.139333	525958.583616	0.000878	0.08
Y_R 377.433	1.181560	44648.600000	0.007397	0.63
Y_R 488.368	1.191220	42991.000000	0.001089	0.09
Y_R2 488.368	1.180362	83070.051304	0.000205	0.02
Y_R4	1.181790	36262.200000	0.003960	0.34

Sample Name: 280-115724-A-7-A

Date: 11/6/2018 12:11:01 AM Rack:Tube: 2:18

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000396 u	ppm	0.000749	> 100.00	-230.609000	Y 377.433
Al (394.401 nm)	0.009349	ppm	0.000298	3.19	274.605000	Y 377.433
Al H (396.152 nm)	0.078360 u	ppm	0.002170	2.77	-10.835600	Y_R 377.433
As (188.980 nm)	0.008127	ppm	0.000916	11.27	-3.744370	Y 242.219
B (249.678 nm)	0.006630	ppm	0.001304	19.67	73.117100	Y 242.219
Ba (493.408 nm)	0.070924	ppm	0.000167	0.24	7292.350000	Y_R 488.368
Be (234.861 nm)	0.000109	ppm	0.000019	17.29	-9.051490	Y_R 488.368
Bi (223.061 nm)	0.001159 u	ppm	0.004148	> 100.00	45.275300	Y 377.433
Ca (315.887 nm)	49.064461	ppm	0.018795	0.04	32405.684911	Y_R 377.433
Cd (214.439 nm)	0.000325	ppm	0.000090	27.75	-3.064920	Y 377.433
Co (228.615 nm)	0.000435	ppm	0.000183	41.97	-16.941800	Y 242.219
Cr (205.560 nm)	0.001872	ppm	0.000010	0.56	-0.421351	Y 377.433
Cu (324.754 nm)	-0.000043 u	ppm	0.000345	> 100.00	170.050000	Y 377.433
Fe (238.204 nm)	0.623622	ppm	0.002345	0.38	1050.595687	Y_R 377.433
Fe H (259.940 nm)	0.627187 u	ppm	0.006808	1.09	564.533000	Y_R 377.433
K (766.491 nm)	6.991400	ppm	0.054118	0.77	8568.890000	Y_R2 488.368
Li (670.783 nm)	0.022121	ppm	0.008074	36.50	-133.587000	Y_R2 488.368
Mg (279.078 nm)	12.075800	ppm	0.015644	0.13	26319.600000	Y 377.433
Mn (257.610 nm)	0.071121	ppm	0.000024	0.03	14902.800000	Y 377.433
Mo (202.032 nm)	0.004325	ppm	0.000150	3.47	67.881100	Y 377.433
Na (589.592 nm)	28.723200	ppm	0.090534	0.32	14293.400000	Y_R2 488.368
Na H (589.593 nm)	29.852894 u	ppm	0.154378	0.52	10262.260317	Y_R4
Ni (231.604 nm)	0.000652 u	ppm	0.001771	> 100.00	11.672000	Y 377.433
P (213.618 nm)	0.027209	ppm	0.003753	13.79	30.492100	Y 242.219
Pb (220.353 nm)	-0.004955 u	ppm	0.000899	18.14	3.387510	Y 242.219
S (181.972 nm)	13.968264	ppm	0.024531	0.18	6648.824617	Y 377.433
Sb (206.834 nm)	-0.001867 u	ppm	0.000119	6.35	-4.162500	Y 377.433
Se (196.026 nm)	0.006540	ppm	0.000397	6.07	11.412800	Y 242.219
Si (288.158 nm)	20.141300	ppm	0.016820	0.08	91515.900000	Y 377.433
Sn (189.925 nm)	-0.006697 u	ppm	0.001174	17.53	0.245067	Y 377.433
Sr (421.552 nm)	0.266326	ppm	0.001035	0.39	31193.115616	Y_R 488.368
Th (288.505 nm)	-0.012886 u	ppm	0.001654	12.84	0.292766	Y 377.433
Ti (336.122 nm)	0.000680	ppm	0.000195	28.73	-177.105000	Y 377.433
Tl (190.794 nm)	-0.003343 u	ppm	0.002405	71.94	-11.243000	Y 377.433
U (409.013 nm)	0.001544 u	ppm	0.010138	> 100.00	114.005000	Y 377.433
V (292.401 nm)	0.012051	ppm	0.000001	0.01	388.965000	Y 377.433
Zn (206.200 nm)	1.196360	ppm	0.001332	0.11	4139.170000	Y 377.433
Zr (343.823 nm)	0.000409	ppm	0.000315	76.89	-101.952000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.142143	12166.323263	0.003224	0.28
Y 377.433	1.134893	523909.040673	0.005967	0.53
Y_R 377.433	1.182840	44696.700000	0.003509	0.30
Y_R 488.368	1.176700	42467.200000	0.002471	0.21
Y_R2 488.368	1.177831	82891.872988	0.010192	0.87
Y_R4	1.174610	36041.800000	0.004630	0.39

Sample Name: 280-115724-A-8-A

Date: 11/6/2018 12:14:28 AM Rack:Tube: 2:19

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000657	ppm	0.000683	> 100.00	-223.284000	Y 377.433
Al (394.401 nm)	0.008520	ppm	0.000049	0.58	262.075000	Y 377.433
Al H (396.152 nm)	0.088091 u	ppm	0.002436	2.76	2.471110	Y_R 377.433
As (188.980 nm)	0.006032	ppm	0.001162	19.27	-6.729790	Y 242.219
B (249.678 nm)	0.006034	ppm	0.001026	17.01	70.074900	Y 242.219
Ba (493.408 nm)	0.069646	ppm	0.000239	0.34	7176.860000	Y_R 488.368
Be (234.861 nm)	0.000063 u	ppm	0.000146	> 100.00	-39.654400	Y_R 488.368
Bi (223.061 nm)	0.003124 u	ppm	0.006128	> 100.00	48.774500	Y 377.433
Ca (315.887 nm)	47.800763	ppm	0.106638	0.22	31570.989504	Y_R 377.433
Cd (214.439 nm)	0.000287	ppm	0.000118	41.10	-4.014040	Y 377.433
Co (228.615 nm)	0.000589	ppm	0.000146	24.75	-11.049600	Y 242.219
Cr (205.560 nm)	0.001509	ppm	0.000221	14.63	-2.145420	Y 377.433
Cu (324.754 nm)	-0.000261 u	ppm	0.000099	37.97	162.794000	Y 377.433
Fe (238.204 nm)	2.626690	ppm	0.014096	0.54	4388.046565	Y_R 377.433
Fe H (259.940 nm)	2.626100 u	ppm	0.001777	0.07	2398.840000	Y_R 377.433
K (766.491 nm)	6.774140	ppm	0.171354	2.53	8356.550000	Y_R2 488.368
Li (670.783 nm)	0.019227	ppm	0.001831	9.52	-174.576000	Y_R2 488.368
Mg (279.078 nm)	11.707600	ppm	0.011851	0.10	25515.800000	Y 377.433
Mn (257.610 nm)	0.070009	ppm	0.000015	0.02	14670.300000	Y 377.433
Mo (202.032 nm)	0.001245	ppm	0.000537	43.17	32.838700	Y 377.433
Na (589.592 nm)	28.156000	ppm	0.021908	0.08	14008.400000	Y_R2 488.368
Na H (589.593 nm)	29.065891 u	ppm	0.096335	0.33	9981.339132	Y_R4
Ni (231.604 nm)	-0.000987 u	ppm	0.000029	2.96	5.689840	Y 377.433
P (213.618 nm)	0.019784	ppm	0.002697	13.63	21.870600	Y 242.219
Pb (220.353 nm)	-0.002376 u	ppm	0.002514	> 100.00	9.163600	Y 242.219
S (181.972 nm)	13.465961	ppm	0.024518	0.18	6408.841195	Y 377.433
Sb (206.834 nm)	-0.001781 u	ppm	0.002547	> 100.00	-3.843740	Y 377.433
Se (196.026 nm)	0.004865	ppm	0.000442	9.08	8.377840	Y 242.219
Si (288.158 nm)	19.882600	ppm	0.254341	1.28	90357.000000	Y 377.433
Sn (189.925 nm)	-0.006489 u	ppm	0.000030	0.46	0.488487	Y 377.433
Sr (421.552 nm)	0.258111	ppm	0.000756	0.29	30239.695659	Y_R 488.368
Th (288.505 nm)	-0.012755 u	ppm	0.001356	10.63	0.249229	Y 377.433
Ti (336.122 nm)	0.000625	ppm	0.000306	48.98	-184.820000	Y 377.433
Tl (190.794 nm)	-0.003919 u	ppm	0.004538	> 100.00	-11.620500	Y 377.433
U (409.013 nm)	0.005766 u	ppm	0.008816	> 100.00	124.803000	Y 377.433
V (292.401 nm)	0.011608	ppm	0.000205	1.77	367.901000	Y 377.433
Zn (206.200 nm)	1.641990	ppm	0.000667	0.04	5679.520000	Y 377.433
Zr (343.823 nm)	0.000483	ppm	0.000058	11.96	-98.968300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.133088	12069.868517	0.000101	0.01
Y 377.433	1.131417	522304.197769	0.000935	0.08
Y_R 377.433	1.165620	44046.300000	0.007144	0.61
Y_R 488.368	1.161940	41934.500000	0.001362	0.12
Y_R2 488.368	1.168832	82258.579553	0.004360	0.37
Y_R4	1.178330	36156.100000	0.001985	0.17

Sample Name: CCVH-5408055

Date: 11/6/2018 12:18:00 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001105	ppm	0.000095	8.62	-320.598000	Y 377.433
Al (394.401 nm)	51.290000 o	ppm	0.050764	0.10	638747.000000	Y 377.433
Al H (396.152 nm)	49.970500	ppm	0.008705	0.02	82179.900000	Y_R 377.433
As (188.980 nm)	-0.004209 u	ppm	0.000455	10.82	-23.100800	Y 242.219
B (249.678 nm)	-0.013035 u	ppm	0.000367	2.81	-21.753200	Y 242.219
Ba (493.408 nm)	-0.000414 u	ppm	0.000269	64.87	799.403000	Y_R 488.368
Be (234.861 nm)	0.000109	ppm	0.000041	37.77	-698.123000	Y_R 488.368
Bi (223.061 nm)	1.002420	ppm	0.005275	0.53	1701.960000	Y 377.433
Ca (315.887 nm)	-0.006121 u	ppm	0.000691	11.29	3.988602	Y_R 377.433
Cd (214.439 nm)	0.000246	ppm	0.000086	34.91	-5.035830	Y 377.433
Co (228.615 nm)	0.001667	ppm	0.000401	24.03	66.812200	Y 242.219
Cr (205.560 nm)	0.000036 u	ppm	0.000322	> 100.00	-10.125600	Y 377.433
Cu (324.754 nm)	-0.000160 u	ppm	0.000100	62.41	656.639000	Y 377.433
Fe (238.204 nm)	49.432219 o	ppm	0.048473	0.10	82373.986527	Y_R 377.433
Fe H (259.940 nm)	49.703000	ppm	0.076934	0.15	45599.100000	Y_R 377.433
K (766.491 nm)	0.038866 u	ppm	0.055861	> 100.00	1773.900000	Y_R2 488.368
Li (670.783 nm)	0.012937	ppm	0.002590	20.02	-263.658000	Y_R2 488.368
Mg (279.078 nm)	-0.031268 u	ppm	0.000734	2.35	-206.656000	Y 377.433
Mn (257.610 nm)	0.000318	ppm	0.000030	9.32	89.235300	Y 377.433
Mo (202.032 nm)	-0.001311 u	ppm	0.000017	1.30	3.766180	Y 377.433
Na (589.592 nm)	252.490000 o	ppm	0.543240	0.22	126715.000000	Y_R2 488.368
Na H (589.593 nm)	255.315533	ppm	0.968241	0.38	90776.052281	Y_R4
Ni (231.604 nm)	-0.000368 u	ppm	0.000235	63.87	15.080100	Y 377.433
P (213.618 nm)	-0.013542 u	ppm	0.000822	6.07	-18.057800	Y 242.219
Pb (220.353 nm)	-0.003993 u	ppm	0.003261	81.67	16.097700	Y 242.219
S (181.972 nm)	5.082474	ppm	0.004312	0.08	2401.672908	Y 377.433
Sb (206.834 nm)	-0.000610 u	ppm	0.001101	> 100.00	1.950750	Y 377.433
Se (196.026 nm)	-0.000848 u	ppm	0.001834	> 100.00	-12.369700	Y 242.219
Si (288.158 nm)	-0.196725 u	ppm	0.001347	0.68	403.501000	Y 377.433
Sn (189.925 nm)	-0.007653 u	ppm	0.000509	6.65	-0.870782	Y 377.433
Sr (421.552 nm)	-0.000105 u	ppm	0.000069	65.93	271.731120	Y_R 488.368
Th (288.505 nm)	5.000660	ppm	0.012979	0.26	5365.060000	Y 377.433
Ti (336.122 nm)	0.000794	ppm	0.000118	14.85	-289.562000	Y 377.433
Tl (190.794 nm)	-0.002815 u	ppm	0.006639	> 100.00	-13.732400	Y 377.433
U (409.013 nm)	10.409400	ppm	0.007124	0.07	23934.300000	Y 377.433
V (292.401 nm)	-0.003962 u	ppm	0.000129	3.26	-394.620000	Y 377.433
Zn (206.200 nm)	0.000243 u	ppm	0.000387	> 100.00	10.525900	Y 377.433
Zr (343.823 nm)	-0.006582 u	ppm	0.000069	1.05	-385.288000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.098978	11706.529420	0.000119	0.01
Y 377.433	1.100368	507971.081502	0.000684	0.06
Y_R 377.433	1.151640	43517.900000	0.000299	0.03
Y_R 488.368	1.164400	42023.000000	0.003025	0.26
Y_R2 488.368	1.153729	81195.661438	0.000962	0.08
Y_R4	1.176200	36090.800000	0.003291	0.28

Sample Name: CCV-5407762

Date: 11/6/2018 12:21:37 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.508381	ppm	0.000282	0.06	13828.000000	Y 377.433
Al (394.401 nm)	0.504467	ppm	0.001706	0.34	6485.600000	Y 377.433
Al H (396.152 nm)	0.556775 u	ppm	0.002868	0.52	894.802000	Y_R 377.433
As (188.980 nm)	0.994694	ppm	0.003658	0.37	1378.540000	Y 242.219
B (249.678 nm)	0.481136	ppm	0.000443	0.09	1977.740000	Y 242.219
Ba (493.408 nm)	0.496127	ppm	0.001025	0.21	46207.900000	Y_R 488.368
Be (234.861 nm)	0.510285	ppm	0.000188	0.04	26384.400000	Y_R 488.368
Bi (223.061 nm)	-0.002359 u	ppm	0.001099	46.61	39.793400	Y 377.433
Ca (315.887 nm)	4.985211	ppm	0.037230	0.75	3290.616715	Y_R 377.433
Cd (214.439 nm)	0.512639	ppm	0.001999	0.39	12753.600000	Y 377.433
Co (228.615 nm)	0.497653	ppm	0.001710	0.34	11801.500000	Y 242.219
Cr (205.560 nm)	0.519781	ppm	0.000444	0.09	2469.300000	Y 377.433
Cu (324.754 nm)	0.510754	ppm	0.002839	0.56	24783.700000	Y 377.433
Fe (238.204 nm)	2.497397	ppm	0.000089	0.00	4172.621501	Y_R 377.433
Fe H (259.940 nm)	2.511210 u	ppm	0.016917	0.67	2293.410000	Y_R 377.433
K (766.491 nm)	50.807900	ppm	0.232917	0.46	51392.500000	Y_R2 488.368
Li (670.783 nm)	1.037910	ppm	0.003057	0.29	14253.600000	Y_R2 488.368
Mg (279.078 nm)	20.211600	ppm	0.080034	0.40	44041.800000	Y 377.433
Mn (257.610 nm)	0.508286	ppm	0.001273	0.25	106368.000000	Y 377.433
Mo (202.032 nm)	0.514274	ppm	0.000673	0.13	5869.350000	Y 377.433
Na (589.592 nm)	25.687300	ppm	0.107700	0.42	12761.600000	Y_R2 488.368
Na H (589.593 nm)	28.059952 u	ppm	0.024395	0.09	9580.112018	Y_R4
Ni (231.604 nm)	0.510083	ppm	0.000214	0.04	1964.870000	Y 377.433
P (213.618 nm)	1.000260	ppm	0.003657	0.37	1136.300000	Y 242.219
Pb (220.353 nm)	0.996220	ppm	0.003403	0.34	2237.750000	Y 242.219
S (181.972 nm)	0.003317	ppm	0.001663	50.12	-22.199595	Y 377.433
Sb (206.834 nm)	1.025540	ppm	0.003844	0.37	1685.020000	Y 377.433
Se (196.026 nm)	1.018730	ppm	0.003079	0.30	1533.410000	Y 242.219
Si (288.158 nm)	4.883620	ppm	0.016458	0.34	23162.900000	Y 377.433
Sn (189.925 nm)	1.022520	ppm	0.002132	0.21	1201.720000	Y 377.433
Sr (421.552 nm)	0.504082	ppm	0.001485	0.29	58791.658693	Y_R 488.368
Th (288.505 nm)	-0.025384 u	ppm	0.010378	40.88	-45.595100	Y 377.433
Ti (336.122 nm)	0.514357	ppm	0.000869	0.17	48557.300000	Y 377.433
Tl (190.794 nm)	1.019850	ppm	0.000450	0.04	575.085000	Y 377.433
U (409.013 nm)	-0.018592 u	ppm	0.006916	37.20	27.287200	Y 377.433
V (292.401 nm)	0.506411	ppm	0.001350	0.27	24188.000000	Y 377.433
Zn (206.200 nm)	0.511764	ppm	0.002704	0.53	1773.350000	Y 377.433
Zr (343.823 nm)	0.512581	ppm	0.000320	0.06	20654.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.132868	12067.522158	0.001536	0.14
Y 377.433	1.120411	517223.788562	0.002677	0.24
Y_R 377.433	1.152960	43567.700000	0.002494	0.22
Y_R 488.368	1.154560	41668.100000	0.000933	0.08
Y_R2 488.368	1.141546	80338.276334	0.000017	0.00
Y_R4	1.137970	34917.600000	0.001293	0.11

Sample Name: CCB

Date: 11/6/2018 12:25:07 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000526	ppm	0.000143	27.15	-224.617000	Y 377.433
Al (394.401 nm)	-0.000643 u	ppm	0.000857	> 100.00	81.184100	Y 377.433
Al H (396.152 nm)	0.133895 Zu	ppm	0.004846	3.62	5.383480 Z	Y_R 377.433
As (188.980 nm)	0.000209 u	ppm	0.001662	> 100.00	-14.822700	Y 242.219
B (249.678 nm)	-0.010094 u	ppm	0.000990	9.81	6.172710	Y 242.219
Ba (493.408 nm)	-0.001149 u	ppm	0.000335	29.16	695.849000	Y_R 488.368
Be (234.861 nm)	0.000157	ppm	0.000121	77.07	2.248750	Y_R 488.368
Bi (223.061 nm)	-0.001551 u	ppm	0.001283	82.72	40.714300	Y 377.433
Ca (315.887 nm)	-0.001904 u	ppm	0.005566	> 100.00	-3.577004	Y_R 377.433
Cd (214.439 nm)	0.000270	ppm	0.000145	53.64	-4.441810	Y 377.433
Co (228.615 nm)	0.000690	ppm	0.000495	71.71	-11.590700	Y 242.219
Cr (205.560 nm)	0.000604	ppm	0.000139	22.94	-6.460330	Y 377.433
Cu (324.754 nm)	0.000812	ppm	0.000341	42.00	239.781000	Y 377.433
Fe (238.204 nm)	-0.001858 u	ppm	0.001420	76.42	8.440230	Y_R 377.433
Fe H (259.940 nm)	0.010977 u	ppm	0.000512	4.66	-0.933990	Y_R 377.433
K (766.491 nm)	-0.138127 u	ppm	0.178523	> 100.00	1600.920000	Y_R2 488.368
Li (670.783 nm)	0.014479 Z	ppm	0.004846	33.47	-241.831000 Z	Y_R2 488.368
Mg (279.078 nm)	0.001733	ppm	0.001922	> 100.00	17.851300	Y 377.433
Mn (257.610 nm)	0.000005	ppm	0.000003	52.00	23.789900	Y 377.433
Mo (202.032 nm)	0.000001 u	ppm	0.000102	> 100.00	18.686900	Y 377.433
Na (589.592 nm)	0.155727	ppm	0.084143	54.03	-57.771400	Y_R2 488.368
Na H (589.593 nm)	2.256163 u	ppm	0.024486	1.09	415.249672	Y_R4
Ni (231.604 nm)	-0.000388 u	ppm	0.000384	98.83	7.591820	Y 377.433
P (213.618 nm)	0.000675 u	ppm	0.002204	> 100.00	-0.307283	Y 242.219
Pb (220.353 nm)	-0.002700 u	ppm	0.000414	15.33	8.467440	Y 242.219
S (181.972 nm)	0.010728	ppm	0.000301	2.80	-20.586460	Y 377.433
Sb (206.834 nm)	-0.000572 u	ppm	0.001527	> 100.00	-2.065780	Y 377.433
Se (196.026 nm)	0.001295 u	ppm	0.003280	> 100.00	3.589270	Y 242.219
Si (288.158 nm)	-0.204010 Zu	ppm	0.000112	0.05	370.862000 Z	Y 377.433
Sn (189.925 nm)	-0.005436 u	ppm	0.000778	14.30	1.717250	Y 377.433
Sr (421.552 nm)	-0.000251 u	ppm	0.000031	12.15	249.037433	Y_R 488.368
Th (288.505 nm)	-0.000922 u	ppm	0.003295	> 100.00	13.414900	Y 377.433
Ti (336.122 nm)	0.000575	ppm	0.000014	2.39	-310.430000	Y 377.433
Tl (190.794 nm)	-0.002120 u	ppm	0.001530	72.19	-10.030500	Y 377.433
U (409.013 nm)	-0.005466 u	ppm	0.005407	98.92	102.327000	Y 377.433
V (292.401 nm)	0.000475	ppm	0.000133	27.98	-172.216000	Y 377.433
Zn (206.200 nm)	0.000226 u	ppm	0.000993	> 100.00	5.158360	Y 377.433
Zr (343.823 nm)	0.000627	ppm	0.000169	26.92	-93.120700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120726	11938.189580	0.001350	0.12
Y 377.433	1.114249	514378.925117	0.002533	0.23
Y_R 377.433	1.135360	42902.700000	0.003227	0.28
Y_R 488.368	1.139750	41133.500000	0.002456	0.22
Y_R2 488.368	1.141774	80354.335680	0.004338	0.38
Y_R4	1.146490	35179.200000	0.009963	0.87

Sample Name: CCVL-5412564

Date: 11/6/2018 12:28:17 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010337	ppm	0.000284	2.75	47.588200	Y 377.433
Al (394.401 nm)	0.101791	ppm	0.000316	0.31	1360.220000	Y 377.433
Al H (396.152 nm)	0.232871 u	ppm	0.003696	1.59	172.995000	Y_R 377.433
As (188.980 nm)	0.015307	ppm	0.000261	1.70	6.328490	Y 242.219
B (249.678 nm)	0.092320	ppm	0.000416	0.45	417.350000	Y 242.219
Ba (493.408 nm)	0.009421	ppm	0.000102	1.08	1663.280000	Y_R 488.368
Be (234.861 nm)	0.001120	ppm	0.000003	0.28	50.721600	Y_R 488.368
Bi (223.061 nm)	0.095143	ppm	0.002256	2.37	200.110000	Y 377.433
Ca (315.887 nm)	0.205170	ppm	0.000533	0.26	133.222398	Y_R 377.433
Cd (214.439 nm)	0.005362	ppm	0.000092	1.72	122.367000	Y 377.433
Co (228.615 nm)	0.011275	ppm	0.000299	2.65	240.071000	Y 242.219
Cr (205.560 nm)	0.011061	ppm	0.000797	7.21	43.327700	Y 377.433
Cu (324.754 nm)	0.016272	ppm	0.000511	3.14	984.712000	Y 377.433
Fe (238.204 nm)	0.099209	ppm	0.000460	0.46	176.835121	Y_R 377.433
Fe H (259.940 nm)	0.114823 u	ppm	0.000089	0.08	94.360000	Y_R 377.433
K (766.491 nm)	2.933090	ppm	0.077974	2.66	4602.540000	Y_R2 488.368
Li (670.783 nm)	0.036731 Q	ppm	0.001090	2.97	73.336700 Q	Y_R2 488.368
Mg (279.078 nm)	0.212686	ppm	0.000078	0.04	476.910000	Y 377.433
Mn (257.610 nm)	0.010824	ppm	0.000005	0.05	2287.280000	Y 377.433
Mo (202.032 nm)	0.020745	ppm	0.000543	2.62	254.681000	Y 377.433
Na (589.592 nm)	1.297320	ppm	0.017534	1.35	515.603000	Y_R2 488.368
Na H (589.593 nm)	3.098849 u	ppm	0.004393	0.14	715.111901	Y_R4
Ni (231.604 nm)	0.042597	ppm	0.000015	0.04	172.335000	Y 377.433
P (213.618 nm)	2.925410	ppm	0.011870	0.41	3391.960000	Y 242.219
Pb (220.353 nm)	0.008555	ppm	0.002323	27.15	33.601800	Y 242.219
S (181.972 nm)	0.099963	ppm	0.000771	0.77	22.079176	Y 377.433
Sb (206.834 nm)	0.019409	ppm	0.000117	0.60	30.657700	Y 377.433
Se (196.026 nm)	0.021407	ppm	0.003454	16.13	33.819200	Y 242.219
Si (288.158 nm)	0.302242 Q	ppm	0.002054	0.68	2638.820000 Q	Y 377.433
Sn (189.925 nm)	0.096233	ppm	0.001127	1.17	120.402000	Y 377.433
Sr (421.552 nm)	0.009452	ppm	0.000085	0.90	1375.455318	Y_R 488.368
Th (288.505 nm)	0.013187	ppm	0.002002	15.18	28.047200	Y 377.433
Ti (336.122 nm)	0.011012	ppm	0.000147	1.34	682.675000	Y 377.433
Tl (190.794 nm)	0.016773	ppm	0.001610	9.60	0.767188	Y 377.433
U (409.013 nm)	0.056709	ppm	0.002452	4.32	243.160000	Y 377.433
V (292.401 nm)	0.010517	ppm	0.000049	0.47	310.887000	Y 377.433
Zn (206.200 nm)	0.021924	ppm	0.000508	2.32	80.161500	Y 377.433
Zr (343.823 nm)	0.016162	ppm	0.000087	0.54	536.446000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.134686	12086.895930	0.005405	0.48
Y 377.433	1.128263	520848.386158	0.005273	0.47
Y_R 377.433	1.132910	42810.100000	0.002497	0.22
Y_R 488.368	1.137380	41047.900000	0.002842	0.25
Y_R2 488.368	1.155270	81304.100769	0.007623	0.66
Y_R4	1.155680	35461.100000	0.003858	0.33

Sample Name: 280-115927-A-1-A

Date: 11/6/2018 12:31:43 AM Rack:Tube: 2:20

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000381	ppm	0.000287	75.33	-228.728000	Y 377.433
Al (394.401 nm)	0.012434	ppm	0.001188	9.56	319.035000	Y 377.433
Al H (396.152 nm)	0.082215 u	ppm	0.003426	4.17	-1.223790	Y_R 377.433
As (188.980 nm)	-0.001770 u	ppm	0.004589	> 100.00	-17.595600	Y 242.219
B (249.678 nm)	0.002350	ppm	0.001846	78.55	56.132600	Y 242.219
Ba (493.408 nm)	0.047174	ppm	0.000811	1.72	5118.350000	Y_R 488.368
Be (234.861 nm)	0.000080	ppm	0.000036	44.27	-1.894670	Y_R 488.368
Bi (223.061 nm)	0.001221 u	ppm	0.002753	> 100.00	45.288200	Y 377.433
Ca (315.887 nm)	67.844073	ppm	0.156386	0.23	44809.974444	Y_R 377.433
Cd (214.439 nm)	0.000319	ppm	0.000004	1.19	-3.213520	Y 377.433
Co (228.615 nm)	0.000256	ppm	0.000160	62.51	-21.875900	Y 242.219
Cr (205.560 nm)	0.002231	ppm	0.000069	3.11	1.302450	Y 377.433
Cu (324.754 nm)	-0.000039 u	ppm	0.000182	> 100.00	158.355000	Y 377.433
Fe (238.204 nm)	0.011201	ppm	0.002884	25.74	30.198507	Y_R 377.433
Fe H (259.940 nm)	0.015794 u	ppm	0.006829	43.24	3.486260	Y_R 377.433
K (766.491 nm)	1.685490	ppm	0.073617	4.37	3383.220000	Y_R2 488.368
Li (670.783 nm)	0.015598	ppm	0.001940	12.44	-225.973000	Y_R2 488.368
Mg (279.078 nm)	11.770000	ppm	0.019588	0.17	25653.900000	Y 377.433
Mn (257.610 nm)	0.001083	ppm	0.000023	2.15	249.160000	Y 377.433
Mo (202.032 nm)	0.000563	ppm	0.000002	0.31	25.089000	Y 377.433
Na (589.592 nm)	5.177940	ppm	0.005712	0.11	2464.640000	Y_R2 488.368
Na H (589.593 nm)	6.832533 u	ppm	0.077760	1.14	2044.602820	Y_R4
Ni (231.604 nm)	0.000098 u	ppm	0.000463	> 100.00	9.455460	Y 377.433
P (213.618 nm)	0.020892	ppm	0.000277	1.32	23.140700	Y 242.219
Pb (220.353 nm)	-0.002523 u	ppm	0.000271	10.75	8.833040	Y 242.219
S (181.972 nm)	23.015223	ppm	0.040067	0.17	10970.745923	Y 377.433
Sb (206.834 nm)	-0.002240 u	ppm	0.001680	75.02	-4.801330	Y 377.433
Se (196.026 nm)	0.005365	ppm	0.000626	11.67	9.705900	Y 242.219
Si (288.158 nm)	6.132320	ppm	0.004033	0.07	28757.000000	Y 377.433
Sn (189.925 nm)	-0.006664 u	ppm	0.000711	10.66	0.283280	Y 377.433
Sr (421.552 nm)	0.287806	ppm	0.001889	0.66	33686.300755	Y_R 488.368
Th (288.505 nm)	-0.012675 u	ppm	0.004271	33.69	0.341776	Y 377.433
Ti (336.122 nm)	0.000676	ppm	0.000045	6.61	-130.132000	Y 377.433
Tl (190.794 nm)	-0.003613 u	ppm	0.002147	59.42	-11.560600	Y 377.433
U (409.013 nm)	-0.002267 u	ppm	0.009188	> 100.00	103.159000	Y 377.433
V (292.401 nm)	0.002228	ppm	0.000232	10.43	-87.527600	Y 377.433
Zn (206.200 nm)	0.003180	ppm	0.000071	2.22	15.372400	Y 377.433
Zr (343.823 nm)	0.000566	ppm	0.000094	16.66	-95.618300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.114299	11869.729398	0.000543	0.05
Y 377.433	1.109493	512183.312008	0.001102	0.10
Y_R 377.433	1.145270	43277.100000	0.006103	0.53
Y_R 488.368	1.143290	41261.300000	0.010554	0.92
Y_R2 488.368	1.145521	80618.053396	0.004717	0.41
Y_R4	1.157270	35509.800000	0.004094	0.35

Sample Name: 280-115927-A-1-B MS

Date: 11/6/2018 12:35:07 AM Rack:Tube: 2:21

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055280	ppm	0.000115	0.21	1237.090000	Y 377.433
Al (394.401 nm)	2.174490	ppm	0.001906	0.09	27558.200000	Y 377.433
Al H (396.152 nm)	2.035520	ppm	0.002048	0.10	3619.450000	Y_R 377.433
As (188.980 nm)	1.042980	ppm	0.002423	0.23	1446.200000	Y 242.219
B (249.678 nm)	1.069010	ppm	0.000404	0.04	4338.630000	Y 242.219
Ba (493.408 nm)	2.135710	ppm	0.002368	0.11	196260.000000	Y_R 488.368
Be (234.861 nm)	0.053226	ppm	0.000092	0.17	2734.970000	Y_R 488.368
Bi (223.061 nm)	2.045980	ppm	0.005121	0.25	3415.790000	Y 377.433
Ca (315.887 nm)	120.985299	ppm	0.222163	0.18	79911.215075	Y_R 377.433
Cd (214.439 nm)	0.104678	ppm	0.000257	0.25	2595.330000	Y 377.433
Co (228.615 nm)	0.498831	ppm	0.001148	0.23	11852.100000	Y 242.219
Cr (205.560 nm)	0.217565	ppm	0.000298	0.14	1024.960000	Y 377.433
Cu (324.754 nm)	0.261067	ppm	0.000203	0.08	12764.100000	Y 377.433
Fe (238.204 nm)	1.099818	ppm	0.001108	0.10	1844.017883	Y_R 377.433
Fe H (259.940 nm)	1.088810 u	ppm	0.011092	1.02	988.143000	Y_R 377.433
K (766.491 nm)	55.442900	ppm	0.066124	0.12	55922.500000	Y_R2 488.368
Li (670.783 nm)	1.083970	ppm	0.003559	0.33	14906.000000	Y_R2 488.368
Mg (279.078 nm)	63.371800	ppm	0.017325	0.03	138040.000000	Y 377.433
Mn (257.610 nm)	0.521172	ppm	0.000655	0.13	109064.000000	Y 377.433
Mo (202.032 nm)	1.078180	ppm	0.001173	0.11	12284.600000	Y 377.433
Na (589.592 nm)	57.838500 o	ppm	0.067562	0.12	28889.000000	Y_R2 488.368
Na H (589.593 nm)	59.577709	ppm	0.146267	0.25	20672.455114	Y_R4
Ni (231.604 nm)	0.501234	ppm	0.000598	0.12	1931.690000	Y 377.433
P (213.618 nm)	10.632200	ppm	0.022447	0.21	12321.300000	Y 242.219
Pb (220.353 nm)	0.516469	ppm	0.003811	0.74	1168.250000	Y 242.219
S (181.972 nm)	26.639908	ppm	0.128418	0.48	12706.522685	Y 377.433
Sb (206.834 nm)	0.536050	ppm	0.007095	1.32	869.852000	Y 377.433
Se (196.026 nm)	2.129140	ppm	0.001878	0.09	3203.310000	Y 242.219
Si (288.158 nm)	16.911600	ppm	0.020918	0.12	77047.200000	Y 377.433
Sn (189.925 nm)	2.125370	ppm	0.007227	0.34	2489.140000	Y 377.433
Sr (421.552 nm)	1.349667	ppm	0.002020	0.15	156945.912620	Y_R 488.368
Th (288.505 nm)	1.005880	ppm	0.006408	0.64	1059.390000	Y 377.433
Ti (336.122 nm)	1.059700	ppm	0.000430	0.04	100705.000000	Y 377.433
Tl (190.794 nm)	2.098080	ppm	0.008492	0.40	1190.730000	Y 377.433
U (409.013 nm)	2.187190	ppm	0.006374	0.29	5056.380000	Y 377.433
V (292.401 nm)	0.532351	ppm	0.000144	0.03	25516.800000	Y 377.433
Zn (206.200 nm)	0.521884	ppm	0.000238	0.05	1808.170000	Y 377.433
Zr (343.823 nm)	0.524273	ppm	0.000220	0.04	21127.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.080676	11511.571069	0.006147	0.57
Y 377.433	1.082212	499589.646295	0.004861	0.45
Y_R 377.433	1.120330	42334.700000	0.006901	0.62
Y_R 488.368	1.120420	40436.000000	0.006954	0.62
Y_R2 488.368	1.121090	78898.637001	0.002766	0.25
Y_R4	1.128930	34640.300000	0.006976	0.62

Sample Name: 280-115927-A-1-C MSD

Date: 11/6/2018 12:38:36 AM Rack:Tube: 2:22

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055133	ppm	0.000169	0.31	1234.860000	Y 377.433
Al (394.401 nm)	2.119190	ppm	0.002350	0.11	26863.700000	Y 377.433
Al H (396.152 nm)	1.965040	ppm	0.005669	0.29	3499.680000	Y_R 377.433
As (188.980 nm)	1.032890	ppm	0.002302	0.22	1432.070000	Y 242.219
B (249.678 nm)	1.076590	ppm	0.000003	0.00	4369.070000	Y 242.219
Ba (493.408 nm)	2.118990	ppm	0.000978	0.05	194730.000000	Y_R 488.368
Be (234.861 nm)	0.052509	ppm	0.000203	0.39	2697.660000	Y_R 488.368
Bi (223.061 nm)	2.039430	ppm	0.002105	0.10	3405.000000	Y 377.433
Ca (315.887 nm)	118.562391	ppm	0.145220	0.12	78310.826054	Y_R 377.433
Cd (214.439 nm)	0.104297	ppm	0.000363	0.35	2585.840000	Y 377.433
Co (228.615 nm)	0.494465	ppm	0.000997	0.20	11749.000000	Y 242.219
Cr (205.560 nm)	0.217720	ppm	0.000468	0.21	1025.660000	Y 377.433
Cu (324.754 nm)	0.260351	ppm	0.000333	0.13	12731.500000	Y 377.433
Fe (238.204 nm)	1.115359	ppm	0.006152	0.55	1869.912549	Y_R 377.433
Fe H (259.940 nm)	1.098320 u	ppm	0.006100	0.56	996.872000	Y_R 377.433
K (766.491 nm)	55.303000	ppm	0.001473	0.00	55785.800000	Y_R2 488.368
Li (670.783 nm)	1.069290	ppm	0.004372	0.41	14698.100000	Y_R2 488.368
Mg (279.078 nm)	63.138400	ppm	0.008247	0.01	137532.000000	Y 377.433
Mn (257.610 nm)	0.519108	ppm	0.000663	0.13	108633.000000	Y 377.433
Mo (202.032 nm)	1.090550	ppm	0.001410	0.13	12425.300000	Y 377.433
Na (589.592 nm)	57.452600 o	ppm	0.058338	0.10	28695.500000	Y_R2 488.368
Na H (589.593 nm)	59.198703	ppm	0.284066	0.48	20539.092931	Y_R4
Ni (231.604 nm)	0.500538	ppm	0.001939	0.39	1929.010000	Y 377.433
P (213.618 nm)	10.559700	ppm	0.016973	0.16	12237.300000	Y 242.219
Pb (220.353 nm)	0.513702	ppm	0.000855	0.17	1161.990000	Y 242.219
S (181.972 nm)	26.158077	ppm	0.003052	0.01	12476.221497	Y 377.433
Sb (206.834 nm)	0.540435	ppm	0.004758	0.88	876.926000	Y 377.433
Se (196.026 nm)	2.115530	ppm	0.012263	0.58	3182.850000	Y 242.219
Si (288.158 nm)	16.905000	ppm	0.085673	0.51	77017.300000	Y 377.433
Sn (189.925 nm)	2.152760	ppm	0.002203	0.10	2521.120000	Y 377.433
Sr (421.552 nm)	1.334757	ppm	0.001371	0.10	155215.155883	Y_R 488.368
Th (288.505 nm)	1.001980	ppm	0.007007	0.70	1055.270000	Y 377.433
Ti (336.122 nm)	1.069520	ppm	0.001424	0.13	101631.000000	Y 377.433
Tl (190.794 nm)	2.088090	ppm	0.001303	0.06	1185.000000	Y 377.433
U (409.013 nm)	2.155710	ppm	0.007162	0.33	4984.240000	Y 377.433
V (292.401 nm)	0.530806	ppm	0.000811	0.15	25441.900000	Y 377.433
Zn (206.200 nm)	0.517287	ppm	0.000723	0.14	1792.290000	Y 377.433
Zr (343.823 nm)	0.529509	ppm	0.000936	0.18	21340.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072989	11429.683681	0.003019	0.28
Y 377.433	1.069765	493843.723524	0.002805	0.26
Y_R 377.433	1.119780	42313.800000	0.004350	0.39
Y_R 488.368	1.116530	40295.500000	0.002538	0.23
Y_R2 488.368	1.124018	79104.728746	0.004930	0.44
Y_R4	1.137410	34900.500000	0.010913	0.96

Sample Name: 280-115927-A-2-A

Date: 11/6/2018 12:42:04 AM Rack:Tube: 2:23

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001152	ppm	0.000141	12.21	-207.352000	Y 377.433
Al (394.401 nm)	0.008439	ppm	0.000156	1.85	268.409000	Y 377.433
Al H (396.152 nm)	0.087675 u	ppm	0.002340	2.67	7.407880	Y_R 377.433
As (188.980 nm)	0.001563 u	ppm	0.003083	> 100.00	-12.925900	Y 242.219
B (249.678 nm)	0.002101	ppm	0.002013	95.82	55.132300	Y 242.219
Ba (493.408 nm)	0.046251	ppm	0.000363	0.78	5033.840000	Y_R 488.368
Be (234.861 nm)	0.000140	ppm	0.000019	13.20	1.266220	Y_R 488.368
Bi (223.061 nm)	0.003826	ppm	0.003974	> 100.00	49.582400	Y 377.433
Ca (315.887 nm)	67.304909	ppm	0.016130	0.02	44453.846443	Y_R 377.433
Cd (214.439 nm)	0.000339	ppm	0.000142	41.74	-2.717060	Y 377.433
Co (228.615 nm)	0.000306	ppm	0.000044	14.56	-20.703700	Y 242.219
Cr (205.560 nm)	0.003247	ppm	0.000204	6.28	6.151970	Y 377.433
Cu (324.754 nm)	0.000241 u	ppm	0.000569	> 100.00	172.361000	Y 377.433
Fe (238.204 nm)	0.008589	ppm	0.000334	3.89	25.846727	Y_R 377.433
Fe H (259.940 nm)	0.015269 u	ppm	0.002506	16.41	3.004100	Y_R 377.433
K (766.491 nm)	1.729900	ppm	0.122000	7.05	3426.610000	Y_R2 488.368
Li (670.783 nm)	0.011772	ppm	0.000028	0.24	-280.167000	Y_R2 488.368
Mg (279.078 nm)	11.641400	ppm	0.031711	0.27	25373.900000	Y 377.433
Mn (257.610 nm)	0.000995	ppm	0.000095	9.51	230.731000	Y 377.433
Mo (202.032 nm)	0.001078	ppm	0.000034	3.19	30.949400	Y 377.433
Na (589.592 nm)	5.149910	ppm	0.087888	1.71	2450.580000	Y_R2 488.368
Na H (589.593 nm)	7.009118 u	ppm	0.029065	0.41	2107.783889	Y_R4
Ni (231.604 nm)	-0.000032 u	ppm	0.000046	> 100.00	8.961160	Y 377.433
P (213.618 nm)	0.024600	ppm	0.002566	10.43	27.430600	Y 242.219
Pb (220.353 nm)	-0.001804 u	ppm	0.000402	22.29	10.438100	Y 242.219
S (181.972 nm)	22.856161	ppm	0.084627	0.37	10894.756799	Y 377.433
Sb (206.834 nm)	-0.004225 u	ppm	0.001254	29.68	-8.062640	Y 377.433
Se (196.026 nm)	0.007765	ppm	0.002494	32.12	13.315100	Y 242.219
Si (288.158 nm)	6.143280	ppm	0.014767	0.24	28806.100000	Y 377.433
Sn (189.925 nm)	-0.005618 u	ppm	0.000564	10.04	1.504640	Y 377.433
Sr (421.552 nm)	0.286224	ppm	0.000540	0.19	33502.680324	Y_R 488.368
Th (288.505 nm)	-0.013334 u	ppm	0.003215	24.11	-0.356881	Y 377.433
Ti (336.122 nm)	0.000550	ppm	0.000070	12.82	-142.862000	Y 377.433
Tl (190.794 nm)	-0.001746 u	ppm	0.000236	13.54	-10.488000	Y 377.433
U (409.013 nm)	-0.003924 u	ppm	0.006372	> 100.00	99.400000	Y 377.433
V (292.401 nm)	0.001936	ppm	0.000208	10.74	-101.831000	Y 377.433
Zn (206.200 nm)	0.002135	ppm	0.000681	31.90	11.758200	Y 377.433
Zr (343.823 nm)	0.000586	ppm	0.000131	22.31	-94.772100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.116462	11892.767539	0.002161	0.19
Y 377.433	1.110264	512539.334618	0.002740	0.25
Y_R 377.433	1.147370	43356.700000	0.004258	0.37
Y_R 488.368	1.135160	40968.000000	0.001772	0.16
Y_R2 488.368	1.152724	81124.969678	0.004294	0.37
Y_R4	1.143300	35081.300000	0.000108	0.01

Sample Name: MB 280-435829/1-A

Date: 11/6/2018 12:45:28 AM Rack:Tube: 2:24

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000016 u	ppm	0.000122	> 100.00	-238.671000	Y 377.433
Al (394.401 nm)	0.004146	ppm	0.000243	5.85	138.820000	Y 377.433
Al H (396.152 nm)	0.141666 u	ppm	0.008308	5.86	18.182400	Y_R 377.433
As (188.980 nm)	-0.000706 u	ppm	0.002644	> 100.00	-16.105600	Y 242.219
B (249.678 nm)	-0.009963 u	ppm	0.000564	5.67	6.685290	Y 242.219
Ba (493.408 nm)	-0.001073 u	ppm	0.000155	14.45	702.831000	Y_R 488.368
Be (234.861 nm)	0.000142	ppm	0.000079	55.75	0.969587	Y_R 488.368
Bi (223.061 nm)	-0.004136 u	ppm	0.001920	46.41	36.458500	Y 377.433
Ca (315.887 nm)	0.043632	ppm	0.002792	6.40	26.501892	Y_R 377.433
Cd (214.439 nm)	0.000076	ppm	0.000039	50.67	-9.257580	Y 377.433
Co (228.615 nm)	0.000613	ppm	0.000116	18.99	-13.355100	Y 242.219
Cr (205.560 nm)	0.000402	ppm	0.000074	18.43	-7.427930	Y 377.433
Cu (324.754 nm)	0.000623	ppm	0.000339	54.33	231.681000	Y 377.433
Fe (238.204 nm)	0.033568	ppm	0.000237	0.71	67.466043	Y_R 377.433
Fe H (259.940 nm)	0.040264 u	ppm	0.002732	6.78	25.941400	Y_R 377.433
K (766.491 nm)	-0.182702 u	ppm	0.103223	56.50	1557.350000	Y_R2 488.368
Li (670.783 nm)	0.014193	ppm	0.004558	32.11	-245.879000	Y_R2 488.368
Mg (279.078 nm)	0.029303	ppm	0.003478	11.87	77.998200	Y 377.433
Mn (257.610 nm)	0.000295	ppm	0.000027	9.25	84.371700	Y 377.433
Mo (202.032 nm)	-0.000059 u	ppm	0.000320	> 100.00	18.009800	Y 377.433
Na (589.592 nm)	0.165063	ppm	0.022899	13.87	-53.083800	Y_R2 488.368
Na H (589.593 nm)	2.087053 u	ppm	0.022685	1.09	354.846734	Y_R4
Ni (231.604 nm)	0.000052 u	ppm	0.000336	> 100.00	9.288120	Y 377.433
P (213.618 nm)	0.000965	ppm	0.000301	31.15	0.039429	Y 242.219
Pb (220.353 nm)	-0.002051 u	ppm	0.000975	47.55	9.897530	Y 242.219
S (181.972 nm)	0.034587	ppm	0.001934	5.59	-9.187552	Y 377.433
Sb (206.834 nm)	0.000598	ppm	0.000646	> 100.00	-0.142190	Y 377.433
Se (196.026 nm)	0.002238	ppm	0.000633	28.27	4.998830	Y 242.219
Si (288.158 nm)	-0.194100 u	ppm	0.001255	0.65	415.260000	Y 377.433
Sn (189.925 nm)	-0.005595 u	ppm	0.000414	7.40	1.531640	Y 377.433
Sr (421.552 nm)	-0.000201 u	ppm	0.000040	20.14	254.934277	Y_R 488.368
Th (288.505 nm)	0.003761	ppm	0.004796	> 100.00	18.356000	Y 377.433
Ti (336.122 nm)	0.001118	ppm	0.000069	6.16	-258.710000	Y 377.433
Tl (190.794 nm)	-0.001052 u	ppm	0.001959	> 100.00	-9.420280	Y 377.433
U (409.013 nm)	-0.020598 u	ppm	0.003114	15.12	67.754200	Y 377.433
V (292.401 nm)	0.000674	ppm	0.000109	16.25	-161.705000	Y 377.433
Zn (206.200 nm)	0.007196	ppm	0.000248	3.44	29.251700	Y 377.433
Zr (343.823 nm)	0.000584	ppm	0.000097	16.54	-94.862900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.132358	12062.098752	0.006464	0.57
Y 377.433	1.122306	518098.560195	0.004874	0.43
Y_R 377.433	1.148880	43413.700000	0.003606	0.31
Y_R 488.368	1.160540	41883.800000	0.017652	1.52
Y_R2 488.368	1.159925	81631.764479	0.004838	0.42
Y_R4	1.141150	35015.100000	0.007300	0.64

Sample Name: LCS 280-435829/2-A

Date: 11/6/2018 12:48:37 AM Rack:Tube: 2:25

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054192	ppm	0.000404	0.75	1209.440000	Y 377.433
Al (394.401 nm)	2.086830	ppm	0.001311	0.06	26377.000000	Y 377.433
Al H (396.152 nm)	2.007540	ppm	0.015088	0.75	3484.260000	Y_R 377.433
As (188.980 nm)	1.009280	ppm	0.001185	0.12	1398.980000	Y 242.219
B (249.678 nm)	1.038910	ppm	0.000863	0.08	4217.770000	Y 242.219
Ba (493.408 nm)	2.065440	ppm	0.004037	0.20	189829.000000	Y_R 488.368
Be (234.861 nm)	0.051923	ppm	0.000063	0.12	2668.300000	Y_R 488.368
Bi (223.061 nm)	1.998540	ppm	0.006825	0.34	3337.600000	Y 377.433
Ca (315.887 nm)	50.935857	ppm	0.086400	0.17	33642.213565	Y_R 377.433
Cd (214.439 nm)	0.103067	ppm	0.000242	0.24	2555.220000	Y 377.433
Co (228.615 nm)	0.496959	ppm	0.000764	0.15	11807.600000	Y 242.219
Cr (205.560 nm)	0.213038	ppm	0.000055	0.03	1003.370000	Y 377.433
Cu (324.754 nm)	0.256178	ppm	0.000233	0.09	12573.400000	Y 377.433
Fe (238.204 nm)	1.046384	ppm	0.001684	0.16	1754.989083	Y_R 377.433
Fe H (259.940 nm)	1.047790 u	ppm	0.010018	0.96	950.496000	Y_R 377.433
K (766.491 nm)	52.597600	ppm	0.327007	0.62	53141.600000	Y_R2 488.368
Li (670.783 nm)	1.059500	ppm	0.002255	0.21	14559.400000	Y_R2 488.368
Mg (279.078 nm)	50.751200	ppm	0.008407	0.02	110548.000000	Y 377.433
Mn (257.610 nm)	0.514846	ppm	0.000516	0.10	107741.000000	Y 377.433
Mo (202.032 nm)	1.074360	ppm	0.002852	0.27	12241.300000	Y 377.433
Na (589.592 nm)	51.800100	ppm	0.084943	0.16	25856.400000	Y_R2 488.368
Na H (589.593 nm)	53.400189	ppm	0.112079	0.21	18473.696573	Y_R4
Ni (231.604 nm)	0.496969	ppm	0.001496	0.30	1915.330000	Y 377.433
P (213.618 nm)	10.385400	ppm	0.031376	0.30	12035.300000	Y 242.219
Pb (220.353 nm)	0.513006	ppm	0.000882	0.17	1160.490000	Y 242.219
S (181.972 nm)	2.025230	ppm	0.012115	0.60	945.924490	Y 377.433
Sb (206.834 nm)	0.526616	ppm	0.005113	0.97	854.310000	Y 377.433
Se (196.026 nm)	2.084980	ppm	0.000533	0.03	3136.930000	Y 242.219
Si (288.158 nm)	10.212000	ppm	0.019291	0.19	47033.500000	Y 377.433
Sn (189.925 nm)	2.104830	ppm	0.001465	0.07	2465.170000	Y 377.433
Sr (421.552 nm)	1.036999	ppm	0.002995	0.29	120651.778023	Y_R 488.368
Th (288.505 nm)	1.008060	ppm	0.007259	0.72	1062.600000	Y 377.433
Ti (336.122 nm)	1.058100	ppm	0.000359	0.03	100374.000000	Y 377.433
Tl (190.794 nm)	2.086770	ppm	0.000966	0.05	1184.960000	Y 377.433
U (409.013 nm)	2.150830	ppm	0.011029	0.51	4979.970000	Y 377.433
V (292.401 nm)	0.523914	ppm	0.000379	0.07	25111.400000	Y 377.433
Zn (206.200 nm)	0.513593	ppm	0.001768	0.34	1779.510000	Y 377.433
Zr (343.823 nm)	0.524615	ppm	0.000241	0.05	21141.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099266	11709.593922	0.000461	0.04
Y 377.433	1.100251	507916.778664	0.000396	0.04
Y_R 377.433	1.140050	43080.000000	0.003656	0.32
Y_R 488.368	1.139560	41126.800000	0.000752	0.07
Y_R2 488.368	1.128933	79450.654463	0.013675	1.21
Y_R4	1.165680	35767.900000	0.004695	0.40

Sample Name: LCSD 280-435829/3-A

Date: 11/6/2018 12:52:06 AM Rack:Tube: 2:26

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055670	ppm	0.000009	0.02	1248.450000	Y 377.433
Al (394.401 nm)	2.165790	ppm	0.000312	0.01	27375.200000	Y 377.433
Al H (396.152 nm)	2.057790	ppm	0.009104	0.44	3580.480000	Y_R 377.433
As (188.980 nm)	1.042240	ppm	0.001509	0.14	1445.170000	Y 242.219
B (249.678 nm)	1.067830	ppm	0.000526	0.05	4333.890000	Y 242.219
Ba (493.408 nm)	2.130850	ppm	0.008045	0.38	195815.000000	Y_R 488.368
Be (234.861 nm)	0.052989	ppm	0.000113	0.21	2723.310000	Y_R 488.368
Bi (223.061 nm)	2.066700	ppm	0.002700	0.13	3449.950000	Y 377.433
Ca (315.887 nm)	52.361075	ppm	0.112372	0.21	34583.610487	Y_R 377.433
Cd (214.439 nm)	0.106816	ppm	0.000024	0.02	2648.570000	Y 377.433
Co (228.615 nm)	0.510130	ppm	0.001406	0.28	12121.300000	Y 242.219
Cr (205.560 nm)	0.218959	ppm	0.000055	0.02	1031.510000	Y 377.433
Cu (324.754 nm)	0.266279	ppm	0.000200	0.08	13058.200000	Y 377.433
Fe (238.204 nm)	1.059306	ppm	0.002939	0.28	1776.518835	Y_R 377.433
Fe H (259.940 nm)	1.052630 u	ppm	0.010166	0.97	954.942000	Y_R 377.433
K (766.491 nm)	53.881800	ppm	0.071059	0.13	54396.800000	Y_R2 488.368
Li (670.783 nm)	1.089780	ppm	0.001562	0.14	14988.200000	Y_R2 488.368
Mg (279.078 nm)	52.400800	ppm	0.015907	0.03	114141.000000	Y 377.433
Mn (257.610 nm)	0.530796	ppm	0.000600	0.11	111078.000000	Y 377.433
Mo (202.032 nm)	1.103920	ppm	0.000042	0.00	12577.500000	Y 377.433
Na (589.592 nm)	53.475200	ppm	0.000475	0.00	26697.000000	Y_R2 488.368
Na H (589.593 nm)	55.013899	ppm	0.243455	0.44	19043.618218	Y_R4
Ni (231.604 nm)	0.513255	ppm	0.001270	0.25	1977.790000	Y 377.433
P (213.618 nm)	10.705600	ppm	0.004534	0.04	12406.300000	Y 242.219
Pb (220.353 nm)	0.526332	ppm	0.000982	0.19	1190.290000	Y 242.219
S (181.972 nm)	2.108569	ppm	0.018132	0.86	985.854208	Y 377.433
Sb (206.834 nm)	0.544824	ppm	0.003643	0.67	883.956000	Y 377.433
Se (196.026 nm)	2.155340	ppm	0.003312	0.15	3242.740000	Y 242.219
Si (288.158 nm)	10.596900	ppm	0.028148	0.27	48757.700000	Y 377.433
Sn (189.925 nm)	2.175850	ppm	0.010073	0.46	2548.070000	Y 377.433
Sr (421.552 nm)	1.072954	ppm	0.001784	0.17	124825.391187	Y_R 488.368
Th (288.505 nm)	1.027440	ppm	0.003171	0.31	1082.530000	Y 377.433
Ti (336.122 nm)	1.086580	ppm	0.000111	0.01	103085.000000	Y 377.433
Tl (190.794 nm)	2.156060	ppm	0.009748	0.45	1224.610000	Y 377.433
U (409.013 nm)	2.224860	ppm	0.000116	0.01	5147.740000	Y 377.433
V (292.401 nm)	0.539841	ppm	0.000108	0.02	25879.600000	Y 377.433
Zn (206.200 nm)	0.528498	ppm	0.000508	0.10	1831.030000	Y 377.433
Zr (343.823 nm)	0.538523	ppm	0.000499	0.09	21705.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.100027	11717.695884	0.004537	0.41
Y 377.433	1.097419	506609.428869	0.002311	0.21
Y_R 377.433	1.151510	43513.100000	0.002993	0.26
Y_R 488.368	1.149020	41468.100000	0.005756	0.50
Y_R2 488.368	1.146037	80654.363585	0.004706	0.41
Y_R4	1.156030	35471.900000	0.006869	0.59

Sample Name: 280-116299-C-4-A

Date: 11/6/2018 12:55:35 AM Rack:Tube: 2:27

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000151 u	ppm	0.000425	> 100.00	-234.830000	Y 377.433
Al (394.401 nm)	0.028674	ppm	0.000497	1.73	458.543000	Y 377.433
Al H (396.152 nm)	0.155254 u	ppm	0.005309	3.42	57.878900	Y_R 377.433
As (188.980 nm)	0.000422 u	ppm	0.001544	> 100.00	-14.616300	Y 242.219
B (249.678 nm)	0.063897	ppm	0.000559	0.88	302.078000	Y 242.219
Ba (493.408 nm)	0.003472	ppm	0.000374	10.79	1121.440000	Y_R 488.368
Be (234.861 nm)	0.000109	ppm	0.000050	46.12	-51.418000	Y_R 488.368
Bi (223.061 nm)	-0.005637 u	ppm	0.003250	57.64	34.455000	Y 377.433
Ca (315.887 nm)	9.196407	ppm	0.010233	0.11	6072.086861	Y_R 377.433
Cd (214.439 nm)	0.000201	ppm	0.000057	28.28	-6.149240	Y 377.433
Co (228.615 nm)	0.000433	ppm	0.000023	5.24	-13.628900	Y 242.219
Cr (205.560 nm)	0.000677	ppm	0.000202	29.93	-6.117860	Y 377.433
Cu (324.754 nm)	0.010959	ppm	0.000059	0.54	728.538000	Y 377.433
Fe (238.204 nm)	3.628546	ppm	0.015065	0.42	6057.307847	Y_R 377.433
Fe H (259.940 nm)	3.631060 u	ppm	0.005759	0.16	3321.040000	Y_R 377.433
K (766.491 nm)	1.000980	ppm	0.096812	9.67	2714.210000	Y_R2 488.368
Li (670.783 nm)	0.018778	ppm	0.000106	0.56	-180.936000	Y_R2 488.368
Mg (279.078 nm)	1.140780	ppm	0.001909	0.17	2496.200000	Y 377.433
Mn (257.610 nm)	0.111535	ppm	0.000042	0.04	23358.500000	Y 377.433
Mo (202.032 nm)	0.000215	ppm	0.000199	92.54	21.120600	Y 377.433
Na (589.592 nm)	16.242200	ppm	0.024311	0.15	8023.970000	Y_R2 488.368
Na H (589.593 nm)	17.674153 u	ppm	0.072756	0.41	5920.163086	Y_R4
Ni (231.604 nm)	0.000599	ppm	0.000432	72.13	11.923300	Y 377.433
P (213.618 nm)	0.041597	ppm	0.002827	6.80	46.707000	Y 242.219
Pb (220.353 nm)	0.001196	ppm	0.000841	70.36	17.130100	Y 242.219
S (181.972 nm)	3.482600	ppm	0.000175	0.01	1638.538183	Y 377.433
Sb (206.834 nm)	-0.000947 u	ppm	0.001884	> 100.00	-2.388590	Y 377.433
Se (196.026 nm)	0.005108	ppm	0.001053	20.62	8.541140	Y 242.219
Si (288.158 nm)	3.083950	ppm	0.012933	0.42	15100.600000	Y 377.433
Sn (189.925 nm)	-0.006594 u	ppm	0.000762	11.56	0.365368	Y 377.433
Sr (421.552 nm)	0.060061	ppm	0.000045	0.07	7250.461101	Y_R 488.368
Th (288.505 nm)	-0.001626 u	ppm	0.000888	54.62	13.328700	Y 377.433
Ti (336.122 nm)	0.000896	ppm	0.000109	12.16	-256.787000	Y 377.433
Tl (190.794 nm)	-0.000310 u	ppm	0.000467	> 100.00	-9.195740	Y 377.433
U (409.013 nm)	-0.009812 u	ppm	0.000801	8.17	93.436300	Y 377.433
V (292.401 nm)	0.001036	ppm	0.000192	18.49	-143.661000	Y 377.433
Zn (206.200 nm)	0.037461	ppm	0.001119	2.99	134.235000	Y 377.433
Zr (343.823 nm)	0.000692	ppm	0.000166	23.97	-90.481500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.132021	12058.509866	0.000806	0.07
Y 377.433	1.129908	521607.785903	0.002259	0.20
Y_R 377.433	1.169860	44206.200000	0.008918	0.76
Y_R 488.368	1.173070	42336.100000	0.012097	1.03
Y_R2 488.368	1.181050	83118.422470	0.000258	0.02
Y_R4	1.169060	35871.800000	0.004337	0.37

Sample Name: 280-116303-C-5-B

Date: 11/6/2018 12:59:05 AM Rack:Tube: 2:28

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000768	ppm	0.000163	21.22	-218.023000	Y 377.433
Al (394.401 nm)	0.020533	ppm	0.000123	0.60	371.185000	Y 377.433
Al H (396.152 nm)	0.128356 u	ppm	0.013851	10.79	14.098000	Y_R 377.433
As (188.980 nm)	-0.002504 u	ppm	0.000064	2.55	-18.624400	Y 242.219
B (249.678 nm)	0.019982	ppm	0.000587	2.94	126.929000	Y 242.219
Ba (493.408 nm)	0.000767	ppm	0.000047	6.11	871.260000	Y_R 488.368
Be (234.861 nm)	0.000224	ppm	0.000022	9.93	5.554890	Y_R 488.368
Bi (223.061 nm)	0.002113 u	ppm	0.004975	> 100.00	46.756000	Y 377.433
Ca (315.887 nm)	61.433041	ppm	0.028404	0.05	40575.366464	Y_R 377.433
Cd (214.439 nm)	0.000344	ppm	0.000039	11.19	-2.587460	Y 377.433
Co (228.615 nm)	0.000101 u	ppm	0.000348	> 100.00	-25.559000	Y 242.219
Cr (205.560 nm)	0.000555	ppm	0.000586	> 100.00	-6.696780	Y 377.433
Cu (324.754 nm)	0.000102	ppm	0.000041	40.34	167.143000	Y 377.433
Fe (238.204 nm)	0.010307	ppm	0.002138	20.75	28.709224	Y_R 377.433
Fe H (259.940 nm)	0.018550 u	ppm	0.003801	20.49	6.015440	Y_R 377.433
K (766.491 nm)	0.499633	ppm	0.056157	11.24	2224.220000	Y_R2 488.368
Li (670.783 nm)	0.029574	ppm	0.001286	4.35	-28.021100	Y_R2 488.368
Mg (279.078 nm)	16.897800	ppm	0.045496	0.27	36824.300000	Y 377.433
Mn (257.610 nm)	0.000367	ppm	0.000016	4.40	99.419000	Y 377.433
Mo (202.032 nm)	-0.000244 u	ppm	0.000239	98.11	15.905700	Y 377.433
Na (589.592 nm)	8.212280	ppm	0.078269	0.95	3989.800000	Y_R2 488.368
Na H (589.593 nm)	9.786980 u	ppm	0.007445	0.08	3104.113781	Y_R4
Ni (231.604 nm)	-0.000859 u	ppm	0.000935	> 100.00	5.787010	Y 377.433
P (213.618 nm)	0.007809	ppm	0.003462	44.34	7.952850	Y 242.219
Pb (220.353 nm)	-0.001661 u	ppm	0.000972	58.53	10.779800	Y 242.219
S (181.972 nm)	9.116852	ppm	0.003387	0.04	4332.019325	Y 377.433
Sb (206.834 nm)	-0.003683 u	ppm	0.000294	7.97	-7.181570	Y 377.433
Se (196.026 nm)	0.004810	ppm	0.002536	52.71	8.871050	Y 242.219
Si (288.158 nm)	6.405940	ppm	0.026898	0.42	29982.800000	Y 377.433
Sn (189.925 nm)	-0.006815 u	ppm	0.000271	3.98	0.107059	Y 377.433
Sr (421.552 nm)	0.090735	ppm	0.000617	0.68	10810.605403	Y_R 488.368
Th (288.505 nm)	-0.017289 u	ppm	0.001233	7.13	-4.469600	Y 377.433
Ti (336.122 nm)	0.000707	ppm	0.000106	14.99	-142.295000	Y 377.433
Tl (190.794 nm)	-0.003021 u	ppm	0.005430	> 100.00	-11.161100	Y 377.433
U (409.013 nm)	-0.002008 u	ppm	0.010806	> 100.00	104.336000	Y 377.433
V (292.401 nm)	0.000923	ppm	0.000038	4.14	-151.393000	Y 377.433
Zn (206.200 nm)	0.001832	ppm	0.000240	13.08	10.711000	Y 377.433
Zr (343.823 nm)	0.000513	ppm	0.000061	11.80	-97.732100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119149	11921.387576	0.006425	0.57
Y 377.433	1.117621	515935.611173	0.007604	0.68
Y_R 377.433	1.160090	43837.300000	0.002750	0.24
Y_R 488.368	1.163430	41988.200000	0.012735	1.09
Y_R2 488.368	1.155517	81321.489886	0.002066	0.18
Y_R4	1.162230	35662.200000	0.004679	0.40

Sample Name: 280-116303-C-5-Bsd@5

Date: 11/6/2018 1:02:30 AM Rack:Tube: 2:29

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000606	ppm	0.000390	64.47	-222.253000	Y 377.433
Al (394.401 nm)	0.005755	ppm	0.000430	7.47	161.201000	Y 377.433
Al H (396.152 nm)	0.142765 u	ppm	0.014116	9.89	23.288300	Y_R 377.433
As (188.980 nm)	-0.000901 u	ppm	0.000437	48.45	-16.378300	Y 242.219
B (249.678 nm)	-0.003575 u	ppm	0.000896	25.05	32.344800	Y 242.219
Ba (493.408 nm)	-0.000771 u	ppm	0.000059	7.68	730.489000	Y_R 488.368
Be (234.861 nm)	0.000120	ppm	0.000101	84.54	0.286722	Y_R 488.368
Bi (223.061 nm)	0.000558 u	ppm	0.001373	> 100.00	44.191200	Y 377.433
Ca (315.887 nm)	12.148176	ppm	0.017983	0.15	8021.781931	Y_R 377.433
Cd (214.439 nm)	0.000075 u	ppm	0.000132	> 100.00	-9.282410	Y 377.433
Co (228.615 nm)	0.000455	ppm	0.000155	34.08	-17.172500	Y 242.219
Cr (205.560 nm)	0.000631	ppm	0.000029	4.52	-6.331190	Y 377.433
Cu (324.754 nm)	0.000219	ppm	0.000112	51.02	206.111000	Y 377.433
Fe (238.204 nm)	0.000806	ppm	0.000238	29.50	12.877526	Y_R 377.433
Fe H (259.940 nm)	0.015622 u	ppm	0.003895	24.93	3.328050	Y_R 377.433
K (766.491 nm)	-0.142737 u	ppm	0.075436	52.85	1596.410000	Y_R2 488.368
Li (670.783 nm)	0.017303	ppm	0.001092	6.31	-201.819000	Y_R2 488.368
Mg (279.078 nm)	3.382220	ppm	0.001044	0.03	7382.160000	Y 377.433
Mn (257.610 nm)	0.000090	ppm	0.000034	37.43	41.418600	Y 377.433
Mo (202.032 nm)	-0.000024 u	ppm	0.000079	> 100.00	18.409400	Y 377.433
Na (589.592 nm)	1.736530	ppm	0.029958	1.73	736.422000	Y_R2 488.368
Na H (589.593 nm)	3.483097 u	ppm	0.063645	1.83	853.362945	Y_R4
Ni (231.604 nm)	-0.001458 u	ppm	0.001119	76.76	3.493230	Y 377.433
P (213.618 nm)	0.001351	ppm	0.001849	> 100.00	0.484360	Y 242.219
Pb (220.353 nm)	-0.002870 u	ppm	0.001225	42.70	8.045710	Y 242.219
S (181.972 nm)	1.794295	ppm	0.002101	0.12	831.935682	Y 377.433
Sb (206.834 nm)	0.000787 u	ppm	0.002039	> 100.00	0.171396	Y 377.433
Se (196.026 nm)	0.003542	ppm	0.001711	48.32	6.966930	Y 242.219
Si (288.158 nm)	1.098020	ppm	0.007159	0.65	6203.820000	Y 377.433
Sn (189.925 nm)	-0.007552 u	ppm	0.000417	5.52	-0.752610	Y 377.433
Sr (421.552 nm)	0.017033	ppm	0.000088	0.52	2255.373839	Y_R 488.368
Th (288.505 nm)	0.000192 u	ppm	0.003919	> 100.00	14.429500	Y 377.433
Ti (336.122 nm)	0.000614	ppm	0.000006	0.97	-276.158000	Y 377.433
Tl (190.794 nm)	-0.003441 u	ppm	0.001754	50.98	-10.908300	Y 377.433
U (409.013 nm)	-0.006271 u	ppm	0.006879	> 100.00	99.345100	Y 377.433
V (292.401 nm)	0.000602	ppm	0.000018	2.91	-164.555000	Y 377.433
Zn (206.200 nm)	-0.000013 u	ppm	0.000689	> 100.00	4.334530	Y 377.433
Zr (343.823 nm)	0.000592	ppm	0.000350	59.24	-94.560700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.141948	12164.252985	0.001099	0.10
Y 377.433	1.136386	524598.455319	0.002825	0.25
Y_R 377.433	1.175690	44426.800000	0.001668	0.14
Y_R 488.368	1.179200	42557.200000	0.006805	0.58
Y_R2 488.368	1.180289	83064.914712	0.001046	0.09
Y_R4	1.152160	35353.200000	0.011306	0.98

Sample Name: CCVH-5408055

Date: 11/6/2018 1:05:42 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001034	ppm	0.000077	7.43	-324.254000	Y 377.433
Al (394.401 nm)	52.134800 o	ppm	0.038047	0.07	649278.000000	Y 377.433
Al H (396.152 nm)	50.622100	ppm	0.029340	0.06	83254.300000	Y_R 377.433
As (188.980 nm)	-0.000990 u	ppm	0.000393	39.71	-18.616700	Y 242.219
B (249.678 nm)	-0.013823 u	ppm	0.001297	9.38	-25.100500	Y 242.219
Ba (493.408 nm)	-0.000760 u	ppm	0.000254	33.39	768.167000	Y_R 488.368
Be (234.861 nm)	0.000163	ppm	0.000077	46.94	-703.332000	Y_R 488.368
Bi (223.061 nm)	1.013670	ppm	0.005347	0.53	1720.570000	Y 377.433
Ca (315.887 nm)	-0.007850 u	ppm	0.002237	28.49	2.977582	Y_R 377.433
Cd (214.439 nm)	0.000287	ppm	0.000059	20.67	-4.009320	Y 377.433
Co (228.615 nm)	0.001389	ppm	0.000044	3.17	60.862000	Y 242.219
Cr (205.560 nm)	0.000531	ppm	0.000169	31.83	-7.779260	Y 377.433
Cu (324.754 nm)	0.000412	ppm	0.000407	98.85	682.058000	Y 377.433
Fe (238.204 nm)	49.985923 o	ppm	0.168463	0.34	83296.551130	Y_R 377.433
Fe H (259.940 nm)	50.317900	ppm	0.069253	0.14	46163.300000	Y_R 377.433
K (766.491 nm)	0.103949	ppm	0.000421	0.41	1837.510000	Y_R2 488.368
Li (670.783 nm)	0.017378	ppm	0.004335	24.95	-200.766000	Y_R2 488.368
Mg (279.078 nm)	-0.031684 u	ppm	0.001402	4.42	-209.619000	Y 377.433
Mn (257.610 nm)	0.000280	ppm	0.000007	2.38	81.260100	Y 377.433
Mo (202.032 nm)	-0.000564 u	ppm	0.000145	25.61	12.258500	Y 377.433
Na (589.592 nm)	256.264000 o	ppm	0.135005	0.05	128611.000000	Y_R2 488.368
Na H (589.593 nm)	258.090208	ppm	0.049722	0.02	91766.860329	Y_R4
Ni (231.604 nm)	0.000132 u	ppm	0.001036	> 100.00	17.079800	Y 377.433
P (213.618 nm)	-0.013138 u	ppm	0.002137	16.27	-17.628300	Y 242.219
Pb (220.353 nm)	-0.002241 u	ppm	0.000406	18.12	20.171800	Y 242.219
S (181.972 nm)	5.173214	ppm	0.003573	0.07	2445.012329	Y 377.433
Sb (206.834 nm)	-0.000200 u	ppm	0.001432	> 100.00	2.670430	Y 377.433
Se (196.026 nm)	0.001550 u	ppm	0.004326	> 100.00	-8.910610	Y 242.219
Si (288.158 nm)	-0.198468 u	ppm	0.000053	0.03	395.690000	Y 377.433
Sn (189.925 nm)	-0.006847 u	ppm	0.000353	5.15	0.069825	Y 377.433
Sr (421.552 nm)	-0.000176 u	ppm	0.000058	32.95	263.550240	Y_R 488.368
Th (288.505 nm)	5.051990	ppm	0.012604	0.25	5420.080000	Y 377.433
Ti (336.122 nm)	0.001079	ppm	0.000078	7.24	-262.426000	Y 377.433
Tl (190.794 nm)	-0.002516 u	ppm	0.000616	24.46	-13.602000	Y 377.433
U (409.013 nm)	10.557500	ppm	0.003697	0.04	24273.200000	Y 377.433
V (292.401 nm)	-0.003945 u	ppm	0.000131	3.31	-398.176000	Y 377.433
Zn (206.200 nm)	-0.000259 u	ppm	0.000255	98.24	8.851540	Y 377.433
Zr (343.823 nm)	-0.006853 u	ppm	0.000259	3.78	-396.266000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.098082	11696.976233	0.000054	0.00
Y 377.433	1.104248	509762.078715	0.001378	0.12
Y_R 377.433	1.156150	43688.300000	0.000925	0.08
Y_R 488.368	1.155720	41709.800000	0.008049	0.70
Y_R2 488.368	1.164361	81943.899658	0.006291	0.54
Y_R4	1.179570	36194.100000	0.007218	0.61

Sample Name: CCV-5407762

Date: 11/6/2018 1:09:18 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.518278	ppm	0.001804	0.35	14102.400000	Y 377.433
Al (394.401 nm)	0.515590	ppm	0.000291	0.06	6627.300000	Y 377.433
Al H (396.152 nm)	0.564608 u	ppm	0.001150	0.20	912.366000	Y_R 377.433
As (188.980 nm)	1.008440	ppm	0.006040	0.60	1397.800000	Y 242.219
B (249.678 nm)	0.491395	ppm	0.000172	0.04	2018.910000	Y 242.219
Ba (493.408 nm)	0.508662	ppm	0.000922	0.18	47355.100000	Y_R 488.368
Be (234.861 nm)	0.517556	ppm	0.003195	0.62	26760.000000	Y_R 488.368
Bi (223.061 nm)	-0.006537 u	ppm	0.000020	0.30	32.915500	Y 377.433
Ca (315.887 nm)	5.067768	ppm	0.013089	0.26	3345.148627	Y_R 377.433
Cd (214.439 nm)	0.520313	ppm	0.003529	0.68	12944.700000	Y 377.433
Co (228.615 nm)	0.504354	ppm	0.001925	0.38	11961.100000	Y 242.219
Cr (205.560 nm)	0.530989	ppm	0.001195	0.23	2522.760000	Y 377.433
Cu (324.754 nm)	0.521437	ppm	0.001189	0.23	25298.600000	Y 377.433
Fe (238.204 nm)	2.554012	ppm	0.003976	0.16	4266.951882	Y_R 377.433
Fe H (259.940 nm)	2.571550 u	ppm	0.020310	0.79	2348.780000	Y_R 377.433
K (766.491 nm)	51.357600	ppm	0.104520	0.20	51929.800000	Y_R2 488.368
Li (670.783 nm)	1.045890	ppm	0.001725	0.16	14366.600000	Y_R2 488.368
Mg (279.078 nm)	20.521100	ppm	0.043385	0.21	44715.800000	Y 377.433
Mn (257.610 nm)	0.517431	ppm	0.000697	0.13	108282.000000	Y 377.433
Mo (202.032 nm)	0.523670	ppm	0.001288	0.25	5976.240000	Y 377.433
Na (589.592 nm)	25.884900	ppm	0.029270	0.11	12860.700000	Y_R2 488.368
Na H (589.593 nm)	27.772330 u	ppm	0.103007	0.37	9476.109975	Y_R4
Ni (231.604 nm)	0.519611	ppm	0.002724	0.52	2001.410000	Y 377.433
P (213.618 nm)	1.016260	ppm	0.003139	0.31	1154.370000	Y 242.219
Pb (220.353 nm)	1.014310	ppm	0.002124	0.21	2278.140000	Y 242.219
S (181.972 nm)	-0.002136 u	ppm	0.002830	> 100.00	-24.771029	Y 377.433
Sb (206.834 nm)	1.035640	ppm	0.004059	0.39	1701.630000	Y 377.433
Se (196.026 nm)	1.031300	ppm	0.002061	0.20	1552.300000	Y 242.219
Si (288.158 nm)	4.948820	ppm	0.009519	0.19	23455.000000	Y 377.433
Sn (189.925 nm)	1.042560	ppm	0.003295	0.32	1225.110000	Y 377.433
Sr (421.552 nm)	0.516927	ppm	0.000964	0.19	60282.712696	Y_R 488.368
Th (288.505 nm)	-0.023001 u	ppm	0.005762	25.05	-43.551800	Y 377.433
Ti (336.122 nm)	0.524435	ppm	0.000600	0.11	49515.800000	Y 377.433
Tl (190.794 nm)	1.041890	ppm	0.002719	0.26	587.702000	Y 377.433
U (409.013 nm)	-0.019233 u	ppm	0.005829	30.31	24.802700	Y 377.433
V (292.401 nm)	0.514951	ppm	0.000749	0.15	24598.600000	Y 377.433
Zn (206.200 nm)	0.519027	ppm	0.001224	0.24	1798.450000	Y 377.433
Zr (343.823 nm)	0.522869	ppm	0.000844	0.16	21071.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.111711	11842.162562	0.004938	0.44
Y 377.433	1.099914	507761.549125	0.003966	0.36
Y_R 377.433	1.138040	43003.900000	0.002430	0.21
Y_R 488.368	1.135960	40996.700000	0.000387	0.03
Y_R2 488.368	1.139597	80201.097817	0.004492	0.39
Y_R4	1.155720	35462.300000	0.006068	0.53

Sample Name: CCB

Date: 11/6/2018 1:12:48 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000002 u	ppm	0.000192	> 100.00	-239.154000	Y 377.433
Al (394.401 nm)	-0.000125 u	ppm	0.000341	> 100.00	87.996200	Y 377.433
Al H (396.152 nm)	0.135032 Zu	ppm	0.003494	2.59	7.172640 Z	Y_R 377.433
As (188.980 nm)	0.002858	ppm	0.000180	6.28	-11.110600	Y 242.219
B (249.678 nm)	-0.010908 u	ppm	0.000436	3.99	2.905330	Y 242.219
Ba (493.408 nm)	-0.001430 u	ppm	0.000076	5.34	670.165000	Y_R 488.368
Be (234.861 nm)	0.000084	ppm	0.000048	57.19	-1.541750	Y_R 488.368
Bi (223.061 nm)	-0.003247 u	ppm	0.001227	37.80	37.919300	Y 377.433
Ca (315.887 nm)	-0.008198 u	ppm	0.004737	57.78	-7.735404	Y_R 377.433
Cd (214.439 nm)	0.000163	ppm	0.000038	23.34	-7.091690	Y 377.433
Co (228.615 nm)	0.000490	ppm	0.000338	68.95	-16.343300	Y 242.219
Cr (205.560 nm)	0.000413 u	ppm	0.000646	> 100.00	-7.371690	Y 377.433
Cu (324.754 nm)	0.000583	ppm	0.000289	49.60	228.517000	Y 377.433
Fe (238.204 nm)	-0.000832 u	ppm	0.002923	> 100.00	10.149477	Y_R 377.433
Fe H (259.940 nm)	0.017563 u	ppm	0.000096	0.55	5.109910	Y_R 377.433
K (766.491 nm)	-0.183631 u	ppm	0.003570	1.94	1556.440000	Y_R2 488.368
Li (670.783 nm)	0.013054 Z	ppm	0.001204	9.22	-262.012000 Z	Y_R2 488.368
Mg (279.078 nm)	0.002958	ppm	0.001584	53.54	20.507500	Y 377.433
Mn (257.610 nm)	-0.000026 u	ppm	0.000012	43.89	17.144000	Y 377.433
Mo (202.032 nm)	-0.000346 u	ppm	0.000180	52.04	14.746000	Y 377.433
Na (589.592 nm)	0.136706	ppm	0.027284	19.96	-67.319700	Y_R2 488.368
Na H (589.593 nm)	2.156165 u	ppm	0.046219	2.14	379.593796	Y_R4
Ni (231.604 nm)	0.000413 u	ppm	0.001007	> 100.00	10.663600	Y 377.433
P (213.618 nm)	0.001589 u	ppm	0.004368	> 100.00	0.753957	Y 242.219
Pb (220.353 nm)	-0.001641 u	ppm	0.001029	62.71	10.836000	Y 242.219
S (181.972 nm)	0.008515	ppm	0.002401	28.20	-21.643611	Y 377.433
Sb (206.834 nm)	0.002048	ppm	0.001235	60.33	2.242460	Y 377.433
Se (196.026 nm)	0.002308	ppm	0.003085	> 100.00	5.111900	Y 242.219
Si (288.158 nm)	-0.206463 Zu	ppm	0.000981	0.48	359.875000 Z	Y 377.433
Sn (189.925 nm)	-0.004836 u	ppm	0.002035	42.09	2.417990	Y 377.433
Sr (421.552 nm)	-0.000378 u	ppm	0.000077	20.46	234.327706	Y_R 488.368
Th (288.505 nm)	-0.003260 u	ppm	0.001248	38.27	10.922200	Y 377.433
Ti (336.122 nm)	0.000654	ppm	0.000090	13.78	-302.854000	Y 377.433
Tl (190.794 nm)	0.002765	ppm	0.003008	> 100.00	-7.229320	Y 377.433
U (409.013 nm)	-0.005731 u	ppm	0.006074	> 100.00	101.711000	Y 377.433
V (292.401 nm)	0.000361	ppm	0.000294	81.43	-177.727000	Y 377.433
Zn (206.200 nm)	0.000136 u	ppm	0.000803	> 100.00	4.848330	Y 377.433
Zr (343.823 nm)	0.000604	ppm	0.000298	49.30	-94.043800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131071	12048.389538	0.000552	0.05
Y 377.433	1.123905	518836.530158	0.000415	0.04
Y_R 377.433	1.159080	43799.000000	0.005062	0.44
Y_R 488.368	1.163760	42000.000000	0.013383	1.15
Y_R2 488.368	1.162839	81836.798360	0.000027	0.00
Y_R4	1.130090	34675.800000	0.011605	1.03

Sample Name: CCVL-5412564

Date: 11/6/2018 1:15:58 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010126	ppm	0.000801	7.91	41.776900	Y 377.433
Al (394.401 nm)	0.101180	ppm	0.000722	0.71	1352.370000	Y 377.433
Al H (396.152 nm)	0.242964 u	ppm	0.004388	1.81	189.580000	Y_R 377.433
As (188.980 nm)	0.013999	ppm	0.001020	7.29	4.495770	Y 242.219
B (249.678 nm)	0.089255	ppm	0.000720	0.81	405.044000	Y 242.219
Ba (493.408 nm)	0.008900	ppm	0.000012	0.14	1615.640000	Y_R 488.368
Be (234.861 nm)	0.001132	ppm	0.000048	4.23	51.331900	Y_R 488.368
Bi (223.061 nm)	0.093051	ppm	0.002523	2.71	196.661000	Y 377.433
Ca (315.887 nm)	0.197746	ppm	0.000708	0.36	128.319842	Y_R 377.433
Cd (214.439 nm)	0.005604	ppm	0.000254	4.54	128.373000	Y 377.433
Co (228.615 nm)	0.011112	ppm	0.000026	0.23	236.205000	Y 242.219
Cr (205.560 nm)	0.011783	ppm	0.000300	2.55	46.775100	Y 377.433
Cu (324.754 nm)	0.016296	ppm	0.000321	1.97	985.860000	Y 377.433
Fe (238.204 nm)	0.099656	ppm	0.000270	0.27	177.579722	Y_R 377.433
Fe H (259.940 nm)	0.104768 u	ppm	0.003516	3.36	85.133100	Y_R 377.433
K (766.491 nm)	2.770230	ppm	0.060042	2.17	4443.370000	Y_R2 488.368
Li (670.783 nm)	0.033845 Q	ppm	0.000909	2.68	32.470700 Q	Y_R2 488.368
Mg (279.078 nm)	0.210658	ppm	0.002144	1.02	472.520000	Y 377.433
Mn (257.610 nm)	0.010731	ppm	0.000077	0.71	2267.780000	Y 377.433
Mo (202.032 nm)	0.020623	ppm	0.000091	0.44	253.300000	Y 377.433
Na (589.592 nm)	1.230740	ppm	0.000316	0.03	482.164000	Y_R2 488.368
Na H (589.593 nm)	3.042289 u	ppm	0.023883	0.79	695.005344	Y_R4
Ni (231.604 nm)	0.042069	ppm	0.000475	1.13	170.310000	Y 377.433
P (213.618 nm)	2.917160	ppm	0.005629	0.19	3382.400000	Y 242.219
Pb (220.353 nm)	0.007396	ppm	0.000996	13.46	31.006600	Y 242.219
S (181.972 nm)	0.102163	ppm	0.003164	3.10	23.129182	Y 377.433
Sb (206.834 nm)	0.021514	ppm	0.001551	7.21	34.132800	Y 377.433
Se (196.026 nm)	0.023972	ppm	0.000933	3.89	37.674500	Y 242.219
Si (288.158 nm)	0.300536 Q	ppm	0.001493	0.50	2631.180000 Q	Y 377.433
Sn (189.925 nm)	0.095255	ppm	0.000630	0.66	119.260000	Y 377.433
Sr (421.552 nm)	0.009329	ppm	0.000235	2.52	1361.141885	Y_R 488.368
Th (288.505 nm)	0.012047	ppm	0.005597	46.46	26.817000	Y 377.433
Ti (336.122 nm)	0.010952	ppm	0.000250	2.28	676.930000	Y 377.433
Tl (190.794 nm)	0.016643	ppm	0.002286	13.73	0.692532	Y 377.433
U (409.013 nm)	0.052668	ppm	0.003212	6.10	233.918000	Y 377.433
V (292.401 nm)	0.010620	ppm	0.000127	1.19	315.632000	Y 377.433
Zn (206.200 nm)	0.021088	ppm	0.001292	6.13	77.271200	Y 377.433
Zr (343.823 nm)	0.016144	ppm	0.000010	0.06	535.694000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.151031	12261.006853	0.000081	0.01
Y 377.433	1.144548	528366.052210	0.001503	0.13
Y_R 377.433	1.172520	44307.000000	0.006636	0.57
Y_R 488.368	1.176750	42469.000000	0.029342	2.49
Y_R2 488.368	1.177728	82884.666171	0.000337	0.03
Y_R4	1.159800	35587.500000	0.002933	0.25

Sample Name: 280-116303-C-5-C MS

Date: 11/6/2018 1:19:24 AM Rack:Tube: 2:30

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055528	ppm	0.000013	0.02	1245.640000	Y 377.433
Al (394.401 nm)	2.133280	ppm	0.005432	0.25	26990.300000	Y 377.433
Al H (396.152 nm)	2.019260	ppm	0.003426	0.17	3528.810000	Y_R 377.433
As (188.980 nm)	1.033600	ppm	0.000760	0.07	1433.070000	Y 242.219
B (249.678 nm)	1.090400	ppm	0.000466	0.04	4424.510000	Y 242.219
Ba (493.408 nm)	2.082540	ppm	0.004980	0.24	191394.000000	Y_R 488.368
Be (234.861 nm)	0.053056	ppm	0.000165	0.31	2726.840000	Y_R 488.368
Bi (223.061 nm)	2.042310	ppm	0.001202	0.06	3409.740000	Y 377.433
Ca (315.887 nm)	110.884202	ppm	0.001135	0.00	73239.237988	Y_R 377.433
Cd (214.439 nm)	0.103931	ppm	0.001131	1.09	2576.730000	Y 377.433
Co (228.615 nm)	0.496523	ppm	0.000374	0.08	11797.700000	Y 242.219
Cr (205.560 nm)	0.213928	ppm	0.001012	0.47	1007.590000	Y 377.433
Cu (324.754 nm)	0.261131	ppm	0.000365	0.14	12773.100000	Y 377.433
Fe (238.204 nm)	1.051801	ppm	0.003054	0.29	1764.013747	Y_R 377.433
Fe H (259.940 nm)	1.040500 u	ppm	0.003633	0.35	943.810000	Y_R 377.433
K (766.491 nm)	54.014200	ppm	0.309116	0.57	54526.100000	Y_R2 488.368
Li (670.783 nm)	1.087800	ppm	0.004609	0.42	14960.200000	Y_R2 488.368
Mg (279.078 nm)	67.622700	ppm	0.123300	0.18	147300.000000	Y 377.433
Mn (257.610 nm)	0.517849	ppm	0.001074	0.21	108369.000000	Y 377.433
Mo (202.032 nm)	1.082430	ppm	0.000014	0.00	12333.000000	Y 377.433
Na (589.592 nm)	60.427500 o	ppm	0.058679	0.10	30190.600000	Y_R2 488.368
Na H (589.593 nm)	62.081030	ppm	0.355648	0.57	21571.880062	Y_R4
Ni (231.604 nm)	0.498607	ppm	0.002609	0.52	1921.610000	Y 377.433
P (213.618 nm)	10.580500	ppm	0.043020	0.41	12261.300000	Y 242.219
Pb (220.353 nm)	0.514687	ppm	0.000763	0.15	1164.260000	Y 242.219
S (181.972 nm)	11.296208	ppm	0.007973	0.07	5377.214111	Y 377.433
Sb (206.834 nm)	0.537520	ppm	0.000694	0.13	872.159000	Y 377.433
Se (196.026 nm)	2.123040	ppm	0.003895	0.18	3194.150000	Y 242.219
Si (288.158 nm)	16.721900	ppm	0.085696	0.51	76197.300000	Y 377.433
Sn (189.925 nm)	2.126340	ppm	0.000426	0.02	2490.270000	Y 377.433
Sr (421.552 nm)	1.143973	ppm	0.002738	0.24	133069.191012	Y_R 488.368
Th (288.505 nm)	0.998760	ppm	0.002998	0.30	1052.000000	Y 377.433
Ti (336.122 nm)	1.068160	ppm	0.001321	0.12	101483.000000	Y 377.433
Tl (190.794 nm)	2.088840	ppm	0.004541	0.22	1185.520000	Y 377.433
U (409.013 nm)	2.182320	ppm	0.004605	0.21	5045.740000	Y 377.433
V (292.401 nm)	0.529709	ppm	0.000673	0.13	25389.800000	Y 377.433
Zn (206.200 nm)	0.510069	ppm	0.000545	0.11	1767.330000	Y 377.433
Zr (343.823 nm)	0.529201	ppm	0.000604	0.11	21327.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.089020	11600.450755	0.005412	0.50
Y 377.433	1.095269	505617.180777	0.004736	0.43
Y_R 377.433	1.136780	42956.200000	0.000962	0.08
Y_R 488.368	1.132560	40873.900000	0.002165	0.19
Y_R2 488.368	1.141632	80344.353156	0.011856	1.04
Y_R4	1.138400	34930.800000	0.004279	0.38

Sample Name: 280-116303-C-5-D MSD

Date: 11/6/2018 1:22:53 AM Rack:Tube: 2:31

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055043	ppm	0.000424	0.77	1232.590000	Y 377.433
Al (394.401 nm)	2.107040	ppm	0.001485	0.07	26657.400000	Y 377.433
Al H (396.152 nm)	2.002700	ppm	0.013929	0.70	3493.870000	Y_R 377.433
As (188.980 nm)	1.022190	ppm	0.001567	0.15	1417.080000	Y 242.219
B (249.678 nm)	1.078770	ppm	0.002034	0.19	4377.850000	Y 242.219
Ba (493.408 nm)	2.049940	ppm	0.002064	0.10	188410.000000	Y_R 488.368
Be (234.861 nm)	0.051710	ppm	0.000280	0.54	2657.410000	Y_R 488.368
Bi (223.061 nm)	2.011620	ppm	0.007469	0.37	3359.150000	Y 377.433
Ca (315.887 nm)	111.513282	ppm	0.009290	0.01	73654.751061	Y_R 377.433
Cd (214.439 nm)	0.102472	ppm	0.000216	0.21	2540.410000	Y 377.433
Co (228.615 nm)	0.490875	ppm	0.000318	0.06	11663.000000	Y 242.219
Cr (205.560 nm)	0.212740	ppm	0.000775	0.36	1001.980000	Y 377.433
Cu (324.754 nm)	0.257136	ppm	0.000184	0.07	12579.600000	Y 377.433
Fe (238.204 nm)	1.037461	ppm	0.000633	0.06	1740.121099	Y_R 377.433
Fe H (259.940 nm)	1.029480 u	ppm	0.000091	0.01	933.693000	Y_R 377.433
K (766.491 nm)	53.564100	ppm	0.118514	0.22	54086.200000	Y_R2 488.368
Li (670.783 nm)	1.077810	ppm	0.001794	0.17	14818.700000	Y_R2 488.368
Mg (279.078 nm)	67.408500	ppm	0.121038	0.18	146834.000000	Y 377.433
Mn (257.610 nm)	0.511349	ppm	0.000429	0.08	107009.000000	Y 377.433
Mo (202.032 nm)	1.067460	ppm	0.001540	0.14	12162.700000	Y 377.433
Na (589.592 nm)	60.104600 o	ppm	0.085753	0.14	30028.900000	Y_R2 488.368
Na H (589.593 nm)	61.801054	ppm	0.348103	0.56	21475.077769	Y_R4
Ni (231.604 nm)	0.492457	ppm	0.001971	0.40	1898.020000	Y 377.433
P (213.618 nm)	10.479200	ppm	0.013983	0.13	12144.000000	Y 242.219
Pb (220.353 nm)	0.507562	ppm	0.003074	0.61	1148.340000	Y 242.219
S (181.972 nm)	11.449432	ppm	0.024995	0.22	5450.406467	Y 377.433
Sb (206.834 nm)	0.528426	ppm	0.001557	0.29	857.362000	Y 377.433
Se (196.026 nm)	2.091260	ppm	0.011027	0.53	3146.370000	Y 242.219
Si (288.158 nm)	16.824600	ppm	0.069009	0.41	76657.400000	Y 377.433
Sn (189.925 nm)	2.106850	ppm	0.005073	0.24	2467.520000	Y 377.433
Sr (421.552 nm)	1.120826	ppm	0.002823	0.25	130382.316024	Y_R 488.368
Th (288.505 nm)	0.988988	ppm	0.002048	0.21	1041.910000	Y 377.433
Ti (336.122 nm)	1.052070	ppm	0.001113	0.11	99953.800000	Y 377.433
Tl (190.794 nm)	2.064990	ppm	0.004191	0.20	1171.870000	Y 377.433
U (409.013 nm)	2.153970	ppm	0.011738	0.54	4981.640000	Y 377.433
V (292.401 nm)	0.522898	ppm	0.000446	0.09	25060.600000	Y 377.433
Zn (206.200 nm)	0.506784	ppm	0.001680	0.33	1755.980000	Y 377.433
Zr (343.823 nm)	0.521440	ppm	0.000893	0.17	21013.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.081116	11516.257809	0.003475	0.32
Y 377.433	1.084952	500854.389059	0.003106	0.29
Y_R 377.433	1.135350	42902.400000	0.004003	0.35
Y_R 488.368	1.138030	41071.400000	0.003316	0.29
Y_R2 488.368	1.142113	80378.156787	0.011773	1.03
Y_R4	1.158630	35551.700000	0.007471	0.64

Sample Name: 280-116303-C-5-Bpds

Date: 11/6/2018 1:26:24 AM Rack:Tube: 2:32

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049492	ppm	0.000191	0.39	1124.360000	Y 377.433
Al (394.401 nm)	1.053990	ppm	0.000500	0.05	13267.300000	Y 377.433
Al H (396.152 nm)	1.132780	ppm	0.005419	0.48	1686.070000	Y_R 377.433
As (188.980 nm)	0.203079	ppm	0.000064	0.03	269.388000	Y 242.219
B (249.678 nm)	0.124650	ppm	0.002143	1.72	546.862000	Y 242.219
Ba (493.408 nm)	0.101803	ppm	0.000395	0.39	10118.700000	Y_R 488.368
Be (234.861 nm)	0.050904	ppm	0.000220	0.43	2615.770000	Y_R 488.368
Bi (223.061 nm)	0.002673 u	ppm	0.003799	> 100.00	47.845600	Y 377.433
Ca (315.887 nm)	79.407168	ppm	0.025627	0.03	52447.829892	Y_R 377.433
Cd (214.439 nm)	0.051325	ppm	0.000073	0.14	1266.830000	Y 377.433
Co (228.615 nm)	0.048695	ppm	0.000560	1.15	1130.300000	Y 242.219
Cr (205.560 nm)	0.054036	ppm	0.000263	0.49	248.325000	Y 377.433
Cu (324.754 nm)	0.051231	ppm	0.000033	0.06	2629.270000	Y 377.433
Fe (238.204 nm)	1.020296	ppm	0.010427	1.02	1711.521820	Y_R 377.433
Fe H (259.940 nm)	1.018740 u	ppm	0.000724	0.07	923.840000	Y_R 377.433
K (766.491 nm)	21.412000	ppm	0.108360	0.51	22662.700000	Y_R2 488.368
Li (670.783 nm)	0.130388	ppm	0.000424	0.33	1399.860000	Y_R2 488.368
Mg (279.078 nm)	36.444700	ppm	0.046628	0.13	79399.000000	Y 377.433
Mn (257.610 nm)	0.051528	ppm	0.000046	0.09	10803.600000	Y 377.433
Mo (202.032 nm)	0.051947	ppm	0.000328	0.63	609.660000	Y 377.433
Na (589.592 nm)	28.399400	ppm	0.091946	0.32	14130.300000	Y_R2 488.368
Na H (589.593 nm)	30.035316 u	ppm	0.148529	0.49	10324.319193	Y_R4
Ni (231.604 nm)	0.050144	ppm	0.001163	2.32	201.545000	Y 377.433
P (213.618 nm)	2.076860	ppm	0.009760	0.47	2405.900000	Y 242.219
Pb (220.353 nm)	0.097429	ppm	0.004123	4.23	232.648000	Y 242.219
S (181.972 nm)	9.004808	ppm	0.027348	0.30	4279.578232	Y 377.433
Sb (206.834 nm)	0.096826	ppm	0.001153	1.19	158.125000	Y 377.433
Se (196.026 nm)	0.211822	ppm	0.004008	1.89	319.921000	Y 242.219
Si (288.158 nm)	11.415200	ppm	0.041973	0.37	52423.800000	Y 377.433
Sn (189.925 nm)	0.095849	ppm	0.003578	3.73	119.953000	Y 377.433
Sr (421.552 nm)	0.139030	ppm	0.001107	0.80	16416.709874	Y_R 488.368
Th (288.505 nm)	0.196674	ppm	0.002559	1.30	221.426000	Y 377.433
Ti (336.122 nm)	0.052109	ppm	0.000055	0.10	4790.410000	Y 377.433
Tl (190.794 nm)	0.203517	ppm	0.001980	0.97	106.948000	Y 377.433
U (409.013 nm)	0.541699	ppm	0.004240	0.78	1341.440000	Y 377.433
V (292.401 nm)	0.052670	ppm	0.000016	0.03	2336.250000	Y 377.433
Zn (206.200 nm)	0.204270	ppm	0.000209	0.10	710.464000	Y 377.433
Zr (343.823 nm)	0.051669	ppm	0.000096	0.19	1975.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.105410	11775.044475	0.003537	0.32
Y 377.433	1.104189	509734.823000	0.001469	0.13
Y_R 377.433	1.148010	43380.700000	0.000697	0.06
Y_R 488.368	1.149940	41501.200000	0.008071	0.70
Y_R2 488.368	1.154561	81254.247399	0.009069	0.79
Y_R4	1.151900	35345.000000	0.005111	0.44

Sample Name: 280-116303-C-6-B

Date: 11/6/2018 1:29:52 AM Rack:Tube: 2:33

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001131	ppm	0.000296	26.21	-207.908000	Y 377.433
Al (394.401 nm)	0.021763	ppm	0.001053	4.84	385.445000	Y 377.433
Al H (396.152 nm)	0.129608 u	ppm	0.004657	3.59	16.820900	Y_R 377.433
As (188.980 nm)	-0.002012 u	ppm	0.000314	15.61	-17.935200	Y 242.219
B (249.678 nm)	0.021688	ppm	0.000212	0.98	133.779000	Y 242.219
Ba (493.408 nm)	0.000783	ppm	0.000317	40.44	872.717000	Y_R 488.368
Be (234.861 nm)	0.000045	ppm	0.000011	24.35	-3.710650	Y_R 488.368
Bi (223.061 nm)	-0.002857 u	ppm	0.000763	26.73	38.565800	Y 377.433
Ca (315.887 nm)	61.967727	ppm	0.023324	0.04	40928.535971	Y_R 377.433
Cd (214.439 nm)	0.000282	ppm	0.000081	28.66	-4.128310	Y 377.433
Co (228.615 nm)	0.000361	ppm	0.000278	77.05	-19.389800	Y 242.219
Cr (205.560 nm)	0.000832	ppm	0.000051	6.09	-5.375230	Y 377.433
Cu (324.754 nm)	0.000180	ppm	0.000093	51.65	171.783000	Y 377.433
Fe (238.204 nm)	0.008849	ppm	0.000832	9.41	26.278945	Y_R 377.433
Fe H (259.940 nm)	0.019006 u	ppm	0.001249	6.57	6.433640	Y_R 377.433
K (766.491 nm)	0.650657	ppm	0.082710	12.71	2371.830000	Y_R2 488.368
Li (670.783 nm)	0.029780	ppm	0.005858	19.67	-25.101900	Y_R2 488.368
Mg (279.078 nm)	17.091300	ppm	0.000282	0.00	37245.900000	Y 377.433
Mn (257.610 nm)	0.000326	ppm	0.000037	11.43	90.866900	Y 377.433
Mo (202.032 nm)	0.000149	ppm	0.000126	84.54	20.375900	Y 377.433
Na (589.592 nm)	8.397770	ppm	0.047553	0.57	4082.990000	Y_R2 488.368
Na H (589.593 nm)	10.042321 u	ppm	0.064790	0.65	3195.267396	Y_R4
Ni (231.604 nm)	0.000453 u	ppm	0.000653	> 100.00	10.816100	Y 377.433
P (213.618 nm)	0.009292	ppm	0.001219	13.11	9.675930	Y 242.219
Pb (220.353 nm)	-0.001472 u	ppm	0.000373	25.33	11.193000	Y 242.219
S (181.972 nm)	9.205544	ppm	0.039567	0.43	4374.387640	Y 377.433
Sb (206.834 nm)	-0.002639 u	ppm	0.003010	> 100.00	-5.464000	Y 377.433
Se (196.026 nm)	0.001034	ppm	0.000104	10.08	3.194230	Y 242.219
Si (288.158 nm)	6.504130	ppm	0.040158	0.62	30422.700000	Y 377.433
Sn (189.925 nm)	-0.007492 u	ppm	0.000209	2.79	-0.682524	Y 377.433
Sr (421.552 nm)	0.092675	ppm	0.002425	2.62	11035.841242	Y_R 488.368
Th (288.505 nm)	-0.016325 u	ppm	0.002232	13.67	-3.459120	Y 377.433
Ti (336.122 nm)	0.000592	ppm	0.000177	29.93	-152.911000	Y 377.433
Tl (190.794 nm)	-0.003119 u	ppm	0.001905	61.09	-11.218300	Y 377.433
U (409.013 nm)	0.001565 u	ppm	0.012651	> 100.00	112.493000	Y 377.433
V (292.401 nm)	0.001008	ppm	0.000127	12.56	-146.810000	Y 377.433
Zn (206.200 nm)	0.000363	ppm	0.000197	54.32	5.636040	Y 377.433
Zr (343.823 nm)	0.000454	ppm	0.000079	17.33	-100.137000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122111	11952.940981	0.002543	0.23
Y 377.433	1.118455	516320.432770	0.003796	0.34
Y_R 377.433	1.159350	43809.100000	0.005543	0.48
Y_R 488.368	1.146540	41378.700000	0.031482	2.75
Y_R2 488.368	1.152314	81096.084438	0.000166	0.01
Y_R4	1.151500	35332.800000	0.007850	0.68

Sample Name: 280-116303-C-8-B

Date: 11/6/2018 1:33:16 AM Rack:Tube: 2:34

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000630	ppm	0.000125	19.88	-221.778000	Y 377.433
Al (394.401 nm)	0.016007	ppm	0.001048	6.55	314.005000	Y 377.433
Al H (396.152 nm)	0.112459 u	ppm	0.011686	10.39	-10.454600	Y_R 377.433
As (188.980 nm)	-0.000970 u	ppm	0.000680	70.12	-16.474000	Y 242.219
B (249.678 nm)	0.012265	ppm	0.000884	7.21	95.942700	Y 242.219
Ba (493.408 nm)	0.006019	ppm	0.000053	0.89	1351.920000	Y_R 488.368
Be (234.861 nm)	0.000126	ppm	0.000020	15.68	0.522981	Y_R 488.368
Bi (223.061 nm)	0.002876	ppm	0.001831	63.67	48.013900	Y 377.433
Ca (315.887 nm)	66.886447	ppm	0.058178	0.09	44177.442570	Y_R 377.433
Cd (214.439 nm)	0.000374	ppm	0.000221	59.11	-1.855480	Y 377.433
Co (228.615 nm)	0.000097	ppm	0.000001	0.94	-25.653600	Y 242.219
Cr (205.560 nm)	0.001303	ppm	0.000244	18.69	-3.124080	Y 377.433
Cu (324.754 nm)	0.000255	ppm	0.000012	4.55	173.467000	Y 377.433
Fe (238.204 nm)	0.009531	ppm	0.003164	33.20	27.415432	Y_R 377.433
Fe H (259.940 nm)	0.018349 u	ppm	0.005282	28.79	5.831000	Y_R 377.433
K (766.491 nm)	0.578527	ppm	0.035146	6.08	2301.330000	Y_R2 488.368
Li (670.783 nm)	0.021795	ppm	0.001048	4.81	-138.206000	Y_R2 488.368
Mg (279.078 nm)	15.157200	ppm	0.008070	0.05	33032.700000	Y 377.433
Mn (257.610 nm)	0.461912	ppm	0.000168	0.04	96665.600000	Y 377.433
Mo (202.032 nm)	0.000065	ppm	0.000001	2.02	19.421900	Y 377.433
Na (589.592 nm)	4.403920	ppm	0.056580	1.28	2076.410000	Y_R2 488.368
Na H (589.593 nm)	6.032445 u	ppm	0.027507	0.46	1763.016771	Y_R4
Ni (231.604 nm)	0.000304 u	ppm	0.001712	> 100.00	10.249600	Y 377.433
P (213.618 nm)	0.032202	ppm	0.000101	0.31	36.249900	Y 242.219
Pb (220.353 nm)	-0.001247 u	ppm	0.002152	> 100.00	11.694900	Y 242.219
S (181.972 nm)	6.116299	ppm	0.000499	0.01	2900.622374	Y 377.433
Sb (206.834 nm)	-0.006065 u	ppm	0.001829	30.15	-11.098500	Y 377.433
Se (196.026 nm)	0.007551	ppm	0.000064	0.84	13.634100	Y 242.219
Si (288.158 nm)	5.675800	ppm	0.041512	0.73	26711.800000	Y 377.433
Sn (189.925 nm)	-0.006620 u	ppm	0.000732	11.05	0.334492	Y 377.433
Sr (421.552 nm)	0.098748	ppm	0.000258	0.26	11740.807383	Y_R 488.368
Th (288.505 nm)	-0.015399 u	ppm	0.002800	18.18	2.551450	Y 377.433
Ti (336.122 nm)	0.000520	ppm	0.000142	27.29	-147.448000	Y 377.433
Tl (190.794 nm)	-0.001748 u	ppm	0.001665	95.26	-10.480900	Y 377.433
U (409.013 nm)	-0.007844 u	ppm	0.015152	> 100.00	90.502200	Y 377.433
V (292.401 nm)	0.001070	ppm	0.000064	6.00	-143.372000	Y 377.433
Zn (206.200 nm)	0.001436	ppm	0.000347	24.15	9.341820	Y 377.433
Zr (343.823 nm)	0.000510	ppm	0.000271	53.21	-97.877600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.117563	11904.491507	0.003478	0.31
Y 377.433	1.113605	514081.589290	0.002218	0.20
Y_R 377.433	1.153260	43579.100000	0.005517	0.48
Y_R 488.368	1.153580	41632.800000	0.007907	0.69
Y_R2 488.368	1.172099	82488.508274	0.002958	0.25
Y_R4	1.157080	35504.200000	0.000478	0.04

Sample Name: 280-116303-E-10-B

Date: 11/6/2018 1:36:41 AM Rack:Tube: 2:35

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001838	ppm	0.000235	12.81	-188.369000	Y 377.433
Al (394.401 nm)	0.294561	ppm	0.000226	0.08	3837.400000	Y 377.433
Al H (396.152 nm)	0.344193 u	ppm	0.003801	1.10	433.236000	Y_R 377.433
As (188.980 nm)	0.012604	ppm	0.001030	8.17	2.506240	Y 242.219
B (249.678 nm)	0.049959	ppm	0.000232	0.46	246.855000	Y 242.219
Ba (493.408 nm)	0.026034	ppm	0.000380	1.46	3184.630000	Y_R 488.368
Be (234.861 nm)	0.000085	ppm	0.000067	79.23	-20.614900	Y_R 488.368
Bi (223.061 nm)	0.006966	ppm	0.005048	72.47	54.934600	Y 377.433
Ca (315.887 nm)	97.527928	ppm	0.174389	0.18	64416.775721	Y_R 377.433
Cd (214.439 nm)	0.000305	ppm	0.000062	20.49	-3.571470	Y 377.433
Co (228.615 nm)	0.000641	ppm	0.000155	24.12	-11.124600	Y 242.219
Cr (205.560 nm)	0.001494	ppm	0.000459	30.74	-2.225570	Y 377.433
Cu (324.754 nm)	0.000319	ppm	0.000204	64.18	160.047000	Y 377.433
Fe (238.204 nm)	1.352940	ppm	0.000346	0.03	2265.763091	Y_R 377.433
Fe H (259.940 nm)	1.348510 u	ppm	0.006837	0.51	1226.450000	Y_R 377.433
K (766.491 nm)	2.658210	ppm	0.117843	4.43	4333.890000	Y_R2 488.368
Li (670.783 nm)	0.063415	ppm	0.003991	6.29	451.283000	Y_R2 488.368
Mg (279.078 nm)	52.246700	ppm	0.031445	0.06	113827.000000	Y 377.433
Mn (257.610 nm)	0.212138	ppm	0.000288	0.14	44407.100000	Y 377.433
Mo (202.032 nm)	0.001258	ppm	0.000251	19.95	32.991300	Y 377.433
Na (589.592 nm)	23.791400	ppm	0.026893	0.11	11816.400000	Y_R2 488.368
Na H (589.593 nm)	25.037507 u	ppm	0.113196	0.45	8547.212117	Y_R4
Ni (231.604 nm)	0.000980	ppm	0.000282	28.76	13.041300	Y 377.433
P (213.618 nm)	0.014415	ppm	0.000981	6.80	15.598200	Y 242.219
Pb (220.353 nm)	-0.001699 u	ppm	0.000247	14.52	10.649900	Y 242.219
S (181.972 nm)	47.572571	ppm	0.124452	0.26	22702.553646	Y 377.433
Sb (206.834 nm)	-0.006005 u	ppm	0.001210	20.15	-10.905400	Y 377.433
Se (196.026 nm)	0.005877	ppm	0.002508	42.67	10.423500	Y 242.219
Si (288.158 nm)	8.587820	ppm	0.050313	0.59	39757.400000	Y 377.433
Sn (189.925 nm)	-0.006883 u	ppm	0.000030	0.43	0.028091	Y 377.433
Sr (421.552 nm)	0.312276	ppm	0.000761	0.24	36527.007976	Y_R 488.368
Th (288.505 nm)	-0.012509 u	ppm	0.007031	56.21	2.538220	Y 377.433
Ti (336.122 nm)	0.004052	ppm	0.000169	4.17	266.994000	Y 377.433
Tl (190.794 nm)	-0.006275 u	ppm	0.000616	9.82	-13.441100	Y 377.433
U (409.013 nm)	0.014801	ppm	0.004992	33.73	140.020000	Y 377.433
V (292.401 nm)	0.001321	ppm	0.000002	0.17	-131.179000	Y 377.433
Zn (206.200 nm)	0.002984	ppm	0.000441	14.76	14.837600	Y 377.433
Zr (343.823 nm)	0.000493	ppm	0.000290	58.80	-98.573600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103476	11754.442925	0.000367	0.03
Y 377.433	1.103021	509195.536987	0.002370	0.21
Y_R 377.433	1.141440	43132.400000	0.007534	0.66
Y_R 488.368	1.139200	41113.700000	0.011641	1.02
Y_R2 488.368	1.122068	78967.462289	0.001058	0.09
Y_R4	1.130020	34673.600000	0.009442	0.84

Sample Name: 280-116336-E-3-A

Date: 11/6/2018 1:40:09 AM Rack:Tube: 2:36

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001436	ppm	0.000302	21.05	-199.295000	Y 377.433
Al (394.401 nm)	0.100507	ppm	0.002470	2.46	1407.130000	Y 377.433
Al H (396.152 nm)	0.170742 u	ppm	0.002164	1.27	126.134000	Y_R 377.433
As (188.980 nm)	-0.000903 u	ppm	0.000093	10.34	-16.388000	Y 242.219
B (249.678 nm)	0.059383	ppm	0.001916	3.23	285.048000	Y 242.219
Ba (493.408 nm)	0.023145	ppm	0.000031	0.14	2919.440000	Y_R 488.368
Be (234.861 nm)	0.000171	ppm	0.000092	54.08	-0.881479	Y_R 488.368
Bi (223.061 nm)	0.004898	ppm	0.001671	34.12	51.384900	Y 377.433
Ca (315.887 nm)	141.498267	ppm	0.338167	0.24	93459.975497	Y_R 377.433
Cd (214.439 nm)	0.000403	ppm	0.000133	33.11	-1.122300	Y 377.433
Co (228.615 nm)	0.000600	ppm	0.000240	39.95	-13.379500	Y 242.219
Cr (205.560 nm)	0.001839	ppm	0.000266	14.48	-0.570785	Y 377.433
Cu (324.754 nm)	-0.000721 u	ppm	0.000284	39.43	84.047100	Y 377.433
Fe (238.204 nm)	0.272161	ppm	0.000824	0.30	465.000914	Y_R 377.433
Fe H (259.940 nm)	0.254407 u	ppm	0.000375	0.15	222.450000	Y_R 377.433
K (766.491 nm)	2.352720	ppm	0.038105	1.62	4035.320000	Y_R2 488.368
Li (670.783 nm)	0.051940	ppm	0.001596	3.07	288.761000	Y_R2 488.368
Mg (279.078 nm)	70.660000	ppm	0.032349	0.05	153940.000000	Y 377.433
Mn (257.610 nm)	0.150428	ppm	0.000072	0.05	31495.800000	Y 377.433
Mo (202.032 nm)	0.000027 u	ppm	0.000386	> 100.00	18.981600	Y 377.433
Na (589.592 nm)	11.280600	ppm	0.057295	0.51	5530.980000	Y_R2 488.368
Na H (589.593 nm)	12.825864 u	ppm	0.023511	0.18	4187.047858	Y_R4
Ni (231.604 nm)	0.001783	ppm	0.000289	16.19	15.957300	Y 377.433
P (213.618 nm)	0.001994	ppm	0.001725	86.51	1.199990	Y 242.219
Pb (220.353 nm)	-0.001135 u	ppm	0.001177	> 100.00	11.908100	Y 242.219
S (181.972 nm)	105.113836	ppm	0.331403	0.32	50188.656088	Y 377.433
Sb (206.834 nm)	-0.007754 u	ppm	0.001187	15.30	-13.850800	Y 377.433
Se (196.026 nm)	0.004793	ppm	0.001238	25.82	8.987080	Y 242.219
Si (288.158 nm)	5.783480	ppm	0.033989	0.59	27194.200000	Y 377.433
Sn (189.925 nm)	-0.005173 u	ppm	0.000971	18.78	2.023920	Y 377.433
Sr (421.552 nm)	0.267749	ppm	0.000406	0.15	31358.152097	Y_R 488.368
Th (288.505 nm)	-0.009212 u	ppm	0.008903	96.65	5.142730	Y 377.433
Ti (336.122 nm)	0.002069	ppm	0.000185	8.96	191.413000	Y 377.433
Tl (190.794 nm)	-0.004941 u	ppm	0.000462	9.35	-13.078800	Y 377.433
U (409.013 nm)	-0.002371 u	ppm	0.017463	> 100.00	95.904700	Y 377.433
V (292.401 nm)	0.001234	ppm	0.000008	0.64	-134.392000	Y 377.433
Zn (206.200 nm)	0.004357	ppm	0.001222	28.05	19.467200	Y 377.433
Zr (343.823 nm)	0.000274 u	ppm	0.000454	> 100.00	-107.450000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099748	11714.726437	0.002541	0.23
Y 377.433	1.103775	509543.618123	0.006435	0.58
Y_R 377.433	1.137180	42971.600000	0.006079	0.53
Y_R 488.368	1.130170	40787.800000	0.007430	0.66
Y_R2 488.368	1.141396	80327.704274	0.006415	0.56
Y_R4	1.125430	34532.900000	0.002970	0.26

Sample Name: 280-116336-E-6-A

Date: 11/6/2018 1:43:35 AM Rack:Tube: 2:37

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001244	ppm	0.000184	14.78	-204.875000	Y 377.433
Al (394.401 nm)	1.045250	ppm	0.000832	0.08	13173.900000	Y 377.433
Al H (396.152 nm)	1.107260	ppm	0.010590	0.96	1684.790000	Y_R 377.433
As (188.980 nm)	0.020287	ppm	0.002003	9.87	13.202300	Y 242.219
B (249.678 nm)	0.028663	ppm	0.000125	0.43	160.624000	Y 242.219
Ba (493.408 nm)	0.029710	ppm	0.000264	0.89	3522.660000	Y_R 488.368
Be (234.861 nm)	0.000245	ppm	0.000130	53.03	-43.566300	Y_R 488.368
Bi (223.061 nm)	0.003756	ppm	0.002508	66.77	49.931700	Y 377.433
Ca (315.887 nm)	76.773965	ppm	0.029973	0.04	50708.546590	Y_R 377.433
Cd (214.439 nm)	0.000367	ppm	0.000048	13.00	-2.013640	Y 377.433
Co (228.615 nm)	0.001415	ppm	0.000072	5.08	9.969140	Y 242.219
Cr (205.560 nm)	0.001902	ppm	0.000267	14.04	-0.297237	Y 377.433
Cu (324.754 nm)	0.002268	ppm	0.000085	3.75	268.867000	Y 377.433
Fe (238.204 nm)	3.571106	ppm	0.007128	0.20	5961.603223	Y_R 377.433
Fe H (259.940 nm)	3.574860 u	ppm	0.007409	0.21	3269.470000	Y_R 377.433
K (766.491 nm)	2.085180	ppm	0.005909	0.28	3773.840000	Y_R2 488.368
Li (670.783 nm)	0.063183	ppm	0.003172	5.02	448.002000	Y_R2 488.368
Mg (279.078 nm)	47.538000	ppm	0.002677	0.01	103568.000000	Y 377.433
Mn (257.610 nm)	0.130456	ppm	0.000066	0.05	27317.100000	Y 377.433
Mo (202.032 nm)	0.001854	ppm	0.000121	6.53	39.766900	Y 377.433
Na (589.592 nm)	21.775700	ppm	0.046084	0.21	10803.600000	Y_R2 488.368
Na H (589.593 nm)	22.941779 u	ppm	0.076962	0.34	7798.513131	Y_R4
Ni (231.604 nm)	0.002784	ppm	0.000097	3.47	20.284700	Y 377.433
P (213.618 nm)	0.071985	ppm	0.002411	3.35	82.306600	Y 242.219
Pb (220.353 nm)	0.001546	ppm	0.000079	5.08	17.775700	Y 242.219
S (181.972 nm)	18.753518	ppm	0.053069	0.28	8936.067420	Y 377.433
Sb (206.834 nm)	-0.006436 u	ppm	0.000523	8.13	-11.461500	Y 377.433
Se (196.026 nm)	0.003002	ppm	0.002080	69.29	5.416460	Y 242.219
Si (288.158 nm)	9.553870	ppm	0.017060	0.18	44085.200000	Y 377.433
Sn (189.925 nm)	-0.006437 u	ppm	0.000820	12.75	0.548756	Y 377.433
Sr (421.552 nm)	0.279622	ppm	0.001602	0.57	32736.797243	Y_R 488.368
Th (288.505 nm)	-0.014659 u	ppm	0.000103	0.70	-0.851921	Y 377.433
Ti (336.122 nm)	0.010791	ppm	0.000341	3.16	854.836000	Y 377.433
Tl (190.794 nm)	-0.003032 u	ppm	0.003375	> 100.00	-11.475400	Y 377.433
U (409.013 nm)	-0.004167 u	ppm	0.004312	> 100.00	99.787700	Y 377.433
V (292.401 nm)	0.002643	ppm	0.000108	4.08	-66.869400	Y 377.433
Zn (206.200 nm)	0.007837	ppm	0.000117	1.50	31.848300	Y 377.433
Zr (343.823 nm)	0.001473	ppm	0.000025	1.69	-58.851300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.105309	11773.963639	0.001012	0.09
Y 377.433	1.107582	511301.362099	0.000616	0.06
Y_R 377.433	1.150910	43490.300000	0.000156	0.01
Y_R 488.368	1.135380	40975.900000	0.004999	0.44
Y_R2 488.368	1.149166	80874.547730	0.003713	0.32
Y_R4	1.160030	35594.500000	0.004084	0.35

Sample Name: 280-116336-E-7-A

Date: 11/6/2018 1:47:04 AM Rack:Tube: 2:38

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000535	ppm	0.000225	42.05	-224.413000	Y 377.433
Al (394.401 nm)	0.012604	ppm	0.000537	4.26	264.759000	Y 377.433
Al H (396.152 nm)	0.136978 u	ppm	0.002937	2.14	24.392200	Y_R 377.433
As (188.980 nm)	0.002358	ppm	0.001148	48.71	-12.039100	Y 242.219
B (249.678 nm)	0.008758	ppm	0.001495	17.07	78.934000	Y 242.219
Ba (493.408 nm)	0.019678	ppm	0.000029	0.15	2608.530000	Y_R 488.368
Be (234.861 nm)	0.000104	ppm	0.000088	84.69	-127.404000	Y_R 488.368
Bi (223.061 nm)	0.001110 u	ppm	0.005886	> 100.00	46.276800	Y 377.433
Ca (315.887 nm)	37.458496	ppm	0.118291	0.32	24739.726341	Y_R 377.433
Cd (214.439 nm)	0.000233	ppm	0.000004	1.74	-5.361210	Y 377.433
Co (228.615 nm)	0.006188	ppm	0.000025	0.41	128.858000	Y 242.219
Cr (205.560 nm)	0.000734	ppm	0.000320	43.69	-5.854370	Y 377.433
Cu (324.754 nm)	0.000277 u	ppm	0.000444	> 100.00	201.484000	Y 377.433
Fe (238.204 nm)	8.988129 o	ppm	0.029612	0.33	14987.280836	Y_R 377.433
Fe H (259.940 nm)	8.981010	ppm	0.038012	0.42	8230.440000	Y_R 377.433
K (766.491 nm)	0.940934	ppm	0.093725	9.96	2655.530000	Y_R2 488.368
Li (670.783 nm)	0.019746	ppm	0.000547	2.77	-167.223000	Y_R2 488.368
Mg (279.078 nm)	12.446800	ppm	0.020516	0.16	27120.300000	Y 377.433
Mn (257.610 nm)	0.436381	ppm	0.000240	0.05	91324.100000	Y 377.433
Mo (202.032 nm)	-0.000320 u	ppm	0.000331	> 100.00	15.038100	Y 377.433
Na (589.592 nm)	6.321150	ppm	0.014668	0.23	3039.410000	Y_R2 488.368
Na H (589.593 nm)	7.849992 u	ppm	0.022661	0.29	2410.648499	Y_R4
Ni (231.604 nm)	0.007918	ppm	0.000535	6.76	40.771100	Y 377.433
P (213.618 nm)	0.038030	ppm	0.000188	0.49	43.053700	Y 242.219
Pb (220.353 nm)	-0.001574 u	ppm	0.000032	2.05	10.973500	Y 242.219
S (181.972 nm)	13.158274	ppm	0.010381	0.08	6262.537514	Y 377.433
Sb (206.834 nm)	-0.004153 u	ppm	0.000327	7.88	-7.217100	Y 377.433
Se (196.026 nm)	0.003715	ppm	0.000510	13.74	5.516890	Y 242.219
Si (288.158 nm)	4.322110	ppm	0.003000	0.07	20647.400000	Y 377.433
Sn (189.925 nm)	-0.007396 u	ppm	0.000059	0.80	-0.571350	Y 377.433
Sr (421.552 nm)	0.066009	ppm	0.000390	0.59	7941.480506	Y_R 488.368
Th (288.505 nm)	-0.009143 u	ppm	0.002784	30.46	8.147850	Y 377.433
Ti (336.122 nm)	0.000669	ppm	0.000175	26.17	-206.506000	Y 377.433
Tl (190.794 nm)	-0.001579 u	ppm	0.000723	45.80	-10.361400	Y 377.433
U (409.013 nm)	0.004680	ppm	0.001109	23.69	126.702000	Y 377.433
V (292.401 nm)	0.000911	ppm	0.000066	7.20	-151.436000	Y 377.433
Zn (206.200 nm)	0.053724	ppm	0.000051	0.09	191.020000	Y 377.433
Zr (343.823 nm)	0.000739	ppm	0.000061	8.27	-88.579500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.129495	12031.597053	0.001885	0.17
Y 377.433	1.126305	519944.617750	0.001933	0.17
Y_R 377.433	1.156970	43719.200000	0.006619	0.57
Y_R 488.368	1.160340	41876.500000	0.006005	0.52
Y_R2 488.368	1.157641	81471.009361	0.007638	0.66
Y_R4	1.169480	35884.600000	0.011863	1.01

Sample Name: 280-116336-E-12-A

Date: 11/6/2018 1:50:36 AM Rack:Tube: 2:39

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001298	ppm	0.000338	26.02	-203.326000	Y 377.433
Al (394.401 nm)	0.118834	ppm	0.000258	0.22	1608.560000	Y 377.433
Al H (396.152 nm)	0.215425 u	ppm	0.009870	4.58	170.628000	Y_R 377.433
As (188.980 nm)	0.005408	ppm	0.001806	33.39	-7.571720	Y 242.219
B (249.678 nm)	0.012417	ppm	0.000609	4.91	96.148000	Y 242.219
Ba (493.408 nm)	0.091009	ppm	0.000183	0.20	9131.020000	Y_R 488.368
Be (234.861 nm)	0.000162	ppm	0.000099	60.96	-15.153500	Y_R 488.368
Bi (223.061 nm)	0.005886	ppm	0.000994	16.89	53.139100	Y 377.433
Ca (315.887 nm)	84.813746	ppm	0.155837	0.18	56018.784672	Y_R 377.433
Cd (214.439 nm)	0.000247	ppm	0.000055	22.42	-5.014650	Y 377.433
Co (228.615 nm)	0.000306	ppm	0.000249	81.41	-19.268700	Y 242.219
Cr (205.560 nm)	0.001759	ppm	0.000027	1.53	-0.957186	Y 377.433
Cu (324.754 nm)	0.002316	ppm	0.000087	3.76	261.707000	Y 377.433
Fe (238.204 nm)	1.248267	ppm	0.002987	0.24	2091.359641	Y_R 377.433
Fe H (259.940 nm)	1.244500 u	ppm	0.006116	0.49	1131.010000	Y_R 377.433
K (766.491 nm)	1.127290	ppm	0.044942	3.99	2837.660000	Y_R2 488.368
Li (670.783 nm)	0.028247	ppm	0.005721	20.26	-46.826600	Y_R2 488.368
Mg (279.078 nm)	21.886200	ppm	0.053599	0.24	47690.000000	Y 377.433
Mn (257.610 nm)	0.365175	ppm	0.000608	0.17	76426.000000	Y 377.433
Mo (202.032 nm)	0.001888	ppm	0.000042	2.24	40.161800	Y 377.433
Na (589.592 nm)	7.114520	ppm	0.014771	0.21	3436.900000	Y_R2 488.368
Na H (589.593 nm)	8.632891 u	ppm	0.012207	0.14	2683.134657	Y_R4
Ni (231.604 nm)	-0.000091 u	ppm	0.000319	> 100.00	8.919210	Y 377.433
P (213.618 nm)	0.011806	ppm	0.000870	7.37	12.485100	Y 242.219
Pb (220.353 nm)	-0.002772 u	ppm	0.001016	36.66	8.274080	Y 242.219
S (181.972 nm)	19.953730	ppm	0.058835	0.29	9510.539023	Y 377.433
Sb (206.834 nm)	-0.005905 u	ppm	0.000512	8.68	-10.743100	Y 377.433
Se (196.026 nm)	0.001769	ppm	0.001905	> 100.00	4.487670	Y 242.219
Si (288.158 nm)	8.919920	ppm	0.020570	0.23	41245.200000	Y 377.433
Sn (189.925 nm)	-0.006707 u	ppm	0.000702	10.47	0.233789	Y 377.433
Sr (421.552 nm)	0.144135	ppm	0.000327	0.23	17009.391041	Y_R 488.368
Th (288.505 nm)	-0.014936 u	ppm	0.006697	44.84	1.726000	Y 377.433
Ti (336.122 nm)	0.002054	ppm	0.000278	13.54	44.435200	Y 377.433
Tl (190.794 nm)	-0.005819 u	ppm	0.002457	42.22	-13.042100	Y 377.433
U (409.013 nm)	0.002816 u	ppm	0.009290	> 100.00	113.784000	Y 377.433
V (292.401 nm)	0.001073	ppm	0.000139	12.94	-144.355000	Y 377.433
Zn (206.200 nm)	0.001410	ppm	0.000602	42.71	9.386430	Y 377.433
Zr (343.823 nm)	0.000468	ppm	0.000138	29.59	-99.572200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103341	11753.002269	0.000787	0.07
Y 377.433	1.100222	507903.752980	0.001655	0.15
Y_R 377.433	1.143790	43221.100000	0.004558	0.40
Y_R 488.368	1.140050	41144.500000	0.000541	0.05
Y_R2 488.368	1.143176	80452.971419	0.000790	0.07
Y_R4	1.145330	35143.600000	0.004970	0.43

Sample Name: CCVH-5408055

Date: 11/6/2018 1:54:05 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000808	ppm	0.000251	31.11	-330.786000	Y 377.433
Al (394.401 nm)	51.976700 o	ppm	0.102542	0.20	647305.000000	Y 377.433
Al H (396.152 nm)	50.856400	ppm	0.099792	0.20	83640.600000	Y_R 377.433
As (188.980 nm)	-0.003668 u	ppm	0.002075	56.58	-22.382000	Y 242.219
B (249.678 nm)	-0.013980 u	ppm	0.002443	17.48	-25.844300	Y 242.219
Ba (493.408 nm)	-0.000207 u	ppm	0.000027	13.09	819.049000	Y_R 488.368
Be (234.861 nm)	0.000355	ppm	0.000241	67.90	-698.391000	Y_R 488.368
Bi (223.061 nm)	1.016820	ppm	0.001989	0.20	1725.820000	Y 377.433
Ca (315.887 nm)	-0.009289 u	ppm	0.004586	49.37	2.082331	Y_R 377.433
Cd (214.439 nm)	0.000183 u	ppm	0.000263	> 100.00	-6.605550	Y 377.433
Co (228.615 nm)	0.001314	ppm	0.000045	3.42	59.480900	Y 242.219
Cr (205.560 nm)	-0.000074 u	ppm	0.000669	> 100.00	-10.669200	Y 377.433
Cu (324.754 nm)	0.000533	ppm	0.000038	7.11	693.041000	Y 377.433
Fe (238.204 nm)	50.328290 o	ppm	0.098533	0.20	83866.992549	Y_R 377.433
Fe H (259.940 nm)	50.499700	ppm	0.014164	0.03	46330.200000	Y_R 377.433
K (766.491 nm)	0.003178 u	ppm	0.061682	> 100.00	1739.020000	Y_R2 488.368
Li (670.783 nm)	0.010494	ppm	0.005036	47.98	-298.262000	Y_R2 488.368
Mg (279.078 nm)	-0.030166 u	ppm	0.000984	3.26	-206.924000	Y 377.433
Mn (257.610 nm)	0.000318	ppm	0.000002	0.71	89.188900	Y 377.433
Mo (202.032 nm)	-0.001368 u	ppm	0.000061	4.44	3.116070	Y 377.433
Na (589.592 nm)	255.273000 o	ppm	0.287964	0.11	128113.000000	Y_R2 488.368
Na H (589.593 nm)	257.277938	ppm	0.314059	0.12	91476.746523	Y_R4
Ni (231.604 nm)	0.000535	ppm	0.000258	48.11	18.676300	Y 377.433
P (213.618 nm)	-0.009406 u	ppm	0.000083	0.88	-13.299800	Y 242.219
Pb (220.353 nm)	-0.001207 u	ppm	0.000423	35.07	22.493800	Y 242.219
S (181.972 nm)	5.136417	ppm	0.022182	0.43	2427.435308	Y 377.433
Sb (206.834 nm)	0.001632	ppm	0.001922	> 100.00	5.716650	Y 377.433
Se (196.026 nm)	0.001091 u	ppm	0.002314	> 100.00	-9.692350	Y 242.219
Si (288.158 nm)	-0.200801 u	ppm	0.000748	0.37	385.239000	Y 377.433
Sn (189.925 nm)	-0.004409 u	ppm	0.002399	54.41	2.915720	Y 377.433
Sr (421.552 nm)	-0.000194 u	ppm	0.000010	5.28	261.570116	Y_R 488.368
Th (288.505 nm)	5.055520	ppm	0.006695	0.13	5423.900000	Y 377.433
Ti (336.122 nm)	0.001164	ppm	0.000078	6.68	-254.358000	Y 377.433
Tl (190.794 nm)	-0.009438 u	ppm	0.001417	15.01	-17.590400	Y 377.433
U (409.013 nm)	10.575800	ppm	0.020273	0.19	24315.200000	Y 377.433
V (292.401 nm)	-0.004351 u	ppm	0.000041	0.94	-416.077000	Y 377.433
Zn (206.200 nm)	-0.000343 u	ppm	0.001286	> 100.00	8.601300	Y 377.433
Zr (343.823 nm)	-0.006969 u	ppm	0.000050	0.71	-400.944000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090344	11614.557180	0.007065	0.65
Y 377.433	1.089234	502830.944990	0.008045	0.74
Y_R 377.433	1.148520	43399.900000	0.005739	0.50
Y_R 488.368	1.159970	41863.100000	0.006967	0.60
Y_R2 488.368	1.156747	81408.105421	0.000148	0.01
Y_R4	1.167120	35812.100000	0.002588	0.22

Sample Name: CCV-5407762

Date: 11/6/2018 1:57:41 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.517792	ppm	0.000382	0.07	14088.400000	Y 377.433
Al (394.401 nm)	0.514642	ppm	0.001852	0.36	6614.710000	Y 377.433
Al H (396.152 nm)	0.558627 u	ppm	0.007628	1.37	902.796000	Y_R 377.433
As (188.980 nm)	1.012580	ppm	0.005826	0.58	1403.610000	Y 242.219
B (249.678 nm)	0.493811	ppm	0.000977	0.20	2028.610000	Y 242.219
Ba (493.408 nm)	0.508628	ppm	0.000574	0.11	47352.000000	Y_R 488.368
Be (234.861 nm)	0.520312	ppm	0.001024	0.20	26902.700000	Y_R 488.368
Bi (223.061 nm)	-0.003136 u	ppm	0.000054	1.71	38.521800	Y 377.433
Ca (315.887 nm)	5.085795	ppm	0.010622	0.21	3357.055736	Y_R 377.433
Cd (214.439 nm)	0.520771	ppm	0.000285	0.05	12956.100000	Y 377.433
Co (228.615 nm)	0.509073	ppm	0.002578	0.51	12072.900000	Y 242.219
Cr (205.560 nm)	0.529653	ppm	0.001291	0.24	2516.390000	Y 377.433
Cu (324.754 nm)	0.521731	ppm	0.000855	0.16	25312.800000	Y 377.433
Fe (238.204 nm)	2.562595	ppm	0.000557	0.02	4281.252619	Y_R 377.433
Fe H (259.940 nm)	2.565670 u	ppm	0.000119	0.00	2343.390000	Y_R 377.433
K (766.491 nm)	51.465200	ppm	0.093842	0.18	52034.900000	Y_R2 488.368
Li (670.783 nm)	1.042780	ppm	0.001472	0.14	14322.500000	Y_R2 488.368
Mg (279.078 nm)	20.528300	ppm	0.038115	0.19	44731.600000	Y 377.433
Mn (257.610 nm)	0.517651	ppm	0.000490	0.09	108328.000000	Y 377.433
Mo (202.032 nm)	0.523131	ppm	0.000628	0.12	5970.110000	Y 377.433
Na (589.592 nm)	25.894000	ppm	0.004121	0.02	12865.300000	Y_R2 488.368
Na H (589.593 nm)	27.412971 u	ppm	0.160577	0.59	9347.780217	Y_R4
Ni (231.604 nm)	0.519983	ppm	0.002294	0.44	2002.830000	Y 377.433
P (213.618 nm)	1.028830	ppm	0.000027	0.00	1168.960000	Y 242.219
Pb (220.353 nm)	1.016500	ppm	0.003466	0.34	2283.010000	Y 242.219
S (181.972 nm)	-0.005245 u	ppm	0.003885	74.08	-26.251438	Y 377.433
Sb (206.834 nm)	1.043960	ppm	0.001997	0.19	1715.330000	Y 377.433
Se (196.026 nm)	1.042380	ppm	0.005891	0.57	1568.960000	Y 242.219
Si (288.158 nm)	4.963300	ppm	0.028193	0.57	23519.900000	Y 377.433
Sn (189.925 nm)	1.040740	ppm	0.000161	0.02	1222.990000	Y 377.433
Sr (421.552 nm)	0.517975	ppm	0.000100	0.02	60404.415430	Y_R 488.368
Th (288.505 nm)	-0.023117 u	ppm	0.000090	0.39	-43.738900	Y 377.433
Ti (336.122 nm)	0.523843	ppm	0.000744	0.14	49459.700000	Y 377.433
Tl (190.794 nm)	1.045870	ppm	0.003653	0.35	589.988000	Y 377.433
U (409.013 nm)	-0.019587 u	ppm	0.001296	6.61	24.278800	Y 377.433
V (292.401 nm)	0.514539	ppm	0.000913	0.18	24579.000000	Y 377.433
Zn (206.200 nm)	0.518894	ppm	0.001017	0.20	1797.990000	Y 377.433
Zr (343.823 nm)	0.521656	ppm	0.000867	0.17	21021.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115693	11884.577503	0.001433	0.13
Y 377.433	1.108164	511569.773359	0.002094	0.19
Y_R 377.433	1.140070	43080.700000	0.005102	0.45
Y_R 488.368	1.140140	41147.600000	0.002798	0.25
Y_R2 488.368	1.146365	80677.431299	0.008242	0.72
Y_R4	1.165950	35776.400000	0.001929	0.17

Sample Name: CCB

Date: 11/6/2018 2:01:11 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000401	ppm	0.000195	48.50	-227.985000	Y 377.433
Al (394.401 nm)	-0.001032 u	ppm	0.000709	68.65	73.943000	Y 377.433
Al H (396.152 nm)	0.140115 Zu	ppm	0.000864	0.62	15.573100 Z	Y_R 377.433
As (188.980 nm)	0.000421	ppm	0.000592	> 100.00	-14.525500	Y 242.219
B (249.678 nm)	-0.011476 u	ppm	0.000329	2.87	0.623462	Y 242.219
Ba (493.408 nm)	-0.001333 u	ppm	0.000040	2.99	679.013000	Y_R 488.368
Be (234.861 nm)	0.000069	ppm	0.000054	77.45	-2.289450	Y_R 488.368
Bi (223.061 nm)	-0.005188 u	ppm	0.001137	21.91	34.720000	Y 377.433
Ca (315.887 nm)	-0.001482 u	ppm	0.000108	7.31	-3.296097	Y_R 377.433
Cd (214.439 nm)	0.000003 u	ppm	0.000009	> 100.00	-11.090500	Y 377.433
Co (228.615 nm)	0.000510	ppm	0.000146	28.54	-15.854000	Y 242.219
Cr (205.560 nm)	0.000311	ppm	0.000178	57.15	-7.862190	Y 377.433
Cu (324.754 nm)	0.000704	ppm	0.000288	40.85	235.794000	Y 377.433
Fe (238.204 nm)	-0.001205 u	ppm	0.001091	90.61	9.528357	Y_R 377.433
Fe H (259.940 nm)	0.014259 u	ppm	0.002198	15.42	2.077780	Y_R 377.433
K (766.491 nm)	-0.218976 u	ppm	0.014727	6.73	1521.900000	Y_R2 488.368
Li (670.783 nm)	0.013703 Z	ppm	0.006197	45.22	-252.819000 Z	Y_R2 488.368
Mg (279.078 nm)	0.003843	ppm	0.002046	53.22	22.576900	Y 377.433
Mn (257.610 nm)	-0.000002 u	ppm	0.000002	79.16	22.225800	Y 377.433
Mo (202.032 nm)	0.000036 u	ppm	0.000434	> 100.00	19.090400	Y 377.433
Na (589.592 nm)	0.135479	ppm	0.002305	1.70	-67.938400	Y_R2 488.368
Na H (589.593 nm)	2.056341 u	ppm	0.005795	0.28	343.934897	Y_R4
Ni (231.604 nm)	0.000827	ppm	0.001092	> 100.00	12.247800	Y 377.433
P (213.618 nm)	0.004641	ppm	0.001720	37.06	4.295350	Y 242.219
Pb (220.353 nm)	-0.002650 u	ppm	0.000974	36.76	8.558580	Y 242.219
S (181.972 nm)	0.003105	ppm	0.000113	3.63	-24.227817	Y 377.433
Sb (206.834 nm)	0.000757	ppm	0.000326	43.04	0.116893	Y 377.433
Se (196.026 nm)	0.002383	ppm	0.000329	13.83	5.224290	Y 242.219
Si (288.158 nm)	-0.206494 Zu	ppm	0.000457	0.22	359.735000 Z	Y 377.433
Sn (189.925 nm)	-0.006212 u	ppm	0.000055	0.89	0.810842	Y 377.433
Sr (421.552 nm)	-0.000433 u	ppm	0.000208	47.99	227.927413	Y_R 488.368
Th (288.505 nm)	-0.001645 u	ppm	0.005945	> 100.00	12.597600	Y 377.433
Ti (336.122 nm)	0.000710	ppm	0.000029	4.13	-297.582000	Y 377.433
Tl (190.794 nm)	-0.001416 u	ppm	0.001430	> 100.00	-9.627330	Y 377.433
U (409.013 nm)	-0.007427 u	ppm	0.010857	> 100.00	97.848300	Y 377.433
V (292.401 nm)	0.000519	ppm	0.000026	5.11	-169.102000	Y 377.433
Zn (206.200 nm)	-0.000155 u	ppm	0.000816	> 100.00	3.843830	Y 377.433
Zr (343.823 nm)	0.000575	ppm	0.000207	35.96	-95.215000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.137210	12113.775610	0.000804	0.07
Y 377.433	1.129372	521360.520464	0.001317	0.12
Y_R 377.433	1.144210	43237.300000	0.000756	0.07
Y_R 488.368	1.148050	41433.100000	0.014354	1.25
Y_R2 488.368	1.141320	80322.398217	0.001504	0.13
Y_R4	1.135190	34832.500000	0.002311	0.20

Sample Name: CCVL-5412564

Date: 11/6/2018 2:04:22 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010862	ppm	0.000573	5.27	62.158600	Y 377.433
Al (394.401 nm)	0.102309	ppm	0.000810	0.79	1365.940000	Y 377.433
Al H (396.152 nm)	0.236546 u	ppm	0.001021	0.43	179.026000	Y_R 377.433
As (188.980 nm)	0.013826	ppm	0.001818	13.15	4.253380	Y 242.219
B (249.678 nm)	0.089619	ppm	0.001380	1.54	406.504000	Y 242.219
Ba (493.408 nm)	0.008900	ppm	0.000168	1.89	1615.580000	Y_R 488.368
Be (234.861 nm)	0.001034	ppm	0.000012	1.12	46.251000	Y_R 488.368
Bi (223.061 nm)	0.094064	ppm	0.002954	3.14	198.331000	Y 377.433
Ca (315.887 nm)	0.197796	ppm	0.010567	5.34	128.351554	Y_R 377.433
Cd (214.439 nm)	0.005417	ppm	0.000089	1.64	123.716000	Y 377.433
Co (228.615 nm)	0.011111	ppm	0.000116	1.04	236.186000	Y 242.219
Cr (205.560 nm)	0.011201	ppm	0.000139	1.24	43.997800	Y 377.433
Cu (324.754 nm)	0.016337	ppm	0.000014	0.08	988.286000	Y 377.433
Fe (238.204 nm)	0.101201	ppm	0.000555	0.55	180.154193	Y_R 377.433
Fe H (259.940 nm)	0.107176 u	ppm	0.002242	2.09	87.343500	Y_R 377.433
K (766.491 nm)	2.769860	ppm	0.003430	0.12	4443.010000	Y_R2 488.368
Li (670.783 nm)	0.035248 Q	ppm	0.001149	3.26	52.332600 Q	Y_R2 488.368
Mg (279.078 nm)	0.208604	ppm	0.004768	2.29	468.037000	Y 377.433
Mn (257.610 nm)	0.010731	ppm	0.000012	0.11	2267.800000	Y 377.433
Mo (202.032 nm)	0.020260	ppm	0.000359	1.77	249.165000	Y 377.433
Na (589.592 nm)	1.214440	ppm	0.026724	2.20	473.973000	Y_R2 488.368
Na H (589.593 nm)	2.922274 u	ppm	0.036283	1.24	652.141836	Y_R4
Ni (231.604 nm)	0.042032	ppm	0.001661	3.95	170.171000	Y 377.433
P (213.618 nm)	2.920550	ppm	0.012455	0.43	3386.340000	Y 242.219
Pb (220.353 nm)	0.007885	ppm	0.000360	4.56	32.102000	Y 242.219
S (181.972 nm)	0.107100	ppm	0.006111	5.71	25.485864	Y 377.433
Sb (206.834 nm)	0.020645	ppm	0.001922	9.31	32.692500	Y 377.433
Se (196.026 nm)	0.023123	ppm	0.000779	3.37	36.398300	Y 242.219
Si (288.158 nm)	0.300579 Q	ppm	0.002330	0.78	2631.370000 Q	Y 377.433
Sn (189.925 nm)	0.096188	ppm	0.000022	0.02	120.350000	Y 377.433
Sr (421.552 nm)	0.009456	ppm	0.000143	1.52	1375.902462	Y_R 488.368
Th (288.505 nm)	0.015988	ppm	0.004858	30.39	31.006800	Y 377.433
Ti (336.122 nm)	0.010979	ppm	0.000147	1.34	679.392000	Y 377.433
Tl (190.794 nm)	0.019018	ppm	0.000914	4.81	2.054800	Y 377.433
U (409.013 nm)	0.057417	ppm	0.007049	12.28	244.759000	Y 377.433
V (292.401 nm)	0.010705	ppm	0.000081	0.76	320.368000	Y 377.433
Zn (206.200 nm)	0.022080	ppm	0.000807	3.66	80.701100	Y 377.433
Zr (343.823 nm)	0.016102	ppm	0.000280	1.74	534.009000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.150925	12259.871361	0.002000	0.17
Y 377.433	1.146366	529205.556309	0.003175	0.28
Y_R 377.433	1.168470	44154.000000	0.003223	0.28
Y_R 488.368	1.164180	42015.300000	0.018813	1.62
Y_R2 488.368	1.185528	83433.575826	0.000682	0.06
Y_R4	1.173170	35997.600000	0.002577	0.22

Sample Name: 280-116336-E-13-A

Date: 11/6/2018 2:07:47 AM Rack:Tube: 2:40

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001159	ppm	0.000384	33.16	-207.087000	Y 377.433
Al (394.401 nm)	0.115678	ppm	0.000522	0.45	1569.080000	Y 377.433
Al H (396.152 nm)	0.212426 u	ppm	0.008474	3.99	166.395000	Y_R 377.433
As (188.980 nm)	0.006066	ppm	0.000876	14.44	-6.648740	Y 242.219
B (249.678 nm)	0.012142	ppm	0.000767	6.32	95.046700	Y 242.219
Ba (493.408 nm)	0.092189	ppm	0.001097	1.19	9239.000000	Y_R 488.368
Be (234.861 nm)	0.000152	ppm	0.000070	45.92	-15.555200	Y_R 488.368
Bi (223.061 nm)	0.000835 u	ppm	0.002754	> 100.00	44.812100	Y 377.433
Ca (315.887 nm)	85.546365	ppm	0.110496	0.13	56502.691698	Y_R 377.433
Cd (214.439 nm)	0.000261	ppm	0.000033	12.55	-4.665580	Y 377.433
Co (228.615 nm)	0.000128 u	ppm	0.000421	> 100.00	-23.474200	Y 242.219
Cr (205.560 nm)	0.001308	ppm	0.000202	15.42	-3.106870	Y 377.433
Cu (324.754 nm)	-0.000183 u	ppm	0.000242	> 100.00	141.504000	Y 377.433
Fe (238.204 nm)	1.241533	ppm	0.003489	0.28	2080.140273	Y_R 377.433
Fe H (259.940 nm)	1.232830 u	ppm	0.002083	0.17	1120.300000	Y_R 377.433
K (766.491 nm)	1.194660	ppm	0.045329	3.79	2903.500000	Y_R2 488.368
Li (670.783 nm)	0.028625	ppm	0.004823	16.85	-41.461400	Y_R2 488.368
Mg (279.078 nm)	21.983900	ppm	0.033722	0.15	47902.800000	Y 377.433
Mn (257.610 nm)	0.367243	ppm	0.000673	0.18	76858.600000	Y 377.433
Mo (202.032 nm)	0.001797	ppm	0.000045	2.52	39.121300	Y 377.433
Na (589.592 nm)	7.264250	ppm	0.038226	0.53	3512.110000	Y_R2 488.368
Na H (589.593 nm)	8.703293 u	ppm	0.063209	0.73	2708.173998	Y_R4
Ni (231.604 nm)	-0.001025 u	ppm	0.001168	> 100.00	5.339720	Y 377.433
P (213.618 nm)	0.012778	ppm	0.001304	10.21	13.729900	Y 242.219
Pb (220.353 nm)	-0.000511 u	ppm	0.000592	> 100.00	13.321500	Y 242.219
S (181.972 nm)	20.052612	ppm	0.026004	0.13	9557.821922	Y 377.433
Sb (206.834 nm)	-0.007429 u	ppm	0.001450	19.51	-13.258400	Y 377.433
Se (196.026 nm)	0.002745	ppm	0.000704	25.64	5.960680	Y 242.219
Si (288.158 nm)	8.925410	ppm	0.013122	0.15	41269.800000	Y 377.433
Sn (189.925 nm)	-0.005557 u	ppm	0.000275	4.94	1.576310	Y 377.433
Sr (421.552 nm)	0.146735	ppm	0.000893	0.61	17311.220229	Y_R 488.368
Th (288.505 nm)	-0.018763 u	ppm	0.001253	6.68	-2.314860	Y 377.433
Ti (336.122 nm)	0.002402	ppm	0.000215	8.95	79.686200	Y 377.433
Tl (190.794 nm)	-0.003352 u	ppm	0.003145	93.84	-11.635200	Y 377.433
U (409.013 nm)	-0.009937 u	ppm	0.003567	35.90	84.543900	Y 377.433
V (292.401 nm)	0.000996	ppm	0.000063	6.31	-147.558000	Y 377.433
Zn (206.200 nm)	0.001612	ppm	0.000493	30.59	10.082100	Y 377.433
Zr (343.823 nm)	0.000606	ppm	0.000138	22.78	-93.991000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115378	11881.225121	0.001334	0.12
Y 377.433	1.114378	514438.767646	0.003094	0.28
Y_R 377.433	1.158530	43778.400000	0.007703	0.66
Y_R 488.368	1.147750	41422.300000	0.012124	1.06
Y_R2 488.368	1.156770	81409.698478	0.000092	0.01
Y_R4	1.164350	35727.100000	0.014478	1.24

Sample Name: MB 280-435645/1-A

Date: 11/6/2018 2:11:16 AM Rack:Tube: 2:41

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000268	ppm	0.000086	32.15	-231.679000	Y 377.433
Al (394.401 nm)	0.001044 u	ppm	0.002276	> 100.00	99.643800	Y 377.433
Al H (396.152 nm)	0.143034 u	ppm	0.008366	5.85	20.410900	Y_R 377.433
As (188.980 nm)	-0.002460 u	ppm	0.000626	25.44	-18.561800	Y 242.219
B (249.678 nm)	-0.011643 u	ppm	0.000660	5.66	-0.046873	Y 242.219
Ba (493.408 nm)	-0.001042 u	ppm	0.000070	6.70	705.659000	Y_R 488.368
Be (234.861 nm)	0.000123	ppm	0.000083	67.44	0.519163	Y_R 488.368
Bi (223.061 nm)	-0.005541 u	ppm	0.001406	25.37	34.137600	Y 377.433
Ca (315.887 nm)	0.003835	ppm	0.000472	12.32	0.215416	Y_R 377.433
Cd (214.439 nm)	0.000060	ppm	0.000073	> 100.00	-9.662030	Y 377.433
Co (228.615 nm)	0.000568	ppm	0.000111	19.57	-14.495800	Y 242.219
Cr (205.560 nm)	0.000198 u	ppm	0.000502	> 100.00	-8.400800	Y 377.433
Cu (324.754 nm)	0.000622	ppm	0.000168	27.03	232.037000	Y 377.433
Fe (238.204 nm)	-0.002174 u	ppm	0.000005	0.25	7.913508	Y_R 377.433
Fe H (259.940 nm)	0.012789 u	ppm	0.000875	6.85	0.728544	Y_R 377.433
K (766.491 nm)	-0.364404 u	ppm	0.024743	6.79	1379.770000	Y_R2 488.368
Li (670.783 nm)	0.015123	ppm	0.004692	31.03	-232.697000	Y_R2 488.368
Mg (279.078 nm)	0.000325 u	ppm	0.000721	> 100.00	14.901400	Y 377.433
Mn (257.610 nm)	0.000027	ppm	0.000006	21.99	28.225200	Y 377.433
Mo (202.032 nm)	-0.000431 u	ppm	0.000236	54.68	13.774900	Y 377.433
Na (589.592 nm)	0.125959	ppm	0.029064	23.07	-72.725200	Y_R2 488.368
Na H (589.593 nm)	1.860033 u	ppm	0.019031	1.02	273.813052	Y_R4
Ni (231.604 nm)	0.000711	ppm	0.000448	62.99	11.809200	Y 377.433
P (213.618 nm)	0.003422	ppm	0.001221	35.69	2.893950	Y 242.219
Pb (220.353 nm)	-0.003102 u	ppm	0.001959	63.15	7.550180	Y 242.219
S (181.972 nm)	0.012574	ppm	0.002352	18.70	-19.704553	Y 377.433
Sb (206.834 nm)	0.002605	ppm	0.001730	66.43	3.160580	Y 377.433
Se (196.026 nm)	0.004476	ppm	0.000052	1.15	8.371950	Y 242.219
Si (288.158 nm)	-0.206847 u	ppm	0.000218	0.11	358.155000	Y 377.433
Sn (189.925 nm)	-0.007092 u	ppm	0.000681	9.60	-0.216450	Y 377.433
Sr (421.552 nm)	-0.000304 u	ppm	0.000034	11.14	242.952139	Y_R 488.368
Th (288.505 nm)	0.003467 u	ppm	0.009879	> 100.00	18.052200	Y 377.433
Ti (336.122 nm)	0.000654	ppm	0.000004	0.65	-302.852000	Y 377.433
Tl (190.794 nm)	0.001650	ppm	0.000172	10.44	-7.868820	Y 377.433
U (409.013 nm)	-0.011946 u	ppm	0.005001	41.86	87.525300	Y 377.433
V (292.401 nm)	0.000549	ppm	0.000045	8.21	-167.553000	Y 377.433
Zn (206.200 nm)	0.000528	ppm	0.000348	65.90	6.203050	Y 377.433
Zr (343.823 nm)	0.000433	ppm	0.000364	84.14	-100.982000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.148484	12233.867218	0.000244	0.02
Y 377.433	1.142901	527606.035361	0.002435	0.21
Y_R 377.433	1.185300	44789.800000	0.006978	0.59
Y_R 488.368	1.178290	42524.600000	0.002849	0.24
Y_R2 488.368	1.176288	82783.342925	0.002118	0.18
Y_R4	1.177090	36118.200000	0.000246	0.02

Sample Name: LCS 280-435645/2-A

Date: 11/6/2018 2:14:26 AM Rack:Tube: 2:42

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054214	ppm	0.000173	0.32	1209.840000	Y 377.433
Al (394.401 nm)	2.090070	ppm	0.000674	0.03	26426.000000	Y 377.433
Al H (396.152 nm)	2.005930	ppm	0.013435	0.67	3486.780000	Y_R 377.433
As (188.980 nm)	1.015270	ppm	0.004308	0.42	1407.380000	Y 242.219
B (249.678 nm)	1.042470	ppm	0.002423	0.23	4232.110000	Y 242.219
Ba (493.408 nm)	2.074660	ppm	0.003358	0.16	190673.000000	Y_R 488.368
Be (234.861 nm)	0.052084	ppm	0.000200	0.38	2676.990000	Y_R 488.368
Bi (223.061 nm)	2.021730	ppm	0.011403	0.56	3375.820000	Y 377.433
Ca (315.887 nm)	51.186471	ppm	0.080275	0.16	33807.750327	Y_R 377.433
Cd (214.439 nm)	0.103939	ppm	0.000673	0.65	2576.920000	Y 377.433
Co (228.615 nm)	0.498525	ppm	0.000845	0.17	11844.900000	Y 242.219
Cr (205.560 nm)	0.213646	ppm	0.001590	0.74	1006.250000	Y 377.433
Cu (324.754 nm)	0.258705	ppm	0.000413	0.16	12692.400000	Y 377.433
Fe (238.204 nm)	1.020634	ppm	0.006862	0.67	1712.085152	Y_R 377.433
Fe H (259.940 nm)	1.018560 u	ppm	0.011010	1.08	923.680000	Y_R 377.433
K (766.491 nm)	52.828700	ppm	0.049167	0.09	53367.500000	Y_R2 488.368
Li (670.783 nm)	1.062440	ppm	0.002124	0.20	14601.000000	Y_R2 488.368
Mg (279.078 nm)	51.159100	ppm	0.094256	0.18	111436.000000	Y 377.433
Mn (257.610 nm)	0.518006	ppm	0.000498	0.10	108402.000000	Y 377.433
Mo (202.032 nm)	1.080330	ppm	0.001638	0.15	12309.200000	Y 377.433
Na (589.592 nm)	52.351700	ppm	0.062951	0.12	26133.400000	Y_R2 488.368
Na H (589.593 nm)	53.424932	ppm	0.112258	0.21	18481.476259	Y_R4
Ni (231.604 nm)	0.499974	ppm	0.002424	0.48	1926.850000	Y 377.433
P (213.618 nm)	10.463500	ppm	0.025574	0.24	12125.800000	Y 242.219
Pb (220.353 nm)	0.513469	ppm	0.000803	0.16	1161.550000	Y 242.219
S (181.972 nm)	2.062088	ppm	0.012022	0.58	963.557746	Y 377.433
Sb (206.834 nm)	0.530404	ppm	0.000523	0.10	860.478000	Y 377.433
Se (196.026 nm)	2.107130	ppm	0.004493	0.21	3170.240000	Y 242.219
Si (288.158 nm)	10.350300	ppm	0.039780	0.38	47653.200000	Y 377.433
Sn (189.925 nm)	2.126150	ppm	0.015092	0.71	2490.050000	Y 377.433
Sr (421.552 nm)	1.051643	ppm	0.001016	0.10	122351.716992	Y_R 488.368
Th (288.505 nm)	1.003200	ppm	0.008997	0.90	1057.380000	Y 377.433
Ti (336.122 nm)	1.061820	ppm	0.000100	0.01	100728.000000	Y 377.433
Tl (190.794 nm)	2.095080	ppm	0.000316	0.02	1189.710000	Y 377.433
U (409.013 nm)	2.184690	ppm	0.006338	0.29	5057.030000	Y 377.433
V (292.401 nm)	0.526178	ppm	0.001193	0.23	25219.200000	Y 377.433
Zn (206.200 nm)	0.517523	ppm	0.003958	0.76	1793.090000	Y 377.433
Zr (343.823 nm)	0.527502	ppm	0.000183	0.03	21258.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.111230	11837.030459	0.000625	0.06
Y 377.433	1.110416	512609.441513	0.003422	0.31
Y_R 377.433	1.159040	43797.700000	0.008514	0.73
Y_R 488.368	1.154980	41683.200000	0.006651	0.58
Y_R2 488.368	1.165666	82035.799263	0.010550	0.91
Y_R4	1.172910	35989.600000	0.006899	0.59

Sample Name: 280-116015-B-4-4

Date: 11/6/2018 2:17:55 AM Rack:Tube: 2:43

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000630	ppm	0.000306	48.56	-222.745000	Y 377.433
Al (394.401 nm)	0.004545	ppm	0.000047	1.03	159.118000	Y 377.433
Al H (396.152 nm)	0.148533 u	ppm	0.011182	7.53	27.968500	Y_R 377.433
As (188.980 nm)	-0.000448 u	ppm	0.001874	> 100.00	-15.742800	Y 242.219
B (249.678 nm)	0.097590	ppm	0.001089	1.12	438.543000	Y 242.219
Ba (493.408 nm)	-0.000724 u	ppm	0.000322	44.53	734.806000	Y_R 488.368
Be (234.861 nm)	0.000079	ppm	0.000073	92.18	-1.847590	Y_R 488.368
Bi (223.061 nm)	0.001950	ppm	0.000034	1.73	46.494300	Y 377.433
Ca (315.887 nm)	10.573339	ppm	0.031163	0.29	6981.572968	Y_R 377.433
Cd (214.439 nm)	0.000185	ppm	0.000184	99.34	-6.544320	Y 377.433
Co (228.615 nm)	0.104392	ppm	0.000386	0.37	2448.140000	Y 242.219
Cr (205.560 nm)	0.025787	ppm	0.001739	6.75	113.613000	Y 377.433
Cu (324.754 nm)	0.026801	ppm	0.000283	1.06	1478.310000	Y 377.433
Fe (238.204 nm)	0.004199	ppm	0.002849	67.85	18.531707	Y_R 377.433
Fe H (259.940 nm)	0.013855 u	ppm	0.003191	23.03	1.707130	Y_R 377.433
K (766.491 nm)	5.140590	ppm	0.020945	0.41	6760.020000	Y_R2 488.368
Li (670.783 nm)	0.010960	ppm	0.003439	31.38	-291.668000	Y_R2 488.368
Mg (279.078 nm)	0.084152	ppm	0.001053	1.25	196.474000	Y 377.433
Mn (257.610 nm)	0.106196	ppm	0.000110	0.10	22241.400000	Y 377.433
Mo (202.032 nm)	-0.000179 u	ppm	0.000214	> 100.00	16.649100	Y 377.433
Na (589.592 nm)	21.506800	ppm	0.046245	0.22	10669.000000	Y_R2 488.368
Na H (589.593 nm)	22.683414 u	ppm	0.034643	0.15	7709.259740	Y_R4
Ni (231.604 nm)	0.105799	ppm	0.001229	1.16	414.485000	Y 377.433
P (213.618 nm)	0.001309 u	ppm	0.002642	> 100.00	-0.765819	Y 242.219
Pb (220.353 nm)	-0.003033 u	ppm	0.001421	46.86	7.843010	Y 242.219
S (181.972 nm)	0.100428	ppm	0.011312	11.26	23.145909	Y 377.433
Sb (206.834 nm)	-0.002385 u	ppm	0.000548	22.98	-4.806160	Y 377.433
Se (196.026 nm)	0.003022	ppm	0.000568	18.80	6.331600	Y 242.219
Si (288.158 nm)	-0.095930 u	ppm	0.000097	0.10	855.052000	Y 377.433
Sn (189.925 nm)	-0.006993 u	ppm	0.000365	5.22	-0.100407	Y 377.433
Sr (421.552 nm)	0.000736	ppm	0.000005	0.69	363.600047	Y_R 488.368
Th (288.505 nm)	-0.007561 u	ppm	0.000943	12.47	7.692350	Y 377.433
Ti (336.122 nm)	0.000632	ppm	0.000202	32.02	-277.841000	Y 377.433
Tl (190.794 nm)	0.004250 u	ppm	0.006263	> 100.00	-6.360770	Y 377.433
U (409.013 nm)	0.108410	ppm	0.013882	12.81	361.627000	Y 377.433
V (292.401 nm)	0.000592	ppm	0.000032	5.34	-178.464000	Y 377.433
Zn (206.200 nm)	0.109670	ppm	0.000382	0.35	383.409000	Y 377.433
Zr (343.823 nm)	0.000346	ppm	0.000223	64.42	-104.515000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.133038	12069.333845	0.002801	0.25
Y 377.433	1.130678	521963.278366	0.005391	0.48
Y_R 377.433	1.157880	43753.700000	0.003568	0.31
Y_R 488.368	1.142330	41226.700000	0.010792	0.94
Y_R2 488.368	1.173641	82597.011242	0.001745	0.15
Y_R4	1.190360	36525.100000	0.003195	0.27

Sample Name: 280-116015-B-4-Dsd@5

Date: 11/6/2018 2:21:06 AM Rack:Tube: 2:44

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000030 u	ppm	0.000299	> 100.00	-238.471000	Y 377.433
Al (394.401 nm)	-0.000382 u	ppm	0.000300	78.68	85.910700	Y 377.433
Al H (396.152 nm)	0.135825 u	ppm	0.001985	1.46	8.173470	Y_R 377.433
As (188.980 nm)	-0.000870 u	ppm	0.002251	> 100.00	-16.333700	Y 242.219
B (249.678 nm)	0.010938	ppm	0.000695	6.36	90.619800	Y 242.219
Ba (493.408 nm)	-0.001208 u	ppm	0.000097	8.01	690.450000	Y_R 488.368
Be (234.861 nm)	0.000083	ppm	0.000027	32.76	-1.600990	Y_R 488.368
Bi (223.061 nm)	-0.003449 u	ppm	0.004955	> 100.00	37.588200	Y 377.433
Ca (315.887 nm)	2.039356	ppm	0.000103	0.01	1344.713514	Y_R 377.433
Cd (214.439 nm)	0.000087	ppm	0.000047	53.98	-8.984560	Y 377.433
Co (228.615 nm)	0.020411	ppm	0.000390	1.91	456.180000	Y 242.219
Cr (205.560 nm)	0.005175	ppm	0.000230	4.45	15.332300	Y 377.433
Cu (324.754 nm)	0.005658	ppm	0.000143	2.53	471.101000	Y 377.433
Fe (238.204 nm)	0.000795	ppm	0.001017	> 100.00	12.860052	Y_R 377.433
Fe H (259.940 nm)	0.018518 u	ppm	0.000861	4.65	5.985870	Y_R 377.433
K (766.491 nm)	0.814114	ppm	0.064202	7.89	2531.580000	Y_R2 488.368
Li (670.783 nm)	0.013665	ppm	0.000157	1.15	-253.346000	Y_R2 488.368
Mg (279.078 nm)	0.017565	ppm	0.000357	2.04	52.244900	Y 377.433
Mn (257.610 nm)	0.020718	ppm	0.000169	0.82	4357.250000	Y 377.433
Mo (202.032 nm)	-0.001040 u	ppm	0.000027	2.58	6.852630	Y 377.433
Na (589.592 nm)	4.486950	ppm	0.002374	0.05	2118.230000	Y_R2 488.368
Na H (589.593 nm)	5.925198 u	ppm	0.012500	0.21	1725.363559	Y_R4
Ni (231.604 nm)	0.020146	ppm	0.001560	7.74	86.276000	Y 377.433
P (213.618 nm)	0.005567	ppm	0.003273	58.79	5.140360	Y 242.219
Pb (220.353 nm)	-0.001867 u	ppm	0.001247	66.80	10.341100	Y 242.219
S (181.972 nm)	0.029878	ppm	0.004432	14.83	-11.272428	Y 377.433
Sb (206.834 nm)	0.001603 u	ppm	0.004103	> 100.00	1.552210	Y 377.433
Se (196.026 nm)	0.003930	ppm	0.002773	70.57	7.577730	Y 242.219
Si (288.158 nm)	-0.187333 u	ppm	0.001282	0.68	445.576000	Y 377.433
Sn (189.925 nm)	-0.006234 u	ppm	0.000645	10.35	0.785675	Y 377.433
Sr (421.552 nm)	-0.000157 u	ppm	0.000010	6.58	259.950833	Y_R 488.368
Th (288.505 nm)	-0.001246 u	ppm	0.000600	48.14	13.309200	Y 377.433
Ti (336.122 nm)	0.000589	ppm	0.000081	13.83	-304.056000	Y 377.433
Tl (190.794 nm)	0.000141 u	ppm	0.001241	> 100.00	-8.729040	Y 377.433
U (409.013 nm)	0.008666	ppm	0.007556	87.19	134.447000	Y 377.433
V (292.401 nm)	0.000519	ppm	0.000118	22.69	-171.456000	Y 377.433
Zn (206.200 nm)	0.020092	ppm	0.000540	2.69	73.819600	Y 377.433
Zr (343.823 nm)	0.000412	ppm	0.000114	27.60	-101.832000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.141954	12164.311744	0.001073	0.09
Y 377.433	1.134917	523920.244831	0.002396	0.21
Y_R 377.433	1.185100	44782.100000	0.008186	0.69
Y_R 488.368	1.173240	42342.200000	0.007583	0.65
Y_R2 488.368	1.178192	82917.331474	0.000084	0.01
Y_R4	1.175790	36078.200000	0.006077	0.52

Sample Name: 280-116015-B-4-E MS

Date: 11/6/2018 2:24:16 AM Rack:Tube: 2:45

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054882	ppm	0.000119	0.22	1225.550000	Y 377.433
Al (394.401 nm)	2.115930	ppm	0.001933	0.09	26763.100000	Y 377.433
Al H (396.152 nm)	2.027720	ppm	0.009503	0.47	3522.660000	Y_R 377.433
As (188.980 nm)	1.028210	ppm	0.000671	0.07	1425.520000	Y 242.219
B (249.678 nm)	1.152680	ppm	0.000242	0.02	4674.590000	Y 242.219
Ba (493.408 nm)	2.083910	ppm	0.001661	0.08	191519.000000	Y_R 488.368
Be (234.861 nm)	0.052171	ppm	0.000504	0.97	2681.270000	Y_R 488.368
Bi (223.061 nm)	2.044500	ppm	0.006440	0.32	3413.350000	Y 377.433
Ca (315.887 nm)	62.151563	ppm	0.093333	0.15	41050.404218	Y_R 377.433
Cd (214.439 nm)	0.105177	ppm	0.000265	0.25	2607.750000	Y 377.433
Co (228.615 nm)	0.602835	ppm	0.002075	0.34	14319.100000	Y 242.219
Cr (205.560 nm)	0.242042	ppm	0.000641	0.26	1141.670000	Y 377.433
Cu (324.754 nm)	0.286843	ppm	0.001055	0.37	14035.100000	Y 377.433
Fe (238.204 nm)	1.039517	ppm	0.005422	0.52	1743.546929	Y_R 377.433
Fe H (259.940 nm)	1.040690 u	ppm	0.002308	0.22	943.983000	Y_R 377.433
K (766.491 nm)	58.566500	ppm	0.268070	0.46	58975.300000	Y_R2 488.368
Li (670.783 nm)	1.075770	ppm	0.002966	0.28	14789.800000	Y_R2 488.368
Mg (279.078 nm)	51.594400	ppm	0.110052	0.21	112383.000000	Y 377.433
Mn (257.610 nm)	0.626746	ppm	0.000460	0.07	131153.000000	Y 377.433
Mo (202.032 nm)	1.080890	ppm	0.001685	0.16	12315.400000	Y 377.433
Na (589.592 nm)	73.721800 o	ppm	0.228690	0.31	36869.500000	Y_R2 488.368
Na H (589.593 nm)	75.383816	ppm	0.409145	0.54	26321.483424	Y_R4
Ni (231.604 nm)	0.605783	ppm	0.000344	0.06	2332.290000	Y 377.433
P (213.618 nm)	10.560300	ppm	0.053216	0.50	12236.800000	Y 242.219
Pb (220.353 nm)	0.516160	ppm	0.000678	0.13	1167.720000	Y 242.219
S (181.972 nm)	2.144979	ppm	0.004481	0.21	1004.086334	Y 377.433
Sb (206.834 nm)	0.532959	ppm	0.004603	0.86	864.978000	Y 377.433
Se (196.026 nm)	2.116110	ppm	0.000527	0.02	3183.900000	Y 242.219
Si (288.158 nm)	10.444600	ppm	0.048331	0.46	48075.700000	Y 377.433
Sn (189.925 nm)	2.123430	ppm	0.004348	0.20	2486.880000	Y 377.433
Sr (421.552 nm)	1.058401	ppm	0.000053	0.00	123136.137498	Y_R 488.368
Th (288.505 nm)	1.015610	ppm	0.001890	0.19	1071.650000	Y 377.433
Ti (336.122 nm)	1.062640	ppm	0.002176	0.20	100836.000000	Y 377.433
Tl (190.794 nm)	2.099380	ppm	0.004183	0.20	1192.190000	Y 377.433
U (409.013 nm)	2.300790	ppm	0.029731	1.29	5321.330000	Y 377.433
V (292.401 nm)	0.532588	ppm	0.000875	0.16	25516.400000	Y 377.433
Zn (206.200 nm)	0.625746	ppm	0.000028	0.00	2167.120000	Y 377.433
Zr (343.823 nm)	0.528101	ppm	0.000324	0.06	21283.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.103075	11750.162474	0.005570	0.50
Y 377.433	1.101393	508444.025856	0.006606	0.60
Y_R 377.433	1.156770	43711.800000	0.004322	0.37
Y_R 488.368	1.156640	41743.000000	0.005214	0.45
Y_R2 488.368	1.161261	81725.755047	0.001750	0.15
Y_R4	1.165410	35759.600000	0.004929	0.42

Sample Name: 280-116015-B-4-F MSD

Date: 11/6/2018 2:27:45 AM Rack:Tube: 2:46

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055029	ppm	0.000249	0.45	1230.040000	Y 377.433
Al (394.401 nm)	2.113620	ppm	0.002275	0.11	26732.200000	Y 377.433
Al H (396.152 nm)	2.020680	ppm	0.009386	0.46	3510.840000	Y_R 377.433
As (188.980 nm)	1.028650	ppm	0.003357	0.33	1426.130000	Y 242.219
B (249.678 nm)	1.155650	ppm	0.001280	0.11	4686.520000	Y 242.219
Ba (493.408 nm)	2.077070	ppm	0.005089	0.25	190893.000000	Y_R 488.368
Be (234.861 nm)	0.052471	ppm	0.000115	0.22	2696.580000	Y_R 488.368
Bi (223.061 nm)	2.034150	ppm	0.004764	0.23	3396.290000	Y 377.433
Ca (315.887 nm)	61.963248	ppm	0.052747	0.09	40926.020362	Y_R 377.433
Cd (214.439 nm)	0.104854	ppm	0.000585	0.56	2599.730000	Y 377.433
Co (228.615 nm)	0.601926	ppm	0.000194	0.03	14297.600000	Y 242.219
Cr (205.560 nm)	0.240753	ppm	0.000426	0.18	1135.510000	Y 377.433
Cu (324.754 nm)	0.286638	ppm	0.000282	0.10	14026.100000	Y 377.433
Fe (238.204 nm)	1.053003	ppm	0.001502	0.14	1766.017198	Y_R 377.433
Fe H (259.940 nm)	1.057260 u	ppm	0.008280	0.78	959.185000	Y_R 377.433
K (766.491 nm)	58.607700	ppm	0.266070	0.45	59015.600000	Y_R2 488.368
Li (670.783 nm)	1.061930	ppm	0.005560	0.52	14593.800000	Y_R2 488.368
Mg (279.078 nm)	51.566400	ppm	0.065731	0.13	112322.000000	Y 377.433
Mn (257.610 nm)	0.625823	ppm	0.000400	0.06	130960.000000	Y 377.433
Mo (202.032 nm)	1.079310	ppm	0.000178	0.02	12297.500000	Y 377.433
Na (589.592 nm)	73.651100 o	ppm	0.238820	0.32	36834.200000	Y_R2 488.368
Na H (589.593 nm)	75.339773	ppm	0.380778	0.51	26306.742620	Y_R4
Ni (231.604 nm)	0.607055	ppm	0.004651	0.77	2337.170000	Y 377.433
P (213.618 nm)	10.591100	ppm	0.053004	0.50	12272.500000	Y 242.219
Pb (220.353 nm)	0.516959	ppm	0.000269	0.05	1169.480000	Y 242.219
S (181.972 nm)	2.140377	ppm	0.004795	0.22	1001.854240	Y 377.433
Sb (206.834 nm)	0.535621	ppm	0.003304	0.62	869.358000	Y 377.433
Se (196.026 nm)	2.118040	ppm	0.006585	0.31	3186.780000	Y 242.219
Si (288.158 nm)	10.448400	ppm	0.010193	0.10	48092.700000	Y 377.433
Sn (189.925 nm)	2.117370	ppm	0.001922	0.09	2479.800000	Y 377.433
Sr (421.552 nm)	1.054657	ppm	0.003331	0.32	122701.529950	Y_R 488.368
Th (288.505 nm)	1.010150	ppm	0.002721	0.27	1065.830000	Y 377.433
Ti (336.122 nm)	1.064280	ppm	0.000402	0.04	100990.000000	Y 377.433
Tl (190.794 nm)	2.107030	ppm	0.007246	0.34	1196.580000	Y 377.433
U (409.013 nm)	2.289260	ppm	0.003371	0.15	5295.060000	Y 377.433
V (292.401 nm)	0.531719	ppm	0.000111	0.02	25475.200000	Y 377.433
Zn (206.200 nm)	0.625293	ppm	0.000417	0.07	2165.560000	Y 377.433
Zr (343.823 nm)	0.527948	ppm	0.000112	0.02	21276.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.092483	11637.343276	0.005674	0.52
Y 377.433	1.090427	503381.791993	0.005391	0.49
Y_R 377.433	1.136200	42934.500000	0.005507	0.48
Y_R 488.368	1.132830	40884.000000	0.005410	0.48
Y_R2 488.368	1.143208	80455.248290	0.008203	0.72
Y_R4	1.175490	36069.100000	0.003133	0.27

Sample Name: 280-116015-B-4-Dpds

Date: 11/6/2018 2:31:14 AM Rack:Tube: 2:47

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.047549	ppm	0.000070	0.15	1069.580000	Y 377.433
Al (394.401 nm)	1.039500	ppm	0.001764	0.17	13079.400000	Y 377.433
Al H (396.152 nm)	1.145260	ppm	0.000270	0.02	1687.580000	Y_R 377.433
As (188.980 nm)	0.200484	ppm	0.001312	0.65	265.752000	Y 242.219
B (249.678 nm)	0.200850	ppm	0.001026	0.51	852.819000	Y 242.219
Ba (493.408 nm)	0.100214	ppm	0.000896	0.89	9973.260000	Y_R 488.368
Be (234.861 nm)	0.050954	ppm	0.000065	0.13	2618.390000	Y_R 488.368
Bi (223.061 nm)	0.000384 u	ppm	0.002383	> 100.00	44.080100	Y 377.433
Ca (315.887 nm)	30.594998	ppm	0.013249	0.04	20206.465006	Y_R 377.433
Cd (214.439 nm)	0.051725	ppm	0.000130	0.25	1276.810000	Y 377.433
Co (228.615 nm)	0.149946	ppm	0.000842	0.56	3531.940000	Y 242.219
Cr (205.560 nm)	0.078998	ppm	0.000142	0.18	367.354000	Y 377.433
Cu (324.754 nm)	0.076589	ppm	0.000293	0.38	3871.090000	Y 377.433
Fe (238.204 nm)	1.021113	ppm	0.003704	0.36	1712.883147	Y_R 377.433
Fe H (259.940 nm)	1.013110 u	ppm	0.006584	0.65	918.675000	Y_R 377.433
K (766.491 nm)	25.709400	ppm	0.116015	0.45	26862.800000	Y_R2 488.368
Li (670.783 nm)	0.115951	ppm	0.003148	2.71	1195.390000	Y_R2 488.368
Mg (279.078 nm)	20.258600	ppm	0.002975	0.01	44138.300000	Y 377.433
Mn (257.610 nm)	0.155844	ppm	0.000036	0.02	32628.900000	Y 377.433
Mo (202.032 nm)	0.052186	ppm	0.000185	0.35	612.372000	Y 377.433
Na (589.592 nm)	41.573700	ppm	0.072938	0.18	20749.000000	Y_R2 488.368
Na H (589.593 nm)	42.599672 u	ppm	0.025301	0.06	14810.931924	Y_R4
Ni (231.604 nm)	0.150474	ppm	0.004368	2.90	585.988000	Y 377.433
P (213.618 nm)	2.058530	ppm	0.008376	0.41	2383.510000	Y 242.219
Pb (220.353 nm)	0.096450	ppm	0.001534	1.59	230.594000	Y 242.219
S (181.972 nm)	0.092255	ppm	0.002715	2.94	20.433801	Y 377.433
Sb (206.834 nm)	0.099998	ppm	0.000639	0.64	163.609000	Y 377.433
Se (196.026 nm)	0.207670	ppm	0.001390	0.67	313.825000	Y 242.219
Si (288.158 nm)	5.028870	ppm	0.020816	0.41	23813.700000	Y 377.433
Sn (189.925 nm)	0.091278	ppm	0.002448	2.68	114.618000	Y 377.433
Sr (421.552 nm)	0.051968	ppm	0.000089	0.17	6310.761879	Y_R 488.368
Th (288.505 nm)	0.200619	ppm	0.009716	4.84	227.416000	Y 377.433
Ti (336.122 nm)	0.052343	ppm	0.000237	0.45	4690.180000	Y 377.433
Tl (190.794 nm)	0.207528	ppm	0.003747	1.81	109.853000	Y 377.433
U (409.013 nm)	0.644660	ppm	0.009237	1.43	1581.450000	Y 377.433
V (292.401 nm)	0.052488	ppm	0.000240	0.46	2313.810000	Y 377.433
Zn (206.200 nm)	0.312484	ppm	0.000614	0.20	1084.460000	Y 377.433
Zr (343.823 nm)	0.051920	ppm	0.000051	0.10	1985.560000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.117460	11903.397792	0.000321	0.03
Y 377.433	1.112185	513426.040258	0.001536	0.14
Y_R 377.433	1.157300	43731.800000	0.004300	0.37
Y_R 488.368	1.157730	41782.600000	0.000347	0.03
Y_R2 488.368	1.162939	81843.863300	0.006456	0.56
Y_R4	1.181320	36248.000000	0.001804	0.15

Sample Name: 280-116015-B-5-B

Date: 11/6/2018 2:34:42 AM Rack:Tube: 2:48

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000372	ppm	0.000242	65.10	-230.017000	Y 377.433
Al (394.401 nm)	0.004467	ppm	0.001191	26.66	158.048000	Y 377.433
Al H (396.152 nm)	0.135151 u	ppm	0.006853	5.07	5.890160	Y_R 377.433
As (188.980 nm)	-0.001619 u	ppm	0.001773	> 100.00	-17.384200	Y 242.219
B (249.678 nm)	0.094723	ppm	0.001951	2.06	427.030000	Y 242.219
Ba (493.408 nm)	-0.000628 u	ppm	0.000020	3.21	743.595000	Y_R 488.368
Be (234.861 nm)	0.000132	ppm	0.000018	13.35	0.930924	Y_R 488.368
Bi (223.061 nm)	-0.003194 u	ppm	0.000060	1.88	38.015800	Y 377.433
Ca (315.887 nm)	10.652075	ppm	0.034139	0.32	7033.577088	Y_R 377.433
Cd (214.439 nm)	0.000193	ppm	0.000115	59.93	-6.361180	Y 377.433
Co (228.615 nm)	0.105841	ppm	0.000023	0.02	2482.500000	Y 242.219
Cr (205.560 nm)	0.026224	ppm	0.000183	0.70	115.704000	Y 377.433
Cu (324.754 nm)	0.026727	ppm	0.000044	0.16	1475.260000	Y 377.433
Fe (238.204 nm)	0.002457 u	ppm	0.003669	> 100.00	15.628824	Y_R 377.433
Fe H (259.940 nm)	0.019601 u	ppm	0.002231	11.38	6.979700	Y_R 377.433
K (766.491 nm)	5.224070	ppm	0.187628	3.59	6841.610000	Y_R2 488.368
Li (670.783 nm)	0.013654	ppm	0.007763	56.85	-253.510000	Y_R2 488.368
Mg (279.078 nm)	0.083973	ppm	0.003747	4.46	195.971000	Y 377.433
Mn (257.610 nm)	0.108357	ppm	0.000054	0.05	22693.600000	Y 377.433
Mo (202.032 nm)	0.000129	ppm	0.000097	74.91	20.151000	Y 377.433
Na (589.592 nm)	21.544200	ppm	0.097326	0.45	10687.700000	Y_R2 488.368
Na H (589.593 nm)	22.666095 u	ppm	0.061486	0.27	7703.051227	Y_R4
Ni (231.604 nm)	0.103199	ppm	0.001088	1.05	404.522000	Y 377.433
P (213.618 nm)	-0.001136 u	ppm	0.002148	> 100.00	-3.616130	Y 242.219
Pb (220.353 nm)	-0.004279 u	ppm	0.000948	22.16	5.077250	Y 242.219
S (181.972 nm)	0.106379	ppm	0.002375	2.23	25.999446	Y 377.433
Sb (206.834 nm)	-0.000912 u	ppm	0.000685	75.12	-2.374770	Y 377.433
Se (196.026 nm)	0.003643	ppm	0.003046	83.61	7.269370	Y 242.219
Si (288.158 nm)	-0.097675 u	ppm	0.000462	0.47	847.234000	Y 377.433
Sn (189.925 nm)	-0.006153 u	ppm	0.001871	30.41	0.880260	Y 377.433
Sr (421.552 nm)	0.000660	ppm	0.000137	20.76	354.821534	Y_R 488.368
Th (288.505 nm)	-0.003460 u	ppm	0.001320	38.17	12.121500	Y 377.433
Ti (336.122 nm)	0.000557	ppm	0.000088	15.73	-284.758000	Y 377.433
Tl (190.794 nm)	0.000082 u	ppm	0.001423	> 100.00	-8.749840	Y 377.433
U (409.013 nm)	0.100965	ppm	0.005166	5.12	344.606000	Y 377.433
V (292.401 nm)	0.000659	ppm	0.000197	29.95	-175.444000	Y 377.433
Zn (206.200 nm)	0.109793	ppm	0.000049	0.04	383.832000	Y 377.433
Zr (343.823 nm)	0.000327	ppm	0.000010	3.03	-105.291000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120295	11933.592543	0.000381	0.03
Y 377.433	1.111525	513121.491918	0.000405	0.04
Y_R 377.433	1.137700	42991.100000	0.000469	0.04
Y_R 488.368	1.135230	40970.500000	0.007345	0.65
Y_R2 488.368	1.144507	80546.638338	0.024127	2.11
Y_R4	1.158130	35536.300000	0.003144	0.27

Sample Name: 280-116015-B-6-B

Date: 11/6/2018 2:37:52 AM Rack:Tube: 2:49

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000130	ppm	0.000041	31.16	-236.818000	Y 377.433
Al (394.401 nm)	0.003816	ppm	0.000299	7.83	151.690000	Y 377.433
Al H (396.152 nm)	0.126587 u	ppm	0.001308	1.03	-8.266850	Y_R 377.433
As (188.980 nm)	-0.000494 u	ppm	0.001669	> 100.00	-15.807000	Y 242.219
B (249.678 nm)	0.093568	ppm	0.001744	1.86	422.394000	Y 242.219
Ba (493.408 nm)	-0.000862 u	ppm	0.000070	8.09	722.138000	Y_R 488.368
Be (234.861 nm)	0.000093	ppm	0.000093	99.11	-1.119350	Y_R 488.368
Bi (223.061 nm)	-0.002207 u	ppm	0.000999	45.28	39.642600	Y 377.433
Ca (315.887 nm)	10.497885	ppm	0.020392	0.19	6931.731542	Y_R 377.433
Cd (214.439 nm)	0.000206	ppm	0.000129	62.63	-6.037070	Y 377.433
Co (228.615 nm)	0.104937	ppm	0.000333	0.32	2461.090000	Y 242.219
Cr (205.560 nm)	0.025826	ppm	0.000075	0.29	113.804000	Y 377.433
Cu (324.754 nm)	0.026638	ppm	0.000024	0.09	1470.130000	Y 377.433
Fe (238.204 nm)	0.004379	ppm	0.001340	30.59	18.830934	Y_R 377.433
Fe H (259.940 nm)	0.014449 u	ppm	0.002735	18.93	2.251970	Y_R 377.433
K (766.491 nm)	4.996710	ppm	0.128522	2.57	6619.400000	Y_R2 488.368
Li (670.783 nm)	0.012844	ppm	0.001311	10.21	-264.982000	Y_R2 488.368
Mg (279.078 nm)	0.085605	ppm	0.000131	0.15	199.440000	Y 377.433
Mn (257.610 nm)	0.107128	ppm	0.000240	0.22	22436.300000	Y 377.433
Mo (202.032 nm)	-0.000975 u	ppm	0.000014	1.41	7.591150	Y 377.433
Na (589.592 nm)	21.206600	ppm	0.054859	0.26	10518.200000	Y_R2 488.368
Na H (589.593 nm)	22.486397 u	ppm	0.143954	0.64	7638.903992	Y_R4
Ni (231.604 nm)	0.104021	ppm	0.001385	1.33	407.672000	Y 377.433
P (213.618 nm)	0.005060	ppm	0.001644	32.49	3.596230	Y 242.219
Pb (220.353 nm)	-0.002692 u	ppm	0.001778	66.03	8.639420	Y 242.219
S (181.972 nm)	0.106082	ppm	0.004759	4.49	25.846442	Y 377.433
Sb (206.834 nm)	-0.001371 u	ppm	0.002404	> 100.00	-3.131290	Y 377.433
Se (196.026 nm)	0.000307 u	ppm	0.003011	> 100.00	2.251320	Y 242.219
Si (288.158 nm)	-0.099943 u	ppm	0.001877	1.88	837.076000	Y 377.433
Sn (189.925 nm)	-0.006617 u	ppm	0.001112	16.81	0.338421	Y 377.433
Sr (421.552 nm)	0.000669	ppm	0.000013	1.99	355.881387	Y_R 488.368
Th (288.505 nm)	-0.004387 u	ppm	0.000031	0.71	11.142300	Y 377.433
Ti (336.122 nm)	0.000720	ppm	0.000010	1.36	-269.651000	Y 377.433
Tl (190.794 nm)	0.001928	ppm	0.001350	70.01	-7.690130	Y 377.433
U (409.013 nm)	0.108333	ppm	0.014964	13.81	361.459000	Y 377.433
V (292.401 nm)	0.000501	ppm	0.000093	18.55	-183.399000	Y 377.433
Zn (206.200 nm)	0.109109	ppm	0.000091	0.08	381.468000	Y 377.433
Zr (343.823 nm)	0.000204	ppm	0.000205	> 100.00	-110.274000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130005	12037.035192	0.003868	0.34
Y 377.433	1.120291	517168.272795	0.003809	0.34
Y_R 377.433	1.167060	44100.700000	0.004008	0.34
Y_R 488.368	1.154010	41648.300000	0.001473	0.13
Y_R2 488.368	1.165000	81988.875462	0.000196	0.02
Y_R4	1.173070	35994.700000	0.002729	0.23

Sample Name: CCVH-5408055

Date: 11/6/2018 2:41:03 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001257	ppm	0.000008	0.65	-317.799000	Y 377.433
Al (394.401 nm)	51.985400 o	ppm	0.050706	0.10	647411.000000	Y 377.433
Al H (396.152 nm)	50.831600	ppm	0.075841	0.15	83599.900000	Y_R 377.433
As (188.980 nm)	-0.004084 u	ppm	0.000096	2.35	-22.959300	Y 242.219
B (249.678 nm)	-0.011948 u	ppm	0.001308	10.94	-17.626200	Y 242.219
Ba (493.408 nm)	-0.000157 u	ppm	0.000324	> 100.00	823.513000	Y_R 488.368
Be (234.861 nm)	-0.000018 u	ppm	0.000262	> 100.00	-715.061000	Y_R 488.368
Bi (223.061 nm)	1.020500	ppm	0.001381	0.14	1731.860000	Y 377.433
Ca (315.887 nm)	-0.013323 u	ppm	0.001978	14.85	-0.587446	Y_R 377.433
Cd (214.439 nm)	0.000284	ppm	0.000042	14.98	-4.097730	Y 377.433
Co (228.615 nm)	0.001325	ppm	0.000405	30.59	59.540400	Y 242.219
Cr (205.560 nm)	0.000362	ppm	0.000058	15.96	-8.584960	Y 377.433
Cu (324.754 nm)	0.000437	ppm	0.000376	86.12	687.145000	Y 377.433
Fe (238.204 nm)	50.140915 o	ppm	0.055227	0.11	83554.794832	Y_R 377.433
Fe H (259.940 nm)	50.293200	ppm	0.089040	0.18	46140.700000	Y_R 377.433
K (766.491 nm)	0.017215 u	ppm	0.034837	> 100.00	1752.740000	Y_R2 488.368
Li (670.783 nm)	0.015851	ppm	0.004129	26.05	-222.395000	Y_R2 488.368
Mg (279.078 nm)	-0.034156 u	ppm	0.000947	2.77	-214.955000	Y 377.433
Mn (257.610 nm)	0.000309	ppm	0.000038	12.34	87.254100	Y 377.433
Mo (202.032 nm)	-0.001329 u	ppm	0.000002	0.13	3.560860	Y 377.433
Na (589.592 nm)	255.608000 o	ppm	0.811470	0.32	128281.000000	Y_R2 488.368
Na H (589.593 nm)	259.007531	ppm	0.449882	0.17	92094.317227	Y_R4
Ni (231.604 nm)	0.001009	ppm	0.000783	77.62	20.460800	Y 377.433
P (213.618 nm)	-0.013784 u	ppm	0.001221	8.86	-18.372000	Y 242.219
Pb (220.353 nm)	-0.003462 u	ppm	0.001817	52.47	17.381000	Y 242.219
S (181.972 nm)	5.137499	ppm	0.019393	0.38	2427.952642	Y 377.433
Sb (206.834 nm)	0.001642	ppm	0.000177	10.77	5.722350	Y 377.433
Se (196.026 nm)	0.001235	ppm	0.000149	12.08	-9.427180	Y 242.219
Si (288.158 nm)	-0.198440 u	ppm	0.000021	0.01	395.817000	Y 377.433
Sn (189.925 nm)	-0.006290 u	ppm	0.000921	14.64	0.719943	Y 377.433
Sr (421.552 nm)	-0.000111 u	ppm	0.000020	17.92	271.173615	Y_R 488.368
Th (288.505 nm)	5.015210	ppm	0.013770	0.27	5380.860000	Y 377.433
Ti (336.122 nm)	0.001183	ppm	0.000152	12.86	-252.534000	Y 377.433
Tl (190.794 nm)	-0.004368 u	ppm	0.002735	62.63	-14.676500	Y 377.433
U (409.013 nm)	10.542800	ppm	0.012077	0.11	24239.600000	Y 377.433
V (292.401 nm)	-0.003918 u	ppm	0.000001	0.02	-394.721000	Y 377.433
Zn (206.200 nm)	-0.000337 u	ppm	0.000008	2.40	8.600520	Y 377.433
Zr (343.823 nm)	-0.006794 u	ppm	0.000171	2.52	-393.849000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.093660	11649.876022	0.000445	0.04
Y 377.433	1.095014	505499.487378	0.003290	0.30
Y_R 377.433	1.131470	42755.800000	0.004598	0.41
Y_R 488.368	1.131150	40823.300000	0.006309	0.56
Y_R2 488.368	1.133403	79765.208774	0.005470	0.48
Y_R4	1.147950	35224.000000	0.007387	0.64

Sample Name: CCV-5407762

Date: 11/6/2018 2:44:40 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.518068	ppm	0.001382	0.27	14095.700000	Y 377.433
Al (394.401 nm)	0.513320	ppm	0.000174	0.03	6600.300000	Y 377.433
Al H (396.152 nm)	0.551642 u	ppm	0.005090	0.92	891.576000	Y_R 377.433
As (188.980 nm)	1.015650	ppm	0.000843	0.08	1407.900000	Y 242.219
B (249.678 nm)	0.492327	ppm	0.002409	0.49	2022.660000	Y 242.219
Ba (493.408 nm)	0.508887	ppm	0.001092	0.21	47375.700000	Y_R 488.368
Be (234.861 nm)	0.522063	ppm	0.002087	0.40	26993.400000	Y_R 488.368
Bi (223.061 nm)	-0.001960 u	ppm	0.001319	67.29	40.459000	Y 377.433
Ca (315.887 nm)	5.081185	ppm	0.000435	0.01	3354.010150	Y_R 377.433
Cd (214.439 nm)	0.523574	ppm	0.002227	0.43	13025.900000	Y 377.433
Co (228.615 nm)	0.513257	ppm	0.003738	0.73	12172.100000	Y 242.219
Cr (205.560 nm)	0.528994	ppm	0.001336	0.25	2513.240000	Y 377.433
Cu (324.754 nm)	0.519136	ppm	0.000634	0.12	25187.400000	Y 377.433
Fe (238.204 nm)	2.557231	ppm	0.006474	0.25	4272.314732	Y_R 377.433
Fe H (259.940 nm)	2.549260 u	ppm	0.009684	0.38	2328.330000	Y_R 377.433
K (766.491 nm)	51.401900	ppm	0.146944	0.29	51973.000000	Y_R2 488.368
Li (670.783 nm)	1.044660	ppm	0.000416	0.04	14349.200000	Y_R2 488.368
Mg (279.078 nm)	20.597700	ppm	0.000283	0.00	44882.700000	Y 377.433
Mn (257.610 nm)	0.517379	ppm	0.000915	0.18	108271.000000	Y 377.433
Mo (202.032 nm)	0.523548	ppm	0.001331	0.25	5974.850000	Y 377.433
Na (589.592 nm)	25.869500	ppm	0.049182	0.19	12853.000000	Y_R2 488.368
Na H (589.593 nm)	27.527977 u	ppm	0.221753	0.81	9388.864714	Y_R4
Ni (231.604 nm)	0.517705	ppm	0.000571	0.11	1994.100000	Y 377.433
P (213.618 nm)	1.027530	ppm	0.000825	0.08	1167.510000	Y 242.219
Pb (220.353 nm)	1.021830	ppm	0.002748	0.27	2294.960000	Y 242.219
S (181.972 nm)	-0.000918 u	ppm	0.002500	> 100.00	-24.184903	Y 377.433
Sb (206.834 nm)	1.044790	ppm	0.002675	0.26	1716.680000	Y 377.433
Se (196.026 nm)	1.041330	ppm	0.001060	0.10	1567.380000	Y 242.219
Si (288.158 nm)	4.957250	ppm	0.021763	0.44	23492.800000	Y 377.433
Sn (189.925 nm)	1.040740	ppm	0.001891	0.18	1222.980000	Y 377.433
Sr (421.552 nm)	0.518249	ppm	0.000635	0.12	60436.210730	Y_R 488.368
Th (288.505 nm)	-0.018485 u	ppm	0.000097	0.53	-38.794100	Y 377.433
Ti (336.122 nm)	0.523267	ppm	0.001284	0.25	49404.800000	Y 377.433
Tl (190.794 nm)	1.040460	ppm	0.003898	0.37	586.892000	Y 377.433
U (409.013 nm)	-0.011282 u	ppm	0.005813	51.53	43.261900	Y 377.433
V (292.401 nm)	0.515050	ppm	0.000899	0.17	24603.900000	Y 377.433
Zn (206.200 nm)	0.521809	ppm	0.001801	0.35	1808.070000	Y 377.433
Zr (343.823 nm)	0.520917	ppm	0.001174	0.23	20991.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.116800	11896.370733	0.007068	0.63
Y 377.433	1.111911	513299.791720	0.003203	0.29
Y_R 377.433	1.148980	43417.300000	0.013115	1.14
Y_R 488.368	1.142950	41249.100000	0.010076	0.88
Y_R2 488.368	1.158010	81496.949811	0.000122	0.01
Y_R4	1.176920	36112.900000	0.006604	0.56

Sample Name: CCB

Date: 11/6/2018 2:48:11 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000612	ppm	0.000120	19.68	-222.215000	Y 377.433
Al (394.401 nm)	-0.001008 u	ppm	0.000035	3.52	75.916600	Y 377.433
Al H (396.152 nm)	0.130342 Zu	ppm	0.003356	2.57	-0.489861 Z	Y_R 377.433
As (188.980 nm)	-0.002982 u	ppm	0.002148	72.03	-19.293900	Y 242.219
B (249.678 nm)	-0.011066 u	ppm	0.000078	0.71	2.271210	Y 242.219
Ba (493.408 nm)	-0.001193 u	ppm	0.000404	33.83	691.793000	Y_R 488.368
Be (234.861 nm)	0.000146	ppm	0.000048	32.71	1.728340	Y_R 488.368
Bi (223.061 nm)	-0.003978 u	ppm	0.001228	30.86	36.714700	Y 377.433
Ca (315.887 nm)	-0.004604 u	ppm	0.001637	35.56	-5.361179	Y_R 377.433
Cd (214.439 nm)	0.000121	ppm	0.000069	57.16	-8.149730	Y 377.433
Co (228.615 nm)	0.000592	ppm	0.000023	3.97	-13.914700	Y 242.219
Cr (205.560 nm)	-0.000139 u	ppm	0.001078	> 100.00	-10.011400	Y 377.433
Cu (324.754 nm)	0.000349	ppm	0.000122	34.95	217.984000	Y 377.433
Fe (238.204 nm)	-0.005492 u	ppm	0.002178	39.66	2.384642	Y_R 377.433
Fe H (259.940 nm)	0.016716 u	ppm	0.003347	20.02	4.332150	Y_R 377.433
K (766.491 nm)	-0.301877 u	ppm	0.005874	1.95	1440.880000	Y_R2 488.368
Li (670.783 nm)	0.011795 Z	ppm	0.002168	18.38	-279.835000 Z	Y_R2 488.368
Mg (279.078 nm)	0.004135	ppm	0.000554	13.39	23.103900	Y 377.433
Mn (257.610 nm)	-0.000003 u	ppm	0.000008	> 100.00	21.987400	Y 377.433
Mo (202.032 nm)	-0.000446 u	ppm	0.000564	> 100.00	13.601800	Y 377.433
Na (589.592 nm)	0.136638	ppm	0.012101	8.86	-67.361600	Y_R2 488.368
Na H (589.593 nm)	1.966081 u	ppm	0.021905	1.11	311.670354	Y_R4
Ni (231.604 nm)	-0.000424 u	ppm	0.001655	> 100.00	7.458010	Y 377.433
P (213.618 nm)	0.003865	ppm	0.000165	4.27	3.403980	Y 242.219
Pb (220.353 nm)	-0.002972 u	ppm	0.001557	52.37	7.857160	Y 242.219
S (181.972 nm)	0.004909	ppm	0.002590	52.76	-23.366074	Y 377.433
Sb (206.834 nm)	0.002379	ppm	0.002020	84.91	2.784150	Y 377.433
Se (196.026 nm)	0.002594	ppm	0.000187	7.20	5.542320	Y 242.219
Si (288.158 nm)	-0.207351 Zu	ppm	0.001494	0.72	355.898000 Z	Y 377.433
Sn (189.925 nm)	-0.006362 u	ppm	0.000652	10.25	0.635612	Y 377.433
Sr (421.552 nm)	-0.000279 u	ppm	0.000162	57.94	245.835443	Y_R 488.368
Th (288.505 nm)	0.004106	ppm	0.001506	36.69	18.762200	Y 377.433
Ti (336.122 nm)	0.000752	ppm	0.000131	17.35	-293.557000	Y 377.433
Tl (190.794 nm)	0.002586	ppm	0.000509	19.68	-7.331790	Y 377.433
U (409.013 nm)	-0.006208 u	ppm	0.006606	> 100.00	100.625000	Y 377.433
V (292.401 nm)	0.000480	ppm	0.000188	39.17	-171.537000	Y 377.433
Zn (206.200 nm)	-0.000220 u	ppm	0.000391	> 100.00	3.619120	Y 377.433
Zr (343.823 nm)	0.000440	ppm	0.000166	37.72	-100.695000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.137647	12118.434342	0.005532	0.49
Y 377.433	1.130235	521758.729126	0.007729	0.68
Y_R 377.433	1.164100	43988.700000	0.000577	0.05
Y_R 488.368	1.159170	41834.300000	0.005993	0.52
Y_R2 488.368	1.154680	81262.585281	0.003911	0.34
Y_R4	1.178650	36165.900000	0.002411	0.20

Sample Name: CCVL-5412564

Date: 11/6/2018 2:51:23 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010545	ppm	0.000089	0.84	53.273300	Y 377.433
Al (394.401 nm)	0.101164	ppm	0.000384	0.38	1352.800000	Y 377.433
Al H (396.152 nm)	0.235739 u	ppm	0.009459	4.01	177.710000	Y_R 377.433
As (188.980 nm)	0.013569	ppm	0.001578	11.63	3.892590	Y 242.219
B (249.678 nm)	0.089398	ppm	0.001854	2.07	405.617000	Y 242.219
Ba (493.408 nm)	0.008916	ppm	0.000533	5.98	1617.060000	Y_R 488.368
Be (234.861 nm)	0.001121	ppm	0.000065	5.78	50.741400	Y_R 488.368
Bi (223.061 nm)	0.097653	ppm	0.005725	5.86	204.247000	Y 377.433
Ca (315.887 nm)	0.199490	ppm	0.000197	0.10	129.471065	Y_R 377.433
Cd (214.439 nm)	0.005472	ppm	0.000227	4.14	125.086000	Y 377.433
Co (228.615 nm)	0.010882	ppm	0.000007	0.07	230.745000	Y 242.219
Cr (205.560 nm)	0.010876	ppm	0.000208	1.91	42.443300	Y 377.433
Cu (324.754 nm)	0.016102	ppm	0.000198	1.23	976.587000	Y 377.433
Fe (238.204 nm)	0.099252	ppm	0.001309	1.32	176.905460	Y_R 377.433
Fe H (259.940 nm)	0.105795 u	ppm	0.000292	0.28	86.075800	Y_R 377.433
K (766.491 nm)	2.928130	ppm	0.027709	0.95	4597.690000	Y_R2 488.368
Li (670.783 nm)	0.036069 Q	ppm	0.001911	5.30	63.967300 Q	Y_R2 488.368
Mg (279.078 nm)	0.210702	ppm	0.000749	0.36	472.504000	Y 377.433
Mn (257.610 nm)	0.010789	ppm	0.000030	0.28	2280.050000	Y 377.433
Mo (202.032 nm)	0.020464	ppm	0.000021	0.10	251.493000	Y 377.433
Na (589.592 nm)	1.249900	ppm	0.008770	0.70	491.792000	Y_R2 488.368
Na H (589.593 nm)	2.875602 u	ppm	0.018554	0.65	635.480113	Y_R4
Ni (231.604 nm)	0.041827	ppm	0.001460	3.49	169.386000	Y 377.433
P (213.618 nm)	2.928290	ppm	0.007106	0.24	3395.310000	Y 242.219
Pb (220.353 nm)	0.007716	ppm	0.001778	23.05	31.741700	Y 242.219
S (181.972 nm)	0.097875	ppm	0.003353	3.43	21.081396	Y 377.433
Sb (206.834 nm)	0.021333	ppm	0.000024	0.11	33.821200	Y 377.433
Se (196.026 nm)	0.021952	ppm	0.001736	7.91	34.638000	Y 242.219
Si (288.158 nm)	0.298924 Q	ppm	0.002764	0.92	2623.960000 Q	Y 377.433
Sn (189.925 nm)	0.097260	ppm	0.001029	1.06	121.601000	Y 377.433
Sr (421.552 nm)	0.009442	ppm	0.000155	1.64	1374.227114	Y_R 488.368
Th (288.505 nm)	0.015370	ppm	0.003060	19.91	30.394700	Y 377.433
Ti (336.122 nm)	0.010979	ppm	0.000076	0.69	679.554000	Y 377.433
Tl (190.794 nm)	0.018723	ppm	0.000718	3.83	1.885250	Y 377.433
U (409.013 nm)	0.061677	ppm	0.004407	7.14	254.523000	Y 377.433
V (292.401 nm)	0.010514	ppm	0.000190	1.81	310.786000	Y 377.433
Zn (206.200 nm)	0.021283	ppm	0.000860	4.04	77.944900	Y 377.433
Zr (343.823 nm)	0.015817	ppm	0.000199	1.26	522.460000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.146240	12209.969731	0.002086	0.18
Y 377.433	1.138235	525451.873115	0.003508	0.31
Y_R 377.433	1.181650	44651.800000	0.007972	0.67
Y_R 488.368	1.188030	42875.800000	0.001957	0.16
Y_R2 488.368	1.169963	82338.160292	0.016496	1.41
Y_R4	1.188620	36471.700000	0.003714	0.31

Sample Name: MB 280-436023/1-A

Date: 11/6/2018 2:54:47 AM Rack:Tube: 2:50

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000332	ppm	0.000074	22.15	-229.782000	Y 377.433
Al (394.401 nm)	0.007713	ppm	0.001929	25.01	183.360000	Y 377.433
Al H (396.152 nm)	0.142573 u	ppm	0.001876	1.32	19.744900	Y_R 377.433
As (188.980 nm)	-0.000737 u	ppm	0.000455	61.72	-16.147800	Y 242.219
B (249.678 nm)	0.000472	ppm	0.000540	> 100.00	48.592300	Y 242.219
Ba (493.408 nm)	-0.000924 u	ppm	0.000264	28.56	716.498000	Y_R 488.368
Be (234.861 nm)	0.000094	ppm	0.000004	4.69	-1.196340	Y_R 488.368
Bi (223.061 nm)	-0.000250 u	ppm	0.001580	> 100.00	42.861800	Y 377.433
Ca (315.887 nm)	0.160560	ppm	0.005668	3.53	103.735939	Y_R 377.433
Cd (214.439 nm)	0.000185	ppm	0.000036	19.32	-6.543660	Y 377.433
Co (228.615 nm)	0.000664	ppm	0.000093	13.94	-12.175600	Y 242.219
Cr (205.560 nm)	0.001218	ppm	0.001190	97.66	-3.531460	Y 377.433
Cu (324.754 nm)	0.000681	ppm	0.000142	20.80	234.092000	Y 377.433
Fe (238.204 nm)	0.013564	ppm	0.001855	13.68	34.135254	Y_R 377.433
Fe H (259.940 nm)	0.023598 u	ppm	0.003476	14.73	10.647300	Y_R 377.433
K (766.491 nm)	-0.245219 u	ppm	0.022340	9.11	1496.250000	Y_R2 488.368
Li (670.783 nm)	0.016840	ppm	0.003603	21.39	-208.380000	Y_R2 488.368
Mg (279.078 nm)	0.048732	ppm	0.001883	3.86	120.399000	Y 377.433
Mn (257.610 nm)	0.000435	ppm	0.000000	0.03	113.753000	Y 377.433
Mo (202.032 nm)	-0.000605 u	ppm	0.000032	5.25	11.792700	Y 377.433
Na (589.592 nm)	0.175499	ppm	0.010054	5.73	-47.842800	Y_R2 488.368
Na H (589.593 nm)	1.932102 u	ppm	0.001234	0.06	299.506583	Y_R4
Ni (231.604 nm)	0.001342	ppm	0.000281	20.94	14.222800	Y 377.433
P (213.618 nm)	0.021311	ppm	0.000961	4.51	23.630100	Y 242.219
Pb (220.353 nm)	-0.001579 u	ppm	0.001042	65.95	10.941200	Y 242.219
S (181.972 nm)	0.015266	ppm	0.006016	39.41	-18.410768	Y 377.433
Sb (206.834 nm)	0.000792 u	ppm	0.001221	> 100.00	0.180626	Y 377.433
Se (196.026 nm)	0.001803	ppm	0.001975	> 100.00	4.349150	Y 242.219
Si (288.158 nm)	-0.107192 u	ppm	0.003035	2.83	804.601000	Y 377.433
Sn (189.925 nm)	0.008453	ppm	0.000705	8.34	17.931100	Y 377.433
Sr (421.552 nm)	0.000105 u	ppm	0.000166	> 100.00	290.374217	Y_R 488.368
Th (288.505 nm)	0.000715 u	ppm	0.004313	> 100.00	15.112800	Y 377.433
Ti (336.122 nm)	0.001025	ppm	0.000012	1.17	-267.304000	Y 377.433
Tl (190.794 nm)	-0.000348 u	ppm	0.000090	25.92	-9.016160	Y 377.433
U (409.013 nm)	-0.005358 u	ppm	0.002147	40.07	102.559000	Y 377.433
V (292.401 nm)	0.000459	ppm	0.000086	18.77	-172.388000	Y 377.433
Zn (206.200 nm)	0.002203	ppm	0.000432	19.62	11.995300	Y 377.433
Zr (343.823 nm)	0.000480	ppm	0.000078	16.22	-99.078000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.162091	12378.819166	0.004835	0.42
Y 377.433	1.155395	533373.527998	0.004695	0.41
Y_R 377.433	1.182610	44688.200000	0.001461	0.12
Y_R 488.368	1.182640	42681.600000	0.008317	0.70
Y_R2 488.368	1.173583	82592.936819	0.005610	0.48
Y_R4	1.158280	35540.900000	0.004483	0.39

Sample Name: LCS 280-436023/2-A

Date: 11/6/2018 2:57:57 AM Rack:Tube: 2:51

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053003	ppm	0.000726	1.37	1177.510000	Y 377.433
Al (394.401 nm)	2.055840	ppm	0.002737	0.13	25988.700000	Y 377.433
Al H (396.152 nm)	1.988480	ppm	0.019078	0.96	3445.250000	Y_R 377.433
As (188.980 nm)	0.989127	ppm	0.002532	0.26	1370.750000	Y 242.219
B (249.678 nm)	1.070350	ppm	0.002084	0.19	4344.040000	Y 242.219
Ba (493.408 nm)	1.998070	ppm	0.002146	0.11	183663.000000	Y_R 488.368
Be (234.861 nm)	0.051316	ppm	0.000250	0.49	2637.170000	Y_R 488.368
Bi (223.061 nm)	1.959280	ppm	0.009835	0.50	3272.870000	Y 377.433
Ca (315.887 nm)	49.838325	ppm	0.039538	0.08	32917.268219	Y_R 377.433
Cd (214.439 nm)	0.101471	ppm	0.000136	0.13	2515.470000	Y 377.433
Co (228.615 nm)	0.487059	ppm	0.002029	0.42	11571.600000	Y 242.219
Cr (205.560 nm)	0.209128	ppm	0.000672	0.32	984.795000	Y 377.433
Cu (324.754 nm)	0.252068	ppm	0.000562	0.22	12372.400000	Y 377.433
Fe (238.204 nm)	1.020161	ppm	0.004001	0.39	1711.297210	Y_R 377.433
Fe H (259.940 nm)	1.011200 u	ppm	0.008954	0.89	916.924000	Y_R 377.433
K (766.491 nm)	51.263900	ppm	0.020254	0.04	51838.200000	Y_R2 488.368
Li (670.783 nm)	1.026810	ppm	0.001709	0.17	14096.400000	Y_R2 488.368
Mg (279.078 nm)	49.640900	ppm	0.090981	0.18	108130.000000	Y 377.433
Mn (257.610 nm)	0.504460	ppm	0.000590	0.12	105568.000000	Y 377.433
Mo (202.032 nm)	1.050330	ppm	0.000872	0.08	11967.800000	Y 377.433
Na (589.592 nm)	50.907300	ppm	0.117332	0.23	25408.900000	Y_R2 488.368
Na H (589.593 nm)	52.119832	ppm	0.046600	0.09	18022.916355	Y_R4
Ni (231.604 nm)	0.492588	ppm	0.001512	0.31	1898.500000	Y 377.433
P (213.618 nm)	10.272100	ppm	0.083386	0.81	11904.100000	Y 242.219
Pb (220.353 nm)	0.497193	ppm	0.001048	0.21	1125.190000	Y 242.219
S (181.972 nm)	1.994928	ppm	0.013182	0.66	931.397267	Y 377.433
Sb (206.834 nm)	0.512642	ppm	0.001272	0.25	831.573000	Y 377.433
Se (196.026 nm)	2.038980	ppm	0.004981	0.24	3067.760000	Y 242.219
Si (288.158 nm)	1.761080	ppm	0.001108	0.06	9174.260000	Y 377.433
Sn (189.925 nm)	2.064970	ppm	0.005462	0.26	2418.640000	Y 377.433
Sr (421.552 nm)	1.015337	ppm	0.001428	0.14	118137.319586	Y_R 488.368
Th (288.505 nm)	0.977042	ppm	0.006907	0.71	1030.260000	Y 377.433
Ti (336.122 nm)	1.032860	ppm	0.001051	0.10	97972.800000	Y 377.433
Tl (190.794 nm)	2.040020	ppm	0.004996	0.24	1158.220000	Y 377.433
U (409.013 nm)	2.122290	ppm	0.010384	0.49	4915.910000	Y 377.433
V (292.401 nm)	0.511030	ppm	0.000348	0.07	24488.000000	Y 377.433
Zn (206.200 nm)	0.503669	ppm	0.000101	0.02	1745.210000	Y 377.433
Zr (343.823 nm)	0.512522	ppm	0.001241	0.24	20651.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.108260	11805.400267	0.001669	0.15
Y 377.433	1.107064	511062.321594	0.001883	0.17
Y_R 377.433	1.142960	43189.700000	0.002820	0.25
Y_R 488.368	1.139640	41129.500000	0.003315	0.29
Y_R2 488.368	1.146383	80678.706634	0.001386	0.12
Y_R4	1.170240	35907.800000	0.001562	0.13

Sample Name: LCSD 280-436023/3-A

Date: 11/6/2018 3:01:26 AM Rack:Tube: 2:52

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051445	ppm	0.000139	0.27	1135.640000	Y 377.433
Al (394.401 nm)	1.997960	ppm	0.000057	0.00	25262.800000	Y 377.433
Al H (396.152 nm)	1.925300	ppm	0.010572	0.55	3332.230000	Y_R 377.433
As (188.980 nm)	0.955241	ppm	0.002591	0.27	1323.270000	Y 242.219
B (249.678 nm)	1.037770	ppm	0.003303	0.32	4213.230000	Y 242.219
Ba (493.408 nm)	1.938280	ppm	0.004120	0.21	178191.000000	Y_R 488.368
Be (234.861 nm)	0.049812	ppm	0.000076	0.15	2559.790000	Y_R 488.368
Bi (223.061 nm)	1.902350	ppm	0.002046	0.11	3179.040000	Y 377.433
Ca (315.887 nm)	48.396769	ppm	0.009622	0.02	31965.081039	Y_R 377.433
Cd (214.439 nm)	0.099096	ppm	0.000136	0.14	2456.350000	Y 377.433
Co (228.615 nm)	0.472737	ppm	0.000794	0.17	11230.400000	Y 242.219
Cr (205.560 nm)	0.201894	ppm	0.001207	0.60	950.394000	Y 377.433
Cu (324.754 nm)	0.246223	ppm	0.000118	0.05	12088.800000	Y 377.433
Fe (238.204 nm)	0.984714	ppm	0.004210	0.43	1652.235452	Y_R 377.433
Fe H (259.940 nm)	0.986437 u	ppm	0.014095	1.43	894.199000	Y_R 377.433
K (766.491 nm)	49.638500	ppm	0.106261	0.21	50249.600000	Y_R2 488.368
Li (670.783 nm)	1.001370	ppm	0.010580	1.06	13736.000000	Y_R2 488.368
Mg (279.078 nm)	48.254000	ppm	0.026671	0.06	105109.000000	Y 377.433
Mn (257.610 nm)	0.490434	ppm	0.000591	0.12	102633.000000	Y 377.433
Mo (202.032 nm)	1.016870	ppm	0.000365	0.04	11587.100000	Y 377.433
Na (589.592 nm)	49.186500	ppm	0.080906	0.16	24545.300000	Y_R2 488.368
Na H (589.593 nm)	50.775204	ppm	0.060659	0.12	17548.703327	Y_R4
Ni (231.604 nm)	0.477784	ppm	0.001725	0.36	1841.720000	Y 377.433
P (213.618 nm)	9.952200	ppm	0.030334	0.30	11533.200000	Y 242.219
Pb (220.353 nm)	0.484845	ppm	0.002201	0.45	1097.610000	Y 242.219
S (181.972 nm)	1.917215	ppm	0.014104	0.74	894.156389	Y 377.433
Sb (206.834 nm)	0.501889	ppm	0.000410	0.08	814.228000	Y 377.433
Se (196.026 nm)	1.978410	ppm	0.005618	0.28	2976.680000	Y 242.219
Si (288.158 nm)	1.764680	ppm	0.007405	0.42	9190.400000	Y 377.433
Sn (189.925 nm)	2.000900	ppm	0.001491	0.07	2343.840000	Y 377.433
Sr (421.552 nm)	0.986307	ppm	0.001402	0.14	114767.602946	Y_R 488.368
Th (288.505 nm)	0.949720	ppm	0.009484	1.00	1001.880000	Y 377.433
Ti (336.122 nm)	0.999619	ppm	0.001271	0.13	94808.200000	Y 377.433
Tl (190.794 nm)	1.988690	ppm	0.002509	0.13	1128.870000	Y 377.433
U (409.013 nm)	2.050440	ppm	0.000194	0.01	4753.190000	Y 377.433
V (292.401 nm)	0.496427	ppm	0.000453	0.09	23782.300000	Y 377.433
Zn (206.200 nm)	0.491408	ppm	0.000344	0.07	1702.830000	Y 377.433
Zr (343.823 nm)	0.496713	ppm	0.000534	0.11	20011.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.112055	11845.817908	0.002680	0.24
Y 377.433	1.109488	512181.255624	0.001168	0.11
Y_R 377.433	1.150870	43488.900000	0.002745	0.24
Y_R 488.368	1.148910	41464.100000	0.002333	0.20
Y_R2 488.368	1.142840	80429.322416	0.006339	0.55
Y_R4	1.172030	35962.600000	0.002262	0.19

Sample Name: 280-116417-A-1-A

Date: 11/6/2018 3:04:54 AM Rack:Tube: 2:53

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001291 u	ppm	0.000162	12.56	-335.918000	Y 377.433
Al (394.401 nm)	127.888000 o	ppm	0.163507	0.13	1592220.000000	Y 377.433
Al H (396.152 nm)	125.021000	ppm	0.058417	0.05	206046.000000	Y_R 377.433
As (188.980 nm)	0.048234	ppm	0.000647	1.34	46.857800	Y 242.219
B (249.678 nm)	-0.000352 u	ppm	0.000861	> 100.00	0.087368	Y 242.219
Ba (493.408 nm)	1.424960	ppm	0.000956	0.07	131314.000000	Y_R 488.368
Be (234.861 nm)	0.007363	ppm	0.000352	4.78	-1582.190000	Y_R 488.368
Bi (223.061 nm)	0.001376	ppm	0.000180	13.07	63.652800	Y 377.433
Ca (315.887 nm)	58.380990	ppm	0.094915	0.16	38585.398351	Y_R 377.433
Cd (214.439 nm)	0.012681	ppm	0.000289	2.28	304.598000	Y 377.433
Co (228.615 nm)	0.081832	ppm	0.000917	1.12	2106.090000	Y 242.219
Cr (205.560 nm)	0.168717	ppm	0.000471	0.28	793.558000	Y 377.433
Cu (324.754 nm)	0.289170	ppm	0.000051	0.02	14288.300000	Y 377.433
Fe (238.204 nm)	138.231349 o	ppm	0.228125	0.17	230328.382598	Y_R 377.433
Fe H (259.940 nm)	138.427000	ppm	0.147649	0.11	127017.000000	Y_R 377.433
K (766.491 nm)	9.866140	ppm	0.006693	0.07	11378.500000	Y_R2 488.368
Li (670.783 nm)	0.089577	ppm	0.006010	6.71	821.824000	Y_R2 488.368
Mg (279.078 nm)	12.374500	ppm	0.001152	0.01	26850.500000	Y 377.433
Mn (257.610 nm)	7.108590	ppm	0.008945	0.13	1487310.000000	Y 377.433
Mo (202.032 nm)	0.002489	ppm	0.000006	0.26	46.995800	Y 377.433
Na (589.592 nm)	1.294550	ppm	0.040761	3.15	492.336000	Y_R2 488.368
Na H (589.593 nm)	3.165617 u	ppm	0.004356	0.14	599.151672	Y_R4
Ni (231.604 nm)	0.098005	ppm	0.002301	2.35	405.397000	Y 377.433
P (213.618 nm)	2.039510	ppm	0.003098	0.15	2352.180000	Y 242.219
Pb (220.353 nm)	0.641331	ppm	0.000436	0.07	1428.650000	Y 242.219
S (181.972 nm)	0.984291	ppm	0.001008	0.10	470.535626	Y 377.433
Sb (206.834 nm)	0.001503	ppm	0.001444	96.08	10.571800	Y 377.433
Se (196.026 nm)	0.005968	ppm	0.000315	5.27	-15.172100	Y 242.219
Si (288.158 nm)	3.093450	ppm	0.015428	0.50	15143.100000	Y 377.433
Sn (189.925 nm)	0.011705	ppm	0.000114	0.97	21.727200	Y 377.433
Sr (421.552 nm)	0.403157	ppm	0.000410	0.10	47092.334095	Y_R 488.368
Th (288.505 nm)	-0.021626 u	ppm	0.000744	3.44	30.261600	Y 377.433
Ti (336.122 nm)	0.859095	ppm	0.000784	0.09	81470.000000	Y 377.433
Tl (190.794 nm)	0.005900	ppm	0.003875	65.67	-15.701500	Y 377.433
U (409.013 nm)	-0.092821 u	ppm	0.017558	18.92	-39.243600	Y 377.433
V (292.401 nm)	0.328480	ppm	0.000029	0.01	15730.100000	Y 377.433
Zn (206.200 nm)	1.588530	ppm	0.001218	0.08	5509.370000	Y 377.433
Zr (343.823 nm)	0.110946	ppm	0.000047	0.04	4377.620000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.173712	12502.600512	0.004811	0.41
Y 377.433	1.170238	540225.747286	0.001822	0.16
Y_R 377.433	1.219950	46099.000000	0.007134	0.58
Y_R 488.368	1.217270	43931.200000	0.005592	0.46
Y_R2 488.368	1.227369	86378.201569	0.002285	0.19
Y_R4	1.258370	38612.200000	0.006099	0.48

Sample Name: 280-116417-A-1-Asd@5

Date: 11/6/2018 3:08:33 AM Rack:Tube: 2:54

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000084 u	ppm	0.000137	> 100.00	-248.814000	Y 377.433
Al (394.401 nm)	25.911300 o	ppm	0.033976	0.13	322673.000000	Y 377.433
Al H (396.152 nm)	25.941900	ppm	0.030722	0.12	42583.700000	Y_R 377.433
As (188.980 nm)	0.007444	ppm	0.001143	15.35	-5.854780	Y 242.219
B (249.678 nm)	-0.009015 u	ppm	0.000374	4.15	1.031630	Y 242.219
Ba (493.408 nm)	0.291555	ppm	0.006103	2.09	27505.200000	Y_R 488.368
Be (234.861 nm)	0.001513	ppm	0.000064	4.25	-337.797000	Y_R 488.368
Bi (223.061 nm)	-0.003511 u	ppm	0.001370	39.01	41.280300	Y 377.433
Ca (315.887 nm)	12.131048	ppm	0.014802	0.12	8015.828774	Y_R 377.433
Cd (214.439 nm)	0.002604	ppm	0.000003	0.13	53.685400	Y 377.433
Co (228.615 nm)	0.017658	ppm	0.000023	0.13	431.070000	Y 242.219
Cr (205.560 nm)	0.034650	ppm	0.000055	0.16	155.549000	Y 377.433
Cu (324.754 nm)	0.058615	ppm	0.000127	0.22	3056.080000	Y 377.433
Fe (238.204 nm)	28.970807 o	ppm	0.000477	0.00	48281.807685	Y_R 377.433
Fe H (259.940 nm)	29.013200	ppm	0.010808	0.04	26613.000000	Y_R 377.433
K (766.491 nm)	1.758640	ppm	0.052679	3.00	3454.700000	Y_R2 488.368
Li (670.783 nm)	0.027880	ppm	0.003107	11.14	-52.014700	Y_R2 488.368
Mg (279.078 nm)	2.573080	ppm	0.007261	0.28	5594.290000	Y 377.433
Mn (257.610 nm)	1.517140	ppm	0.004441	0.29	317445.000000	Y 377.433
Mo (202.032 nm)	-0.000064 u	ppm	0.000534	> 100.00	17.955700	Y 377.433
Na (589.592 nm)	0.348602	ppm	0.017195	4.93	34.614500	Y_R2 488.368
Na H (589.593 nm)	1.998373 u	ppm	0.047092	2.36	294.348947	Y_R4
Ni (231.604 nm)	0.019312	ppm	0.000529	2.74	87.436400	Y 377.433
P (213.618 nm)	0.418557	ppm	0.006237	1.49	481.946000	Y 242.219
Pb (220.353 nm)	0.133264	ppm	0.001739	1.30	308.348000	Y 242.219
S (181.972 nm)	0.204696	ppm	0.009173	4.48	77.605383	Y 377.433
Sb (206.834 nm)	-0.000870 u	ppm	0.001631	> 100.00	-0.624244	Y 377.433
Se (196.026 nm)	0.006180	ppm	0.000033	0.54	5.564530	Y 242.219
Si (288.158 nm)	0.452533	ppm	0.002078	0.46	3312.110000	Y 377.433
Sn (189.925 nm)	-0.004011 u	ppm	0.001350	33.65	3.380400	Y 377.433
Sr (421.552 nm)	0.082510	ppm	0.001518	1.84	9859.279239	Y_R 488.368
Th (288.505 nm)	-0.010201 u	ppm	0.004631	45.40	12.156600	Y 377.433
Ti (336.122 nm)	0.176566	ppm	0.000335	0.19	16454.100000	Y 377.433
Tl (190.794 nm)	0.003885	ppm	0.003044	78.33	-8.715470	Y 377.433
U (409.013 nm)	-0.029189 u	ppm	0.001693	5.80	60.418800	Y 377.433
V (292.401 nm)	0.067609	ppm	0.000406	0.60	3083.060000	Y 377.433
Zn (206.200 nm)	0.329356	ppm	0.003486	1.06	1145.780000	Y 377.433
Zr (343.823 nm)	0.022763	ppm	0.000096	0.42	803.944000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.145154	12198.395028	0.000827	0.07
Y 377.433	1.146808	529409.564008	0.001654	0.14
Y_R 377.433	1.182700	44691.700000	0.003214	0.27
Y_R 488.368	1.189370	42924.300000	0.014871	1.25
Y_R2 488.368	1.197970	84309.250954	0.011415	0.95
Y_R4	1.200430	36834.200000	0.008326	0.69

Sample Name: 280-116417-A-1-B MS

Date: 11/6/2018 3:12:06 AM Rack:Tube: 2:55

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053931	ppm	0.000174	0.32	1117.890000	Y 377.433
Al (394.401 nm)	258.783000 o	ppm	0.020841	0.01	3222040.000000	Y 377.433
Al H (396.152 nm)	250.593000	ppm	0.566409	0.23	413510.000000	Y_R 377.433
As (188.980 nm)	1.034690	ppm	0.002475	0.24	1425.920000	Y 242.219
B (249.678 nm)	0.975399	ppm	0.000931	0.10	3904.910000	Y 242.219
Ba (493.408 nm)	6.761400	ppm	0.077499	1.15	619729.000000	Y_R 488.368
Be (234.861 nm)	0.060700	ppm	0.000492	0.81	616.350000	Y_R 488.368
Bi (223.061 nm)	1.978200	ppm	0.001154	0.06	3327.260000	Y 377.433
Ca (315.887 nm)	119.944659	ppm	0.412858	0.34	79275.516462	Y_R 377.433
Cd (214.439 nm)	0.113561	ppm	0.000255	0.22	2816.520000	Y 377.433
Co (228.615 nm)	0.598470	ppm	0.001348	0.23	14476.500000	Y 242.219
Cr (205.560 nm)	0.466019	ppm	0.001075	0.23	2206.430000	Y 377.433
Cu (324.754 nm)	2.667520	ppm	0.019446	0.73	128848.000000	Y 377.433
Fe (238.204 nm)	178.044413 o	ppm	0.595694	0.33	296663.691290	Y_R 377.433
Fe H (259.940 nm)	178.633000	ppm	0.921393	0.52	163912.000000	Y_R 377.433
K (766.491 nm)	72.387100	ppm	0.094189	0.13	72482.800000	Y_R2 488.368
Li (670.783 nm)	1.181590	ppm	0.007265	0.61	16288.600000	Y_R2 488.368
Mg (279.078 nm)	69.244900	ppm	0.037387	0.05	150681.000000	Y 377.433
Mn (257.610 nm)	27.016200 bo	ppm	0.001992	0.01	5652450.000000	Y 377.433
Mo (202.032 nm)	0.985639	ppm	0.001318	0.13	11231.900000	Y 377.433
Na (589.592 nm)	52.536800	ppm	0.194791	0.37	26153.900000	Y_R2 488.368
Na H (589.593 nm)	54.747300	ppm	0.155433	0.28	18490.638846	Y_R4
Ni (231.604 nm)	0.645410	ppm	0.001493	0.23	2510.630000	Y 377.433
P (213.618 nm)	11.921000	ppm	0.048339	0.41	13708.200000	Y 242.219
Pb (220.353 nm)	1.076880	ppm	0.002085	0.19	2383.880000	Y 242.219
S (181.972 nm)	2.709967 b	ppm	0.005279	0.19	1364.379854	Y 377.433
Sb (206.834 nm)	0.272059	ppm	0.001623	0.60	447.149000	Y 377.433
Se (196.026 nm)	2.027250 b	ppm	0.006521	0.32	3041.540000	Y 242.219
Si (288.158 nm)	4.575080	ppm	0.002857	0.06	21780.700000	Y 377.433
Sn (189.925 nm)	1.957580	ppm	0.002176	0.11	2293.280000	Y 377.433
Sr (421.552 nm)	1.520661	ppm	0.005491	0.36	176815.357460	Y_R 488.368
Th (288.505 nm)	0.764714 b	ppm	0.003430	0.45	1046.630000	Y 377.433
Ti (336.122 nm)	2.467720	ppm	0.005911	0.24	234584.000000	Y 377.433
Tl (190.794 nm)	1.988920	ppm	0.004889	0.25	1112.290000	Y 377.433
U (409.013 nm)	2.046770	ppm	0.002214	0.11	4820.710000	Y 377.433
V (292.401 nm)	0.936972	ppm	0.001977	0.21	45147.200000	Y 377.433
Zn (206.200 nm)	3.675080	ppm	0.001359	0.04	12724.900000	Y 377.433
Zr (343.823 nm)	0.624145	ppm	0.000599	0.10	25175.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.129447	12031.088970	0.003271	0.29
Y 377.433	1.127835	520650.930545	0.003325	0.29
Y_R 377.433	1.205140	45539.400000	0.002721	0.23
Y_R 488.368	1.198040	43237.400000	0.005464	0.46
Y_R2 488.368	1.222502	86035.688605	0.001714	0.14
Y_R4	1.251190	38391.800000	0.010001	0.80

Sample Name: 280-116417-A-1-C MSD

Date: 11/6/2018 3:15:45 AM Rack:Tube: 2:56

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053523	ppm	0.000173	0.32	1101.490000	Y 377.433
Al (394.401 nm)	228.702000 o	ppm	0.642862	0.28	2847490.000000	Y 377.433
Al H (396.152 nm)	221.438000	ppm	0.218065	0.10	365421.000000	Y_R 377.433
As (188.980 nm)	0.997636	ppm	0.000636	0.06	1373.240000	Y 242.219
B (249.678 nm)	0.963938	ppm	0.000347	0.04	3842.820000	Y 242.219
Ba (493.408 nm)	8.850960	ppm	0.087139	0.98	810999.000000	Y_R 488.368
Be (234.861 nm)	0.059172	ppm	0.003344	5.65	-158.555000	Y_R 488.368
Bi (223.061 nm)	1.891370	ppm	0.013807	0.73	3190.580000	Y 377.433
Ca (315.887 nm)	110.868606	ppm	0.240655	0.22	73274.536089	Y_R 377.433
Cd (214.439 nm)	0.114800	ppm	0.000705	0.61	2847.370000	Y 377.433
Co (228.615 nm)	0.672272	ppm	0.001700	0.25	16295.400000	Y 242.219
Cr (205.560 nm)	0.442519	ppm	0.000281	0.06	2094.880000	Y 377.433
Cu (324.754 nm)	0.494021	ppm	0.000990	0.20	24359.400000	Y 377.433
Fe (238.204 nm)	227.089231 o	ppm	0.642646	0.28	378380.667530	Y_R 377.433
Fe H (259.940 nm)	227.756000	ppm	1.575250	0.69	208990.000000	Y_R 377.433
K (766.491 nm)	69.868700	ppm	0.109500	0.16	70021.400000	Y_R2 488.368
Li (670.783 nm)	1.126780	ppm	0.005725	0.51	15512.300000	Y_R2 488.368
Mg (279.078 nm)	66.069900	ppm	0.264739	0.40	143722.000000	Y 377.433
Mn (257.610 nm)	48.735000 bo	ppm	0.181573	0.37	10196500.000000	Y 377.433
Mo (202.032 nm)	0.963605	ppm	0.004173	0.43	10981.200000	Y 377.433
Na (589.592 nm)	50.682100	ppm	0.094130	0.19	25189.900000	Y_R2 488.368
Na H (589.593 nm)	52.675541	ppm	0.029689	0.06	17544.698323	Y_R4
Ni (231.604 nm)	0.644677	ppm	0.005382	0.83	2515.220000	Y 377.433
P (213.618 nm)	11.236800	ppm	0.021600	0.19	13012.600000	Y 242.219
Pb (220.353 nm)	0.972664	ppm	0.002649	0.27	2154.730000	Y 242.219
S (181.972 nm)	2.637934 b	ppm	0.006024	0.23	1402.176570	Y 377.433
Sb (206.834 nm)	0.240986	ppm	0.004181	1.74	398.652000	Y 377.433
Se (196.026 nm)	1.976300 b	ppm	0.003036	0.15	2982.830000	Y 242.219
Si (288.158 nm)	6.292840	ppm	0.010308	0.16	29476.100000	Y 377.433
Sn (189.925 nm)	1.901340	ppm	0.009610	0.51	2227.610000	Y 377.433
Sr (421.552 nm)	1.469974	ppm	0.001527	0.10	170937.386562	Y_R 488.368
Th (288.505 nm)	0.536663 b	ppm	0.001187	0.22	1036.850000	Y 377.433
Ti (336.122 nm)	2.767980	ppm	0.003413	0.12	263111.000000	Y 377.433
Tl (190.794 nm)	1.950410	ppm	0.011107	0.57	1089.610000	Y 377.433
U (409.013 nm)	1.950160	ppm	0.005421	0.28	4625.700000	Y 377.433
V (292.401 nm)	0.970973	ppm	0.001731	0.18	46835.300000	Y 377.433
Zn (206.200 nm)	2.116840	ppm	0.019624	0.93	7344.820000	Y 377.433
Zr (343.823 nm)	0.639024	ppm	0.000089	0.01	25778.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.184646	12619.078921	0.005842	0.49
Y 377.433	1.175191	542512.309806	0.008900	0.76
Y_R 377.433	1.264850	47795.900000	0.003982	0.31
Y_R 488.368	1.263650	45605.000000	0.005227	0.41
Y_R2 488.368	1.257256	88481.565133	0.000676	0.05
Y_R4	1.313720	40310.300000	0.008575	0.65

Sample Name: 280-116417-A-1-Apds

Date: 11/6/2018 3:19:24 AM Rack:Tube: 2:57

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.043120	ppm	0.000072	0.17	888.139000	Y 377.433
Al (394.401 nm)	126.939000 o	ppm	0.298668	0.24	1580440.000000	Y 377.433
Al H (396.152 nm)	123.318000	ppm	0.142154	0.12	203251.000000	Y_R 377.433
As (188.980 nm)	0.235863	ppm	0.004318	1.83	309.832000	Y 242.219
B (249.678 nm)	0.094755	ppm	0.000761	0.80	382.560000	Y 242.219
Ba (493.408 nm)	1.496890	ppm	0.005090	0.34	137895.000000	Y_R 488.368
Be (234.861 nm)	0.055870	ppm	0.000026	0.05	955.690000	Y_R 488.368
Bi (223.061 nm)	0.005435	ppm	0.003848	70.79	70.136300	Y 377.433
Ca (315.887 nm)	76.184578	ppm	0.070166	0.09	50344.652396	Y_R 377.433
Cd (214.439 nm)	0.060931	ppm	0.000204	0.34	1506.020000	Y 377.433
Co (228.615 nm)	0.127317	ppm	0.000330	0.26	3184.620000	Y 242.219
Cr (205.560 nm)	0.214652	ppm	0.000098	0.05	1012.650000	Y 377.433
Cu (324.754 nm)	0.332485	ppm	0.000653	0.20	16369.100000	Y 377.433
Fe (238.204 nm)	136.452378 o	ppm	0.547640	0.40	227364.314550	Y_R 377.433
Fe H (259.940 nm)	137.057000	ppm	0.398766	0.29	125760.000000	Y_R 377.433
K (766.491 nm)	29.743500	ppm	0.050915	0.17	30805.400000	Y_R2 488.368
Li (670.783 nm)	0.185604	ppm	0.000632	0.34	2181.920000	Y_R2 488.368
Mg (279.078 nm)	31.392600	ppm	0.072363	0.23	68276.300000	Y 377.433
Mn (257.610 nm)	7.015820	ppm	0.014845	0.21	1467900.000000	Y 377.433
Mo (202.032 nm)	0.051025	ppm	0.000356	0.70	599.170000	Y 377.433
Na (589.592 nm)	20.490100	ppm	0.038127	0.19	10135.100000	Y_R2 488.368
Na H (589.593 nm)	21.888940 u	ppm	0.129430	0.59	7277.763319	Y_R4
Ni (231.604 nm)	0.142989	ppm	0.000401	0.28	577.647000	Y 377.433
P (213.618 nm)	3.953130	ppm	0.000930	0.02	4570.210000	Y 242.219
Pb (220.353 nm)	0.721761	ppm	0.003196	0.44	1609.160000	Y 242.219
S (181.972 nm)	0.974288	ppm	0.005723	0.59	466.378615	Y 377.433
Sb (206.834 nm)	0.098262	ppm	0.000939	0.96	169.505000	Y 377.433
Se (196.026 nm)	0.207604	ppm	0.004911	2.37	288.331000	Y 242.219
Si (288.158 nm)	8.005960	ppm	0.041214	0.51	37150.700000	Y 377.433
Sn (189.925 nm)	0.103844	ppm	0.000354	0.34	129.287000	Y 377.433
Sr (421.552 nm)	0.445834	ppm	0.001281	0.29	52046.018327	Y_R 488.368
Th (288.505 nm)	0.170635	ppm	0.002347	1.38	232.323000	Y 377.433
Ti (336.122 nm)	0.898117	ppm	0.002564	0.29	85226.000000	Y 377.433
Tl (190.794 nm)	0.198268	ppm	0.002313	1.17	94.479300	Y 377.433
U (409.013 nm)	0.414471	ppm	0.002199	0.53	1113.430000	Y 377.433
V (292.401 nm)	0.372753	ppm	0.000986	0.26	17856.500000	Y 377.433
Zn (206.200 nm)	1.728680	ppm	0.004645	0.27	5993.540000	Y 377.433
Zr (343.823 nm)	0.157855	ppm	0.000174	0.11	6278.610000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.163262	12391.292570	0.000781	0.07
Y 377.433	1.164225	537449.720199	0.004699	0.40
Y_R 377.433	1.220030	46102.300000	0.004049	0.33
Y_R 488.368	1.214040	43814.700000	0.007061	0.58
Y_R2 488.368	1.223055	86074.587524	0.007157	0.59
Y_R4	1.241440	38092.600000	0.001125	0.09

Sample Name: 280-116417-A-2-A

Date: 11/6/2018 3:23:02 AM Rack:Tube: 2:58

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.003286 u	ppm	0.000806	24.54	-426.079000	Y 377.433
Al (394.401 nm)	263.749000 o	ppm	0.030236	0.01	3283580.000000	Y 377.433
Al H (396.152 nm)	253.590000	ppm	0.658130	0.26	418073.000000	Y_R 377.433
As (188.980 nm)	0.059505	ppm	0.000721	1.21	58.564300	Y 242.219
B (249.678 nm)	-0.008295 u	ppm	0.000633	7.63	-56.571300	Y 242.219
Ba (493.408 nm)	1.722960	ppm	0.002479	0.14	158642.000000	Y_R 488.368
Be (234.861 nm)	0.013570	ppm	0.000476	3.51	-2333.440000	Y_R 488.368
Bi (223.061 nm)	0.004175	ppm	0.002469	59.13	78.192700	Y 377.433
Ca (315.887 nm)	90.495259	ppm	0.061396	0.07	59824.193172	Y_R 377.433
Cd (214.439 nm)	0.004687	ppm	0.000083	1.76	105.542000	Y 377.433
Co (228.615 nm)	0.165604	ppm	0.000353	0.21	4173.240000	Y 242.219
Cr (205.560 nm)	0.266068	ppm	0.000485	0.18	1255.690000	Y 377.433
Cu (324.754 nm)	0.149241	ppm	0.000034	0.02	7663.930000	Y 377.433
Fe (238.204 nm)	214.224664 o	ppm	0.274436	0.13	356946.119622	Y_R 377.433
Fe H (259.940 nm)	214.755000	ppm	0.041198	0.02	197060.000000	Y_R 377.433
K (766.491 nm)	15.842300	ppm	0.016340	0.10	17219.200000	Y_R2 488.368
Li (670.783 nm)	0.134502	ppm	0.002228	1.66	1458.130000	Y_R2 488.368
Mg (279.078 nm)	20.152200	ppm	0.027816	0.14	43727.100000	Y 377.433
Mn (257.610 nm)	4.635130	ppm	0.000303	0.01	969802.000000	Y 377.433
Mo (202.032 nm)	0.002349	ppm	0.000326	13.86	45.406700	Y 377.433
Na (589.592 nm)	1.891030	ppm	0.052944	2.80	787.401000	Y_R2 488.368
Na H (589.593 nm)	3.631844 u	ppm	0.036610	1.01	736.205409	Y_R4
Ni (231.604 nm)	0.211428	ppm	0.000063	0.03	851.393000	Y 377.433
P (213.618 nm)	1.118610	ppm	0.002848	0.25	1290.320000	Y 242.219
Pb (220.353 nm)	0.321987	ppm	0.003902	1.21	697.401000	Y 242.219
S (181.972 nm)	0.700188	ppm	0.008435	1.20	327.894232	Y 377.433
Sb (206.834 nm)	-0.000059 u	ppm	0.001936	> 100.00	15.768200	Y 377.433
Se (196.026 nm)	0.005921	ppm	0.000832	14.05	-38.297000	Y 242.219
Si (288.158 nm)	3.025000	ppm	0.014898	0.49	14836.500000	Y 377.433
Sn (189.925 nm)	0.011133	ppm	0.001179	10.59	21.058800	Y 377.433
Sr (421.552 nm)	0.517353	ppm	0.001293	0.25	60356.851133	Y_R 488.368
Th (288.505 nm)	0.000885 u	ppm	0.001760	> 100.00	9.545750	Y 377.433
Ti (336.122 nm)	0.752667	ppm	0.000003	0.00	71433.400000	Y 377.433
Tl (190.794 nm)	0.006393	ppm	0.002280	35.66	-22.475300	Y 377.433
U (409.013 nm)	-0.163883 u	ppm	0.011760	7.18	-162.537000	Y 377.433
V (292.401 nm)	0.449409	ppm	0.000106	0.02	21564.000000	Y 377.433
Zn (206.200 nm)	0.596891	ppm	0.001079	0.18	2090.340000	Y 377.433
Zr (343.823 nm)	0.088991	ppm	0.000337	0.38	3487.880000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.188394	12659.004619	0.001465	0.12
Y 377.433	1.181500	545424.667763	0.001751	0.15
Y_R 377.433	1.246490	47102.100000	0.002360	0.19
Y_R 488.368	1.242200	44831.000000	0.003868	0.31
Y_R2 488.368	1.259717	88654.742628	0.001647	0.13
Y_R4	1.296840	39792.400000	0.004567	0.35

Sample Name: 280-116417-A-3-A

Date: 11/6/2018 3:26:40 AM Rack:Tube: 2:59

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002541 u	ppm	0.000370	14.55	-402.868000	Y 377.433
Al (394.401 nm)	188.652000 o	ppm	0.268218	0.14	2348740.000000	Y 377.433
Al H (396.152 nm)	183.664000	ppm	0.220010	0.12	302812.000000	Y_R 377.433
As (188.980 nm)	0.076857	ppm	0.002181	2.84	84.606000	Y 242.219
B (249.678 nm)	0.001146	ppm	0.000204	17.81	-11.536500	Y 242.219
Ba (493.408 nm)	2.144540	ppm	0.004031	0.19	197209.000000	Y_R 488.368
Be (234.861 nm)	0.011471	ppm	0.000184	1.60	-2133.430000	Y_R 488.368
Bi (223.061 nm)	0.007581	ppm	0.000425	5.60	80.943900	Y 377.433
Ca (315.887 nm)	161.521421	ppm	0.114710	0.07	106723.796800	Y_R 377.433
Cd (214.439 nm)	0.031422	ppm	0.000454	1.45	771.240000	Y 377.433
Co (228.615 nm)	0.234546	ppm	0.001316	0.56	5795.210000	Y 242.219
Cr (205.560 nm)	0.220076	ppm	0.000203	0.09	1037.430000	Y 377.433
Cu (324.754 nm)	0.165434	ppm	0.000089	0.05	8362.540000	Y 377.433
Fe (238.204 nm)	192.191885 o	ppm	0.494002	0.26	320235.777093	Y_R 377.433
Fe H (259.940 nm)	193.042000	ppm	0.218794	0.11	177134.000000	Y_R 377.433
K (766.491 nm)	10.978000	ppm	0.123529	1.13	12465.200000	Y_R2 488.368
Li (670.783 nm)	0.118861	ppm	0.000210	0.18	1236.600000	Y_R2 488.368
Mg (279.078 nm)	17.192200	ppm	0.001167	0.01	37298.300000	Y 377.433
Mn (257.610 nm)	14.150900	ppm	0.005022	0.04	2960730.000000	Y 377.433
Mo (202.032 nm)	0.007868	ppm	0.000317	4.02	108.186000	Y 377.433
Na (589.592 nm)	1.445110	ppm	0.005685	0.39	556.915000	Y_R2 488.368
Na H (589.593 nm)	3.297597 u	ppm	0.019922	0.60	575.577495	Y_R4
Ni (231.604 nm)	0.223460	ppm	0.001560	0.70	894.235000	Y 377.433
P (213.618 nm)	2.012350	ppm	0.014482	0.72	2326.380000	Y 242.219
Pb (220.353 nm)	1.606480	ppm	0.000303	0.02	3576.320000	Y 242.219
S (181.972 nm)	1.835512	ppm	0.009371	0.51	905.741103	Y 377.433
Sb (206.834 nm)	0.000567 u	ppm	0.002633	> 100.00	13.357500	Y 377.433
Se (196.026 nm)	0.005491	ppm	0.000380	6.93	-19.958500	Y 242.219
Si (288.158 nm)	3.885100	ppm	0.001971	0.05	18689.700000	Y 377.433
Sn (189.925 nm)	0.011451	ppm	0.000094	0.82	21.430100	Y 377.433
Sr (421.552 nm)	0.681070	ppm	0.000435	0.06	79358.354192	Y_R 488.368
Th (288.505 nm)	-0.079104 u	ppm	0.010093	12.76	31.035100	Y 377.433
Ti (336.122 nm)	1.007120	ppm	0.003195	0.32	95809.000000	Y 377.433
Tl (190.794 nm)	0.005548	ppm	0.002498	45.02	-20.712300	Y 377.433
U (409.013 nm)	-0.259749 u	ppm	0.022598	8.70	-402.177000	Y 377.433
V (292.401 nm)	0.457014	ppm	0.000839	0.18	21960.300000	Y 377.433
Zn (206.200 nm)	5.232310	ppm	0.016845	0.32	18108.400000	Y 377.433
Zr (343.823 nm)	0.111728	ppm	0.000270	0.24	4409.290000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.168985	12452.252770	0.004780	0.41
Y 377.433	1.167037	538747.842796	0.003430	0.29
Y_R 377.433	1.239010	46819.500000	0.002267	0.18
Y_R 488.368	1.238950	44713.600000	0.000854	0.07
Y_R2 488.368	1.236474	87019.040047	0.000228	0.02
Y_R4	1.277080	39186.200000	0.009070	0.71

Sample Name: CCVH-5408055

Date: 11/6/2018 3:30:20 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000865	ppm	0.000368	42.49	-329.624000	Y 377.433
Al (394.401 nm)	52.049200 o	ppm	0.027099	0.05	648214.000000	Y 377.433
Al H (396.152 nm)	50.859100	ppm	0.104977	0.21	83645.200000	Y_R 377.433
As (188.980 nm)	-0.001842 u	ppm	0.001975	> 100.00	-19.825600	Y 242.219
B (249.678 nm)	-0.011869 u	ppm	0.001559	13.14	-17.397100	Y 242.219
Ba (493.408 nm)	-0.000507 u	ppm	0.000323	63.65	791.641000	Y_R 488.368
Be (234.861 nm)	0.000096	ppm	0.000076	78.93	-713.057000	Y_R 488.368
Bi (223.061 nm)	1.017560	ppm	0.001408	0.14	1727.050000	Y 377.433
Ca (315.887 nm)	-0.009070 u	ppm	0.002081	22.94	2.227384	Y_R 377.433
Cd (214.439 nm)	0.000275	ppm	0.000306	> 100.00	-4.318330	Y 377.433
Co (228.615 nm)	0.001319	ppm	0.000042	3.16	59.688600	Y 242.219
Cr (205.560 nm)	-0.000008 u	ppm	0.000009	> 100.00	-10.350900	Y 377.433
Cu (324.754 nm)	0.000630	ppm	0.000043	6.79	695.495000	Y 377.433
Fe (238.204 nm)	50.259049 o	ppm	0.178712	0.36	83751.625941	Y_R 377.433
Fe H (259.940 nm)	50.576600	ppm	0.140556	0.28	46400.800000	Y_R 377.433
K (766.491 nm)	0.218863	ppm	0.011953	5.46	1949.820000	Y_R2 488.368
Li (670.783 nm)	0.015532	ppm	0.002129	13.71	-226.906000	Y_R2 488.368
Mg (279.078 nm)	-0.031979 u	ppm	0.001407	4.40	-211.384000	Y 377.433
Mn (257.610 nm)	0.000743	ppm	0.000010	1.41	178.189000	Y 377.433
Mo (202.032 nm)	-0.001432 u	ppm	0.000101	7.07	2.384610	Y 377.433
Na (589.592 nm)	254.651000 o	ppm	1.916690	0.75	127800.000000	Y_R2 488.368
Na H (589.593 nm)	256.375923	ppm	0.855534	0.33	91154.712285	Y_R4
Ni (231.604 nm)	0.000121 u	ppm	0.000507	> 100.00	17.104200	Y 377.433
P (213.618 nm)	-0.012363 u	ppm	0.001408	11.39	-16.751400	Y 242.219
Pb (220.353 nm)	-0.002209 u	ppm	0.001020	46.19	20.324900	Y 242.219
S (181.972 nm)	5.160223	ppm	0.012587	0.24	2438.806769	Y 377.433
Sb (206.834 nm)	0.004278	ppm	0.000379	8.87	10.079700	Y 377.433
Se (196.026 nm)	0.002386	ppm	0.000760	31.85	-7.766140	Y 242.219
Si (288.158 nm)	-0.197880 u	ppm	0.001006	0.51	398.326000	Y 377.433
Sn (189.925 nm)	-0.007377 u	ppm	0.001265	17.15	-0.548359	Y 377.433
Sr (421.552 nm)	-0.000052 u	ppm	0.000246	> 100.00	278.008899	Y_R 488.368
Th (288.505 nm)	5.044020	ppm	0.039652	0.79	5411.770000	Y 377.433
Ti (336.122 nm)	0.001095	ppm	0.000147	13.42	-260.893000	Y 377.433
Tl (190.794 nm)	-0.000857 u	ppm	0.001845	> 100.00	-12.672600	Y 377.433
U (409.013 nm)	10.658000	ppm	0.006918	0.06	24503.300000	Y 377.433
V (292.401 nm)	-0.003779 u	ppm	0.000135	3.58	-390.249000	Y 377.433
Zn (206.200 nm)	-0.000200 u	ppm	0.000170	85.11	9.105620	Y 377.433
Zr (343.823 nm)	-0.006652 u	ppm	0.000381	5.73	-388.101000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.104417	11764.463175	0.006103	0.55
Y 377.433	1.102171	508803.128834	0.003092	0.28
Y_R 377.433	1.164590	44007.200000	0.009299	0.80
Y_R 488.368	1.162030	41937.800000	0.008177	0.70
Y_R2 488.368	1.163900	81911.511745	0.010123	0.87
Y_R4	1.195680	36688.600000	0.002311	0.19

Sample Name: CCV-5407762

Date: 11/6/2018 3:33:58 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.519194	ppm	0.000205	0.04	14126.900000	Y 377.433
Al (394.401 nm)	0.514611	ppm	0.000120	0.02	6618.970000	Y 377.433
Al H (396.152 nm)	0.556345 u	ppm	0.004648	0.84	900.543000	Y_R 377.433
As (188.980 nm)	1.011950	ppm	0.002457	0.24	1402.720000	Y 242.219
B (249.678 nm)	0.490078	ppm	0.000383	0.08	2013.620000	Y 242.219
Ba (493.408 nm)	0.508284	ppm	0.001486	0.29	47320.500000	Y_R 488.368
Be (234.861 nm)	0.524158	ppm	0.000647	0.12	27101.800000	Y_R 488.368
Bi (223.061 nm)	-0.001943 u	ppm	0.000356	18.33	40.487900	Y 377.433
Ca (315.887 nm)	5.105092	ppm	0.002033	0.04	3369.800729	Y_R 377.433
Cd (214.439 nm)	0.524804	ppm	0.001147	0.22	13056.500000	Y 377.433
Co (228.615 nm)	0.510356	ppm	0.001175	0.23	12103.400000	Y 242.219
Cr (205.560 nm)	0.533602	ppm	0.003632	0.68	2535.230000	Y 377.433
Cu (324.754 nm)	0.520902	ppm	0.002025	0.39	25271.400000	Y 377.433
Fe (238.204 nm)	2.556273	ppm	0.010101	0.40	4270.719980	Y_R 377.433
Fe H (259.940 nm)	2.580920 u	ppm	0.007481	0.29	2357.380000	Y_R 377.433
K (766.491 nm)	51.252400	ppm	0.070027	0.14	51827.000000	Y_R2 488.368
Li (670.783 nm)	1.047930	ppm	0.001560	0.15	14395.600000	Y_R2 488.368
Mg (279.078 nm)	20.596000	ppm	0.025059	0.12	44879.100000	Y 377.433
Mn (257.610 nm)	0.519576	ppm	0.000703	0.14	108730.000000	Y 377.433
Mo (202.032 nm)	0.524481	ppm	0.000325	0.06	5985.470000	Y 377.433
Na (589.592 nm)	25.822300	ppm	0.004446	0.02	12829.200000	Y_R2 488.368
Na H (589.593 nm)	27.356775 u	ppm	0.135466	0.50	9327.765445	Y_R4
Ni (231.604 nm)	0.517906	ppm	0.003250	0.63	1994.880000	Y 377.433
P (213.618 nm)	1.031440	ppm	0.005145	0.50	1171.980000	Y 242.219
Pb (220.353 nm)	1.018770	ppm	0.005128	0.50	2288.120000	Y 242.219
S (181.972 nm)	-0.001548 u	ppm	0.009207	> 100.00	-24.471899	Y 377.433
Sb (206.834 nm)	1.043510	ppm	0.001639	0.16	1714.560000	Y 377.433
Se (196.026 nm)	1.039540	ppm	0.002255	0.22	1564.690000	Y 242.219
Si (288.158 nm)	4.977060	ppm	0.001572	0.03	23581.500000	Y 377.433
Sn (189.925 nm)	1.038710	ppm	0.004042	0.39	1220.620000	Y 377.433
Sr (421.552 nm)	0.517217	ppm	0.001468	0.28	60316.382435	Y_R 488.368
Th (288.505 nm)	-0.022316 u	ppm	0.007608	34.09	-42.922500	Y 377.433
Ti (336.122 nm)	0.524864	ppm	0.000391	0.07	49556.800000	Y 377.433
Tl (190.794 nm)	1.046680	ppm	0.007825	0.75	590.459000	Y 377.433
U (409.013 nm)	-0.012638 u	ppm	0.003940	31.18	39.999100	Y 377.433
V (292.401 nm)	0.516027	ppm	0.000445	0.09	24650.500000	Y 377.433
Zn (206.200 nm)	0.522146	ppm	0.001668	0.32	1809.230000	Y 377.433
Zr (343.823 nm)	0.523169	ppm	0.000030	0.01	21083.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125265	11986.543644	0.001728	0.15
Y 377.433	1.119922	516997.639862	0.001181	0.11
Y_R 377.433	1.151560	43515.000000	0.000423	0.04
Y_R 488.368	1.152230	41584.000000	0.001400	0.12
Y_R2 488.368	1.165666	82035.776090	0.009115	0.78
Y_R4	1.168380	35850.700000	0.010574	0.91

Sample Name: CCB

Date: 11/6/2018 3:37:28 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000212 u	ppm	0.000456	> 100.00	-233.320000	Y 377.433
Al (394.401 nm)	0.000009 u	ppm	0.000763	> 100.00	87.607800	Y 377.433
Al H (396.152 nm)	0.133547 Zu	ppm	0.003552	2.66	4.782830 Z	Y_R 377.433
As (188.980 nm)	-0.000125 u	ppm	0.001574	> 100.00	-15.289800	Y 242.219
B (249.678 nm)	-0.010896 u	ppm	0.000601	5.51	2.952890	Y 242.219
Ba (493.408 nm)	-0.001103 u	ppm	0.000177	16.00	700.054000	Y_R 488.368
Be (234.861 nm)	0.000113	ppm	0.000096	84.92	-0.001304	Y_R 488.368
Bi (223.061 nm)	-0.002346 u	ppm	0.001257	53.59	39.404300	Y 377.433
Ca (315.887 nm)	-0.007746 u	ppm	0.000103	1.33	-7.436099	Y_R 377.433
Cd (214.439 nm)	-0.000048 u	ppm	0.000010	19.99	-12.354500	Y 377.433
Co (228.615 nm)	0.000719	ppm	0.000321	44.59	-10.904400	Y 242.219
Cr (205.560 nm)	0.000548	ppm	0.000142	25.85	-6.728410	Y 377.433
Cu (324.754 nm)	0.000607	ppm	0.000129	21.25	231.144000	Y 377.433
Fe (238.204 nm)	-0.003833 u	ppm	0.002277	59.42	5.149036	Y_R 377.433
Fe H (259.940 nm)	0.011034 u	ppm	0.000597	5.41	-0.881398	Y_R 377.433
K (766.491 nm)	-0.206584 u	ppm	0.086816	42.02	1534.010000	Y_R2 488.368
Li (670.783 nm)	0.014235 Z	ppm	0.005573	39.15	-245.273000 Z	Y_R2 488.368
Mg (279.078 nm)	-0.000372 u	ppm	0.001407	> 100.00	13.279200	Y 377.433
Mn (257.610 nm)	0.000076	ppm	0.000037	48.36	38.453300	Y 377.433
Mo (202.032 nm)	-0.000546 u	ppm	0.000079	14.53	12.472300	Y 377.433
Na (589.592 nm)	0.097025	ppm	0.073878	76.14	-87.258500	Y_R2 488.368
Na H (589.593 nm)	1.844535 u	ppm	0.010971	0.59	268.297100	Y_R4
Ni (231.604 nm)	0.000798	ppm	0.001008	> 100.00	12.137200	Y 377.433
P (213.618 nm)	0.002403	ppm	0.000251	10.45	1.700870	Y 242.219
Pb (220.353 nm)	-0.002176 u	ppm	0.001919	88.17	9.637410	Y 242.219
S (181.972 nm)	0.006184	ppm	0.005464	88.36	-22.756594	Y 377.433
Sb (206.834 nm)	0.001684	ppm	0.002017	> 100.00	1.647530	Y 377.433
Se (196.026 nm)	0.002032	ppm	0.001212	59.66	4.697060	Y 242.219
Si (288.158 nm)	-0.207121 Zu	ppm	0.001551	0.75	356.928000 Z	Y 377.433
Sn (189.925 nm)	-0.007897 u	ppm	0.000321	4.07	-1.155590	Y 377.433
Sr (421.552 nm)	-0.000239 u	ppm	0.000201	83.94	250.409243	Y_R 488.368
Th (288.505 nm)	0.004799	ppm	0.003229	67.28	19.501000	Y 377.433
Ti (336.122 nm)	0.000825	ppm	0.000069	8.41	-286.608000	Y 377.433
Tl (190.794 nm)	0.002886	ppm	0.002209	76.54	-7.159320	Y 377.433
U (409.013 nm)	-0.004724 u	ppm	0.001963	41.56	104.025000	Y 377.433
V (292.401 nm)	0.000656	ppm	0.000560	85.38	-162.742000	Y 377.433
Zn (206.200 nm)	0.000296	ppm	0.000244	82.51	5.401960	Y 377.433
Zr (343.823 nm)	0.000515	ppm	0.000312	60.62	-97.682200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.144359	12189.933201	0.003019	0.26
Y 377.433	1.138798	525711.521975	0.003081	0.27
Y_R 377.433	1.167920	44133.000000	0.000795	0.07
Y_R 488.368	1.159600	41850.000000	0.002673	0.23
Y_R2 488.368	1.168793	82255.841537	0.002698	0.23
Y_R4	1.170200	35906.600000	0.006804	0.58

Sample Name: CCVL-5412564

Date: 11/6/2018 3:40:40 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010639	ppm	0.000232	2.18	56.002100	Y 377.433
Al (394.401 nm)	0.101126	ppm	0.000644	0.64	1351.330000	Y 377.433
Al H (396.152 nm)	0.245106 u	ppm	0.013336	5.44	193.110000	Y_R 377.433
As (188.980 nm)	0.016875	ppm	0.000206	1.22	8.524570	Y 242.219
B (249.678 nm)	0.089487	ppm	0.000659	0.74	405.975000	Y 242.219
Ba (493.408 nm)	0.008845	ppm	0.000084	0.94	1610.620000	Y_R 488.368
Be (234.861 nm)	0.001126	ppm	0.000011	0.98	51.025800	Y_R 488.368
Bi (223.061 nm)	0.092052	ppm	0.000508	0.55	195.014000	Y 377.433
Ca (315.887 nm)	0.208639	ppm	0.007972	3.82	135.515734	Y_R 377.433
Cd (214.439 nm)	0.005511	ppm	0.000129	2.34	126.066000	Y 377.433
Co (228.615 nm)	0.010975	ppm	0.000056	0.51	232.954000	Y 242.219
Cr (205.560 nm)	0.011335	ppm	0.000890	7.85	44.635700	Y 377.433
Cu (324.754 nm)	0.016308	ppm	0.000158	0.97	986.933000	Y 377.433
Fe (238.204 nm)	0.099717	ppm	0.000701	0.70	177.680886	Y_R 377.433
Fe H (259.940 nm)	0.106472 u	ppm	0.001142	1.07	86.696800	Y_R 377.433
K (766.491 nm)	2.853320	ppm	0.054025	1.89	4524.580000	Y_R2 488.368
Li (670.783 nm)	0.038239 Q	ppm	0.003046	7.97	94.708700 Q	Y_R2 488.368
Mg (279.078 nm)	0.208459	ppm	0.003592	1.72	467.694000	Y 377.433
Mn (257.610 nm)	0.010873	ppm	0.000022	0.20	2297.520000	Y 377.433
Mo (202.032 nm)	0.020580	ppm	0.000286	1.39	252.813000	Y 377.433
Na (589.592 nm)	1.201210	ppm	0.037491	3.12	467.329000	Y_R2 488.368
Na H (589.593 nm)	2.732465 u	ppm	0.012699	0.46	584.377273	Y_R4
Ni (231.604 nm)	0.042563	ppm	0.000025	0.06	172.201000	Y 377.433
P (213.618 nm)	2.928200	ppm	0.007934	0.27	3395.210000	Y 242.219
Pb (220.353 nm)	0.008233	ppm	0.000624	7.57	32.882900	Y 242.219
S (181.972 nm)	0.108344	ppm	0.004828	4.46	26.082061	Y 377.433
Sb (206.834 nm)	0.024314	ppm	0.000137	0.56	38.733100	Y 377.433
Se (196.026 nm)	0.022771	ppm	0.001507	6.62	35.869200	Y 242.219
Si (288.158 nm)	0.300515 Q	ppm	0.000136	0.05	2631.080000 Q	Y 377.433
Sn (189.925 nm)	0.094115	ppm	0.001471	1.56	117.929000	Y 377.433
Sr (421.552 nm)	0.009327	ppm	0.000007	0.08	1360.832843	Y_R 488.368
Th (288.505 nm)	0.020207 Q	ppm	0.002209	10.93	35.522700 Q	Y 377.433
Ti (336.122 nm)	0.011091	ppm	0.000130	1.17	690.189000	Y 377.433
Tl (190.794 nm)	0.013965	ppm	0.006311	45.19	-0.843438	Y 377.433
U (409.013 nm)	0.058750	ppm	0.007549	12.85	247.804000	Y 377.433
V (292.401 nm)	0.010629	ppm	0.000213	2.01	316.480000	Y 377.433
Zn (206.200 nm)	0.021454	ppm	0.000334	1.56	78.535300	Y 377.433
Zr (343.823 nm)	0.016139	ppm	0.000266	1.65	535.492000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.162417	12382.291722	0.003510	0.30
Y 377.433	1.157037	534131.531226	0.004083	0.35
Y_R 377.433	1.188410	44907.300000	0.000532	0.04
Y_R 488.368	1.184550	42750.300000	0.001002	0.08
Y_R2 488.368	1.194934	84095.526448	0.001465	0.12
Y_R4	1.193970	36636.100000	0.002638	0.22

Sample Name: 280-116417-A-4-A

Date: 11/6/2018 3:44:05 AM Rack:Tube: 2:60

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.002118 u	ppm	0.000092	4.34	-382.283000	Y 377.433
Al (394.401 nm)	174.180000 o	ppm	0.628902	0.36	2168510.000000	Y 377.433
Al H (396.152 nm)	169.231000	ppm	0.139433	0.08	278954.000000	Y_R 377.433
As (188.980 nm)	0.054044	ppm	0.001547	2.86	53.759300	Y 242.219
B (249.678 nm)	0.004641	ppm	0.000393	8.46	13.764200	Y 242.219
Ba (493.408 nm)	1.805420	ppm	0.004219	0.23	166147.000000	Y_R 488.368
Be (234.861 nm)	0.009217	ppm	0.001043	11.32	-1762.150000	Y_R 488.368
Bi (223.061 nm)	0.002063 u	ppm	0.005646	> 100.00	67.339300	Y 377.433
Ca (315.887 nm)	63.813654	ppm	0.016194	0.03	42182.964746	Y_R 377.433
Cd (214.439 nm)	0.014166	ppm	0.000050	0.35	341.575000	Y 377.433
Co (228.615 nm)	0.159141	ppm	0.000242	0.15	3972.730000	Y 242.219
Cr (205.560 nm)	0.207948	ppm	0.001082	0.52	979.921000	Y 377.433
Cu (324.754 nm)	0.120582	ppm	0.000601	0.50	6211.620000	Y 377.433
Fe (238.204 nm)	157.709729 o	ppm	0.076103	0.05	262782.663698	Y_R 377.433
Fe H (259.940 nm)	157.930000	ppm	0.075965	0.05	144914.000000	Y_R 377.433
K (766.491 nm)	11.387500	ppm	0.040525	0.36	12865.400000	Y_R2 488.368
Li (670.783 nm)	0.100511	ppm	0.001376	1.37	976.702000	Y_R2 488.368
Mg (279.078 nm)	14.599300	ppm	0.023477	0.16	31680.200000	Y 377.433
Mn (257.610 nm)	7.658200	ppm	0.006197	0.08	1602300.000000	Y 377.433
Mo (202.032 nm)	0.005480	ppm	0.000048	0.88	81.022600	Y 377.433
Na (589.592 nm)	1.649370	ppm	0.018773	1.14	664.766000	Y_R2 488.368
Na H (589.593 nm)	3.415314 u	ppm	0.038956	1.14	651.042636	Y_R4
Ni (231.604 nm)	0.142488	ppm	0.002089	1.47	578.779000	Y 377.433
P (213.618 nm)	2.194470	ppm	0.008732	0.40	2539.640000	Y 242.219
Pb (220.353 nm)	0.934837	ppm	0.000721	0.08	2077.870000	Y 242.219
S (181.972 nm)	2.453568	ppm	0.007699	0.31	1174.353858	Y 377.433
Sb (206.834 nm)	-0.002809 u	ppm	0.000720	25.64	4.352360	Y 377.433
Se (196.026 nm)	0.005637	ppm	0.001356	24.06	-19.935900	Y 242.219
Si (288.158 nm)	3.477980	ppm	0.017413	0.50	16865.800000	Y 377.433
Sn (189.925 nm)	0.010218	ppm	0.003085	30.19	19.991000	Y 377.433
Sr (421.552 nm)	0.436432	ppm	0.000733	0.17	50957.055580	Y_R 488.368
Th (288.505 nm)	-0.018676 u	ppm	0.001884	10.09	29.284600	Y 377.433
Ti (336.122 nm)	1.110740	ppm	0.000514	0.05	105412.000000	Y 377.433
Tl (190.794 nm)	0.005466	ppm	0.001253	22.92	-18.415400	Y 377.433
U (409.013 nm)	-0.126873 u	ppm	0.009398	7.41	-109.492000	Y 377.433
V (292.401 nm)	0.440183	ppm	0.000400	0.09	21148.700000	Y 377.433
Zn (206.200 nm)	2.310610	ppm	0.001880	0.08	8007.020000	Y 377.433
Zr (343.823 nm)	0.136473	ppm	0.000453	0.33	5412.110000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.187010	12644.261876	0.003876	0.33
Y 377.433	1.180796	545099.587372	0.005210	0.44
Y_R 377.433	1.235570	46689.500000	0.002438	0.20
Y_R 488.368	1.231930	44460.200000	0.002307	0.19
Y_R2 488.368	1.226639	86326.846330	0.004497	0.37
Y_R4	1.261360	38703.700000	0.001482	0.12

Sample Name: 280-116417-A-5-A

Date: 11/6/2018 3:47:43 AM Rack:Tube: 2:61

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000869 u	ppm	0.000694	79.88	-338.278000	Y 377.433
Al (394.401 nm)	176.345000 o	ppm	0.007962	0.00	2195460.000000	Y 377.433
Al H (396.152 nm)	171.814000	ppm	0.033368	0.02	283203.000000	Y_R 377.433
As (188.980 nm)	0.052715	ppm	0.000976	1.85	52.020800	Y 242.219
B (249.678 nm)	0.000073 u	ppm	0.001221	> 100.00	-2.440410	Y 242.219
Ba (493.408 nm)	1.763500	ppm	0.001850	0.10	162306.000000	Y_R 488.368
Be (234.861 nm)	0.010698	ppm	0.000501	4.69	-1592.930000	Y_R 488.368
Bi (223.061 nm)	0.001819 u	ppm	0.007805	> 100.00	66.079600	Y 377.433
Ca (315.887 nm)	66.106373	ppm	0.008034	0.01	43697.871328	Y_R 377.433
Cd (214.439 nm)	0.019563	ppm	0.000460	2.35	475.953000	Y 377.433
Co (228.615 nm)	0.133165	ppm	0.001233	0.93	3341.620000	Y 242.219
Cr (205.560 nm)	0.195827	ppm	0.000778	0.40	922.020000	Y 377.433
Cu (324.754 nm)	0.114846	ppm	0.000025	0.02	5926.470000	Y 377.433
Fe (238.204 nm)	151.223264 o	ppm	0.057231	0.04	251975.113933	Y_R 377.433
Fe H (259.940 nm)	151.496000	ppm	0.218677	0.14	139010.000000	Y_R 377.433
K (766.491 nm)	10.570300	ppm	0.040421	0.38	12066.700000	Y_R2 488.368
Li (670.783 nm)	0.096866	ppm	0.000575	0.59	925.073000	Y_R2 488.368
Mg (279.078 nm)	14.705700	ppm	0.014451	0.10	31917.400000	Y 377.433
Mn (257.610 nm)	8.736870	ppm	0.003272	0.04	1827980.000000	Y 377.433
Mo (202.032 nm)	0.004925	ppm	0.000136	2.75	74.713300	Y 377.433
Na (589.592 nm)	1.616190	ppm	0.024416	1.51	648.705000	Y_R2 488.368
Na H (589.593 nm)	3.323537 u	ppm	0.002074	0.06	622.152037	Y_R4
Ni (231.604 nm)	0.136064	ppm	0.000624	0.46	553.176000	Y 377.433
P (213.618 nm)	1.898700	ppm	0.002565	0.14	2196.750000	Y 242.219
Pb (220.353 nm)	1.060430	ppm	0.000904	0.09	2358.290000	Y 242.219
S (181.972 nm)	2.069330	ppm	0.002786	0.13	994.553504	Y 377.433
Sb (206.834 nm)	-0.002383 u	ppm	0.000373	15.65	5.168590	Y 377.433
Se (196.026 nm)	0.007389	ppm	0.000153	2.08	-14.109900	Y 242.219
Si (288.158 nm)	3.065300	ppm	0.002718	0.09	15017.000000	Y 377.433
Sn (189.925 nm)	0.013002	ppm	0.001996	15.35	23.241300	Y 377.433
Sr (421.552 nm)	0.407076	ppm	0.000831	0.20	47548.725404	Y_R 488.368
Th (288.505 nm)	-0.023812 u	ppm	0.000025	0.11	39.942600	Y 377.433
Ti (336.122 nm)	0.936148	ppm	0.001054	0.11	88816.500000	Y 377.433
Tl (190.794 nm)	0.003542	ppm	0.001524	43.04	-19.254100	Y 377.433
U (409.013 nm)	-0.103809 u	ppm	0.004869	4.69	-59.090400	Y 377.433
V (292.401 nm)	0.391501	ppm	0.000304	0.08	18783.200000	Y 377.433
Zn (206.200 nm)	2.884220	ppm	0.003614	0.13	9988.750000	Y 377.433
Zr (343.823 nm)	0.121006	ppm	0.000043	0.04	4785.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.176886	12536.416100	0.002743	0.23
Y 377.433	1.171696	540898.613216	0.001799	0.15
Y_R 377.433	1.231360	46530.200000	0.003005	0.24
Y_R 488.368	1.227390	44296.400000	0.000444	0.04
Y_R2 488.368	1.229936	86558.899275	0.004228	0.34
Y_R4	1.267540	38893.500000	0.005650	0.45

Sample Name: 280-116417-A-6-A

Date: 11/6/2018 3:51:20 AM Rack:Tube: 2:62

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.003797 u	ppm	0.000114	3.01	-454.920000	Y 377.433
Al (394.401 nm)	335.783000 o	ppm	0.471600	0.14	4180350.000000	Y 377.433
Al H (396.152 nm)	324.584000	ppm	0.184980	0.06	535163.000000	Y_R 377.433
As (188.980 nm)	0.095987	ppm	0.002527	2.63	106.782000	Y 242.219
B (249.678 nm)	-0.015210 u	ppm	0.000960	6.31	-106.290000	Y 242.219
Ba (493.408 nm)	1.919020	ppm	0.000122	0.01	176635.000000	Y_R 488.368
Be (234.861 nm)	0.016013	ppm	0.000780	4.87	-3157.690000	Y_R 488.368
Bi (223.061 nm)	0.010737	ppm	0.007991	74.43	97.801400	Y 377.433
Ca (315.887 nm)	55.254111	ppm	0.016617	0.03	36561.502707	Y_R 377.433
Cd (214.439 nm)	0.003238	ppm	0.000133	4.12	69.466200	Y 377.433
Co (228.615 nm)	0.088114	ppm	0.000014	0.02	2403.940000	Y 242.219
Cr (205.560 nm)	0.348709	ppm	0.001922	0.55	1648.790000	Y 377.433
Cu (324.754 nm)	0.133292	ppm	0.000487	0.37	7017.790000	Y 377.433
Fe (238.204 nm)	281.083024 o	ppm	0.136346	0.05	468343.473881	Y_R 377.433
Fe H (259.940 nm)	285.314000	ppm	0.015418	0.01	261808.000000	Y_R 377.433
K (766.491 nm)	18.896000	ppm	0.045340	0.24	20203.800000	Y_R2 488.368
Li (670.783 nm)	0.170238	ppm	0.004163	2.45	1964.270000	Y_R2 488.368
Mg (279.078 nm)	21.973900	ppm	0.036102	0.16	47636.300000	Y 377.433
Mn (257.610 nm)	5.457280	ppm	0.013449	0.25	1141820.000000	Y 377.433
Mo (202.032 nm)	0.002438	ppm	0.000267	10.97	46.410800	Y 377.433
Na (589.592 nm)	3.103760	ppm	0.059069	1.90	1393.650000	Y_R2 488.368
Na H (589.593 nm)	4.787066 u	ppm	0.019497	0.41	1129.376844	Y_R4
Ni (231.604 nm)	0.252308	ppm	0.000539	0.21	1018.120000	Y 377.433
P (213.618 nm)	0.724420	ppm	0.001490	0.21	833.661000	Y 242.219
Pb (220.353 nm)	0.275543	ppm	0.000316	0.11	583.895000	Y 242.219
S (181.972 nm)	0.287406	ppm	0.006724	2.34	131.343234	Y 377.433
Sb (206.834 nm)	0.003538	ppm	0.003857	> 100.00	28.751600	Y 377.433
Se (196.026 nm)	0.002799	ppm	0.002999	> 100.00	-59.201900	Y 242.219
Si (288.158 nm)	2.205280	ppm	0.004642	0.21	11164.300000	Y 377.433
Sn (189.925 nm)	0.010796	ppm	0.004166	38.59	20.665400	Y 377.433
Sr (421.552 nm)	0.585109	ppm	0.000878	0.15	68229.715113	Y_R 488.368
Th (288.505 nm)	-0.005045 u	ppm	0.004475	88.70	1.139890	Y 377.433
Ti (336.122 nm)	0.598325	ppm	0.000124	0.02	56668.400000	Y 377.433
Tl (190.794 nm)	0.005515	ppm	0.004288	77.76	-27.148200	Y 377.433
U (409.013 nm)	-0.106387 u	ppm	0.001934	1.82	8.196680	Y 377.433
V (292.401 nm)	0.503892	ppm	0.000067	0.01	24175.000000	Y 377.433
Zn (206.200 nm)	0.453549	ppm	0.000870	0.19	1602.160000	Y 377.433
Zr (343.823 nm)	0.086064	ppm	0.000030	0.03	3369.270000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.220917	13005.442571	0.002470	0.20
Y 377.433	1.206812	557109.762826	0.001229	0.10
Y_R 377.433	1.289960	48744.700000	0.006957	0.54
Y_R 488.368	1.293630	46687.100000	0.008494	0.66
Y_R2 488.368	1.303171	91712.912884	0.005787	0.44
Y_R4	1.337000	41024.700000	0.009178	0.69

Sample Name: 280-116417-A-7-A

Date: 11/6/2018 3:54:59 AM Rack:Tube: 2:63

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.004378 u	ppm	0.000365	8.33	-471.775000	Y 377.433
Al (394.401 nm)	262.028000 o	ppm	0.079465	0.03	3262100.000000	Y 377.433
Al H (396.152 nm)	251.525000	ppm	0.123225	0.05	414609.000000	Y_R 377.433
As (188.980 nm)	0.105439	ppm	0.003766	3.57	120.764000	Y 242.219
B (249.678 nm)	-0.018262 u	ppm	0.001005	5.50	-124.911000	Y 242.219
Ba (493.408 nm)	2.679990	ppm	0.001190	0.04	246292.000000	Y_R 488.368
Be (234.861 nm)	0.016618	ppm	0.000123	0.74	-3402.070000	Y_R 488.368
Bi (223.061 nm)	0.004440 u	ppm	0.008071	> 100.00	89.964000	Y 377.433
Ca (315.887 nm)	40.419533	ppm	0.075203	0.19	26747.801644	Y_R 377.433
Cd (214.439 nm)	0.164034	ppm	0.000254	0.16	4073.300000	Y 377.433
Co (228.615 nm)	0.171788	ppm	0.001118	0.65	4410.080000	Y 242.219
Cr (205.560 nm)	0.262013	ppm	0.002441	0.93	1236.280000	Y 377.433
Cu (324.754 nm)	0.134314	ppm	0.000020	0.01	7083.210000	Y 377.433
Fe (238.204 nm)	300.512211 o	ppm	0.816814	0.27	500715.792559	Y_R 377.433
Fe H (259.940 nm)	304.485000	ppm	0.199822	0.07	279400.000000	Y_R 377.433
K (766.491 nm)	14.002800	ppm	0.027515	0.20	15421.400000	Y_R2 488.368
Li (670.783 nm)	0.141804	ppm	0.001833	1.29	1561.540000	Y_R2 488.368
Mg (279.078 nm)	18.153600	ppm	0.014549	0.08	39297.100000	Y 377.433
Mn (257.610 nm)	11.033100	ppm	0.011951	0.11	2308420.000000	Y 377.433
Mo (202.032 nm)	0.006041	ppm	0.000093	1.53	87.406300	Y 377.433
Na (589.592 nm)	2.009470	ppm	0.033261	1.66	832.126000	Y_R2 488.368
Na H (589.593 nm)	3.783635 u	ppm	0.014983	0.40	695.950470	Y_R4
Ni (231.604 nm)	0.268673	ppm	0.000073	0.03	1083.760000	Y 377.433
P (213.618 nm)	0.790374	ppm	0.001404	0.18	910.105000	Y 242.219
Pb (220.353 nm)	2.148200	ppm	0.001018	0.05	4777.490000	Y 242.219
S (181.972 nm)	2.969952	ppm	0.013574	0.46	1430.432668	Y 377.433
Sb (206.834 nm)	0.001275 u	ppm	0.002128	> 100.00	25.734600	Y 377.433
Se (196.026 nm)	0.001854 u	ppm	0.008549	> 100.00	-57.825400	Y 242.219
Si (288.158 nm)	2.023340	ppm	0.002258	0.11	10349.100000	Y 377.433
Sn (189.925 nm)	0.011252	ppm	0.000149	1.33	21.198400	Y 377.433
Sr (421.552 nm)	0.310063	ppm	0.000510	0.16	36305.012369	Y_R 488.368
Th (288.505 nm)	-0.050212 u	ppm	0.002383	4.74	12.790800	Y 377.433
Ti (336.122 nm)	0.593749	ppm	0.000018	0.00	56195.600000	Y 377.433
Tl (190.794 nm)	0.008138	ppm	0.005368	65.97	-23.342700	Y 377.433
U (409.013 nm)	-0.190290 u	ppm	0.005205	2.74	-171.177000	Y 377.433
V (292.401 nm)	0.501231	ppm	0.000066	0.01	24075.000000	Y 377.433
Zn (206.200 nm)	10.076200	ppm	0.078245	0.78	34861.100000	Y 377.433
Zr (343.823 nm)	0.079410	ppm	0.000307	0.39	3099.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.222142	13018.493416	0.005244	0.43
Y 377.433	1.215058	560915.982644	0.005361	0.44
Y_R 377.433	1.284700	48545.900000	0.005826	0.45
Y_R 488.368	1.287670	46472.100000	0.004458	0.35
Y_R2 488.368	1.289811	90772.671501	0.001538	0.12
Y_R4	1.307490	40119.400000	0.001786	0.14

Sample Name: 280-116417-A-8-A

Date: 11/6/2018 3:58:37 AM Rack:Tube: 2:64

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000399 u	ppm	0.000566	> 100.00	-286.740000	Y 377.433
Al (394.401 nm)	142.181000 o	ppm	0.036261	0.03	1770130.000000	Y 377.433
Al H (396.152 nm)	139.571000	ppm	0.138922	0.10	229970.000000	Y_R 377.433
As (188.980 nm)	0.025159	ppm	0.000863	3.43	15.436300	Y 242.219
B (249.678 nm)	-0.005597 u	ppm	0.000249	4.44	-6.086040	Y 242.219
Ba (493.408 nm)	0.981493	ppm	0.000146	0.01	90694.500000	Y_R 488.368
Be (234.861 nm)	0.005837	ppm	0.000308	5.28	-1016.500000	Y_R 488.368
Bi (223.061 nm)	-0.003426 u	ppm	0.003304	96.44	49.776000	Y 377.433
Ca (315.887 nm)	155.982899	ppm	0.351020	0.23	103056.314457	Y_R 377.433
Cd (214.439 nm)	0.135458	ppm	0.000052	0.04	3361.760000	Y 377.433
Co (228.615 nm)	0.062175	ppm	0.000276	0.44	1578.780000	Y 242.219
Cr (205.560 nm)	0.140817	ppm	0.001651	1.17	660.096000	Y 377.433
Cu (324.754 nm)	0.094155	ppm	0.000278	0.30	4789.170000	Y 377.433
Fe (238.204 nm)	92.660380 o	ppm	0.344090	0.37	154399.427473	Y_R 377.433
Fe H (259.940 nm)	92.962400	ppm	0.255707	0.28	85296.100000	Y_R 377.433
K (766.491 nm)	8.802870	ppm	0.014388	0.16	10339.300000	Y_R2 488.368
Li (670.783 nm)	0.090351	ppm	0.000772	0.85	832.788000	Y_R2 488.368
Mg (279.078 nm)	53.459900	ppm	0.068121	0.13	116391.000000	Y 377.433
Mn (257.610 nm)	2.002820	ppm	0.001331	0.07	419061.000000	Y 377.433
Mo (202.032 nm)	0.001324	ppm	0.000505	38.11	33.741900	Y 377.433
Na (589.592 nm)	1.294830	ppm	0.008095	0.63	499.339000	Y_R2 488.368
Na H (589.593 nm)	2.872640 u	ppm	0.046176	1.61	538.415612	Y_R4
Ni (231.604 nm)	0.095197	ppm	0.001397	1.47	387.783000	Y 377.433
P (213.618 nm)	0.549122	ppm	0.000861	0.16	631.914000	Y 242.219
Pb (220.353 nm)	8.030460	ppm	0.011379	0.14	17933.700000	Y 242.219
S (181.972 nm)	8.070984	ppm	0.010172	0.13	3843.649114	Y 377.433
Sb (206.834 nm)	-0.006113 u	ppm	0.000931	15.23	-4.941120	Y 377.433
Se (196.026 nm)	0.003897	ppm	0.000633	16.24	-13.666800	Y 242.219
Si (288.158 nm)	2.451940	ppm	0.009613	0.39	12269.300000	Y 377.433
Sn (189.925 nm)	0.010641	ppm	0.001155	10.86	20.485200	Y 377.433
Sr (421.552 nm)	0.235768	ppm	0.001222	0.52	27656.627044	Y_R 488.368
Th (288.505 nm)	0.002526 u	ppm	0.007457	> 100.00	13.285400	Y 377.433
Ti (336.122 nm)	0.634460	ppm	0.000198	0.03	60360.300000	Y 377.433
Tl (190.794 nm)	-0.005608 u	ppm	0.001225	21.84	-22.166900	Y 377.433
U (409.013 nm)	-0.067530 u	ppm	0.010559	15.64	-11.066900	Y 377.433
V (292.401 nm)	0.198409	ppm	0.000280	0.14	9416.300000	Y 377.433
Zn (206.200 nm)	13.774200	ppm	0.057580	0.42	47619.300000	Y 377.433
Zr (343.823 nm)	0.065528	ppm	0.000137	0.21	2537.020000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127878	12014.373728	0.005524	0.49
Y 377.433	1.128898	521141.596971	0.006314	0.56
Y_R 377.433	1.183630	44726.600000	0.005098	0.43
Y_R 488.368	1.185370	42780.000000	0.000593	0.05
Y_R2 488.368	1.187436	83567.860968	0.007894	0.66
Y_R4	1.220770	37458.300000	0.009472	0.78

Sample Name: 280-116417-A-9-A

Date: 11/6/2018 4:02:14 AM Rack:Tube: 2:65

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001453 u	ppm	0.000528	36.32	-361.882000	Y 377.433
Al (394.401 nm)	231.449000 o	ppm	0.142547	0.06	2881710.000000	Y 377.433
Al H (396.152 nm)	225.153000	ppm	0.020822	0.01	371405.000000	Y_R 377.433
As (188.980 nm)	0.074899	ppm	0.001264	1.69	79.181400	Y 242.219
B (249.678 nm)	-0.013293 u	ppm	0.000364	2.74	-95.056400	Y 242.219
Ba (493.408 nm)	4.789050	ppm	0.056692	1.18	439289.000000	Y_R 488.368
Be (234.861 nm)	0.015071	ppm	0.001073	7.12	-3053.240000	Y_R 488.368
Bi (223.061 nm)	0.012715	ppm	0.001070	8.42	99.640000	Y 377.433
Ca (315.887 nm)	462.076545	ppm	1.323158	0.29	305254.785367	Y_R 377.433
Cd (214.439 nm)	0.076774	ppm	0.000508	0.66	1900.510000	Y 377.433
Co (228.615 nm)	0.100984	ppm	0.000283	0.28	2697.980000	Y 242.219
Cr (205.560 nm)	0.279834	ppm	0.000455	0.16	1321.840000	Y 377.433
Cu (324.754 nm)	0.147956	ppm	0.000567	0.38	7452.060000	Y 377.433
Fe (238.204 nm)	269.855847 o	ppm	1.041207	0.39	449637.095174	Y_R 377.433
Fe H (259.940 nm)	273.457000	ppm	0.304066	0.11	250927.000000	Y_R 377.433
K (766.491 nm)	15.482600	ppm	0.104848	0.68	16867.700000	Y_R2 488.368
Li (670.783 nm)	0.136021	ppm	0.004762	3.50	1479.640000	Y_R2 488.368
Mg (279.078 nm)	28.216700	ppm	0.065658	0.23	61245.200000	Y 377.433
Mn (257.610 nm)	22.039400 bo	ppm	0.010202	0.05	4611190.000000	Y 377.433
Mo (202.032 nm)	0.007737	ppm	0.000430	5.56	106.697000	Y 377.433
Na (589.592 nm)	2.439540	ppm	0.032575	1.34	1015.690000	Y_R2 488.368
Na H (589.593 nm)	4.951187 u	ppm	0.010756	0.22	905.142401	Y_R4
Ni (231.604 nm)	0.274878	ppm	0.002252	0.82	1103.010000	Y 377.433
P (213.618 nm)	12.369300	ppm	0.015600	0.13	14342.300000	Y 242.219
Pb (220.353 nm)	2.484800	ppm	0.008451	0.34	5533.020000	Y 242.219
S (181.972 nm)	8.274457 b	ppm	0.046602	0.56	4022.858440	Y 377.433
Sb (206.834 nm)	-0.005510 u	ppm	0.004082	74.08	12.147400	Y 377.433
Se (196.026 nm)	0.004434 b	ppm	0.002272	51.24	-30.643000	Y 242.219
Si (288.158 nm)	2.639200	ppm	0.001249	0.05	13108.100000	Y 377.433
Sn (189.925 nm)	0.008545	ppm	0.000742	8.69	18.037800	Y 377.433
Sr (421.552 nm)	1.435437	ppm	0.004601	0.32	166933.376696	Y_R 488.368
Th (288.505 nm)	-0.170437 bu	ppm	0.002713	1.59	15.568400	Y 377.433
Ti (336.122 nm)	0.625504	ppm	0.000059	0.01	60289.000000	Y 377.433
Tl (190.794 nm)	0.007599	ppm	0.003101	40.81	-26.130700	Y 377.433
U (409.013 nm)	-0.090998 u	ppm	0.009642	10.60	-0.869560	Y 377.433
V (292.401 nm)	0.386597	ppm	0.000158	0.04	18511.300000	Y 377.433
Zn (206.200 nm)	6.603750	ppm	0.006819	0.10	22856.600000	Y 377.433
Zr (343.823 nm)	0.077347	ppm	0.000302	0.39	3015.980000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.268342	13510.618373	0.003862	0.30
Y 377.433	1.250421	577241.005241	0.003063	0.24
Y_R 377.433	1.345110	50828.800000	0.002704	0.20
Y_R 488.368	1.347910	48646.100000	0.003545	0.26
Y_R2 488.368	1.340232	94321.147479	0.005273	0.39
Y_R4	1.384010	42467.100000	0.008447	0.61

Sample Name: 280-116417-A-10-A

Date: 11/6/2018 4:05:51 AM Rack:Tube: 2:66

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001914 u	ppm	0.000106	5.54	-378.822000	Y 377.433
Al (394.401 nm)	259.095000 o	ppm	0.150631	0.06	3225680.000000	Y 377.433
Al H (396.152 nm)	251.601000	ppm	0.098578	0.04	414824.000000	Y_R 377.433
As (188.980 nm)	0.066545	ppm	0.001787	2.69	68.386900	Y 242.219
B (249.678 nm)	-0.003988 u	ppm	0.001996	50.04	-40.244400	Y 242.219
Ba (493.408 nm)	2.130390	ppm	0.004622	0.22	195932.000000	Y_R 488.368
Be (234.861 nm)	0.013296	ppm	0.000087	0.65	-2389.370000	Y_R 488.368
Bi (223.061 nm)	0.005593	ppm	0.001014	18.13	80.914600	Y 377.433
Ca (315.887 nm)	157.327769	ppm	0.048312	0.03	103967.918718	Y_R 377.433
Cd (214.439 nm)	0.080534	ppm	0.000152	0.19	1994.150000	Y 377.433
Co (228.615 nm)	0.112018	ppm	0.000011	0.01	2913.740000	Y 242.219
Cr (205.560 nm)	0.244117	ppm	0.000321	0.13	1150.930000	Y 377.433
Cu (324.754 nm)	0.144978	ppm	0.000242	0.17	7420.970000	Y 377.433
Fe (238.204 nm)	216.843821 o	ppm	0.272553	0.13	361310.078329	Y_R 377.433
Fe H (259.940 nm)	218.095000	ppm	0.458591	0.21	200125.000000	Y_R 377.433
K (766.491 nm)	15.245200	ppm	0.063031	0.41	16635.700000	Y_R2 488.368
Li (670.783 nm)	0.142639	ppm	0.002037	1.43	1573.380000	Y_R2 488.368
Mg (279.078 nm)	23.951700	ppm	0.016410	0.07	52001.200000	Y 377.433
Mn (257.610 nm)	8.663690	ppm	0.002525	0.03	1812670.000000	Y 377.433
Mo (202.032 nm)	0.004331	ppm	0.000613	14.14	67.956700	Y 377.433
Na (589.592 nm)	1.997500	ppm	0.081008	4.06	834.595000	Y_R2 488.368
Na H (589.593 nm)	3.795094 u	ppm	0.020028	0.53	754.241440	Y_R4
Ni (231.604 nm)	0.208728	ppm	0.001201	0.58	841.493000	Y 377.433
P (213.618 nm)	2.752780	ppm	0.000050	0.00	3186.120000	Y 242.219
Pb (220.353 nm)	6.320850	ppm	0.006181	0.10	14098.500000	Y 242.219
S (181.972 nm)	3.590671	ppm	0.013849	0.39	1725.429533	Y 377.433
Sb (206.834 nm)	-0.004755 u	ppm	0.002686	56.49	7.212130	Y 377.433
Se (196.026 nm)	0.003618	ppm	0.000383	10.59	-36.864400	Y 242.219
Si (288.158 nm)	2.833790	ppm	0.003961	0.14	13979.900000	Y 377.433
Sn (189.925 nm)	0.011788	ppm	0.000369	3.13	21.824300	Y 377.433
Sr (421.552 nm)	0.653091	ppm	0.000854	0.13	76113.481242	Y_R 488.368
Th (288.505 nm)	-0.034748 u	ppm	0.007045	20.28	16.313600	Y 377.433
Ti (336.122 nm)	0.934221	ppm	0.000552	0.06	88866.700000	Y 377.433
Tl (190.794 nm)	0.008486	ppm	0.003807	44.87	-22.252100	Y 377.433
U (409.013 nm)	-0.097389 u	ppm	0.012119	12.44	-18.223200	Y 377.433
V (292.401 nm)	0.435735	ppm	0.000499	0.11	20914.200000	Y 377.433
Zn (206.200 nm)	16.856000	ppm	0.018952	0.11	58283.600000	Y 377.433
Zr (343.823 nm)	0.119912	ppm	0.000215	0.18	4740.980000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.170211	12465.309445	0.001808	0.15
Y 377.433	1.165508	538042.213662	0.000605	0.05
Y_R 377.433	1.230880	46512.300000	0.006430	0.52
Y_R 488.368	1.233790	44527.600000	0.005326	0.43
Y_R2 488.368	1.256258	88411.345146	0.007191	0.57
Y_R4	1.286900	39487.300000	0.004600	0.36

Sample Name: 280-116417-A-11-A

Date: 11/6/2018 4:09:31 AM Rack:Tube: 2:67

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001146 u	ppm	0.000295	25.72	-337.678000	Y 377.433
Al (394.401 nm)	173.598000 o	ppm	0.436993	0.25	2161290.000000	Y 377.433
Al H (396.152 nm)	168.631000	ppm	0.522156	0.31	277964.000000	Y_R 377.433
As (188.980 nm)	0.060198	ppm	0.000032	0.05	61.821300	Y 242.219
B (249.678 nm)	-0.005383 u	ppm	0.001876	34.85	-33.861100	Y 242.219
Ba (493.408 nm)	1.551330	ppm	0.000823	0.05	142910.000000	Y_R 488.368
Be (234.861 nm)	0.009312	ppm	0.001124	12.07	-2076.610000	Y_R 488.368
Bi (223.061 nm)	0.009872	ppm	0.003831	38.80	83.161000	Y 377.433
Ca (315.887 nm)	115.767811	ppm	0.208266	0.18	76499.530653	Y_R 377.433
Cd (214.439 nm)	0.271092	ppm	0.000067	0.02	6739.040000	Y 377.433
Co (228.615 nm)	0.076585	ppm	0.000263	0.34	2025.700000	Y 242.219
Cr (205.560 nm)	0.210156	ppm	0.000069	0.03	990.456000	Y 377.433
Cu (324.754 nm)	0.179401	ppm	0.001013	0.56	9032.810000	Y 377.433
Fe (238.204 nm)	180.258286 o	ppm	0.200308	0.11	300352.378930	Y_R 377.433
Fe H (259.940 nm)	180.976000	ppm	0.383738	0.21	166062.000000	Y_R 377.433
K (766.491 nm)	10.311000	ppm	0.166491	1.61	11813.300000	Y_R2 488.368
Li (670.783 nm)	0.099366	ppm	0.000108	0.11	960.478000	Y_R2 488.368
Mg (279.078 nm)	22.843200	ppm	0.079190	0.35	49618.600000	Y 377.433
Mn (257.610 nm)	7.035560	ppm	0.030982	0.44	1472030.000000	Y 377.433
Mo (202.032 nm)	0.005706	ppm	0.000078	1.37	83.588800	Y 377.433
Na (589.592 nm)	1.467190	ppm	0.006054	0.41	577.158000	Y_R2 488.368
Na H (589.593 nm)	3.129338 u	ppm	0.023640	0.76	573.985408	Y_R4
Ni (231.604 nm)	0.155580	ppm	0.000368	0.24	632.329000	Y 377.433
P (213.618 nm)	1.284900	ppm	0.011950	0.93	1481.810000	Y 242.219
Pb (220.353 nm)	8.818950	ppm	0.015219	0.17	19690.800000	Y 242.219
S (181.972 nm)	28.819125	ppm	0.127513	0.44	13768.118059	Y 377.433
Sb (206.834 nm)	-0.007031 u	ppm	0.000419	5.96	0.731600	Y 377.433
Se (196.026 nm)	0.006850	ppm	0.002365	34.52	-24.812300	Y 242.219
Si (288.158 nm)	4.164640	ppm	0.029298	0.70	19942.000000	Y 377.433
Sn (189.925 nm)	0.009788	ppm	0.001290	13.18	19.489200	Y 377.433
Sr (421.552 nm)	0.468778	ppm	0.000744	0.16	54714.396981	Y_R 488.368
Th (288.505 nm)	-0.034320 u	ppm	0.002989	8.71	9.897390	Y 377.433
Ti (336.122 nm)	0.788213	ppm	0.001547	0.20	74877.200000	Y 377.433
Tl (190.794 nm)	0.001561 u	ppm	0.003840	> 100.00	-21.549200	Y 377.433
U (409.013 nm)	-0.084646 u	ppm	0.010395	12.28	-2.664620	Y 377.433
V (292.401 nm)	0.341408	ppm	0.001223	0.36	16340.600000	Y 377.433
Zn (206.200 nm)	51.348900	ppm	0.592043	1.15	177490.000000	Y 377.433
Zr (343.823 nm)	0.098715	ppm	0.000493	0.50	3881.950000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.150162	12251.745646	0.003702	0.32
Y 377.433	1.142434	527390.455262	0.004754	0.42
Y_R 377.433	1.211280	45771.600000	0.004097	0.34
Y_R 488.368	1.210310	43680.200000	0.003322	0.27
Y_R2 488.368	1.215049	85511.169130	0.011556	0.95
Y_R4	1.241140	38083.300000	0.004867	0.39

Sample Name: 280-116417-A-12-A

Date: 11/6/2018 4:13:08 AM Rack:Tube: 2:68

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001222 u	ppm	0.000803	65.68	-316.779000	Y 377.433
Al (394.401 nm)	136.781000 o	ppm	0.301531	0.22	1703200.000000	Y 377.433
Al H (396.152 nm)	134.923000	ppm	0.082895	0.06	222613.000000	Y_R 377.433
As (188.980 nm)	0.037504	ppm	0.000798	2.13	31.980800	Y 242.219
B (249.678 nm)	-0.003208 u	ppm	0.000776	24.19	-7.161450	Y 242.219
Ba (493.408 nm)	1.253070	ppm	0.002570	0.21	115573.000000	Y_R 488.368
Be (234.861 nm)	0.006982	ppm	0.000001	0.01	-1419.260000	Y_R 488.368
Bi (223.061 nm)	0.009569	ppm	0.003559	37.19	75.466500	Y 377.433
Ca (315.887 nm)	431.499318	ppm	0.103642	0.02	285039.200829	Y_R 377.433
Cd (214.439 nm)	0.083747	ppm	0.000146	0.17	2074.140000	Y 377.433
Co (228.615 nm)	0.058528	ppm	0.000208	0.36	1539.430000	Y 242.219
Cr (205.560 nm)	0.165885	ppm	0.001265	0.76	779.839000	Y 377.433
Cu (324.754 nm)	0.112016	ppm	0.000548	0.49	5520.810000	Y 377.433
Fe (238.204 nm)	125.322596 o	ppm	0.348346	0.28	208820.212598	Y_R 377.433
Fe H (259.940 nm)	125.810000	ppm	0.007078	0.01	115439.000000	Y_R 377.433
K (766.491 nm)	8.518410	ppm	0.033928	0.40	10061.300000	Y_R2 488.368
Li (670.783 nm)	0.079653	ppm	0.000841	1.06	681.268000	Y_R2 488.368
Mg (279.078 nm)	26.613200	ppm	0.045315	0.17	57879.200000	Y 377.433
Mn (257.610 nm)	2.923080	ppm	0.001784	0.06	611601.000000	Y 377.433
Mo (202.032 nm)	0.002615	ppm	0.000034	1.28	48.424500	Y 377.433
Na (589.592 nm)	2.186560	ppm	0.000128	0.01	943.191000	Y_R2 488.368
Na H (589.593 nm)	3.779761 u	ppm	0.018029	0.48	835.768171	Y_R4
Ni (231.604 nm)	0.103023	ppm	0.000906	0.88	422.684000	Y 377.433
P (213.618 nm)	0.965155	ppm	0.001683	0.17	1113.780000	Y 242.219
Pb (220.353 nm)	1.704320	ppm	0.005363	0.31	3801.920000	Y 242.219
S (181.972 nm)	10.046605	ppm	0.016565	0.16	4804.463219	Y 377.433
Sb (206.834 nm)	-0.000484 u	ppm	0.002993	> 100.00	6.199100	Y 377.433
Se (196.026 nm)	0.005452	ppm	0.001114	20.42	-18.471500	Y 242.219
Si (288.158 nm)	7.561520	ppm	0.000572	0.01	35159.700000	Y 377.433
Sn (189.925 nm)	0.011425	ppm	0.001313	11.49	21.400500	Y 377.433
Sr (421.552 nm)	1.367353	ppm	0.001430	0.10	159013.447659	Y_R 488.368
Th (288.505 nm)	-0.011766 u	ppm	0.006415	54.52	-0.548406	Y 377.433
Ti (336.122 nm)	0.877307	ppm	0.001190	0.14	84153.300000	Y 377.433
Tl (190.794 nm)	0.001570 u	ppm	0.004096	> 100.00	-21.949600	Y 377.433
U (409.013 nm)	-0.053681 u	ppm	0.000379	0.71	9.042870	Y 377.433
V (292.401 nm)	0.244972	ppm	0.000227	0.09	11675.200000	Y 377.433
Zn (206.200 nm)	13.611600	ppm	0.044255	0.33	47060.800000	Y 377.433
Zr (343.823 nm)	0.091045	ppm	0.000074	0.08	3571.110000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.109305	11816.524400	0.003042	0.27
Y 377.433	1.112692	513660.455360	0.003588	0.32
Y_R 377.433	1.174440	44379.600000	0.002287	0.19
Y_R 488.368	1.170180	42231.700000	0.004283	0.37
Y_R2 488.368	1.171269	82430.075217	0.004470	0.38
Y_R4	1.210340	37138.300000	0.005714	0.47

Sample Name: 280-116417-A-13-A

Date: 11/6/2018 4:16:44 AM Rack:Tube: 2:69

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.003092 u	ppm	0.000070	2.25	-414.061000	Y 377.433
Al (394.401 nm)	295.346000 o	ppm	1.150960	0.39	3677160.000000	Y 377.433
Al H (396.152 nm)	288.685000	ppm	0.242490	0.08	476185.000000	Y_R 377.433
As (188.980 nm)	0.058124	ppm	0.002888	4.97	55.982300	Y 242.219
B (249.678 nm)	-0.003160 u	ppm	0.000662	20.95	-36.634800	Y 242.219
Ba (493.408 nm)	1.825850	ppm	0.001987	0.11	168060.000000	Y_R 488.368
Be (234.861 nm)	0.014225	ppm	0.001408	9.90	-2328.970000	Y_R 488.368
Bi (223.061 nm)	0.008643	ppm	0.004019	46.50	85.830400	Y 377.433
Ca (315.887 nm)	288.525954	ppm	0.158776	0.06	190634.528481	Y_R 377.433
Cd (214.439 nm)	0.011039	ppm	0.000119	1.08	263.713000	Y 377.433
Co (228.615 nm)	0.079465	ppm	0.000458	0.58	2140.860000	Y 242.219
Cr (205.560 nm)	0.258150	ppm	0.001176	0.46	1217.270000	Y 377.433
Cu (324.754 nm)	0.135128	ppm	0.000623	0.46	6874.600000	Y 377.433
Fe (238.204 nm)	216.048245 o	ppm	0.731552	0.34	359984.514868	Y_R 377.433
Fe H (259.940 nm)	217.189000	ppm	0.213918	0.10	199293.000000	Y_R 377.433
K (766.491 nm)	16.901200	ppm	0.111261	0.66	18254.100000	Y_R2 488.368
Li (670.783 nm)	0.124199	ppm	0.001573	1.27	1312.200000	Y_R2 488.368
Mg (279.078 nm)	23.036200	ppm	0.083089	0.36	50008.000000	Y 377.433
Mn (257.610 nm)	3.617740	ppm	0.019461	0.54	756940.000000	Y 377.433
Mo (202.032 nm)	0.003502	ppm	0.000758	21.66	58.517700	Y 377.433
Na (589.592 nm)	3.012220	ppm	0.052393	1.74	1349.100000	Y_R2 488.368
Na H (589.593 nm)	4.683190 u	ppm	0.066295	1.42	1101.469440	Y_R4
Ni (231.604 nm)	0.172191	ppm	0.002047	1.19	701.351000	Y 377.433
P (213.618 nm)	0.918299	ppm	0.005951	0.65	1058.390000	Y 242.219
Pb (220.353 nm)	0.556166	ppm	0.003752	0.67	1215.440000	Y 242.219
S (181.972 nm)	2.349477	ppm	0.005793	0.25	1122.495369	Y 377.433
Sb (206.834 nm)	-0.003860 u	ppm	0.007117	> 100.00	8.737550	Y 377.433
Se (196.026 nm)	0.002611	ppm	0.001149	44.03	-45.233800	Y 242.219
Si (288.158 nm)	3.164490	ppm	0.018172	0.57	15461.400000	Y 377.433
Sn (189.925 nm)	0.008812	ppm	0.001150	13.05	18.349700	Y 377.433
Sr (421.552 nm)	1.399844	ppm	0.004900	0.35	162795.542914	Y_R 488.368
Th (288.505 nm)	0.010880	ppm	0.001487	13.66	7.153100	Y 377.433
Ti (336.122 nm)	0.942633	ppm	0.001172	0.12	90000.100000	Y 377.433
Tl (190.794 nm)	0.012929	ppm	0.003603	27.86	-22.384400	Y 377.433
U (409.013 nm)	-0.117155 u	ppm	0.006921	5.91	-76.915800	Y 377.433
V (292.401 nm)	0.450633	ppm	0.000671	0.15	21631.900000	Y 377.433
Zn (206.200 nm)	1.820510	ppm	0.008065	0.44	6319.470000	Y 377.433
Zr (343.823 nm)	0.124141	ppm	0.000383	0.31	4912.370000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.152479	12276.428333	0.000776	0.07
Y 377.433	1.150708	531210.040285	0.001837	0.16
Y_R 377.433	1.233390	46606.900000	0.002894	0.23
Y_R 488.368	1.231880	44458.400000	0.005768	0.47
Y_R2 488.368	1.229807	86549.788156	0.003868	0.31
Y_R4	1.258700	38622.200000	0.001630	0.13

Sample Name: CCVH-5408055

Date: 11/6/2018 4:20:23 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001426	ppm	0.000332	23.28	-313.839000	Y 377.433
Al (394.401 nm)	51.948700 o	ppm	0.119366	0.23	646948.000000	Y 377.433
Al H (396.152 nm)	50.875600	ppm	0.049139	0.10	83672.300000	Y_R 377.433
As (188.980 nm)	-0.003504 u	ppm	0.000672	19.17	-22.156400	Y 242.219
B (249.678 nm)	-0.014390 u	ppm	0.000336	2.34	-27.538100	Y 242.219
Ba (493.408 nm)	-0.000537 u	ppm	0.000379	70.59	788.973000	Y_R 488.368
Be (234.861 nm)	0.000145	ppm	0.000136	93.86	-711.354000	Y_R 488.368
Bi (223.061 nm)	1.021590	ppm	0.004578	0.45	1733.700000	Y 377.433
Ca (315.887 nm)	0.008861	ppm	0.004952	55.88	14.082098	Y_R 377.433
Cd (214.439 nm)	0.000351	ppm	0.000103	29.28	-2.418940	Y 377.433
Co (228.615 nm)	0.001491	ppm	0.000016	1.10	63.822400	Y 242.219
Cr (205.560 nm)	0.000232 u	ppm	0.000409	> 100.00	-9.210660	Y 377.433
Cu (324.754 nm)	0.000651	ppm	0.000136	20.91	705.976000	Y 377.433
Fe (238.204 nm)	50.347968 o	ppm	0.163468	0.32	83899.780301	Y_R 377.433
Fe H (259.940 nm)	50.659300	ppm	0.063695	0.13	46476.600000	Y_R 377.433
K (766.491 nm)	0.158160	ppm	0.077183	48.80	1890.490000	Y_R2 488.368
Li (670.783 nm)	0.015834	ppm	0.000332	2.09	-222.628000	Y_R2 488.368
Mg (279.078 nm)	-0.030161 u	ppm	0.000601	1.99	-207.278000	Y 377.433
Mn (257.610 nm)	0.000481	ppm	0.000037	7.60	123.337000	Y 377.433
Mo (202.032 nm)	-0.000934 u	ppm	0.000283	30.25	8.053820	Y 377.433
Na (589.592 nm)	257.614000 o	ppm	0.668756	0.26	129289.000000	Y_R2 488.368
Na H (589.593 nm)	257.601687	ppm	0.873235	0.34	91592.373519	Y_R4
Ni (231.604 nm)	0.000258 u	ppm	0.000393	> 100.00	17.636000	Y 377.433
P (213.618 nm)	-0.016245 u	ppm	0.000465	2.86	-21.260600	Y 242.219
Pb (220.353 nm)	0.000459 u	ppm	0.001425	> 100.00	26.245600	Y 242.219
S (181.972 nm)	5.151170	ppm	0.014660	0.28	2434.482311	Y 377.433
Sb (206.834 nm)	0.001017	ppm	0.000877	86.24	4.717380	Y 377.433
Se (196.026 nm)	0.002138 u	ppm	0.003409	> 100.00	-8.155300	Y 242.219
Si (288.158 nm)	-0.199106 u	ppm	0.002373	1.19	392.831000	Y 377.433
Sn (189.925 nm)	-0.007338 u	ppm	0.000186	2.54	-0.503221	Y 377.433
Sr (421.552 nm)	-0.000132 u	ppm	0.000026	19.35	268.763235	Y_R 488.368
Th (288.505 nm)	5.069610	ppm	0.019628	0.39	5438.960000	Y 377.433
Ti (336.122 nm)	0.001063	ppm	0.000104	9.75	-263.907000	Y 377.433
Tl (190.794 nm)	-0.002419 u	ppm	0.002175	89.93	-13.572200	Y 377.433
U (409.013 nm)	10.630700	ppm	0.038252	0.36	24440.700000	Y 377.433
V (292.401 nm)	-0.003983 u	ppm	0.000334	8.39	-395.227000	Y 377.433
Zn (206.200 nm)	0.000580	ppm	0.000185	31.87	11.806000	Y 377.433
Zr (343.823 nm)	-0.006800 u	ppm	0.000097	1.43	-394.102000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.102993	11749.296209	0.000432	0.04
Y 377.433	1.103782	509546.955996	0.003826	0.35
Y_R 377.433	1.150550	43476.600000	0.002064	0.18
Y_R 488.368	1.144360	41300.000000	0.014613	1.28
Y_R2 488.368	1.148331	80815.768067	0.001656	0.14
Y_R4	1.188450	36466.700000	0.000712	0.06

Sample Name: CCV-5407762

Date: 11/6/2018 4:23:59 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.518724	ppm	0.000962	0.19	14113.800000	Y 377.433
Al (394.401 nm)	0.515452	ppm	0.000971	0.19	6628.910000	Y 377.433
Al H (396.152 nm)	0.558078 u	ppm	0.009540	1.71	902.438000	Y_R 377.433
As (188.980 nm)	1.014180	ppm	0.003348	0.33	1405.850000	Y 242.219
B (249.678 nm)	0.493289	ppm	0.000747	0.15	2026.510000	Y 242.219
Ba (493.408 nm)	0.509073	ppm	0.000053	0.01	47392.800000	Y_R 488.368
Be (234.861 nm)	0.523363	ppm	0.004140	0.79	27060.600000	Y_R 488.368
Bi (223.061 nm)	-0.006420 u	ppm	0.000462	7.19	33.108300	Y 377.433
Ca (315.887 nm)	5.092652	ppm	0.001144	0.02	3361.584976	Y_R 377.433
Cd (214.439 nm)	0.524101	ppm	0.000616	0.12	13039.000000	Y 377.433
Co (228.615 nm)	0.511793	ppm	0.000913	0.18	12137.500000	Y 242.219
Cr (205.560 nm)	0.532412	ppm	0.000977	0.18	2529.550000	Y 377.433
Cu (324.754 nm)	0.520990	ppm	0.000923	0.18	25275.500000	Y 377.433
Fe (238.204 nm)	2.561119	ppm	0.001244	0.05	4278.794255	Y_R 377.433
Fe H (259.940 nm)	2.573670 u	ppm	0.017421	0.68	2350.730000	Y_R 377.433
K (766.491 nm)	51.277700	ppm	0.224006	0.44	51851.700000	Y_R2 488.368
Li (670.783 nm)	1.049060	ppm	0.000530	0.05	14411.500000	Y_R2 488.368
Mg (279.078 nm)	20.592000	ppm	0.021573	0.10	44870.100000	Y 377.433
Mn (257.610 nm)	0.519315	ppm	0.000858	0.17	108676.000000	Y 377.433
Mo (202.032 nm)	0.524192	ppm	0.001903	0.36	5982.180000	Y 377.433
Na (589.592 nm)	25.945300	ppm	0.046875	0.18	12891.000000	Y_R2 488.368
Na H (589.593 nm)	27.252583 u	ppm	0.146397	0.54	9290.506471	Y_R4
Ni (231.604 nm)	0.519337	ppm	0.001304	0.25	2000.360000	Y 377.433
P (213.618 nm)	1.037350	ppm	0.007360	0.71	1178.890000	Y 242.219
Pb (220.353 nm)	1.020340	ppm	0.004294	0.42	2291.630000	Y 242.219
S (181.972 nm)	-0.004336 u	ppm	0.006579	> 100.00	-25.805557	Y 377.433
Sb (206.834 nm)	1.043180	ppm	0.000027	0.00	1714.030000	Y 377.433
Se (196.026 nm)	1.041810	ppm	0.003890	0.37	1568.090000	Y 242.219
Si (288.158 nm)	4.974180	ppm	0.011848	0.24	23568.600000	Y 377.433
Sn (189.925 nm)	1.039910	ppm	0.001005	0.10	1222.020000	Y 377.433
Sr (421.552 nm)	0.518281	ppm	0.001018	0.20	60439.875705	Y_R 488.368
Th (288.505 nm)	-0.022535 u	ppm	0.007056	31.31	-43.127500	Y 377.433
Ti (336.122 nm)	0.523968	ppm	0.000372	0.07	49471.600000	Y 377.433
Tl (190.794 nm)	1.040750	ppm	0.002343	0.23	587.056000	Y 377.433
U (409.013 nm)	-0.009092 u	ppm	0.003137	34.50	48.168100	Y 377.433
V (292.401 nm)	0.515760	ppm	0.000055	0.01	24637.300000	Y 377.433
Zn (206.200 nm)	0.521613	ppm	0.000186	0.04	1807.390000	Y 377.433
Zr (343.823 nm)	0.522695	ppm	0.000010	0.00	21064.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130265	12039.801233	0.000529	0.05
Y 377.433	1.126941	520237.977018	0.000158	0.01
Y_R 377.433	1.159390	43810.600000	0.007208	0.62
Y_R 488.368	1.159340	41840.400000	0.009355	0.81
Y_R2 488.368	1.174254	82640.168916	0.002997	0.26
Y_R4	1.183130	36303.200000	0.009396	0.79

Sample Name: CCB

Date: 11/6/2018 4:27:30 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000483	ppm	0.000450	93.29	-225.751000	Y 377.433
Al (394.401 nm)	0.000205 u	ppm	0.000863	> 100.00	90.149900	Y 377.433
Al H (396.152 nm)	0.138820 Zu	ppm	0.015706	11.31	13.470500 Z	Y_R 377.433
As (188.980 nm)	-0.000019 u	ppm	0.001883	> 100.00	-15.142400	Y 242.219
B (249.678 nm)	-0.010646 u	ppm	0.001746	16.40	3.956070	Y 242.219
Ba (493.408 nm)	-0.001056 u	ppm	0.000430	40.73	704.352000	Y_R 488.368
Be (234.861 nm)	0.000109	ppm	0.000053	48.28	-0.205005	Y_R 488.368
Bi (223.061 nm)	-0.005718 u	ppm	0.000726	12.69	33.847100	Y 377.433
Ca (315.887 nm)	-0.007110 u	ppm	0.006269	88.18	-7.014571	Y_R 377.433
Cd (214.439 nm)	0.000011 u	ppm	0.000153	> 100.00	-10.890900	Y 377.433
Co (228.615 nm)	0.000597	ppm	0.000135	22.68	-13.794200	Y 242.219
Cr (205.560 nm)	0.000417	ppm	0.000234	56.14	-7.353720	Y 377.433
Cu (324.754 nm)	0.000468	ppm	0.000020	4.22	224.271000	Y 377.433
Fe (238.204 nm)	-0.002007 u	ppm	0.002726	> 100.00	8.191458	Y_R 377.433
Fe H (259.940 nm)	0.012053 u	ppm	0.001095	9.09	0.053504	Y_R 377.433
K (766.491 nm)	-0.211570 u	ppm	0.072711	34.37	1529.140000	Y_R2 488.368
Li (670.783 nm)	0.015263 Z	ppm	0.002155	14.12	-230.714000 Z	Y_R2 488.368
Mg (279.078 nm)	0.001780	ppm	0.001687	94.75	17.995600	Y 377.433
Mn (257.610 nm)	0.000059	ppm	0.000001	2.27	34.951900	Y 377.433
Mo (202.032 nm)	-0.000147 u	ppm	0.000138	94.28	17.010000	Y 377.433
Na (589.592 nm)	0.108752	ppm	0.019448	17.88	-81.370400	Y_R2 488.368
Na H (589.593 nm)	1.715680 u	ppm	0.005605	0.33	222.264970	Y_R4
Ni (231.604 nm)	0.000546 u	ppm	0.001768	> 100.00	11.173500	Y 377.433
P (213.618 nm)	0.004736 u	ppm	0.007820	> 100.00	4.418120	Y 242.219
Pb (220.353 nm)	-0.002713 u	ppm	0.000688	25.36	8.432150	Y 242.219
S (181.972 nm)	0.006914	ppm	0.000102	1.48	-22.407544	Y 377.433
Sb (206.834 nm)	0.000666 u	ppm	0.003997	> 100.00	-0.030346	Y 377.433
Se (196.026 nm)	0.000501	ppm	0.000272	54.20	2.395910	Y 242.219
Si (288.158 nm)	-0.205813 Zu	ppm	0.001229	0.60	362.786000 Z	Y 377.433
Sn (189.925 nm)	-0.005506 u	ppm	0.000689	12.51	1.635110	Y 377.433
Sr (421.552 nm)	-0.000276 u	ppm	0.000342	> 100.00	246.212147	Y_R 488.368
Th (288.505 nm)	0.004472	ppm	0.000747	16.70	19.152500	Y 377.433
Ti (336.122 nm)	0.000653	ppm	0.000005	0.76	-303.005000	Y 377.433
Tl (190.794 nm)	-0.004210 u	ppm	0.006848	> 100.00	-11.228900	Y 377.433
U (409.013 nm)	-0.006781 u	ppm	0.003837	56.59	99.313800	Y 377.433
V (292.401 nm)	0.000362	ppm	0.000031	8.47	-176.996000	Y 377.433
Zn (206.200 nm)	0.000298 u	ppm	0.000715	> 100.00	5.407520	Y 377.433
Zr (343.823 nm)	0.000523	ppm	0.000082	15.76	-97.359800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.149373	12243.338806	0.000074	0.01
Y 377.433	1.143932	528081.606787	0.001613	0.14
Y_R 377.433	1.168070	44138.700000	0.003078	0.26
Y_R 488.368	1.164490	42026.500000	0.011295	0.97
Y_R2 488.368	1.163559	81887.510358	0.001295	0.11
Y_R4	1.196830	36723.600000	0.002416	0.20

Sample Name: CCVL-5412564

Date: 11/6/2018 4:30:42 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010424	ppm	0.000223	2.14	50.081000	Y 377.433
Al (394.401 nm)	0.101055	ppm	0.000780	0.77	1352.100000	Y 377.433
Al H (396.152 nm)	0.233605 u	ppm	0.002800	1.20	174.227000	Y_R 377.433
As (188.980 nm)	0.014394	ppm	0.001603	11.13	5.049000	Y 242.219
B (249.678 nm)	0.088720	ppm	0.000650	0.73	402.895000	Y 242.219
Ba (493.408 nm)	0.009103	ppm	0.000237	2.61	1634.210000	Y_R 488.368
Be (234.861 nm)	0.001068	ppm	0.000051	4.78	48.034800	Y_R 488.368
Bi (223.061 nm)	0.095143	ppm	0.002052	2.16	200.109000	Y 377.433
Ca (315.887 nm)	0.198415	ppm	0.003695	1.86	128.759409	Y_R 377.433
Cd (214.439 nm)	0.005390	ppm	0.000069	1.29	123.041000	Y 377.433
Co (228.615 nm)	0.011011	ppm	0.000008	0.07	233.797000	Y 242.219
Cr (205.560 nm)	0.010731	ppm	0.000189	1.76	41.756000	Y 377.433
Cu (324.754 nm)	0.016090	ppm	0.000020	0.12	975.088000	Y 377.433
Fe (238.204 nm)	0.097865	ppm	0.001064	1.09	174.595629	Y_R 377.433
Fe H (259.940 nm)	0.110051 u	ppm	0.002376	2.16	89.981000	Y_R 377.433
K (766.491 nm)	2.872830	ppm	0.120561	4.20	4543.640000	Y_R2 488.368
Li (670.783 nm)	0.034200 Q	ppm	0.000827	2.42	37.496000 Q	Y_R2 488.368
Mg (279.078 nm)	0.208802	ppm	0.002480	1.19	468.467000	Y 377.433
Mn (257.610 nm)	0.010813	ppm	0.000029	0.27	2285.000000	Y 377.433
Mo (202.032 nm)	0.020243	ppm	0.000043	0.21	248.976000	Y 377.433
Na (589.592 nm)	1.169760	ppm	0.047269	4.04	451.523000	Y_R2 488.368
Na H (589.593 nm)	2.659250 u	ppm	0.013608	0.51	558.186824	Y_R4
Ni (231.604 nm)	0.042467	ppm	0.000396	0.93	171.837000	Y 377.433
P (213.618 nm)	2.934110	ppm	0.008122	0.28	3402.080000	Y 242.219
Pb (220.353 nm)	0.006089 Q	ppm	0.000776	12.75	28.093700 Q	Y 242.219
S (181.972 nm)	0.103006	ppm	0.001258	1.22	23.533124	Y 377.433
Sb (206.834 nm)	0.021836	ppm	0.002881	13.19	34.646200	Y 377.433
Se (196.026 nm)	0.021337	ppm	0.000193	0.90	33.712800	Y 242.219
Si (288.158 nm)	0.298032 Q	ppm	0.003802	1.28	2619.960000 Q	Y 377.433
Sn (189.925 nm)	0.098186	ppm	0.001275	1.30	122.682000	Y 377.433
Sr (421.552 nm)	0.009632	ppm	0.000026	0.27	1396.307098	Y_R 488.368
Th (288.505 nm)	0.009473 Q	ppm	0.003456	36.48	24.084700 Q	Y 377.433
Ti (336.122 nm)	0.010950	ppm	0.000092	0.84	676.772000	Y 377.433
Tl (190.794 nm)	0.018936	ppm	0.006654	35.14	2.007900	Y 377.433
U (409.013 nm)	0.054365	ppm	0.017360	31.93	237.770000	Y 377.433
V (292.401 nm)	0.010415	ppm	0.000085	0.82	305.801000	Y 377.433
Zn (206.200 nm)	0.022513	ppm	0.000455	2.02	82.197000	Y 377.433
Zr (343.823 nm)	0.016217	ppm	0.000134	0.82	538.677000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.156685	12321.232841	0.004573	0.40
Y 377.433	1.152281	531936.188237	0.004801	0.42
Y_R 377.433	1.167710	44125.000000	0.003485	0.30
Y_R 488.368	1.165370	42058.300000	0.016290	1.40
Y_R2 488.368	1.173935	82617.733438	0.002403	0.20
Y_R4	1.193930	36634.800000	0.004906	0.41

Sample Name: MB 280-435144/1-A

Date: 11/6/2018 4:34:06 AM Rack:Tube: 2:70

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000363	ppm	0.000047	13.09	-229.087000	Y 377.433
Al (394.401 nm)	0.002101	ppm	0.001374	65.40	114.643000	Y 377.433
Al H (396.152 nm)	0.143762 u	ppm	0.008221	5.72	21.588900	Y_R 377.433
As (188.980 nm)	-0.002759 u	ppm	0.002365	85.72	-18.980900	Y 242.219
B (249.678 nm)	-0.010705 u	ppm	0.000061	0.57	3.715450	Y 242.219
Ba (493.408 nm)	-0.001320 u	ppm	0.000118	8.95	680.176000	Y_R 488.368
Be (234.861 nm)	0.000107	ppm	0.000051	47.34	-0.373038	Y_R 488.368
Bi (223.061 nm)	-0.004066 u	ppm	0.001134	27.89	36.570500	Y 377.433
Ca (315.887 nm)	0.009499	ppm	0.006427	67.66	3.958480	Y_R 377.433
Cd (214.439 nm)	0.000055	ppm	0.000051	92.89	-9.794330	Y 377.433
Co (228.615 nm)	0.000345	ppm	0.000022	6.36	-19.771300	Y 242.219
Cr (205.560 nm)	-0.000059 u	ppm	0.000217	> 100.00	-9.626250	Y 377.433
Cu (324.754 nm)	0.000600	ppm	0.000177	29.56	229.775000	Y 377.433
Fe (238.204 nm)	0.002414	ppm	0.000249	10.29	15.558197	Y_R 377.433
Fe H (259.940 nm)	0.016204 u	ppm	0.002496	15.41	3.862650	Y_R 377.433
K (766.491 nm)	-0.174764 u	ppm	0.066215	37.89	1565.110000	Y_R2 488.368
Li (670.783 nm)	0.016164	ppm	0.000219	1.36	-217.960000	Y_R2 488.368
Mg (279.078 nm)	0.001557	ppm	0.002046	> 100.00	17.535900	Y 377.433
Mn (257.610 nm)	0.000119	ppm	0.000001	1.15	47.527900	Y 377.433
Mo (202.032 nm)	-0.000354 u	ppm	0.000616	> 100.00	14.657300	Y 377.433
Na (589.592 nm)	0.103449	ppm	0.013581	13.13	-84.031300	Y_R2 488.368
Na H (589.593 nm)	1.610522 u	ppm	0.015844	0.98	184.735870	Y_R4
Ni (231.604 nm)	-0.000710 u	ppm	0.000411	57.81	6.360400	Y 377.433
P (213.618 nm)	0.000727 u	ppm	0.002189	> 100.00	-0.239571	Y 242.219
Pb (220.353 nm)	-0.002005 u	ppm	0.002064	> 100.00	10.006700	Y 242.219
S (181.972 nm)	0.005785	ppm	0.002207	38.15	-22.946910	Y 377.433
Sb (206.834 nm)	0.003574	ppm	0.003475	97.24	4.753800	Y 377.433
Se (196.026 nm)	0.003951	ppm	0.000433	10.96	7.581310	Y 242.219
Si (288.158 nm)	-0.206640 u	ppm	0.001270	0.61	359.081000	Y 377.433
Sn (189.925 nm)	-0.005398 u	ppm	0.000957	17.72	1.761980	Y 377.433
Sr (421.552 nm)	-0.000417 u	ppm	0.000000	0.06	229.846153	Y_R 488.368
Th (288.505 nm)	-0.000026 u	ppm	0.001558	> 100.00	14.349000	Y 377.433
Ti (336.122 nm)	0.000598	ppm	0.000246	41.18	-308.196000	Y 377.433
Tl (190.794 nm)	0.000964 u	ppm	0.001771	> 100.00	-8.262950	Y 377.433
U (409.013 nm)	-0.010400 u	ppm	0.003537	34.01	91.056000	Y 377.433
V (292.401 nm)	0.000594	ppm	0.000049	8.27	-166.038000	Y 377.433
Zn (206.200 nm)	0.001562	ppm	0.000761	48.71	9.777650	Y 377.433
Zr (343.823 nm)	0.000534	ppm	0.000345	64.62	-96.880000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.152580	12277.498060	0.002613	0.23
Y 377.433	1.148381	530135.491687	0.004451	0.39
Y_R 377.433	1.177690	44502.300000	0.004359	0.37
Y_R 488.368	1.163450	41988.800000	0.012217	1.05
Y_R2 488.368	1.186098	83473.738319	0.000700	0.06
Y_R4	1.203210	36919.400000	0.003723	0.31

Sample Name: LCS 280-435144/2-A

Date: 11/6/2018 4:37:17 AM Rack:Tube: 2:71

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.054457	ppm	0.000024	0.04	1215.810000	Y 377.433
Al (394.401 nm)	2.107700	ppm	0.002028	0.10	26647.800000	Y 377.433
Al H (396.152 nm)	2.032200	ppm	0.004092	0.20	3533.710000	Y_R 377.433
As (188.980 nm)	1.025270	ppm	0.000707	0.07	1421.390000	Y 242.219
B (249.678 nm)	1.044830	ppm	0.001530	0.15	4241.560000	Y 242.219
Ba (493.408 nm)	2.090260	ppm	0.002985	0.14	192100.000000	Y_R 488.368
Be (234.861 nm)	0.053393	ppm	0.000116	0.22	2744.430000	Y_R 488.368
Bi (223.061 nm)	2.030850	ppm	0.004527	0.22	3390.850000	Y 377.433
Ca (315.887 nm)	51.611407	ppm	0.075368	0.15	34088.434743	Y_R 377.433
Cd (214.439 nm)	0.105031	ppm	0.000081	0.08	2604.110000	Y 377.433
Co (228.615 nm)	0.502422	ppm	0.001477	0.29	11937.700000	Y 242.219
Cr (205.560 nm)	0.216546	ppm	0.002309	1.07	1020.070000	Y 377.433
Cu (324.754 nm)	0.259638	ppm	0.000009	0.00	12738.300000	Y 377.433
Fe (238.204 nm)	1.045560	ppm	0.002150	0.21	1753.615898	Y_R 377.433
Fe H (259.940 nm)	1.044310 u	ppm	0.004370	0.42	947.308000	Y_R 377.433
K (766.491 nm)	53.445300	ppm	0.043915	0.08	53970.100000	Y_R2 488.368
Li (670.783 nm)	1.078820	ppm	0.005665	0.53	14833.000000	Y_R2 488.368
Mg (279.078 nm)	51.546900	ppm	0.003103	0.01	112281.000000	Y 377.433
Mn (257.610 nm)	0.523034	ppm	0.000115	0.02	109454.000000	Y 377.433
Mo (202.032 nm)	1.087440	ppm	0.001595	0.15	12390.000000	Y 377.433
Na (589.592 nm)	53.038900	ppm	0.048860	0.09	26478.400000	Y_R2 488.368
Na H (589.593 nm)	53.848254	ppm	0.076441	0.14	18631.049058	Y_R4
Ni (231.604 nm)	0.504128	ppm	0.001677	0.33	1942.780000	Y 377.433
P (213.618 nm)	10.572800	ppm	0.022636	0.21	12252.500000	Y 242.219
Pb (220.353 nm)	0.518246	ppm	0.002145	0.41	1172.230000	Y 242.219
S (181.972 nm)	2.054593	ppm	0.004636	0.23	960.048117	Y 377.433
Sb (206.834 nm)	0.534402	ppm	0.002323	0.43	866.991000	Y 377.433
Se (196.026 nm)	2.119980	ppm	0.003722	0.18	3189.560000	Y 242.219
Si (288.158 nm)	10.283200	ppm	0.025719	0.25	47352.700000	Y 377.433
Sn (189.925 nm)	2.130630	ppm	0.009122	0.43	2495.290000	Y 377.433
Sr (421.552 nm)	1.060853	ppm	0.001152	0.11	123420.758103	Y_R 488.368
Th (288.505 nm)	1.021370	ppm	0.006814	0.67	1076.460000	Y 377.433
Ti (336.122 nm)	1.070270	ppm	0.000073	0.01	101535.000000	Y 377.433
Tl (190.794 nm)	2.102520	ppm	0.007920	0.38	1193.950000	Y 377.433
U (409.013 nm)	2.208390	ppm	0.014542	0.66	5110.710000	Y 377.433
V (292.401 nm)	0.531459	ppm	0.000498	0.09	25475.200000	Y 377.433
Zn (206.200 nm)	0.520251	ppm	0.000579	0.11	1802.520000	Y 377.433
Zr (343.823 nm)	0.532588	ppm	0.000402	0.08	21464.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119282	11922.806846	0.002235	0.20
Y 377.433	1.122507	518191.100139	0.001858	0.17
Y_R 377.433	1.159610	43818.900000	0.002074	0.18
Y_R 488.368	1.155440	41699.700000	0.000770	0.07
Y_R2 488.368	1.167129	82138.717516	0.000989	0.08
Y_R4	1.174020	36023.700000	0.009588	0.82

Sample Name: 280-116106-A-1-A

Date: 11/6/2018 4:40:47 AM Rack:Tube: 2:72

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000703	ppm	0.000137	19.50	-225.396000	Y 377.433
Al (394.401 nm)	0.014453	ppm	0.001156	8.00	310.880000	Y 377.433
Al H (396.152 nm)	0.107329 u	ppm	0.007446	6.94	11.480500	Y_R 377.433
As (188.980 nm)	0.022007	ppm	0.002348	10.67	15.720200	Y 242.219
B (249.678 nm)	0.020436	ppm	0.001636	8.00	128.751000	Y 242.219
Ba (493.408 nm)	0.030582	ppm	0.000132	0.43	3599.870000	Y_R 488.368
Be (234.861 nm)	0.000134	ppm	0.000114	84.53	0.966932	Y_R 488.368
Bi (223.061 nm)	0.001259	ppm	0.000990	78.63	45.404100	Y 377.433
Ca (315.887 nm)	36.767473	ppm	0.027644	0.08	24283.292441	Y_R 377.433
Cd (214.439 nm)	0.000378	ppm	0.000053	14.09	-1.742260	Y 377.433
Co (228.615 nm)	0.000715	ppm	0.000071	9.97	-10.993300	Y 242.219
Cr (205.560 nm)	0.003616	ppm	0.000067	1.86	7.888560	Y 377.433
Cu (324.754 nm)	0.002499	ppm	0.000176	7.05	301.262000	Y 377.433
Fe (238.204 nm)	0.007371	ppm	0.003067	41.61	23.816267	Y_R 377.433
Fe H (259.940 nm)	0.018058 u	ppm	0.004904	27.16	5.563380	Y_R 377.433
K (766.491 nm)	33.841200	ppm	0.034600	0.10	34810.300000	Y_R2 488.368
Li (670.783 nm)	0.032044	ppm	0.002849	8.89	6.960180	Y_R2 488.368
Mg (279.078 nm)	11.567900	ppm	0.019886	0.17	25213.900000	Y 377.433
Mn (257.610 nm)	0.001651	ppm	0.000032	1.96	368.115000	Y 377.433
Mo (202.032 nm)	0.008247	ppm	0.000212	2.57	112.502000	Y 377.433
Na (589.592 nm)	101.052000 o	ppm	0.006569	0.01	50631.900000	Y_R2 488.368
Na H (589.593 nm)	99.945558	ppm	0.365447	0.37	35294.473095	Y_R4
Ni (231.604 nm)	-0.000386 u	ppm	0.001134	> 100.00	7.604460	Y 377.433
P (213.618 nm)	52.907100	ppm	1.928970	3.65	61376.500000	Y 242.219
Pb (220.353 nm)	-0.001633 u	ppm	0.000204	12.49	10.777900	Y 242.219
S (181.972 nm)	18.782139	ppm	0.041432	0.22	8947.289943	Y 377.433
Sb (206.834 nm)	-0.000737 u	ppm	0.003968	> 100.00	-2.365420	Y 377.433
Se (196.026 nm)	0.008561	ppm	0.001016	11.87	14.514300	Y 242.219
Si (288.158 nm)	16.927800	ppm	0.333247	1.97	77119.600000	Y 377.433
Sn (189.925 nm)	-0.006295 u	ppm	0.000867	13.78	0.714124	Y 377.433
Sr (421.552 nm)	0.175675	ppm	0.000091	0.05	20670.391908	Y_R 488.368
Th (288.505 nm)	-0.010807 u	ppm	0.004918	45.51	0.919538	Y 377.433
Ti (336.122 nm)	0.000799	ppm	0.000070	8.79	-195.766000	Y 377.433
Tl (190.794 nm)	-0.001920 u	ppm	0.002484	> 100.00	-10.295500	Y 377.433
U (409.013 nm)	-0.002583 u	ppm	0.001924	74.47	105.377000	Y 377.433
V (292.401 nm)	0.025549	ppm	0.000133	0.52	1044.660000	Y 377.433
Zn (206.200 nm)	0.015198	ppm	0.000251	1.65	56.906500	Y 377.433
Zr (343.823 nm)	0.000558	ppm	0.000080	14.24	-95.908500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130641	12043.800734	0.000111	0.01
Y 377.433	1.128801	521096.837422	0.001585	0.14
Y_R 377.433	1.177190	44483.200000	0.001939	0.16
Y_R 488.368	1.164690	42033.800000	0.000145	0.01
Y_R2 488.368	1.166758	82112.610495	0.004948	0.42
Y_R4	1.189820	36508.500000	0.010122	0.85

Sample Name: 280-116106-A-2-A

Date: 11/6/2018 4:44:13 AM Rack:Tube: 2:73

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001080	ppm	0.000308	28.52	-214.714000	Y 377.433
Al (394.401 nm)	0.131869	ppm	0.000493	0.37	1778.050000	Y 377.433
Al H (396.152 nm)	0.220394 u	ppm	0.012572	5.70	200.201000	Y_R 377.433
As (188.980 nm)	0.021559	ppm	0.001692	7.85	15.087200	Y 242.219
B (249.678 nm)	0.018391	ppm	0.002307	12.54	120.500000	Y 242.219
Ba (493.408 nm)	0.046002	ppm	0.000414	0.90	5011.220000	Y_R 488.368
Be (234.861 nm)	0.000141	ppm	0.000026	18.23	-0.499836	Y_R 488.368
Bi (223.061 nm)	0.001874	ppm	0.001581	84.38	46.432900	Y 377.433
Ca (315.887 nm)	38.067821	ppm	0.080482	0.21	25142.218490	Y_R 377.433
Cd (214.439 nm)	0.000260	ppm	0.000167	64.41	-4.689040	Y 377.433
Co (228.615 nm)	0.000255	ppm	0.000165	64.95	-21.519100	Y 242.219
Cr (205.560 nm)	0.003942	ppm	0.000614	15.59	9.443180	Y 377.433
Cu (324.754 nm)	0.004502	ppm	0.000211	4.70	394.915000	Y 377.433
Fe (238.204 nm)	0.135618	ppm	0.001807	1.33	237.498486	Y_R 377.433
Fe H (259.940 nm)	0.140601 u	ppm	0.001627	1.16	118.016000	Y_R 377.433
K (766.491 nm)	33.685900	ppm	0.062971	0.19	34658.500000	Y_R2 488.368
Li (670.783 nm)	0.028984	ppm	0.000023	0.08	-36.387800	Y_R2 488.368
Mg (279.078 nm)	11.826000	ppm	0.005796	0.05	25776.000000	Y 377.433
Mn (257.610 nm)	0.009080	ppm	0.000052	0.58	1922.480000	Y 377.433
Mo (202.032 nm)	0.007792	ppm	0.000161	2.07	107.327000	Y 377.433
Na (589.592 nm)	100.062000 o	ppm	0.110281	0.11	50134.200000	Y_R2 488.368
Na H (589.593 nm)	99.259802	ppm	0.124758	0.13	35048.065490	Y_R4
Ni (231.604 nm)	0.000153 u	ppm	0.000414	> 100.00	9.692030	Y 377.433
P (213.618 nm)	53.993800	ppm	0.153054	0.28	62637.100000	Y 242.219
Pb (220.353 nm)	-0.002448 u	ppm	0.002291	93.57	8.955170	Y 242.219
S (181.972 nm)	18.904975	ppm	0.015993	0.08	9006.046551	Y 377.433
Sb (206.834 nm)	-0.002444 u	ppm	0.001695	69.34	-5.185750	Y 377.433
Se (196.026 nm)	0.007178	ppm	0.000484	6.74	12.413100	Y 242.219
Si (288.158 nm)	18.412800	ppm	0.151656	0.82	83772.300000	Y 377.433
Sn (189.925 nm)	-0.005489 u	ppm	0.000212	3.87	1.655660	Y 377.433
Sr (421.552 nm)	0.183948	ppm	0.000048	0.03	21630.665630	Y_R 488.368
Th (288.505 nm)	-0.011803 u	ppm	0.010512	89.06	-0.073763	Y 377.433
Ti (336.122 nm)	0.007207	ppm	0.000015	0.20	416.576000	Y 377.433
Tl (190.794 nm)	0.000162 u	ppm	0.002962	> 100.00	-9.127670	Y 377.433
U (409.013 nm)	0.007332	ppm	0.008874	> 100.00	127.802000	Y 377.433
V (292.401 nm)	0.025962	ppm	0.000295	1.14	1063.580000	Y 377.433
Zn (206.200 nm)	0.016078	ppm	0.001239	7.71	59.960400	Y 377.433
Zr (343.823 nm)	0.003067	ppm	0.000058	1.88	5.762670	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.126209	11996.597722	0.003717	0.33
Y 377.433	1.120499	517264.436852	0.003708	0.33
Y_R 377.433	1.164600	44007.500000	0.008189	0.70
Y_R 488.368	1.157410	41770.800000	0.007332	0.63
Y_R2 488.368	1.157059	81430.036690	0.001110	0.10
Y_R4	1.175980	36084.100000	0.000278	0.02

Sample Name: 280-116106-A-2-Asd@5

Date: 11/6/2018 4:47:39 AM Rack:Tube: 2:74

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000896	ppm	0.000099	11.01	-215.241000	Y 377.433
Al (394.401 nm)	0.026553	ppm	0.000855	3.22	427.906000	Y 377.433
Al H (396.152 nm)	0.148450 u	ppm	0.002145	1.45	39.578100	Y_R 377.433
As (188.980 nm)	0.006048	ppm	0.000331	5.47	-6.642710	Y 242.219
B (249.678 nm)	-0.005208 u	ppm	0.000366	7.03	25.781500	Y 242.219
Ba (493.408 nm)	0.007858	ppm	0.000373	4.75	1520.200000	Y_R 488.368
Be (234.861 nm)	0.000164	ppm	0.000008	5.08	2.229700	Y_R 488.368
Bi (223.061 nm)	-0.003847 u	ppm	0.000214	5.55	36.945400	Y 377.433
Ca (315.887 nm)	7.528727	ppm	0.003060	0.04	4970.551728	Y_R 377.433
Cd (214.439 nm)	0.000118 u	ppm	0.000220	> 100.00	-8.210200	Y 377.433
Co (228.615 nm)	0.000453	ppm	0.000066	14.67	-17.142300	Y 242.219
Cr (205.560 nm)	0.000787	ppm	0.000351	44.57	-5.598890	Y 377.433
Cu (324.754 nm)	0.001222	ppm	0.000092	7.52	255.505000	Y 377.433
Fe (238.204 nm)	0.026948	ppm	0.002757	10.23	56.434488	Y_R 377.433
Fe H (259.940 nm)	0.035306 u	ppm	0.003491	9.89	21.391500	Y_R 377.433
K (766.491 nm)	6.497270	ppm	0.021399	0.33	8085.960000	Y_R2 488.368
Li (670.783 nm)	0.015822	ppm	0.001871	11.82	-222.801000	Y_R2 488.368
Mg (279.078 nm)	2.342810	ppm	0.000516	0.02	5117.760000	Y 377.433
Mn (257.610 nm)	0.001815	ppm	0.000022	1.22	402.333000	Y 377.433
Mo (202.032 nm)	0.001699	ppm	0.000136	7.98	38.012500	Y 377.433
Na (589.592 nm)	19.989400	ppm	0.035575	0.18	9906.500000	Y_R2 488.368
Na H (589.593 nm)	21.076677 u	ppm	0.072512	0.34	7134.688781	Y_R4
Ni (231.604 nm)	0.001013	ppm	0.000314	30.97	12.965000	Y 377.433
P (213.618 nm)	10.456700	ppm	0.090828	0.87	12129.700000	Y 242.219
Pb (220.353 nm)	-0.004023 u	ppm	0.000376	9.35	5.483230	Y 242.219
S (181.972 nm)	3.680184	ppm	0.016313	0.44	1732.479401	Y 377.433
Sb (206.834 nm)	0.000697	ppm	0.000860	> 100.00	0.006708	Y 377.433
Se (196.026 nm)	0.005171	ppm	0.000958	18.52	9.412530	Y 242.219
Si (288.158 nm)	3.474630	ppm	0.018092	0.52	16850.800000	Y 377.433
Sn (189.925 nm)	-0.005834 u	ppm	0.000422	7.24	1.252850	Y 377.433
Sr (421.552 nm)	0.035863	ppm	0.000638	1.78	4441.122250	Y_R 488.368
Th (288.505 nm)	-0.007443 u	ppm	0.000159	2.13	6.108460	Y 377.433
Ti (336.122 nm)	0.001998	ppm	0.000100	5.01	-156.303000	Y 377.433
Tl (190.794 nm)	0.002587	ppm	0.002291	88.55	-7.410850	Y 377.433
U (409.013 nm)	-0.004758 u	ppm	0.005604	> 100.00	103.235000	Y 377.433
V (292.401 nm)	0.005565	ppm	0.000232	4.16	75.207200	Y 377.433
Zn (206.200 nm)	0.003495	ppm	0.000208	5.95	16.462100	Y 377.433
Zr (343.823 nm)	0.000964	ppm	0.000040	4.13	-79.489000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.150228	12252.450310	0.000944	0.08
Y 377.433	1.145864	528973.797648	0.002309	0.20
Y_R 377.433	1.167580	44120.300000	0.000023	0.00
Y_R 488.368	1.155670	41708.200000	0.014666	1.27
Y_R2 488.368	1.165182	82001.709049	0.001554	0.13
Y_R4	1.174320	36033.100000	0.010378	0.88

Sample Name: 280-116106-A-2-B MS

Date: 11/6/2018 4:50:50 AM Rack:Tube: 2:75

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.056617	ppm	0.000472	0.83	1268.340000	Y 377.433
Al (394.401 nm)	2.345000	ppm	0.000263	0.01	29655.000000	Y 377.433
Al H (396.152 nm)	2.202880	ppm	0.005186	0.24	3877.060000	Y_R 377.433
As (188.980 nm)	1.085000	ppm	0.001715	0.16	1505.080000	Y 242.219
B (249.678 nm)	1.113660	ppm	0.002485	0.22	4517.850000	Y 242.219
Ba (493.408 nm)	2.207540	ppm	0.003441	0.16	202834.000000	Y_R 488.368
Be (234.861 nm)	0.054263	ppm	0.000108	0.20	2786.860000	Y_R 488.368
Bi (223.061 nm)	2.155880	ppm	0.009760	0.45	3597.010000	Y 377.433
Ca (315.887 nm)	90.292731	ppm	0.050395	0.06	59638.227242	Y_R 377.433
Cd (214.439 nm)	0.107842	ppm	0.000108	0.10	2674.110000	Y 377.433
Co (228.615 nm)	0.530647	ppm	0.001867	0.35	12608.900000	Y 242.219
Cr (205.560 nm)	0.223876	ppm	0.000769	0.34	1054.930000	Y 377.433
Cu (324.754 nm)	0.280181	ppm	0.000318	0.11	13706.900000	Y 377.433
Fe (238.204 nm)	1.229179	ppm	0.004767	0.39	2059.555623	Y_R 377.433
Fe H (259.940 nm)	1.221960 u	ppm	0.001484	0.12	1110.320000	Y_R 377.433
K (766.491 nm)	89.195000	ppm	0.120328	0.13	88909.800000	Y_R2 488.368
Li (670.783 nm)	1.126130	ppm	0.002384	0.21	15503.200000	Y_R2 488.368
Mg (279.078 nm)	65.601600	ppm	0.033934	0.05	142897.000000	Y 377.433
Mn (257.610 nm)	0.550171	ppm	0.000030	0.01	115132.000000	Y 377.433
Mo (202.032 nm)	1.114300	ppm	0.000506	0.05	12695.500000	Y 377.433
Na (589.592 nm)	150.970000 o	ppm	0.560199	0.37	75677.200000	Y_R2 488.368
Na H (589.593 nm)	154.944829	ppm	0.446926	0.29	54718.404039	Y_R4
Ni (231.604 nm)	0.530290	ppm	0.000905	0.17	2043.080000	Y 377.433
P (213.618 nm)	66.007800 bo	ppm	0.143901	0.22	76561.900000	Y 242.219
Pb (220.353 nm)	0.530096	ppm	0.001763	0.33	1198.620000	Y 242.219
S (181.972 nm)	21.281576	ppm	0.031723	0.15	10145.711171	Y 377.433
Sb (206.834 nm)	0.549259	ppm	0.003559	0.65	891.161000	Y 377.433
Se (196.026 nm)	2.170880	ppm	0.002833	0.13	3266.080000	Y 242.219
Si (288.158 nm)	27.029300	ppm	0.198310	0.73	122374.000000	Y 377.433
Sn (189.925 nm)	2.189890	ppm	0.004242	0.19	2564.460000	Y 377.433
Sr (421.552 nm)	1.273473	ppm	0.003926	0.31	148101.455370	Y_R 488.368
Th (288.505 nm)	1.038590	ppm	0.013849	1.33	1092.160000	Y 377.433
Ti (336.122 nm)	1.106570	ppm	0.000942	0.09	105085.000000	Y 377.433
Tl (190.794 nm)	2.137250	ppm	0.000972	0.05	1213.420000	Y 377.433
U (409.013 nm)	2.263280	ppm	0.012057	0.53	5231.230000	Y 377.433
V (292.401 nm)	0.570155	ppm	0.000386	0.07	27350.200000	Y 377.433
Zn (206.200 nm)	0.552796	ppm	0.001960	0.35	1915.020000	Y 377.433
Zr (343.823 nm)	0.547443	ppm	0.000127	0.02	22066.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.097321	11688.873237	0.002174	0.20
Y 377.433	1.098902	507294.473109	0.001391	0.13
Y_R 377.433	1.156980	43719.800000	0.003747	0.32
Y_R 488.368	1.152160	41581.400000	0.001995	0.17
Y_R2 488.368	1.159211	81581.514169	0.003004	0.26
Y_R4	1.183320	36309.200000	0.009182	0.78

Sample Name: 280-116106-A-2-C MSD

Date: 11/6/2018 4:54:20 AM Rack:Tube: 2:76

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.056114	ppm	0.000095	0.17	1254.390000	Y 377.433
Al (394.401 nm)	2.311690	ppm	0.001917	0.08	29231.400000	Y 377.433
Al H (396.152 nm)	2.175510	ppm	0.004150	0.19	3821.940000	Y_R 377.433
As (188.980 nm)	1.060090	ppm	0.000973	0.09	1470.180000	Y 242.219
B (249.678 nm)	1.078260	ppm	0.000990	0.09	4375.720000	Y 242.219
Ba (493.408 nm)	2.158570	ppm	0.005032	0.23	198352.000000	Y_R 488.368
Be (234.861 nm)	0.053217	ppm	0.000129	0.24	2732.930000	Y_R 488.368
Bi (223.061 nm)	2.116090	ppm	0.005859	0.28	3531.430000	Y 377.433
Ca (315.887 nm)	89.418248	ppm	0.171665	0.19	59060.605081	Y_R 377.433
Cd (214.439 nm)	0.106094	ppm	0.000034	0.03	2630.580000	Y 377.433
Co (228.615 nm)	0.518207	ppm	0.000682	0.13	12312.200000	Y 242.219
Cr (205.560 nm)	0.220667	ppm	0.000140	0.06	1039.740000	Y 377.433
Cu (324.754 nm)	0.274380	ppm	0.000894	0.33	13427.400000	Y 377.433
Fe (238.204 nm)	1.215798	ppm	0.000548	0.05	2037.260624	Y_R 377.433
Fe H (259.940 nm)	1.204790 u	ppm	0.009718	0.81	1094.570000	Y_R 377.433
K (766.491 nm)	87.525100	ppm	0.088811	0.10	87277.800000	Y_R2 488.368
Li (670.783 nm)	1.102220	ppm	0.000535	0.05	15164.500000	Y_R2 488.368
Mg (279.078 nm)	64.561600	ppm	0.117455	0.18	140632.000000	Y 377.433
Mn (257.610 nm)	0.540229	ppm	0.000918	0.17	113052.000000	Y 377.433
Mo (202.032 nm)	1.078270	ppm	0.002271	0.21	12285.700000	Y 377.433
Na (589.592 nm)	148.262000 o	ppm	0.037161	0.03	74317.400000	Y_R2 488.368
Na H (589.593 nm)	152.474611	ppm	0.759051	0.50	53841.193630	Y_R4
Ni (231.604 nm)	0.522804	ppm	0.000192	0.04	2014.360000	Y 377.433
P (213.618 nm)	64.934100 bo	ppm	0.548022	0.84	75316.500000	Y 242.219
Pb (220.353 nm)	0.518167	ppm	0.001349	0.26	1171.990000	Y 242.219
S (181.972 nm)	21.060669	ppm	0.034222	0.16	10040.121294	Y 377.433
Sb (206.834 nm)	0.530354	ppm	0.002928	0.55	860.461000	Y 377.433
Se (196.026 nm)	2.126320	ppm	0.000184	0.01	3199.070000	Y 242.219
Si (288.158 nm)	28.685000	ppm	0.036267	0.13	129791.000000	Y 377.433
Sn (189.925 nm)	2.123160	ppm	0.000196	0.01	2486.570000	Y 377.433
Sr (421.552 nm)	1.247936	ppm	0.004344	0.35	145137.155748	Y_R 488.368
Th (288.505 nm)	1.016340	ppm	0.000765	0.08	1068.990000	Y 377.433
Ti (336.122 nm)	1.070490	ppm	0.002189	0.20	101652.000000	Y 377.433
Tl (190.794 nm)	2.096540	ppm	0.009350	0.45	1190.170000	Y 377.433
U (409.013 nm)	2.205000	ppm	0.007894	0.36	5099.700000	Y 377.433
V (292.401 nm)	0.558776	ppm	0.000897	0.16	26801.400000	Y 377.433
Zn (206.200 nm)	0.546326	ppm	0.000177	0.03	1892.660000	Y 377.433
Zr (343.823 nm)	0.529228	ppm	0.000988	0.19	21328.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090231	11613.347743	0.002340	0.21
Y 377.433	1.087595	502074.455425	0.000002	0.00
Y_R 377.433	1.137960	43001.000000	0.002197	0.19
Y_R 488.368	1.136940	41032.200000	0.001208	0.11
Y_R2 488.368	1.153119	81152.752670	0.002165	0.19
Y_R4	1.180240	36214.800000	0.010762	0.91

Sample Name: 280-116106-A-2-Apds

Date: 11/6/2018 4:57:50 AM Rack:Tube: 2:77

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048443	ppm	0.000215	0.44	1089.680000	Y 377.433
Al (394.401 nm)	1.170500	ppm	0.001959	0.17	14742.700000	Y 377.433
Al H (396.152 nm)	1.238020	ppm	0.003565	0.29	1892.880000	Y_R 377.433
As (188.980 nm)	0.224122	ppm	0.002326	1.04	298.867000	Y 242.219
B (249.678 nm)	0.121906	ppm	0.000334	0.27	535.797000	Y 242.219
Ba (493.408 nm)	0.147384	ppm	0.000360	0.24	14290.300000	Y_R 488.368
Be (234.861 nm)	0.052009	ppm	0.000538	1.03	2670.920000	Y_R 488.368
Bi (223.061 nm)	0.002091 u	ppm	0.003324	> 100.00	46.959900	Y 377.433
Ca (315.887 nm)	57.412761	ppm	0.027780	0.05	37920.133788	Y_R 377.433
Cd (214.439 nm)	0.052847	ppm	0.000234	0.44	1304.720000	Y 377.433
Co (228.615 nm)	0.051945	ppm	0.000013	0.02	1207.870000	Y 242.219
Cr (205.560 nm)	0.055831	ppm	0.000599	1.07	256.861000	Y 377.433
Cu (324.754 nm)	0.057276	ppm	0.000046	0.08	2931.700000	Y 377.433
Fe (238.204 nm)	1.166412	ppm	0.000841	0.07	1954.975606	Y_R 377.433
Fe H (259.940 nm)	1.163900 u	ppm	0.000922	0.08	1057.040000	Y_R 377.433
K (766.491 nm)	54.158000	ppm	0.015310	0.03	54666.700000	Y_R2 488.368
Li (670.783 nm)	0.131775	ppm	0.001110	0.84	1419.510000	Y_R2 488.368
Mg (279.078 nm)	32.268100	ppm	0.025494	0.08	70300.900000	Y 377.433
Mn (257.610 nm)	0.061407	ppm	0.000049	0.08	12870.500000	Y 377.433
Mo (202.032 nm)	0.059547	ppm	0.000016	0.03	696.120000	Y 377.433
Na (589.592 nm)	117.751000 o	ppm	0.176794	0.15	59019.600000	Y_R2 488.368
Na H (589.593 nm)	118.593542	ppm	0.287312	0.24	41941.644040	Y_R4
Ni (231.604 nm)	0.051992	ppm	0.001957	3.76	208.652000	Y 377.433
P (213.618 nm)	55.310300 o	ppm	0.491828	0.89	64161.900000	Y 242.219
Pb (220.353 nm)	0.099721	ppm	0.001998	2.00	237.704000	Y 242.219
S (181.972 nm)	18.671391	ppm	0.016167	0.09	8895.655216	Y 377.433
Sb (206.834 nm)	0.100009	ppm	0.000352	0.35	163.305000	Y 377.433
Se (196.026 nm)	0.210731	ppm	0.000670	0.32	318.259000	Y 242.219
Si (288.158 nm)	23.497000	ppm	0.297276	1.27	106549.000000	Y 377.433
Sn (189.925 nm)	0.093524	ppm	0.003168	3.39	117.239000	Y 377.433
Sr (421.552 nm)	0.229847	ppm	0.000369	0.16	26958.731932	Y_R 488.368
Th (288.505 nm)	0.190578	ppm	0.000893	0.47	213.421000	Y 377.433
Ti (336.122 nm)	0.059250	ppm	0.000101	0.17	5415.120000	Y 377.433
Tl (190.794 nm)	0.203018	ppm	0.002950	1.45	106.852000	Y 377.433
U (409.013 nm)	0.538640	ppm	0.008339	1.55	1336.360000	Y 377.433
V (292.401 nm)	0.077373	ppm	0.000135	0.17	3533.690000	Y 377.433
Zn (206.200 nm)	0.229450	ppm	0.001726	0.75	797.504000	Y 377.433
Zr (343.823 nm)	0.054546	ppm	0.000154	0.28	2091.960000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113293	11859.011332	0.003481	0.31
Y 377.433	1.109357	512120.771787	0.002586	0.23
Y_R 377.433	1.155370	43658.700000	0.002551	0.22
Y_R 488.368	1.155570	41704.500000	0.003918	0.34
Y_R2 488.368	1.133924	79801.845218	0.000897	0.08
Y_R4	1.166450	35791.500000	0.008195	0.70

Sample Name: 280-116106-A-3-A

Date: 11/6/2018 5:01:18 AM Rack:Tube: 2:78

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001163	ppm	0.000364	31.31	-208.808000	Y 377.433
Al (394.401 nm)	0.013074	ppm	0.000359	2.74	324.896000	Y 377.433
Al H (396.152 nm)	0.091511 u	ppm	0.007125	7.79	8.189740	Y_R 377.433
As (188.980 nm)	0.003015	ppm	0.001188	39.39	-10.890800	Y 242.219
B (249.678 nm)	0.011720	ppm	0.000063	0.54	93.754500	Y 242.219
Ba (493.408 nm)	0.081152	ppm	0.000005	0.01	8227.940000	Y_R 488.368
Be (234.861 nm)	0.000202	ppm	0.000082	40.67	4.422120	Y_R 488.368
Bi (223.061 nm)	0.001217 u	ppm	0.001759	> 100.00	45.287300	Y 377.433
Ca (315.887 nm)	53.779808	ppm	0.139451	0.26	35520.260741	Y_R 377.433
Cd (214.439 nm)	0.000105 u	ppm	0.000178	> 100.00	-8.550600	Y 377.433
Co (228.615 nm)	0.000259	ppm	0.000173	66.91	-21.792300	Y 242.219
Cr (205.560 nm)	0.004410	ppm	0.000247	5.61	11.693500	Y 377.433
Cu (324.754 nm)	0.000033	ppm	0.000009	28.27	167.915000	Y 377.433
Fe (238.204 nm)	0.010914	ppm	0.006590	60.38	29.719684	Y_R 377.433
Fe H (259.940 nm)	0.016863 u	ppm	0.005653	33.53	4.466910	Y_R 377.433
K (766.491 nm)	4.934030	ppm	0.019737	0.40	6558.140000	Y_R2 488.368
Li (670.783 nm)	0.020744	ppm	0.003652	17.61	-153.088000	Y_R2 488.368
Mg (279.078 nm)	12.870000	ppm	0.016484	0.13	28049.800000	Y 377.433
Mn (257.610 nm)	0.000666	ppm	0.000026	3.85	161.938000	Y 377.433
Mo (202.032 nm)	0.004698	ppm	0.000597	12.72	72.121400	Y 377.433
Na (589.592 nm)	22.483600	ppm	0.051784	0.23	11158.500000	Y_R2 488.368
Na H (589.593 nm)	23.865408 u	ppm	0.057139	0.24	8123.247851	Y_R4
Ni (231.604 nm)	-0.001240 u	ppm	0.000610	49.20	4.330090	Y 377.433
P (213.618 nm)	0.100362	ppm	0.000853	0.85	115.322000	Y 242.219
Pb (220.353 nm)	-0.003225 u	ppm	0.000057	1.76	7.323200	Y 242.219
S (181.972 nm)	18.809700	ppm	0.052246	0.28	8961.332603	Y 377.433
Sb (206.834 nm)	-0.002028 u	ppm	0.000593	29.25	-4.462170	Y 377.433
Se (196.026 nm)	0.006084	ppm	0.004582	75.31	10.787600	Y 242.219
Si (288.158 nm)	12.340600	ppm	0.064462	0.52	56569.600000	Y 377.433
Sn (189.925 nm)	-0.007488 u	ppm	0.001685	22.50	-0.678705	Y 377.433
Sr (421.552 nm)	0.259867	ppm	0.001279	0.49	30443.270811	Y_R 488.368
Th (288.505 nm)	-0.011990 u	ppm	0.002913	24.29	0.918625	Y 377.433
Ti (336.122 nm)	0.000871	ppm	0.000096	11.00	-145.394000	Y 377.433
Tl (190.794 nm)	0.000703 u	ppm	0.001981	> 100.00	-8.958540	Y 377.433
U (409.013 nm)	0.056996	ppm	0.014969	26.26	239.907000	Y 377.433
V (292.401 nm)	0.007633	ppm	0.000182	2.38	172.181000	Y 377.433
Zn (206.200 nm)	0.056797	ppm	0.000617	1.09	200.675000	Y 377.433
Zr (343.823 nm)	0.000542	ppm	0.000030	5.49	-96.562500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.124510	11978.500820	0.000540	0.05
Y 377.433	1.119128	516631.509658	0.001621	0.14
Y_R 377.433	1.143710	43218.400000	0.003013	0.26
Y_R 488.368	1.144940	41321.000000	0.004774	0.42
Y_R2 488.368	1.147077	80727.504656	0.003579	0.31
Y_R4	1.188660	36473.200000	0.003696	0.31

Sample Name: 280-116106-A-4-A

Date: 11/6/2018 5:04:42 AM Rack:Tube: 2:79

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000779	ppm	0.000777	99.76	-219.519000	Y 377.433
Al (394.401 nm)	0.010116	ppm	0.000497	4.92	287.884000	Y 377.433
Al H (396.152 nm)	0.085396 u	ppm	0.009909	11.60	-3.657540	Y_R 377.433
As (188.980 nm)	0.001161 u	ppm	0.002279	> 100.00	-13.488500	Y 242.219
B (249.678 nm)	0.010695	ppm	0.000367	3.43	89.642500	Y 242.219
Ba (493.408 nm)	0.078892	ppm	0.000075	0.09	8021.140000	Y_R 488.368
Be (234.861 nm)	0.000146	ppm	0.000064	43.92	1.617410	Y_R 488.368
Bi (223.061 nm)	0.001130 u	ppm	0.004423	> 100.00	45.142700	Y 377.433
Ca (315.887 nm)	52.366884	ppm	0.015973	0.03	34586.997216	Y_R 377.433
Cd (214.439 nm)	0.000275	ppm	0.000025	9.08	-4.310100	Y 377.433
Co (228.615 nm)	0.000788	ppm	0.000187	23.72	-9.258810	Y 242.219
Cr (205.560 nm)	0.003981	ppm	0.000335	8.41	9.646230	Y 377.433
Cu (324.754 nm)	0.000348	ppm	0.000183	52.56	183.296000	Y 377.433
Fe (238.204 nm)	0.002987	ppm	0.000668	22.35	16.511852	Y_R 377.433
Fe H (259.940 nm)	0.013123 u	ppm	0.001692	12.89	1.035610	Y_R 377.433
K (766.491 nm)	4.748650	ppm	0.015863	0.33	6376.960000	Y_R2 488.368
Li (670.783 nm)	0.018244	ppm	0.001270	6.96	-188.498000	Y_R2 488.368
Mg (279.078 nm)	12.572700	ppm	0.011544	0.09	27402.100000	Y 377.433
Mn (257.610 nm)	0.000480	ppm	0.000019	4.06	123.016000	Y 377.433
Mo (202.032 nm)	0.004278	ppm	0.000008	0.18	67.348500	Y 377.433
Na (589.592 nm)	22.052900	ppm	0.192710	0.87	10942.100000	Y_R2 488.368
Na H (589.593 nm)	23.199385 u	ppm	0.075396	0.32	7885.692075	Y_R4
Ni (231.604 nm)	-0.000289 u	ppm	0.001033	> 100.00	7.971740	Y 377.433
P (213.618 nm)	0.095142	ppm	0.002438	2.56	109.269000	Y 242.219
Pb (220.353 nm)	-0.002291 u	ppm	0.001660	72.45	9.430810	Y 242.219
S (181.972 nm)	18.401600	ppm	0.063923	0.35	8766.334207	Y 377.433
Sb (206.834 nm)	-0.004102 u	ppm	0.000227	5.55	-7.872180	Y 377.433
Se (196.026 nm)	0.007127	ppm	0.000993	13.93	12.358000	Y 242.219
Si (288.158 nm)	12.125100	ppm	0.062250	0.51	55604.200000	Y 377.433
Sn (189.925 nm)	-0.007772 u	ppm	0.000101	1.30	-1.009860	Y 377.433
Sr (421.552 nm)	0.251906	ppm	0.000368	0.15	29519.145445	Y_R 488.368
Th (288.505 nm)	-0.014737 u	ppm	0.007982	54.16	-1.950970	Y 377.433
Ti (336.122 nm)	0.000843	ppm	0.000031	3.64	-151.640000	Y 377.433
Tl (190.794 nm)	-0.003980 u	ppm	0.004163	> 100.00	-11.628300	Y 377.433
U (409.013 nm)	0.057536	ppm	0.006959	12.09	241.261000	Y 377.433
V (292.401 nm)	0.007540	ppm	0.000268	3.55	167.262000	Y 377.433
Zn (206.200 nm)	0.055874	ppm	0.000090	0.16	197.486000	Y 377.433
Zr (343.823 nm)	0.000394	ppm	0.000367	93.01	-102.554000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.128100	12016.740068	0.002510	0.22
Y 377.433	1.125189	519429.199170	0.002932	0.26
Y_R 377.433	1.163970	43983.800000	0.001886	0.16
Y_R 488.368	1.165920	42078.100000	0.003037	0.26
Y_R2 488.368	1.156581	81396.398336	0.005903	0.51
Y_R4	1.174520	36039.100000	0.010809	0.92

Sample Name: CCVH-5408055

Date: 11/6/2018 5:08:09 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001177	ppm	0.000064	5.47	-320.413000	Y 377.433
Al (394.401 nm)	51.970800 o	ppm	0.053888	0.10	647233.000000	Y 377.433
Al H (396.152 nm)	50.798600	ppm	0.033441	0.07	83545.300000	Y_R 377.433
As (188.980 nm)	-0.002988 u	ppm	0.000388	12.98	-21.427700	Y 242.219
B (249.678 nm)	-0.013499 u	ppm	0.000803	5.95	-23.914500	Y 242.219
Ba (493.408 nm)	-0.000192 u	ppm	0.000254	> 100.00	820.415000	Y_R 488.368
Be (234.861 nm)	0.000216 u	ppm	0.000378	> 100.00	-705.586000	Y_R 488.368
Bi (223.061 nm)	1.016230	ppm	0.005874	0.58	1724.850000	Y 377.433
Ca (315.887 nm)	-0.005444 u	ppm	0.007970	> 100.00	4.613191	Y_R 377.433
Cd (214.439 nm)	0.000195	ppm	0.000069	35.39	-6.299070	Y 377.433
Co (228.615 nm)	0.001509	ppm	0.000293	19.45	64.077200	Y 242.219
Cr (205.560 nm)	0.000054 u	ppm	0.000189	> 100.00	-10.056900	Y 377.433
Cu (324.754 nm)	0.000536	ppm	0.000144	26.83	691.866000	Y 377.433
Fe (238.204 nm)	50.207520 o	ppm	0.187217	0.37	83665.770388	Y_R 377.433
Fe H (259.940 nm)	50.420900	ppm	0.007963	0.02	46257.800000	Y_R 377.433
K (766.491 nm)	0.170272	ppm	0.002826	1.66	1902.330000	Y_R2 488.368
Li (670.783 nm)	0.018161	ppm	0.002289	12.60	-189.669000	Y_R2 488.368
Mg (279.078 nm)	-0.033519 u	ppm	0.001131	3.38	-214.164000	Y 377.433
Mn (257.610 nm)	0.000325	ppm	0.000035	10.75	90.557300	Y 377.433
Mo (202.032 nm)	-0.001078 u	ppm	0.000297	27.50	6.411020	Y 377.433
Na (589.592 nm)	256.958000 o	ppm	0.864252	0.34	128960.000000	Y_R2 488.368
Na H (589.593 nm)	257.511276	ppm	0.386603	0.15	91560.086502	Y_R4
Ni (231.604 nm)	-0.001326 u	ppm	0.000388	29.27	11.541900	Y 377.433
P (213.618 nm)	-0.012100 u	ppm	0.000326	2.69	-16.444700	Y 242.219
Pb (220.353 nm)	-0.000924 u	ppm	0.004014	> 100.00	23.122000	Y 242.219
S (181.972 nm)	5.153285	ppm	0.035825	0.70	2435.492124	Y 377.433
Sb (206.834 nm)	0.001694 u	ppm	0.003164	> 100.00	5.820930	Y 377.433
Se (196.026 nm)	0.001775 u	ppm	0.002582	> 100.00	-8.663000	Y 242.219
Si (288.158 nm)	-0.189805 u	ppm	0.001000	0.53	434.500000	Y 377.433
Sn (189.925 nm)	-0.008613 u	ppm	0.000002	0.02	-1.992050	Y 377.433
Sr (421.552 nm)	-0.000074 u	ppm	0.000059	80.03	275.473412	Y_R 488.368
Th (288.505 nm)	5.047330	ppm	0.002882	0.06	5415.180000	Y 377.433
Ti (336.122 nm)	0.000816	ppm	0.000169	20.73	-287.391000	Y 377.433
Tl (190.794 nm)	-0.003454 u	ppm	0.002722	78.83	-14.157400	Y 377.433
U (409.013 nm)	10.595300	ppm	0.014917	0.14	24359.800000	Y 377.433
V (292.401 nm)	-0.003867 u	ppm	0.000142	3.67	-393.106000	Y 377.433
Zn (206.200 nm)	-0.000637 u	ppm	0.000117	18.34	7.583200	Y 377.433
Zr (343.823 nm)	-0.006811 u	ppm	0.000119	1.74	-394.538000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.092035	11632.561077	0.003857	0.35
Y 377.433	1.089231	502829.556891	0.004113	0.38
Y_R 377.433	1.137250	42974.000000	0.006410	0.56
Y_R 488.368	1.143080	41253.800000	0.027643	2.42
Y_R2 488.368	1.141532	80337.276529	0.016958	1.49
Y_R4	1.184230	36337.200000	0.007551	0.64

Sample Name: CCV-5407762

Date: 11/6/2018 5:11:46 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.517409	ppm	0.001315	0.25	14077.000000	Y 377.433
Al (394.401 nm)	0.512608	ppm	0.000810	0.16	6594.790000	Y 377.433
Al H (396.152 nm)	0.561652 u	ppm	0.006138	1.09	908.409000	Y_R 377.433
As (188.980 nm)	1.008510	ppm	0.002530	0.25	1397.900000	Y 242.219
B (249.678 nm)	0.491117	ppm	0.002652	0.54	2017.800000	Y 242.219
Ba (493.408 nm)	0.508375	ppm	0.000869	0.17	47328.900000	Y_R 488.368
Be (234.861 nm)	0.523611	ppm	0.001516	0.29	27073.500000	Y_R 488.368
Bi (223.061 nm)	-0.001976 u	ppm	0.004034	> 100.00	40.433000	Y 377.433
Ca (315.887 nm)	5.104276	ppm	0.009384	0.18	3369.263613	Y_R 377.433
Cd (214.439 nm)	0.522881	ppm	0.001030	0.20	13008.600000	Y 377.433
Co (228.615 nm)	0.509750	ppm	0.000228	0.04	12089.000000	Y 242.219
Cr (205.560 nm)	0.531214	ppm	0.002518	0.47	2523.840000	Y 377.433
Cu (324.754 nm)	0.518814	ppm	0.001119	0.22	25170.000000	Y 377.433
Fe (238.204 nm)	2.553654	ppm	0.000471	0.02	4266.355321	Y_R 377.433
Fe H (259.940 nm)	2.572590 u	ppm	0.008151	0.32	2349.730000	Y_R 377.433
K (766.491 nm)	51.442700	ppm	0.111343	0.22	52012.900000	Y_R2 488.368
Li (670.783 nm)	1.047400	ppm	0.003012	0.29	14388.000000	Y_R2 488.368
Mg (279.078 nm)	20.613200	ppm	0.008762	0.04	44916.300000	Y 377.433
Mn (257.610 nm)	0.517904	ppm	0.000097	0.02	108381.000000	Y 377.433
Mo (202.032 nm)	0.523647	ppm	0.000122	0.02	5975.980000	Y 377.433
Na (589.592 nm)	26.028300	ppm	0.004012	0.02	12932.700000	Y_R2 488.368
Na H (589.593 nm)	27.705064 u	ppm	0.153576	0.55	9452.151284	Y_R4
Ni (231.604 nm)	0.517508	ppm	0.001755	0.34	1993.350000	Y 377.433
P (213.618 nm)	1.041850	ppm	0.010747	1.03	1184.170000	Y 242.219
Pb (220.353 nm)	1.018470	ppm	0.003909	0.38	2287.470000	Y 242.219
S (181.972 nm)	-0.001367 u	ppm	0.002734	> 100.00	-24.392137	Y 377.433
Sb (206.834 nm)	1.041120	ppm	0.000004	0.00	1710.630000	Y 377.433
Se (196.026 nm)	1.039290	ppm	0.008377	0.81	1564.310000	Y 242.219
Si (288.158 nm)	4.991990	ppm	0.029114	0.58	23648.400000	Y 377.433
Sn (189.925 nm)	1.039180	ppm	0.006858	0.66	1221.160000	Y 377.433
Sr (421.552 nm)	0.518546	ppm	0.000442	0.09	60470.678708	Y_R 488.368
Th (288.505 nm)	-0.023376 u	ppm	0.003000	12.83	-44.035500	Y 377.433
Ti (336.122 nm)	0.523840	ppm	0.000194	0.04	49459.400000	Y 377.433
Tl (190.794 nm)	1.044450	ppm	0.002354	0.23	589.178000	Y 377.433
U (409.013 nm)	-0.013701 u	ppm	0.006504	47.47	37.732000	Y 377.433
V (292.401 nm)	0.515515	ppm	0.000018	0.00	24625.600000	Y 377.433
Zn (206.200 nm)	0.520094	ppm	0.004012	0.77	1802.140000	Y 377.433
Zr (343.823 nm)	0.521710	ppm	0.000294	0.06	21024.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122873	11961.060996	0.000070	0.01
Y 377.433	1.117889	516059.470582	0.000301	0.03
Y_R 377.433	1.151400	43508.800000	0.002829	0.25
Y_R 488.368	1.149180	41473.700000	0.001546	0.13
Y_R2 488.368	1.153331	81167.702225	0.000338	0.03
Y_R4	1.169570	35887.200000	0.012014	1.03

Sample Name: CCB

Date: 11/6/2018 5:15:16 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000217	ppm	0.000161	74.14	-232.994000	Y 377.433
Al (394.401 nm)	0.000386 u	ppm	0.001483	> 100.00	89.046900	Y 377.433
Al H (396.152 nm)	0.131125 Zu	ppm	0.005302	4.04	0.793129 Z	Y_R 377.433
As (188.980 nm)	-0.000303 u	ppm	0.000679	> 100.00	-15.539700	Y 242.219
B (249.678 nm)	-0.010340 u	ppm	0.000740	7.15	5.184130	Y 242.219
Ba (493.408 nm)	-0.000938 u	ppm	0.000106	11.34	715.160000	Y_R 488.368
Be (234.861 nm)	0.000109	ppm	0.000017	15.38	-0.193849	Y_R 488.368
Bi (223.061 nm)	-0.003460 u	ppm	0.001907	55.10	37.567600	Y 377.433
Ca (315.887 nm)	0.006045	ppm	0.001228	20.31	1.673351	Y_R 377.433
Cd (214.439 nm)	0.000185	ppm	0.000066	35.64	-6.548270	Y 377.433
Co (228.615 nm)	0.000349	ppm	0.000252	72.17	-19.690300	Y 242.219
Cr (205.560 nm)	0.000336	ppm	0.000331	98.44	-7.740230	Y 377.433
Cu (324.754 nm)	0.000254	ppm	0.000276	> 100.00	215.645000	Y 377.433
Fe (238.204 nm)	-0.004389 u	ppm	0.001169	26.64	4.221734	Y_R 377.433
Fe H (259.940 nm)	0.011777 u	ppm	0.002107	17.89	-0.200080	Y_R 377.433
K (766.491 nm)	-0.247493 u	ppm	0.077390	31.27	1494.030000	Y_R2 488.368
Li (670.783 nm)	0.015629 Z	ppm	0.003029	19.38	-225.540000 Z	Y_R2 488.368
Mg (279.078 nm)	-0.002392 u	ppm	0.000774	32.34	9.094090	Y 377.433
Mn (257.610 nm)	0.000000 u	ppm	0.000028	> 100.00	22.599400	Y 377.433
Mo (202.032 nm)	0.000001 u	ppm	0.000128	> 100.00	18.694800	Y 377.433
Na (589.592 nm)	0.115967	ppm	0.007122	6.14	-77.752700	Y_R2 488.368
Na H (589.593 nm)	2.062530 u	ppm	0.003634	0.18	346.069403	Y_R4
Ni (231.604 nm)	-0.000536 u	ppm	0.001305	> 100.00	7.026970	Y 377.433
P (213.618 nm)	0.005248 u	ppm	0.008564	> 100.00	5.009340	Y 242.219
Pb (220.353 nm)	-0.002216 u	ppm	0.002705	> 100.00	9.513380	Y 242.219
S (181.972 nm)	0.006746	ppm	0.001122	16.64	-22.487616	Y 377.433
Sb (206.834 nm)	-0.000567 u	ppm	0.002605	> 100.00	-2.059500	Y 377.433
Se (196.026 nm)	0.002114	ppm	0.001913	90.48	4.821880	Y 242.219
Si (288.158 nm)	-0.200272 Zu	ppm	0.002329	1.16	387.609000 Z	Y 377.433
Sn (189.925 nm)	-0.006871 u	ppm	0.000017	0.24	0.042046	Y 377.433
Sr (421.552 nm)	-0.000285 u	ppm	0.000106	37.22	245.152279	Y_R 488.368
Th (288.505 nm)	0.006875	ppm	0.001292	18.80	21.646200	Y 377.433
Ti (336.122 nm)	0.000668	ppm	0.000047	7.01	-301.550000	Y 377.433
Tl (190.794 nm)	0.000983 u	ppm	0.002393	> 100.00	-8.251380	Y 377.433
U (409.013 nm)	-0.006409 u	ppm	0.000012	0.19	100.171000	Y 377.433
V (292.401 nm)	0.000377	ppm	0.000009	2.52	-175.143000	Y 377.433
Zn (206.200 nm)	0.000623	ppm	0.000152	24.44	6.533300	Y 377.433
Zr (343.823 nm)	0.000519	ppm	0.000227	43.74	-97.522600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.139269	12135.707726	0.000656	0.06
Y 377.433	1.132262	522694.596310	0.002243	0.20
Y_R 377.433	1.150840	43487.600000	0.008671	0.75
Y_R 488.368	1.145360	41336.200000	0.005064	0.44
Y_R2 488.368	1.155178	81297.638539	0.000281	0.02
Y_R4	1.185090	36363.700000	0.007594	0.64

Sample Name: CCVL-5412564

Date: 11/6/2018 5:18:26 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010892	ppm	0.000053	0.49	62.966000	Y 377.433
Al (394.401 nm)	0.100817	ppm	0.002560	2.54	1346.770000	Y 377.433
Al H (396.152 nm)	0.234178 u	ppm	0.005870	2.51	175.111000	Y_R 377.433
As (188.980 nm)	0.014757	ppm	0.003587	24.31	5.557440	Y 242.219
B (249.678 nm)	0.088444	ppm	0.000127	0.14	401.788000	Y 242.219
Ba (493.408 nm)	0.008882	ppm	0.000046	0.51	1614.000000	Y_R 488.368
Be (234.861 nm)	0.001044	ppm	0.000008	0.79	46.752200	Y_R 488.368
Bi (223.061 nm)	0.095480	ppm	0.001139	1.19	200.664000	Y 377.433
Ca (315.887 nm)	0.207629	ppm	0.001142	0.55	134.846158	Y_R 377.433
Cd (214.439 nm)	0.005217	ppm	0.000367	7.04	118.735000	Y 377.433
Co (228.615 nm)	0.011015	ppm	0.000086	0.78	233.910000	Y 242.219
Cr (205.560 nm)	0.010838	ppm	0.000606	5.59	42.266800	Y 377.433
Cu (324.754 nm)	0.016332	ppm	0.000348	2.13	988.676000	Y 377.433
Fe (238.204 nm)	0.101542	ppm	0.001199	1.18	180.721209	Y_R 377.433
Fe H (259.940 nm)	0.106511 u	ppm	0.000257	0.24	86.733200	Y_R 377.433
K (766.491 nm)	2.940950	ppm	0.067469	2.29	4610.220000	Y_R2 488.368
Li (670.783 nm)	0.039786 Q	ppm	0.001662	4.18	116.619000 Q	Y_R2 488.368
Mg (279.078 nm)	0.212012	ppm	0.004478	2.11	475.420000	Y 377.433
Mn (257.610 nm)	0.010765	ppm	0.000012	0.12	2274.900000	Y 377.433
Mo (202.032 nm)	0.020819	ppm	0.000045	0.22	255.529000	Y 377.433
Na (589.592 nm)	1.220460	ppm	0.058548	4.80	477.003000	Y_R2 488.368
Na H (589.593 nm)	2.928509 u	ppm	0.002866	0.10	654.377210	Y_R4
Ni (231.604 nm)	0.042261	ppm	0.000098	0.23	171.045000	Y 377.433
P (213.618 nm)	2.940290	ppm	0.009210	0.31	3409.220000	Y 242.219
Pb (220.353 nm)	0.007805	ppm	0.000795	10.18	31.929100	Y 242.219
S (181.972 nm)	0.105591	ppm	0.005317	5.04	24.767890	Y 377.433
Sb (206.834 nm)	0.019138	ppm	0.000319	1.67	30.210400	Y 377.433
Se (196.026 nm)	0.022139	ppm	0.001247	5.63	34.919400	Y 242.219
Si (288.158 nm)	0.307118 Q	ppm	0.001890	0.62	2660.670000 Q	Y 377.433
Sn (189.925 nm)	0.096646	ppm	0.000807	0.84	120.884000	Y 377.433
Sr (421.552 nm)	0.009307	ppm	0.000119	1.28	1358.545863	Y_R 488.368
Th (288.505 nm)	0.020405 Q	ppm	0.004896	23.99	35.730500 Q	Y 377.433
Ti (336.122 nm)	0.010972	ppm	0.000055	0.50	678.869000	Y 377.433
Tl (190.794 nm)	0.015296	ppm	0.003073	20.09	-0.079696	Y 377.433
U (409.013 nm)	0.060029	ppm	0.007862	13.10	250.741000	Y 377.433
V (292.401 nm)	0.010451	ppm	0.000083	0.79	308.263000	Y 377.433
Zn (206.200 nm)	0.022250	ppm	0.000320	1.44	81.286100	Y 377.433
Zr (343.823 nm)	0.015977	ppm	0.000226	1.42	528.944000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.145168	12198.549003	0.006416	0.56
Y 377.433	1.136870	524821.599470	0.007387	0.65
Y_R 377.433	1.170690	44237.600000	0.004065	0.35
Y_R 488.368	1.177600	42499.600000	0.006034	0.51
Y_R2 488.368	1.173763	82605.597533	0.007986	0.68
Y_R4	1.200550	36837.700000	0.003639	0.30

Sample Name: 280-116106-A-5-A

Date: 11/6/2018 5:21:50 AM Rack:Tube: 2:80

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001402	ppm	0.000262	18.67	-204.618000	Y 377.433
Al (394.401 nm)	0.011651	ppm	0.000810	6.95	302.124000	Y 377.433
Al H (396.152 nm)	0.089779 u	ppm	0.006788	7.56	0.454153	Y_R 377.433
As (188.980 nm)	0.010276	ppm	0.001225	11.92	-0.716529	Y 242.219
B (249.678 nm)	0.016391	ppm	0.000578	3.53	112.511000	Y 242.219
Ba (493.408 nm)	0.054159	ppm	0.000921	1.70	5757.580000	Y_R 488.368
Be (234.861 nm)	0.000215	ppm	0.000033	15.46	5.140340	Y_R 488.368
Bi (223.061 nm)	0.001236	ppm	0.000171	13.83	45.340200	Y 377.433
Ca (315.887 nm)	49.178466	ppm	0.114964	0.23	32480.987332	Y_R 377.433
Cd (214.439 nm)	0.000213	ppm	0.000053	24.92	-5.863140	Y 377.433
Co (228.615 nm)	0.000369	ppm	0.000096	25.95	-19.184200	Y 242.219
Cr (205.560 nm)	0.003094	ppm	0.000439	14.19	5.406170	Y 377.433
Cu (324.754 nm)	-0.000112 u	ppm	0.000181	> 100.00	164.144000	Y 377.433
Fe (238.204 nm)	0.006868	ppm	0.000187	2.72	22.978003	Y_R 377.433
Fe H (259.940 nm)	0.015567 u	ppm	0.000295	1.90	3.277500	Y_R 377.433
K (766.491 nm)	18.835100	ppm	0.095476	0.51	20144.200000	Y_R2 488.368
Li (670.783 nm)	0.029267	ppm	0.002810	9.60	-32.375000	Y_R2 488.368
Mg (279.078 nm)	13.695000	ppm	0.018817	0.14	29846.900000	Y 377.433
Mn (257.610 nm)	0.000343	ppm	0.000030	8.62	94.330400	Y 377.433
Mo (202.032 nm)	0.005467	ppm	0.000158	2.90	80.879800	Y 377.433
Na (589.592 nm)	39.774700	ppm	0.136323	0.34	19845.900000	Y_R2 488.368
Na H (589.593 nm)	40.302719 u	ppm	0.094383	0.23	13995.229811	Y_R4
Ni (231.604 nm)	-0.000069 u	ppm	0.000886	> 100.00	8.817310	Y 377.433
P (213.618 nm)	14.156300	ppm	0.045483	0.32	16421.700000	Y 242.219
Pb (220.353 nm)	-0.003154 u	ppm	0.001437	45.57	7.491340	Y 242.219
S (181.972 nm)	19.384208	ppm	0.010851	0.06	9235.504765	Y 377.433
Sb (206.834 nm)	-0.007829 u	ppm	0.001970	25.16	-14.020200	Y 377.433
Se (196.026 nm)	0.004316	ppm	0.001700	39.38	8.129880	Y 242.219
Si (288.158 nm)	15.484100	ppm	0.016936	0.11	70652.000000	Y 377.433
Sn (189.925 nm)	-0.006826 u	ppm	0.000282	4.13	0.095011	Y 377.433
Sr (421.552 nm)	0.239557	ppm	0.004039	1.69	28085.705430	Y_R 488.368
Th (288.505 nm)	-0.008181 u	ppm	0.004578	55.96	4.363070	Y 377.433
Ti (336.122 nm)	0.000679	ppm	0.000144	21.26	-175.282000	Y 377.433
Tl (190.794 nm)	-0.002683 u	ppm	0.002822	> 100.00	-10.855300	Y 377.433
U (409.013 nm)	0.050584	ppm	0.007037	13.91	225.667000	Y 377.433
V (292.401 nm)	0.017480	ppm	0.000122	0.70	650.335000	Y 377.433
Zn (206.200 nm)	0.010974	ppm	0.000117	1.07	42.305600	Y 377.433
Zr (343.823 nm)	0.000356	ppm	0.000095	26.62	-104.111000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.121050	11941.637736	0.001620	0.14
Y 377.433	1.114902	514680.321399	0.004039	0.36
Y_R 377.433	1.157960	43756.800000	0.001375	0.12
Y_R 488.368	1.162640	41959.800000	0.016601	1.43
Y_R2 488.368	1.160800	81693.306207	0.006898	0.59
Y_R4	1.175380	36065.700000	0.000968	0.08

Sample Name: 280-116106-A-6-A

Date: 11/6/2018 5:25:15 AM Rack:Tube: 2:81

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001091	ppm	0.000384	35.23	-213.132000	Y 377.433
Al (394.401 nm)	0.006706	ppm	0.000724	10.79	240.861000	Y 377.433
Al H (396.152 nm)	0.097331 u	ppm	0.002503	2.57	12.226600	Y_R 377.433
As (188.980 nm)	0.009072	ppm	0.000869	9.58	-2.405000	Y 242.219
B (249.678 nm)	0.016879	ppm	0.002368	14.03	114.465000	Y 242.219
Ba (493.408 nm)	0.051846	ppm	0.000160	0.31	5545.940000	Y_R 488.368
Be (234.861 nm)	0.000151	ppm	0.000107	70.73	1.629960	Y_R 488.368
Bi (223.061 nm)	0.000955 u	ppm	0.005592	> 100.00	44.879700	Y 377.433
Ca (315.887 nm)	48.572905	ppm	0.029029	0.06	32081.003171	Y_R 377.433
Cd (214.439 nm)	0.000229	ppm	0.000195	85.17	-5.446110	Y 377.433
Co (228.615 nm)	0.000329	ppm	0.000220	66.94	-20.141000	Y 242.219
Cr (205.560 nm)	0.004141	ppm	0.000823	19.87	10.408100	Y 377.433
Cu (324.754 nm)	0.000060	ppm	0.000057	95.19	171.787000	Y 377.433
Fe (238.204 nm)	0.021881	ppm	0.001141	5.22	47.993401	Y_R 377.433
Fe H (259.940 nm)	0.027419 u	ppm	0.005537	20.19	14.154400	Y_R 377.433
K (766.491 nm)	18.623400	ppm	0.137752	0.74	19937.400000	Y_R2 488.368
Li (670.783 nm)	0.026442	ppm	0.003603	13.63	-72.380700	Y_R2 488.368
Mg (279.078 nm)	13.521600	ppm	0.005722	0.04	29469.300000	Y 377.433
Mn (257.610 nm)	0.000408	ppm	0.000009	2.22	108.115000	Y 377.433
Mo (202.032 nm)	0.005144	ppm	0.000339	6.58	77.205000	Y 377.433
Na (589.592 nm)	39.171500	ppm	0.141288	0.36	19542.900000	Y_R2 488.368
Na H (589.593 nm)	39.817047 u	ppm	0.098481	0.25	13822.033064	Y_R4
Ni (231.604 nm)	-0.000976 u	ppm	0.001906	> 100.00	5.343550	Y 377.433
P (213.618 nm)	13.854700	ppm	0.045152	0.33	16071.800000	Y 242.219
Pb (220.353 nm)	-0.001270 u	ppm	0.002554	> 100.00	11.690600	Y 242.219
S (181.972 nm)	19.173126	ppm	0.031630	0.16	9134.651002	Y 377.433
Sb (206.834 nm)	-0.003903 u	ppm	0.001069	27.39	-7.548570	Y 377.433
Se (196.026 nm)	0.004704	ppm	0.000599	12.74	8.709950	Y 242.219
Si (288.158 nm)	15.631900	ppm	0.063401	0.41	71314.000000	Y 377.433
Sn (189.925 nm)	-0.006289 u	ppm	0.000153	2.43	0.720973	Y 377.433
Sr (421.552 nm)	0.239732	ppm	0.000949	0.40	28105.953043	Y_R 488.368
Th (288.505 nm)	-0.015527 u	ppm	0.004072	26.22	-3.461510	Y 377.433
Ti (336.122 nm)	0.000570	ppm	0.000110	19.34	-187.241000	Y 377.433
Tl (190.794 nm)	-0.005007 u	ppm	0.000430	8.59	-12.181200	Y 377.433
U (409.013 nm)	0.057989	ppm	0.007235	12.48	242.676000	Y 377.433
V (292.401 nm)	0.017167	ppm	0.000362	2.11	634.530000	Y 377.433
Zn (206.200 nm)	0.008421	ppm	0.000185	2.19	33.486000	Y 377.433
Zr (343.823 nm)	0.000681	ppm	0.000286	42.08	-90.954500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127278	12007.985578	0.002619	0.23
Y 377.433	1.119031	516586.613182	0.004896	0.44
Y_R 377.433	1.146090	43308.300000	0.000186	0.02
Y_R 488.368	1.140170	41148.700000	0.002341	0.21
Y_R2 488.368	1.160151	81647.653142	0.001670	0.14
Y_R4	1.184290	36338.900000	0.001236	0.10

Sample Name: 280-116106-A-7-A

Date: 11/6/2018 5:28:40 AM Rack:Tube: 2:82

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001677	ppm	0.000000	0.01	-199.259000	Y 377.433
Al (394.401 nm)	0.008692	ppm	0.000875	10.07	235.751000	Y 377.433
Al H (396.152 nm)	0.103324 u	ppm	0.005850	5.66	1.175280	Y_R 377.433
As (188.980 nm)	0.021663	ppm	0.000110	0.51	15.237900	Y 242.219
B (249.678 nm)	0.017413	ppm	0.000308	1.77	116.614000	Y 242.219
Ba (493.408 nm)	0.047824	ppm	0.000042	0.09	5177.840000	Y_R 488.368
Be (234.861 nm)	0.000126	ppm	0.000169	> 100.00	0.528912	Y_R 488.368
Bi (223.061 nm)	0.000420 u	ppm	0.001806	> 100.00	43.976800	Y 377.433
Ca (315.887 nm)	34.041023	ppm	0.012268	0.04	22482.421552	Y_R 377.433
Cd (214.439 nm)	0.000235	ppm	0.000036	15.14	-5.313730	Y 377.433
Co (228.615 nm)	0.000303	ppm	0.000120	39.49	-20.760200	Y 242.219
Cr (205.560 nm)	0.004528	ppm	0.000095	2.10	12.246500	Y 377.433
Cu (324.754 nm)	0.000365	ppm	0.000075	20.49	200.277000	Y 377.433
Fe (238.204 nm)	0.005477	ppm	0.000035	0.63	20.661785	Y_R 377.433
Fe H (259.940 nm)	0.016406 u	ppm	0.000672	4.10	4.048250	Y_R 377.433
K (766.491 nm)	7.154490	ppm	0.058299	0.81	8728.290000	Y_R2 488.368
Li (670.783 nm)	0.028122	ppm	0.003030	10.78	-48.590400	Y_R2 488.368
Mg (279.078 nm)	8.883850	ppm	0.016670	0.19	19367.000000	Y 377.433
Mn (257.610 nm)	0.000254	ppm	0.000014	5.50	75.743300	Y 377.433
Mo (202.032 nm)	0.006918	ppm	0.000046	0.66	97.381500	Y 377.433
Na (589.592 nm)	106.948000 o	ppm	0.418605	0.39	53593.700000	Y_R2 488.368
Na H (589.593 nm)	106.108912	ppm	0.245253	0.23	37493.544287	Y_R4
Ni (231.604 nm)	-0.000547 u	ppm	0.001209	> 100.00	6.988870	Y 377.433
P (213.618 nm)	42.991800	ppm	0.508108	1.18	49873.700000	Y 242.219
Pb (220.353 nm)	-0.003281 u	ppm	0.001226	37.36	7.101540	Y 242.219
S (181.972 nm)	18.802953	ppm	0.063978	0.34	8957.082506	Y 377.433
Sb (206.834 nm)	-0.001280 u	ppm	0.000364	28.48	-3.243290	Y 377.433
Se (196.026 nm)	0.006653	ppm	0.003022	45.43	11.643500	Y 242.219
Si (288.158 nm)	19.450900	ppm	0.102721	0.53	88422.700000	Y 377.433
Sn (189.925 nm)	-0.005561 u	ppm	0.001631	29.33	1.571640	Y 377.433
Sr (421.552 nm)	0.162928	ppm	0.000064	0.04	19190.641973	Y_R 488.368
Th (288.505 nm)	-0.008310 u	ppm	0.002626	31.61	3.362570	Y 377.433
Ti (336.122 nm)	0.000581	ppm	0.000035	5.97	-223.597000	Y 377.433
Tl (190.794 nm)	0.001433 u	ppm	0.002361	> 100.00	-8.343460	Y 377.433
U (409.013 nm)	-0.005236 u	ppm	0.007480	> 100.00	99.598500	Y 377.433
V (292.401 nm)	0.028950	ppm	0.000073	0.25	1209.480000	Y 377.433
Zn (206.200 nm)	0.001873	ppm	0.000973	51.97	10.852200	Y 377.433
Zr (343.823 nm)	0.000392	ppm	0.000049	12.62	-102.654000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125662	11990.769338	0.006122	0.54
Y 377.433	1.117668	515957.301050	0.007100	0.64
Y_R 377.433	1.164830	44016.100000	0.002746	0.24
Y_R 488.368	1.161770	41928.200000	0.003381	0.29
Y_R2 488.368	1.172466	82514.303803	0.001778	0.15
Y_R4	1.196160	36703.300000	0.002050	0.17

Sample Name: 280-116106-A-8-A

Date: 11/6/2018 5:32:04 AM Rack:Tube: 2:83

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000700	ppm	0.000488	69.62	-226.480000	Y 377.433
Al (394.401 nm)	0.007924	ppm	0.000688	8.68	226.803000	Y 377.433
Al H (396.152 nm)	0.101658 u	ppm	0.001088	1.07	1.538280	Y_R 377.433
As (188.980 nm)	0.025491	ppm	0.001802	7.07	20.602300	Y 242.219
B (249.678 nm)	0.017538	ppm	0.001283	7.31	117.116000	Y 242.219
Ba (493.408 nm)	0.051360	ppm	0.000744	1.45	5501.400000	Y_R 488.368
Be (234.861 nm)	0.000199	ppm	0.000005	2.56	4.338360	Y_R 488.368
Bi (223.061 nm)	-0.002879 u	ppm	0.001177	40.86	38.539100	Y 377.433
Ca (315.887 nm)	36.072548	ppm	0.000967	0.00	23824.279418	Y_R 377.433
Cd (214.439 nm)	0.000122	ppm	0.000011	8.97	-8.124460	Y 377.433
Co (228.615 nm)	0.000500	ppm	0.000080	16.00	-16.102800	Y 242.219
Cr (205.560 nm)	0.003611	ppm	0.000529	14.65	7.869630	Y 377.433
Cu (324.754 nm)	0.000027 u	ppm	0.000144	> 100.00	183.289000	Y 377.433
Fe (238.204 nm)	0.004783	ppm	0.002070	43.27	19.504452	Y_R 377.433
Fe H (259.940 nm)	0.013534 u	ppm	0.003269	24.16	1.412420	Y_R 377.433
K (766.491 nm)	7.700850	ppm	0.008588	0.11	9262.260000	Y_R2 488.368
Li (670.783 nm)	0.026007	ppm	0.000656	2.52	-78.545900	Y_R2 488.368
Mg (279.078 nm)	9.396620	ppm	0.007152	0.08	20484.300000	Y 377.433
Mn (257.610 nm)	0.000426	ppm	0.000048	11.15	111.881000	Y 377.433
Mo (202.032 nm)	0.007372	ppm	0.000045	0.60	102.553000	Y 377.433
Na (589.592 nm)	113.235000 o	ppm	0.302280	0.27	56752.500000	Y_R2 488.368
Na H (589.593 nm)	112.242745	ppm	0.227157	0.20	39683.399709	Y_R4
Ni (231.604 nm)	0.000432 u	ppm	0.000842	> 100.00	10.733400	Y 377.433
P (213.618 nm)	44.939400	ppm	0.065512	0.15	52133.200000	Y 242.219
Pb (220.353 nm)	-0.002315 u	ppm	0.003020	> 100.00	9.218350	Y 242.219
S (181.972 nm)	19.847080	ppm	0.056970	0.29	9455.905667	Y 377.433
Sb (206.834 nm)	-0.001839 u	ppm	0.000696	37.84	-4.174430	Y 377.433
Se (196.026 nm)	0.005538	ppm	0.004448	80.31	9.968750	Y 242.219
Si (288.158 nm)	20.749000	ppm	0.058292	0.28	94238.300000	Y 377.433
Sn (189.925 nm)	-0.006295 u	ppm	0.000732	11.63	0.714252	Y 377.433
Sr (421.552 nm)	0.173541	ppm	0.002881	1.66	20422.599482	Y_R 488.368
Th (288.505 nm)	-0.011383 u	ppm	0.002843	24.97	-0.114985	Y 377.433
Ti (336.122 nm)	0.000532	ppm	0.000019	3.56	-223.064000	Y 377.433
Tl (190.794 nm)	-0.005202 u	ppm	0.000062	1.19	-12.168500	Y 377.433
U (409.013 nm)	-0.014163 u	ppm	0.004570	32.27	78.988000	Y 377.433
V (292.401 nm)	0.030739	ppm	0.000103	0.34	1297.220000	Y 377.433
Zn (206.200 nm)	0.001818	ppm	0.000028	1.52	10.662000	Y 377.433
Zr (343.823 nm)	0.000296	ppm	0.000105	35.47	-106.546000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.117263	11901.299912	0.001856	0.17
Y 377.433	1.109482	512178.455522	0.000971	0.09
Y_R 377.433	1.147620	43365.900000	0.003563	0.31
Y_R 488.368	1.135160	40967.800000	0.021443	1.89
Y_R2 488.368	1.147475	80755.567925	0.006327	0.55
Y_R4	1.161500	35639.600000	0.003602	0.31

Sample Name: 280-116106-A-9-A

Date: 11/6/2018 5:35:28 AM Rack:Tube: 2:84

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000568	ppm	0.000053	9.32	-225.519000	Y 377.433
Al (394.401 nm)	0.012640	ppm	0.001259	9.96	323.892000	Y 377.433
Al H (396.152 nm)	0.094463 u	ppm	0.010763	11.39	14.679200	Y_R 377.433
As (188.980 nm)	0.001715 u	ppm	0.004132	> 100.00	-12.712800	Y 242.219
B (249.678 nm)	0.012304	ppm	0.000989	8.04	96.101100	Y 242.219
Ba (493.408 nm)	0.082749	ppm	0.000751	0.91	8374.130000	Y_R 488.368
Be (234.861 nm)	0.000049	ppm	0.000004	8.56	-3.532780	Y_R 488.368
Bi (223.061 nm)	0.002598	ppm	0.001883	72.47	47.563400	Y 377.433
Ca (315.887 nm)	54.722903	ppm	0.062802	0.11	36143.193304	Y_R 377.433
Cd (214.439 nm)	0.000235	ppm	0.000183	77.83	-5.312720	Y 377.433
Co (228.615 nm)	0.000364	ppm	0.000119	32.80	-19.291800	Y 242.219
Cr (205.560 nm)	0.003787	ppm	0.000261	6.89	8.717910	Y 377.433
Cu (324.754 nm)	0.000446	ppm	0.000305	68.51	185.733000	Y 377.433
Fe (238.204 nm)	0.011309	ppm	0.000708	6.26	30.378822	Y_R 377.433
Fe H (259.940 nm)	0.022221 u	ppm	0.004447	20.01	9.384400	Y_R 377.433
K (766.491 nm)	4.867470	ppm	0.093994	1.93	6493.090000	Y_R2 488.368
Li (670.783 nm)	0.020615	ppm	0.002756	13.37	-154.923000	Y_R2 488.368
Mg (279.078 nm)	13.147100	ppm	0.034425	0.26	28653.200000	Y 377.433
Mn (257.610 nm)	0.000587	ppm	0.000006	0.99	145.539000	Y 377.433
Mo (202.032 nm)	0.004401	ppm	0.000063	1.43	68.743300	Y 377.433
Na (589.592 nm)	23.122300	ppm	0.101836	0.44	11479.300000	Y_R2 488.368
Na H (589.593 nm)	24.225244 u	ppm	0.169549	0.70	8251.611131	Y_R4
Ni (231.604 nm)	-0.001228 u	ppm	0.000235	19.15	4.377360	Y 377.433
P (213.618 nm)	0.098753	ppm	0.000676	0.68	113.448000	Y 242.219
Pb (220.353 nm)	-0.002683 u	ppm	0.000699	26.03	8.557400	Y 242.219
S (181.972 nm)	19.357403	ppm	0.063878	0.33	9222.978214	Y 377.433
Sb (206.834 nm)	-0.002457 u	ppm	0.000166	6.75	-5.171500	Y 377.433
Se (196.026 nm)	0.006094	ppm	0.001712	28.10	10.802000	Y 242.219
Si (288.158 nm)	12.723100	ppm	0.004231	0.03	58282.900000	Y 377.433
Sn (189.925 nm)	-0.006546 u	ppm	0.000992	15.16	0.421650	Y 377.433
Sr (421.552 nm)	0.262737	ppm	0.002319	0.88	30776.334839	Y_R 488.368
Th (288.505 nm)	-0.015068 u	ppm	0.004701	31.20	-2.335530	Y 377.433
Ti (336.122 nm)	0.001125	ppm	0.000129	11.43	-119.287000	Y 377.433
Tl (190.794 nm)	-0.002115 u	ppm	0.005705	> 100.00	-10.582000	Y 377.433
U (409.013 nm)	0.053023	ppm	0.005084	9.59	230.748000	Y 377.433
V (292.401 nm)	0.007835	ppm	0.000212	2.71	181.185000	Y 377.433
Zn (206.200 nm)	0.058112	ppm	0.000830	1.43	205.220000	Y 377.433
Zr (343.823 nm)	0.000475	ppm	0.000173	36.52	-99.302900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.132377	12062.301267	0.004537	0.40
Y 377.433	1.128802	521097.372311	0.006153	0.55
Y_R 377.433	1.179030	44552.800000	0.004776	0.41
Y_R 488.368	1.178880	42545.900000	0.005843	0.50
Y_R2 488.368	1.164518	81954.970945	0.010528	0.90
Y_R4	1.179280	36185.100000	0.001220	0.10

Sample Name: 280-116106-A-10-A

Date: 11/6/2018 5:38:54 AM Rack:Tube: 2:85

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000962	ppm	0.000051	5.30	-214.437000	Y 377.433
Al (394.401 nm)	0.008090	ppm	0.000208	2.57	261.318000	Y 377.433
Al H (396.152 nm)	0.091472 u	ppm	0.014898	16.29	6.510230	Y_R 377.433
As (188.980 nm)	0.001910	ppm	0.000548	28.72	-12.439800	Y 242.219
B (249.678 nm)	0.010831	ppm	0.000555	5.12	90.187900	Y 242.219
Ba (493.408 nm)	0.079456	ppm	0.000716	0.90	8072.730000	Y_R 488.368
Be (234.861 nm)	0.000116	ppm	0.000073	62.98	0.080505	Y_R 488.368
Bi (223.061 nm)	0.004770	ppm	0.004185	87.75	51.141500	Y 377.433
Ca (315.887 nm)	52.524004	ppm	0.064386	0.12	34690.780175	Y_R 377.433
Cd (214.439 nm)	0.000335	ppm	0.000195	58.11	-2.812010	Y 377.433
Co (228.615 nm)	0.000438	ppm	0.000132	30.21	-17.561800	Y 242.219
Cr (205.560 nm)	0.003923	ppm	0.000243	6.21	9.367040	Y 377.433
Cu (324.754 nm)	0.000275	ppm	0.000127	46.28	180.459000	Y 377.433
Fe (238.204 nm)	0.001347	ppm	0.000382	28.40	13.779457	Y_R 377.433
Fe H (259.940 nm)	0.014639 u	ppm	0.003886	26.54	2.426770	Y_R 377.433
K (766.491 nm)	4.655120	ppm	0.034125	0.73	6285.550000	Y_R2 488.368
Li (670.783 nm)	0.023046	ppm	0.000954	4.14	-120.485000	Y_R2 488.368
Mg (279.078 nm)	12.631500	ppm	0.006444	0.05	27530.200000	Y 377.433
Mn (257.610 nm)	0.000202	ppm	0.000027	13.25	64.815000	Y 377.433
Mo (202.032 nm)	0.003965	ppm	0.000083	2.09	63.782900	Y 377.433
Na (589.592 nm)	21.989700	ppm	0.067543	0.31	10910.400000	Y_R2 488.368
Na H (589.593 nm)	23.132508 u	ppm	0.083838	0.36	7861.702972	Y_R4
Ni (231.604 nm)	-0.000081 u	ppm	0.000960	> 100.00	8.769010	Y 377.433
P (213.618 nm)	0.092890	ppm	0.000696	0.75	106.653000	Y 242.219
Pb (220.353 nm)	-0.003013 u	ppm	0.000253	8.38	7.803220	Y 242.219
S (181.972 nm)	18.499084	ppm	0.086392	0.47	8812.905996	Y 377.433
Sb (206.834 nm)	-0.002221 u	ppm	0.000808	36.37	-4.776780	Y 377.433
Se (196.026 nm)	0.005187	ppm	0.001458	28.11	9.441020	Y 242.219
Si (288.158 nm)	12.141500	ppm	0.037998	0.31	55677.600000	Y 377.433
Sn (189.925 nm)	-0.007081 u	ppm	0.000241	3.40	-0.202691	Y 377.433
Sr (421.552 nm)	0.251594	ppm	0.002387	0.95	29482.923832	Y_R 488.368
Th (288.505 nm)	-0.006638 u	ppm	0.000638	9.62	6.644810	Y 377.433
Ti (336.122 nm)	0.000431	ppm	0.000076	17.58	-190.337000	Y 377.433
Tl (190.794 nm)	-0.004267 u	ppm	0.004129	96.76	-11.794700	Y 377.433
U (409.013 nm)	0.049609	ppm	0.010756	21.68	223.161000	Y 377.433
V (292.401 nm)	0.007701	ppm	0.000047	0.60	175.689000	Y 377.433
Zn (206.200 nm)	0.053995	ppm	0.000553	1.02	190.990000	Y 377.433
Zr (343.823 nm)	0.000367	ppm	0.000040	10.80	-103.647000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131349	12051.349605	0.000002	0.00
Y 377.433	1.126022	519813.772698	0.000211	0.02
Y_R 377.433	1.157960	43756.900000	0.002162	0.19
Y_R 488.368	1.157760	41783.700000	0.010113	0.87
Y_R2 488.368	1.163495	81882.980147	0.004489	0.39
Y_R4	1.175260	36061.800000	0.004442	0.38

Sample Name: 280-116106-A-11-A

Date: 11/6/2018 5:42:20 AM Rack:Tube: 2:86

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000819	ppm	0.000631	77.04	-222.789000	Y 377.433
Al (394.401 nm)	4.239240 o	ppm	0.003595	0.08	52954.800000	Y 377.433
Al H (396.152 nm)	4.310730	ppm	0.004513	0.10	6980.300000	Y_R 377.433
As (188.980 nm)	0.009931	ppm	0.000543	5.47	-1.334410	Y 242.219
B (249.678 nm)	0.014615	ppm	0.001482	10.14	104.573000	Y 242.219
Ba (493.408 nm)	0.289681	ppm	0.004102	1.42	27314.200000	Y_R 488.368
Be (234.861 nm)	0.000771	ppm	0.000043	5.62	-0.963107	Y_R 488.368
Bi (223.061 nm)	0.001949	ppm	0.002336	> 100.00	46.835400	Y 377.433
Ca (315.887 nm)	60.579787	ppm	0.106806	0.18	40012.654420	Y_R 377.433
Cd (214.439 nm)	0.000421	ppm	0.000037	8.69	-0.673646	Y 377.433
Co (228.615 nm)	0.007771	ppm	0.000279	3.59	159.817000	Y 242.219
Cr (205.560 nm)	0.010449	ppm	0.000043	0.41	40.435300	Y 377.433
Cu (324.754 nm)	0.020103	ppm	0.000123	0.61	1130.320000	Y 377.433
Fe (238.204 nm)	2.471545	ppm	0.009359	0.38	4129.548164	Y_R 377.433
Fe H (259.940 nm)	2.482690 u	ppm	0.014286	0.58	2267.240000	Y_R 377.433
K (766.491 nm)	16.395200	ppm	0.046622	0.28	17759.600000	Y_R2 488.368
Li (670.783 nm)	0.029861	ppm	0.001207	4.04	-23.953400	Y_R2 488.368
Mg (279.078 nm)	16.124200	ppm	0.013401	0.08	35136.400000	Y 377.433
Mn (257.610 nm)	0.457149	ppm	0.000161	0.04	95669.100000	Y 377.433
Mo (202.032 nm)	0.003655	ppm	0.000192	5.25	60.258600	Y 377.433
Na (589.592 nm)	34.369400	ppm	0.215293	0.63	17126.700000	Y_R2 488.368
Na H (589.593 nm)	35.085792 u	ppm	0.126014	0.36	12109.205588	Y_R4
Ni (231.604 nm)	0.004677	ppm	0.001399	29.92	27.372700	Y 377.433
P (213.618 nm)	12.073500	ppm	0.063064	0.52	14004.500000	Y 242.219
Pb (220.353 nm)	0.000022 u	ppm	0.001000	> 100.00	14.000600	Y 242.219
S (181.972 nm)	19.482081	ppm	0.019135	0.10	9284.347813	Y 377.433
Sb (206.834 nm)	-0.004931 u	ppm	0.000996	20.19	-9.040230	Y 377.433
Se (196.026 nm)	0.006548	ppm	0.000543	8.30	11.487100	Y 242.219
Si (288.158 nm)	21.010700	ppm	0.345923	1.65	95410.800000	Y 377.433
Sn (189.925 nm)	-0.007437 u	ppm	0.000153	2.06	-0.619213	Y 377.433
Sr (421.552 nm)	0.308616	ppm	0.003692	1.20	36102.247671	Y_R 488.368
Th (288.505 nm)	-0.020080 u	ppm	0.011470	57.12	-4.113760	Y 377.433
Ti (336.122 nm)	0.017894	ppm	0.000055	0.31	1490.390000	Y 377.433
Tl (190.794 nm)	-0.005415 u	ppm	0.001343	24.80	-12.771200	Y 377.433
U (409.013 nm)	0.072519	ppm	0.000190	0.26	276.023000	Y 377.433
V (292.401 nm)	0.025295	ppm	0.000149	0.59	1026.210000	Y 377.433
Zn (206.200 nm)	1.308000	ppm	0.000577	0.04	4525.210000	Y 377.433
Zr (343.823 nm)	0.000657	ppm	0.000151	23.00	-91.927400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.136085	12101.793197	0.001539	0.14
Y 377.433	1.129909	521608.361321	0.002226	0.20
Y_R 377.433	1.160180	43840.800000	0.009636	0.83
Y_R 488.368	1.156950	41754.300000	0.019904	1.72
Y_R2 488.368	1.174607	82665.003578	0.001086	0.09
Y_R4	1.195030	36668.500000	0.002245	0.19

Sample Name: 280-116106-A-12-A

Date: 11/6/2018 5:45:50 AM Rack:Tube: 2:87

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001030	ppm	0.000000	0.00	-215.293000	Y 377.433
Al (394.401 nm)	0.013474	ppm	0.000937	6.95	332.521000	Y 377.433
Al H (396.152 nm)	0.093519 u	ppm	0.010579	11.31	10.998300	Y_R 377.433
As (188.980 nm)	0.009661	ppm	0.000354	3.66	-1.578950	Y 242.219
B (249.678 nm)	0.014855	ppm	0.000188	1.27	106.344000	Y 242.219
Ba (493.408 nm)	0.064947	ppm	0.000320	0.49	6744.870000	Y_R 488.368
Be (234.861 nm)	0.000109	ppm	0.000025	23.20	-0.384261	Y_R 488.368
Bi (223.061 nm)	-0.001131 u	ppm	0.001398	> 100.00	41.434900	Y 377.433
Ca (315.887 nm)	53.639173	ppm	0.008848	0.02	35427.369421	Y_R 377.433
Cd (214.439 nm)	0.000306	ppm	0.000064	21.06	-3.536250	Y 377.433
Co (228.615 nm)	0.000784	ppm	0.000158	20.21	-9.361260	Y 242.219
Cr (205.560 nm)	0.003654	ppm	0.000202	5.54	8.079830	Y 377.433
Cu (324.754 nm)	0.000349	ppm	0.000407	> 100.00	182.256000	Y 377.433
Fe (238.204 nm)	0.008803	ppm	0.001246	14.15	26.202417	Y_R 377.433
Fe H (259.940 nm)	0.020255 u	ppm	0.002872	14.18	7.579680	Y_R 377.433
K (766.491 nm)	15.558000	ppm	0.009022	0.06	16941.400000	Y_R2 488.368
Li (670.783 nm)	0.019156	ppm	0.000486	2.54	-175.577000	Y_R2 488.368
Mg (279.078 nm)	14.261800	ppm	0.001754	0.01	31081.400000	Y 377.433
Mn (257.610 nm)	0.001089	ppm	0.000036	3.34	250.527000	Y 377.433
Mo (202.032 nm)	0.005554	ppm	0.000104	1.87	81.868200	Y 377.433
Na (589.592 nm)	34.014200	ppm	0.068812	0.20	16951.700000	Y_R2 488.368
Na H (589.593 nm)	34.433731 u	ppm	0.064423	0.19	11898.553811	Y_R4
Ni (231.604 nm)	-0.000401 u	ppm	0.000737	> 100.00	7.543780	Y 377.433
P (213.618 nm)	10.928900	ppm	0.122744	1.12	12677.500000	Y 242.219
Pb (220.353 nm)	-0.004376 u	ppm	0.003128	71.48	4.801440	Y 242.219
S (181.972 nm)	19.864062	ppm	0.033359	0.17	9464.934203	Y 377.433
Sb (206.834 nm)	-0.002505 u	ppm	0.003198	> 100.00	-5.253160	Y 377.433
Se (196.026 nm)	0.004835	ppm	0.000134	2.78	8.910990	Y 242.219
Si (288.158 nm)	15.711000	ppm	0.097940	0.62	71668.500000	Y 377.433
Sn (189.925 nm)	-0.005916 u	ppm	0.000474	8.01	1.157060	Y 377.433
Sr (421.552 nm)	0.258693	ppm	0.000417	0.16	30306.916932	Y_R 488.368
Th (288.505 nm)	-0.007976 u	ppm	0.006737	84.47	4.620010	Y 377.433
Ti (336.122 nm)	0.000560	ppm	0.000060	10.71	-175.297000	Y 377.433
Tl (190.794 nm)	-0.005135 u	ppm	0.000828	16.13	-12.305400	Y 377.433
U (409.013 nm)	0.069503	ppm	0.007373	10.61	268.510000	Y 377.433
V (292.401 nm)	0.017496	ppm	0.000300	1.72	649.721000	Y 377.433
Zn (206.200 nm)	0.020085	ppm	0.000279	1.39	73.796900	Y 377.433
Zr (343.823 nm)	0.000406	ppm	0.000117	28.84	-102.086000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.158131	12336.633772	0.004643	0.40
Y 377.433	1.140133	526327.882353	0.002193	0.19
Y_R 377.433	1.198520	45289.600000	0.001850	0.15
Y_R 488.368	1.189600	42932.600000	0.000534	0.04
Y_R2 488.368	1.167167	82141.416456	0.013550	1.16
Y_R4	1.216010	37312.300000	0.008660	0.71

Sample Name: CCVH-5408055

Date: 11/6/2018 5:49:16 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001513	ppm	0.000231	15.25	-311.411000	Y 377.433
Al (394.401 nm)	51.901200 o	ppm	0.029368	0.06	646362.000000	Y 377.433
Al H (396.152 nm)	50.810000	ppm	0.084275	0.17	83564.100000	Y_R 377.433
As (188.980 nm)	-0.003160 u	ppm	0.000292	9.24	-21.669800	Y 242.219
B (249.678 nm)	-0.013709 u	ppm	0.001354	9.87	-24.760600	Y 242.219
Ba (493.408 nm)	-0.000540 u	ppm	0.000250	46.28	788.513000	Y_R 488.368
Be (234.861 nm)	0.000400	ppm	0.000076	18.90	-696.099000	Y_R 488.368
Bi (223.061 nm)	1.017130	ppm	0.000197	0.02	1726.320000	Y 377.433
Ca (315.887 nm)	-0.009052 u	ppm	0.000165	1.82	2.228601	Y_R 377.433
Cd (214.439 nm)	0.000375	ppm	0.000006	1.62	-1.828650	Y 377.433
Co (228.615 nm)	0.001506	ppm	0.000264	17.56	64.026100	Y 242.219
Cr (205.560 nm)	0.000755	ppm	0.000636	84.23	-6.712850	Y 377.433
Cu (324.754 nm)	0.000565	ppm	0.000039	6.96	697.465000	Y 377.433
Fe (238.204 nm)	50.134836 o	ppm	0.040677	0.08	83544.666563	Y_R 377.433
Fe H (259.940 nm)	50.575500	ppm	0.023762	0.05	46399.700000	Y_R 377.433
K (766.491 nm)	0.129793	ppm	0.029392	22.65	1862.770000	Y_R2 488.368
Li (670.783 nm)	0.020462	ppm	0.001434	7.01	-157.077000	Y_R2 488.368
Mg (279.078 nm)	-0.030975 u	ppm	0.005747	18.55	-208.896000	Y 377.433
Mn (257.610 nm)	0.000339	ppm	0.000016	4.62	93.532500	Y 377.433
Mo (202.032 nm)	-0.000903 u	ppm	0.000163	18.08	8.411290	Y 377.433
Na (589.592 nm)	257.044000 o	ppm	1.149640	0.45	129003.000000	Y_R2 488.368
Na H (589.593 nm)	256.521522	ppm	0.415185	0.16	91206.726837	Y_R4
Ni (231.604 nm)	-0.000189 u	ppm	0.000173	91.67	15.901200	Y 377.433
P (213.618 nm)	-0.010931 u	ppm	0.000708	6.48	-15.096000	Y 242.219
Pb (220.353 nm)	-0.003971 u	ppm	0.002399	60.41	16.359500	Y 242.219
S (181.972 nm)	5.164889	ppm	0.009653	0.19	2441.034721	Y 377.433
Sb (206.834 nm)	0.000901 u	ppm	0.003898	> 100.00	4.517500	Y 377.433
Se (196.026 nm)	0.003123	ppm	0.000572	18.33	-6.636790	Y 242.219
Si (288.158 nm)	-0.157769 u	ppm	0.007892	5.00	578.019000	Y 377.433
Sn (189.925 nm)	-0.006166 u	ppm	0.000385	6.25	0.864746	Y 377.433
Sr (421.552 nm)	-0.000156 u	ppm	0.000024	15.59	266.001786	Y_R 488.368
Th (288.505 nm)	5.054500	ppm	0.055483	1.10	5422.880000	Y 377.433
Ti (336.122 nm)	0.001061	ppm	0.000024	2.30	-264.109000	Y 377.433
Tl (190.794 nm)	-0.005142 u	ppm	0.003458	67.25	-15.125400	Y 377.433
U (409.013 nm)	10.640400	ppm	0.012128	0.11	24462.900000	Y 377.433
V (292.401 nm)	-0.003741 u	ppm	0.000007	0.18	-385.591000	Y 377.433
Zn (206.200 nm)	0.000028 u	ppm	0.001014	> 100.00	9.884970	Y 377.433
Zr (343.823 nm)	-0.006309 u	ppm	0.000004	0.06	-374.212000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.116178	11889.739761	0.003537	0.32
Y 377.433	1.116239	515297.786675	0.002222	0.20
Y_R 377.433	1.172390	44302.000000	0.006462	0.55
Y_R 488.368	1.173310	42344.700000	0.001638	0.14
Y_R2 488.368	1.165190	82002.303694	0.011793	1.01
Y_R4	1.204140	36948.000000	0.005274	0.44

Sample Name: CCV-5407762

Date: 11/6/2018 5:52:52 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.521106	ppm	0.000914	0.18	14179.800000	Y 377.433
Al (394.401 nm)	0.513850	ppm	0.000387	0.08	6610.060000	Y 377.433
Al H (396.152 nm)	0.563116 u	ppm	0.001809	0.32	911.964000	Y_R 377.433
As (188.980 nm)	1.016650	ppm	0.001080	0.11	1409.300000	Y 242.219
B (249.678 nm)	0.491931	ppm	0.001416	0.29	2021.060000	Y 242.219
Ba (493.408 nm)	0.507831	ppm	0.000443	0.09	47279.100000	Y_R 488.368
Be (234.861 nm)	0.522439	ppm	0.000244	0.05	27012.700000	Y_R 488.368
Bi (223.061 nm)	-0.003345 u	ppm	0.001909	57.05	38.177500	Y 377.433
Ca (315.887 nm)	5.100793	ppm	0.012085	0.24	3366.963573	Y_R 377.433
Cd (214.439 nm)	0.524725	ppm	0.001761	0.34	13054.500000	Y 377.433
Co (228.615 nm)	0.512190	ppm	0.001021	0.20	12146.900000	Y 242.219
Cr (205.560 nm)	0.535917	ppm	0.001669	0.31	2546.290000	Y 377.433
Cu (324.754 nm)	0.519983	ppm	0.001844	0.35	25226.300000	Y 377.433
Fe (238.204 nm)	2.558876	ppm	0.006460	0.25	4275.056411	Y_R 377.433
Fe H (259.940 nm)	2.576600 u	ppm	0.006819	0.26	2353.420000	Y_R 377.433
K (766.491 nm)	51.437100	ppm	0.149158	0.29	52007.400000	Y_R2 488.368
Li (670.783 nm)	1.045280	ppm	0.003433	0.33	14357.900000	Y_R2 488.368
Mg (279.078 nm)	20.634800	ppm	0.003316	0.02	44963.600000	Y 377.433
Mn (257.610 nm)	0.519098	ppm	0.000178	0.03	108630.000000	Y 377.433
Mo (202.032 nm)	0.526043	ppm	0.000887	0.17	6003.240000	Y 377.433
Na (589.592 nm)	25.941100	ppm	0.058718	0.23	12888.900000	Y_R2 488.368
Na H (589.593 nm)	27.569007 u	ppm	0.161712	0.59	9403.614938	Y_R4
Ni (231.604 nm)	0.517596	ppm	0.000871	0.17	1993.690000	Y 377.433
P (213.618 nm)	1.034140	ppm	0.000389	0.04	1175.170000	Y 242.219
Pb (220.353 nm)	1.020580	ppm	0.000043	0.00	2292.140000	Y 242.219
S (181.972 nm)	-0.004840 u	ppm	0.003525	72.83	-26.043752	Y 377.433
Sb (206.834 nm)	1.043500	ppm	0.002994	0.29	1714.570000	Y 377.433
Se (196.026 nm)	1.049350	ppm	0.001607	0.15	1579.430000	Y 242.219
Si (288.158 nm)	5.031680	ppm	0.025801	0.51	23826.200000	Y 377.433
Sn (189.925 nm)	1.043890	ppm	0.001725	0.17	1226.660000	Y 377.433
Sr (421.552 nm)	0.517369	ppm	0.000620	0.12	60333.975877	Y_R 488.368
Th (288.505 nm)	-0.026144 u	ppm	0.003909	14.95	-47.083700	Y 377.433
Ti (336.122 nm)	0.525757	ppm	0.000579	0.11	49641.700000	Y 377.433
Tl (190.794 nm)	1.043700	ppm	0.003519	0.34	588.750000	Y 377.433
U (409.013 nm)	-0.016232 u	ppm	0.008422	51.89	31.741400	Y 377.433
V (292.401 nm)	0.516895	ppm	0.000079	0.02	24691.500000	Y 377.433
Zn (206.200 nm)	0.522455	ppm	0.004110	0.79	1810.300000	Y 377.433
Zr (343.823 nm)	0.524249	ppm	0.000686	0.13	21127.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.135779	12098.531074	0.002892	0.25
Y 377.433	1.131821	522490.721571	0.003624	0.32
Y_R 377.433	1.174520	44382.400000	0.000282	0.02
Y_R 488.368	1.174310	42380.800000	0.003596	0.31
Y_R2 488.368	1.152407	81102.612540	0.009669	0.84
Y_R4	1.195100	36670.600000	0.009792	0.82

Sample Name: CCB

Date: 11/6/2018 5:56:23 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000473	ppm	0.000086	18.10	-226.089000	Y 377.433
Al (394.401 nm)	-0.001270 u	ppm	0.000107	8.41	73.637400	Y 377.433
Al H (396.152 nm)	0.136175 Zu	ppm	0.004562	3.35	9.150800 Z	Y_R 377.433
As (188.980 nm)	-0.001016 u	ppm	0.001293	> 100.00	-16.538500	Y 242.219
B (249.678 nm)	-0.011953 u	ppm	0.001415	11.84	-1.292970	Y 242.219
Ba (493.408 nm)	-0.001192 u	ppm	0.000164	13.73	691.892000	Y_R 488.368
Be (234.861 nm)	0.000138	ppm	0.000024	17.26	1.268120	Y_R 488.368
Bi (223.061 nm)	-0.002667 u	ppm	0.003635	> 100.00	38.875800	Y 377.433
Ca (315.887 nm)	0.002169 u	ppm	0.004591	> 100.00	-0.885707	Y_R 377.433
Cd (214.439 nm)	0.000162	ppm	0.000049	30.20	-7.129760	Y 377.433
Co (228.615 nm)	0.000568	ppm	0.000039	6.84	-14.480800	Y 242.219
Cr (205.560 nm)	0.000404	ppm	0.000531	> 100.00	-7.417680	Y 377.433
Cu (324.754 nm)	0.000558	ppm	0.000134	23.93	227.626000	Y 377.433
Fe (238.204 nm)	-0.001890 u	ppm	0.001716	90.76	8.385846	Y_R 377.433
Fe H (259.940 nm)	0.015397 u	ppm	0.001178	7.65	3.121880	Y_R 377.433
K (766.491 nm)	0.007091 u	ppm	0.147724	> 100.00	1742.840000	Y_R2 488.368
Li (670.783 nm)	0.008355	ppm	0.001700	20.34	-328.566000	Y_R2 488.368
Mg (279.078 nm)	0.004501	ppm	0.001077	23.93	23.832900	Y 377.433
Mn (257.610 nm)	0.000013	ppm	0.000007	53.62	25.283900	Y 377.433
Mo (202.032 nm)	0.000215	ppm	0.000016	7.54	21.129300	Y 377.433
Na (589.592 nm)	0.151460	ppm	0.030164	19.92	-59.915800	Y_R2 488.368
Na H (589.593 nm)	2.287667 u	ppm	0.040324	1.76	426.494904	Y_R4
Ni (231.604 nm)	-0.000082 u	ppm	0.000429	> 100.00	8.765590	Y 377.433
P (213.618 nm)	-0.000837 u	ppm	0.000300	35.82	-2.052060	Y 242.219
Pb (220.353 nm)	-0.003797 u	ppm	0.002654	69.90	6.023560	Y 242.219
S (181.972 nm)	0.006810	ppm	0.002764	40.59	-22.458178	Y 377.433
Sb (206.834 nm)	0.002298	ppm	0.002052	89.30	2.654810	Y 377.433
Se (196.026 nm)	0.001446	ppm	0.001881	> 100.00	3.815760	Y 242.219
Si (288.158 nm)	-0.193798 Zu	ppm	0.004492	2.32	416.614000 Z	Y 377.433
Sn (189.925 nm)	-0.007510 u	ppm	0.000117	1.56	-0.704390	Y 377.433
Sr (421.552 nm)	-0.000250 u	ppm	0.000124	49.82	249.240381	Y_R 488.368
Th (288.505 nm)	-0.001104 u	ppm	0.003987	> 100.00	13.235700	Y 377.433
Ti (336.122 nm)	0.000567	ppm	0.000002	0.35	-311.158000	Y 377.433
Tl (190.794 nm)	-0.000221 u	ppm	0.001045	> 100.00	-8.942370	Y 377.433
U (409.013 nm)	-0.009535 u	ppm	0.009152	95.98	93.003400	Y 377.433
V (292.401 nm)	0.000480	ppm	0.000121	25.28	-172.000000	Y 377.433
Zn (206.200 nm)	0.000055 u	ppm	0.000338	> 100.00	4.567900	Y 377.433
Zr (343.823 nm)	0.000536	ppm	0.000183	34.07	-96.799300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.184740	12620.078557	0.007674	0.65
Y 377.433	1.166620	538555.393782	0.004478	0.38
Y_R 377.433	1.205500	45553.100000	0.001175	0.10
Y_R 488.368	1.219780	44021.900000	0.004221	0.35
Y_R2 488.368	1.178891	82966.533795	0.006849	0.58
Y_R4	1.221980	37495.400000	0.000181	0.01

Sample Name: CCVL-5412564

Date: 11/6/2018 5:59:34 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010829	ppm	0.000151	1.40	61.310500	Y 377.433
Al (394.401 nm)	0.100040	ppm	0.001327	1.33	1336.830000	Y 377.433
Al H (396.152 nm)	0.233287 u	ppm	0.001914	0.82	173.638000	Y_R 377.433
As (188.980 nm)	0.012752	ppm	0.001274	9.99	2.747990	Y 242.219
B (249.678 nm)	0.087847	ppm	0.000105	0.12	399.393000	Y 242.219
Ba (493.408 nm)	0.008580	ppm	0.000273	3.19	1586.300000	Y_R 488.368
Be (234.861 nm)	0.001172	ppm	0.000044	3.78	53.427600	Y_R 488.368
Bi (223.061 nm)	0.093627	ppm	0.000819	0.88	197.610000	Y 377.433
Ca (315.887 nm)	0.201213	ppm	0.005356	2.66	130.608205	Y_R 377.433
Cd (214.439 nm)	0.005411	ppm	0.000156	2.89	123.588000	Y 377.433
Co (228.615 nm)	0.010841	ppm	0.000066	0.61	229.779000	Y 242.219
Cr (205.560 nm)	0.011401	ppm	0.000438	3.84	44.952400	Y 377.433
Cu (324.754 nm)	0.016159	ppm	0.000176	1.09	980.345000	Y 377.433
Fe (238.204 nm)	0.096323	ppm	0.001733	1.80	172.025597	Y_R 377.433
Fe H (259.940 nm)	0.109532 u	ppm	0.005984	5.46	89.505200	Y_R 377.433
K (766.491 nm)	2.954680	ppm	0.077077	2.61	4623.640000	Y_R2 488.368
Li (670.783 nm)	0.038168 Q	ppm	0.000222	0.58	93.701300 Q	Y_R2 488.368
Mg (279.078 nm)	0.208316	ppm	0.000251	0.12	467.417000	Y 377.433
Mn (257.610 nm)	0.010793	ppm	0.000021	0.20	2280.800000	Y 377.433
Mo (202.032 nm)	0.020593	ppm	0.000171	0.83	252.960000	Y 377.433
Na (589.592 nm)	1.221040	ppm	0.000002	0.00	477.301000	Y_R2 488.368
Na H (589.593 nm)	2.891869 u	ppm	0.019623	0.68	641.352164	Y_R4
Ni (231.604 nm)	0.041570	ppm	0.000232	0.56	168.397000	Y 377.433
P (213.618 nm)	2.941340	ppm	0.004682	0.16	3410.460000	Y 242.219
Pb (220.353 nm)	0.007388	ppm	0.000287	3.88	30.992100	Y 242.219
S (181.972 nm)	0.106305	ppm	0.008892	8.36	25.106368	Y 377.433
Sb (206.834 nm)	0.022543	ppm	0.001304	5.78	35.819900	Y 377.433
Se (196.026 nm)	0.022732	ppm	0.000656	2.89	35.811500	Y 242.219
Si (288.158 nm)	0.314067 Q	ppm	0.005634	1.79	2691.800000 Q	Y 377.433
Sn (189.925 nm)	0.094738	ppm	0.001739	1.84	118.656000	Y 377.433
Sr (421.552 nm)	0.009315	ppm	0.000118	1.27	1359.477211	Y_R 488.368
Th (288.505 nm)	0.020002 Q	ppm	0.001582	7.91	35.293600 Q	Y 377.433
Ti (336.122 nm)	0.011050	ppm	0.000040	0.36	686.205000	Y 377.433
Tl (190.794 nm)	0.018313	ppm	0.000665	3.63	1.650630	Y 377.433
U (409.013 nm)	0.061215	ppm	0.001076	1.76	253.436000	Y 377.433
V (292.401 nm)	0.010617	ppm	0.000110	1.04	316.174000	Y 377.433
Zn (206.200 nm)	0.022379	ppm	0.000302	1.35	81.733100	Y 377.433
Zr (343.823 nm)	0.016309	ppm	0.000088	0.54	542.403000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.167965	12441.388253	0.001203	0.10
Y 377.433	1.158756	534925.152717	0.003911	0.34
Y_R 377.433	1.183200	44710.300000	0.004729	0.40
Y_R 488.368	1.190860	42978.100000	0.010282	0.86
Y_R2 488.368	1.176327	82786.064743	0.001516	0.13
Y_R4	1.204320	36953.600000	0.002851	0.24

Sample Name: MB 280-435260/1-A

Date: 11/6/2018 6:02:58 AM Rack:Tube: 2:88

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000072 u	ppm	0.000265	> 100.00	-241.173000	Y 377.433
Al (394.401 nm)	0.007361	ppm	0.000327	4.45	178.936000	Y 377.433
Al H (396.152 nm)	0.139175 u	ppm	0.007551	5.43	14.113700	Y_R 377.433
As (188.980 nm)	0.000041 u	ppm	0.000992	> 100.00	-15.057600	Y 242.219
B (249.678 nm)	-0.010165 u	ppm	0.000193	1.90	5.880240	Y 242.219
Ba (493.408 nm)	-0.000465 u	ppm	0.000082	17.53	758.436000	Y_R 488.368
Be (234.861 nm)	0.000088	ppm	0.000000	0.06	-1.564660	Y_R 488.368
Bi (223.061 nm)	-0.004591 u	ppm	0.000809	17.62	35.706900	Y 377.433
Ca (315.887 nm)	0.183113	ppm	0.000044	0.02	118.630870	Y_R 377.433
Cd (214.439 nm)	0.000013	ppm	0.000007	49.40	-10.823500	Y 377.433
Co (228.615 nm)	0.000360	ppm	0.000321	89.05	-19.379500	Y 242.219
Cr (205.560 nm)	0.000829	ppm	0.000013	1.57	-5.384320	Y 377.433
Cu (324.754 nm)	0.000764	ppm	0.000117	15.30	238.600000	Y 377.433
Fe (238.204 nm)	0.015866	ppm	0.001984	12.50	37.971217	Y_R 377.433
Fe H (259.940 nm)	0.024708 u	ppm	0.004472	18.10	11.666300	Y_R 377.433
K (766.491 nm)	-0.384263 u	ppm	0.000356	0.09	1360.360000	Y_R2 488.368
Li (670.783 nm)	0.017891	ppm	0.001739	9.72	-193.492000	Y_R2 488.368
Mg (279.078 nm)	0.047665	ppm	0.001563	3.28	117.962000	Y 377.433
Mn (257.610 nm)	0.000530	ppm	0.000035	6.63	133.493000	Y 377.433
Mo (202.032 nm)	-0.000627 u	ppm	0.000100	16.00	11.547300	Y 377.433
Na (589.592 nm)	0.175844	ppm	0.018989	10.80	-47.670600	Y_R2 488.368
Na H (589.593 nm)	1.873820 u	ppm	0.025706	1.37	278.687861	Y_R4
Ni (231.604 nm)	-0.000525 u	ppm	0.000448	85.40	7.074200	Y 377.433
P (213.618 nm)	0.020885	ppm	0.004260	20.40	23.150500	Y 242.219
Pb (220.353 nm)	-0.004364 u	ppm	0.001019	23.36	4.739210	Y 242.219
S (181.972 nm)	0.015720	ppm	0.000054	0.34	-18.193429	Y 377.433
Sb (206.834 nm)	0.001279	ppm	0.000669	52.33	0.973764	Y 377.433
Se (196.026 nm)	0.003344	ppm	0.002147	64.21	6.666230	Y 242.219
Si (288.158 nm)	-0.153420 u	ppm	0.003768	2.46	597.500000	Y 377.433
Sn (189.925 nm)	0.009812	ppm	0.001097	11.18	19.516500	Y 377.433
Sr (421.552 nm)	-0.000011 u	ppm	0.000117	> 100.00	276.980989	Y_R 488.368
Th (288.505 nm)	-0.001533 u	ppm	0.000672	43.82	12.741300	Y 377.433
Ti (336.122 nm)	0.001186	ppm	0.000061	5.17	-252.014000	Y 377.433
Tl (190.794 nm)	-0.000771 u	ppm	0.001222	> 100.00	-9.259130	Y 377.433
U (409.013 nm)	-0.006568 u	ppm	0.010086	> 100.00	99.814000	Y 377.433
V (292.401 nm)	0.000697	ppm	0.000431	61.87	-160.658000	Y 377.433
Zn (206.200 nm)	0.002298	ppm	0.000806	35.07	12.324500	Y 377.433
Zr (343.823 nm)	0.000602	ppm	0.000063	10.50	-94.140600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.174703	12513.157608	0.002069	0.18
Y 377.433	1.168557	539449.635394	0.001998	0.17
Y_R 377.433	1.197320	45244.100000	0.002297	0.19
Y_R 488.368	1.210100	43672.600000	0.001617	0.13
Y_R2 488.368	1.212704	85346.133999	0.005326	0.44
Y_R4	1.207050	37037.400000	0.001316	0.11

Sample Name: LCS 280-435260/2-A

Date: 11/6/2018 6:06:09 AM Rack:Tube: 2:89

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053418	ppm	0.000431	0.81	1187.830000	Y 377.433
Al (394.401 nm)	2.048840	ppm	0.001839	0.09	25907.200000	Y 377.433
Al H (396.152 nm)	1.978040	ppm	0.002033	0.10	3432.230000	Y_R 377.433
As (188.980 nm)	0.995612	ppm	0.004464	0.45	1379.840000	Y 242.219
B (249.678 nm)	0.994018	ppm	0.000445	0.04	4037.540000	Y 242.219
Ba (493.408 nm)	2.011570	ppm	0.000316	0.02	184898.000000	Y_R 488.368
Be (234.861 nm)	0.052098	ppm	0.000105	0.20	2677.520000	Y_R 488.368
Bi (223.061 nm)	1.975120	ppm	0.000934	0.05	3298.990000	Y 377.433
Ca (315.887 nm)	50.233199	ppm	0.041471	0.08	33178.090164	Y_R 377.433
Cd (214.439 nm)	0.103042	ppm	0.000236	0.23	2554.610000	Y 377.433
Co (228.615 nm)	0.493511	ppm	0.001608	0.33	11725.000000	Y 242.219
Cr (205.560 nm)	0.210211	ppm	0.000650	0.31	989.935000	Y 377.433
Cu (324.754 nm)	0.254608	ppm	0.000432	0.17	12493.500000	Y 377.433
Fe (238.204 nm)	1.032060	ppm	0.002203	0.21	1731.121557	Y_R 377.433
Fe H (259.940 nm)	1.026630 u	ppm	0.007049	0.69	931.078000	Y_R 377.433
K (766.491 nm)	51.817800	ppm	0.057514	0.11	52379.600000	Y_R2 488.368
Li (670.783 nm)	1.047260	ppm	0.003358	0.32	14386.000000	Y_R2 488.368
Mg (279.078 nm)	50.283900	ppm	0.030951	0.06	109530.000000	Y 377.433
Mn (257.610 nm)	0.510417	ppm	0.000482	0.09	106814.000000	Y 377.433
Mo (202.032 nm)	1.057780	ppm	0.000301	0.03	12052.500000	Y 377.433
Na (589.592 nm)	51.644000	ppm	0.189589	0.37	25778.800000	Y_R2 488.368
Na H (589.593 nm)	52.844262	ppm	0.002438	0.00	18280.314719	Y_R4
Ni (231.604 nm)	0.496615	ppm	0.000206	0.04	1913.950000	Y 377.433
P (213.618 nm)	10.335200	ppm	0.039158	0.38	11977.100000	Y 242.219
Pb (220.353 nm)	0.503986	ppm	0.000030	0.01	1140.380000	Y 242.219
S (181.972 nm)	2.013191	ppm	0.016447	0.82	940.162052	Y 377.433
Sb (206.834 nm)	0.516805	ppm	0.000996	0.19	838.363000	Y 377.433
Se (196.026 nm)	2.058890	ppm	0.003889	0.19	3097.700000	Y 242.219
Si (288.158 nm)	1.356870	ppm	0.012368	0.91	7363.450000	Y 377.433
Sn (189.925 nm)	2.072560	ppm	0.004546	0.22	2427.490000	Y 377.433
Sr (421.552 nm)	1.023888	ppm	0.002223	0.22	119129.913636	Y_R 488.368
Th (288.505 nm)	0.980362	ppm	0.001853	0.19	1033.520000	Y 377.433
Ti (336.122 nm)	1.039380	ppm	0.000260	0.03	98594.000000	Y 377.433
Tl (190.794 nm)	2.066790	ppm	0.015548	0.75	1173.550000	Y 377.433
U (409.013 nm)	2.147460	ppm	0.014477	0.67	4973.160000	Y 377.433
V (292.401 nm)	0.516803	ppm	0.000162	0.03	24766.400000	Y 377.433
Zn (206.200 nm)	0.510980	ppm	0.001779	0.35	1770.480000	Y 377.433
Zr (343.823 nm)	0.514809	ppm	0.000257	0.05	20744.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120015	11930.612516	0.002638	0.24
Y 377.433	1.118959	516553.200830	0.004512	0.40
Y_R 377.433	1.152640	43555.600000	0.005239	0.45
Y_R 488.368	1.151140	41544.500000	0.007589	0.66
Y_R2 488.368	1.155977	81353.883203	0.002638	0.23
Y_R4	1.162240	35662.400000	0.003684	0.32

Sample Name: 280-116077-A-1-A

Date: 11/6/2018 6:09:38 AM Rack:Tube: 2:90

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.391981 bu	ppm	0.005009	1.28	-54747.100000	Y 377.433
Al (394.401 nm)	28.211300 o	ppm	0.134832	0.48	349520.000000	Y 377.433
Al H (396.152 nm)	27.732400	ppm	0.022456	0.08	46061.500000	Y_R 377.433
As (188.980 nm)	0.039917	ppm	0.002279	5.71	35.970800	Y 242.219
B (249.678 nm)	0.378032	ppm	0.001703	0.45	1508.210000	Y 242.219
Ba (493.408 nm)	1.900800	ppm	0.000046	0.00	174887.000000	Y_R 488.368
Be (234.861 nm)	0.003146	ppm	0.000453	14.40	-2284.150000	Y_R 488.368
Bi (223.061 nm)	0.038709	ppm	0.000031	0.08	129.653000	Y 377.433
Ca (315.887 nm)	508.174353	ppm	1.166368	0.23	335662.270077	Y_R 377.433
Cd (214.439 nm)	0.011566	ppm	0.000151	1.31	276.845000	Y 377.433
Co (228.615 nm)	0.066131	ppm	0.000206	0.31	1763.250000	Y 242.219
Cr (205.560 nm)	2.209310	ppm	0.000919	0.04	10535.100000	Y 377.433
Cu (324.754 nm)	0.483722	ppm	0.000618	0.13	25121.900000	Y 377.433
Fe (238.204 nm)	172.351655 o	ppm	0.213676	0.12	287178.593164	Y_R 377.433
Fe H (259.940 nm)	172.753000	ppm	0.431198	0.25	158516.000000	Y_R 377.433
K (766.491 nm)	8.142400	ppm	0.024743	0.30	9693.810000	Y_R2 488.368
Li (670.783 nm)	0.037954	ppm	0.000342	0.90	90.662100	Y_R2 488.368
Mg (279.078 nm)	38.274800	ppm	0.060690	0.16	83242.500000	Y 377.433
Mn (257.610 nm)	1.543750	ppm	0.001470	0.10	323012.000000	Y 377.433
Mo (202.032 nm)	0.334284	ppm	0.000815	0.24	3821.680000	Y 377.433
Na (589.592 nm)	4.858240	ppm	0.010408	0.21	2275.410000	Y_R2 488.368
Na H (589.593 nm)	7.425965 u	ppm	0.035287	0.48	2073.664279	Y_R4
Ni (231.604 nm)	0.672541	ppm	0.000521	0.08	2612.470000	Y 377.433
P (213.618 nm)	16.051800	ppm	0.004764	0.03	18595.700000	Y 242.219
Pb (220.353 nm)	0.682804	ppm	0.000166	0.02	1531.980000	Y 242.219
S (181.972 nm)	15.746200	ppm	0.027556	0.18	7525.968071	Y 377.433
Sb (206.834 nm)	0.017412	ppm	0.001757	10.09	60.507200	Y 377.433
Se (196.026 nm)	-0.008144 u	ppm	0.002446	30.04	-52.944700	Y 242.219
Si (288.158 nm)	31.271300	ppm	0.112003	0.36	141377.000000	Y 377.433
Sn (189.925 nm)	0.029503	ppm	0.000918	3.11	42.503300	Y 377.433
Sr (421.552 nm)	1.972110	ppm	0.000563	0.03	229218.252359	Y_R 488.368
Th (288.505 nm)	-7.491400 bu	ppm	0.088600	1.18	-19892.500000	Y 377.433
Ti (336.122 nm)	0.644401	ppm	0.002746	0.43	62205.800000	Y 377.433
Tl (190.794 nm)	0.093412	ppm	0.001325	1.42	32.238600	Y 377.433
U (409.013 nm)	-1.147270 u	ppm	0.014333	1.25	-2468.160000	Y 377.433
V (292.401 nm)	171.041000 bo	ppm	0.560659	0.33	8298090.000000	Y 377.433
Zn (206.200 nm)	4.145510	ppm	0.004043	0.10	14350.200000	Y 377.433
Zr (343.823 nm)	0.033928	ppm	0.000115	0.34	1256.430000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113548	11861.729733	0.003841	0.34
Y 377.433	1.103738	509526.561902	0.005325	0.48
Y_R 377.433	1.163310	43958.800000	0.001070	0.09
Y_R 488.368	1.182980	42693.700000	0.001489	0.13
Y_R2 488.368	1.179945	83040.707643	0.005628	0.48
Y_R4	1.105290	33914.900000	0.000774	0.07

Sample Name: 280-116077-A-1-Asd@5

Date: 11/6/2018 6:13:16 AM Rack:Tube: 4:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.060345 bu	ppm	0.001287	2.13	-11037.100000	Y 377.433
Al (394.401 nm)	5.477940 o	ppm	0.000727	0.01	67905.300000	Y 377.433
Al H (396.152 nm)	5.548030	ppm	0.004827	0.09	9042.550000	Y_R 377.433
As (188.980 nm)	0.007150	ppm	0.004075	56.99	-6.083000	Y 242.219
B (249.678 nm)	0.065676	ppm	0.001896	2.89	298.882000	Y 242.219
Ba (493.408 nm)	0.379721	ppm	0.000216	0.06	35578.600000	Y_R 488.368
Be (234.861 nm)	0.000665	ppm	0.000012	1.86	-470.345000	Y_R 488.368
Bi (223.061 nm)	0.009722	ppm	0.002258	23.22	63.910800	Y 377.433
Ca (315.887 nm)	102.123962	ppm	0.073877	0.07	67453.627987	Y_R 377.433
Cd (214.439 nm)	0.002391	ppm	0.000014	0.58	48.388500	Y 377.433
Co (228.615 nm)	0.013829	ppm	0.000263	1.90	345.198000	Y 242.219
Cr (205.560 nm)	0.443126	ppm	0.001301	0.29	2105.580000	Y 377.433
Cu (324.754 nm)	0.092483	ppm	0.000156	0.17	4991.970000	Y 377.433
Fe (238.204 nm)	35.232098 o	ppm	0.000221	0.00	58714.180380	Y_R 377.433
Fe H (259.940 nm)	35.124200	ppm	0.044127	0.13	32220.800000	Y_R 377.433
K (766.491 nm)	1.390240	ppm	0.052849	3.80	3094.650000	Y_R2 488.368
Li (670.783 nm)	0.018264	ppm	0.005030	27.54	-188.213000	Y_R2 488.368
Mg (279.078 nm)	7.703700	ppm	0.037001	0.48	16766.900000	Y 377.433
Mn (257.610 nm)	0.308947	ppm	0.001323	0.43	64661.700000	Y 377.433
Mo (202.032 nm)	0.065857	ppm	0.000347	0.53	767.905000	Y 377.433
Na (589.592 nm)	1.076840	ppm	0.043317	4.02	399.120000	Y_R2 488.368
Na H (589.593 nm)	2.915777 u	ppm	0.041353	1.42	613.227952	Y_R4
Ni (231.604 nm)	0.135672	ppm	0.000964	0.71	534.340000	Y 377.433
P (213.618 nm)	3.136280	ppm	0.019403	0.62	3632.550000	Y 242.219
Pb (220.353 nm)	0.136377	ppm	0.000500	0.37	317.356000	Y 242.219
S (181.972 nm)	2.996995	ppm	0.006278	0.21	1411.929099	Y 377.433
Sb (206.834 nm)	-0.002484 u	ppm	0.001579	63.57	1.450170	Y 377.433
Se (196.026 nm)	0.001206 u	ppm	0.003093	> 100.00	-5.208890	Y 242.219
Si (288.158 nm)	6.052900	ppm	0.012821	0.21	28401.200000	Y 377.433
Sn (189.925 nm)	-0.000724 u	ppm	0.000185	25.61	7.218300	Y 377.433
Sr (421.552 nm)	0.395265	ppm	0.000390	0.10	46164.120894	Y_R 488.368
Th (288.505 nm)	-1.373640 bu	ppm	0.008183	0.60	-3943.620000	Y 377.433
Ti (336.122 nm)	0.126852	ppm	0.000229	0.18	11957.500000	Y 377.433
Tl (190.794 nm)	0.019965	ppm	0.009657	48.37	0.114574	Y 377.433
U (409.013 nm)	-0.208271 u	ppm	0.011144	5.35	-352.921000	Y 377.433
V (292.401 nm)	35.822700 bo	ppm	0.170388	0.48	1737800.000000	Y 377.433
Zn (206.200 nm)	0.846995	ppm	0.004866	0.57	2935.460000	Y 377.433
Zr (343.823 nm)	0.007108	ppm	0.000011	0.16	169.534000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.152854	12280.423563	0.007480	0.65
Y 377.433	1.147499	529728.567023	0.007805	0.68
Y_R 377.433	1.191660	45030.300000	0.001695	0.14
Y_R 488.368	1.194010	43091.800000	0.004688	0.39
Y_R2 488.368	1.195740	84152.308334	0.007843	0.66
Y_R4	1.204610	36962.500000	0.003056	0.25

Sample Name: 280-116077-A-1-B MS

Date: 11/6/2018 6:16:54 AM Rack:Tube: 4:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.447114 bu	ppm	0.001374	0.31	-66522.100000	Y 377.433
Al (394.401 nm)	39.523000 bo	ppm	0.166509	0.42	489960.000000	Y 377.433
Al H (396.152 nm)	38.946600	ppm	0.064565	0.17	65004.700000	Y_R 377.433
As (188.980 nm)	1.086140	ppm	0.007025	0.65	1500.910000	Y 242.219
B (249.678 nm)	1.460310	ppm	0.008922	0.61	5843.440000	Y 242.219
Ba (493.408 nm)	3.843840	ppm	0.000222	0.01	352736.000000	Y_R 488.368
Be (234.861 nm)	0.057197	ppm	0.000115	0.20	68.228200	Y_R 488.368
Bi (223.061 nm)	2.106950	ppm	0.003122	0.15	3542.850000	Y 377.433
Ca (315.887 nm)	627.273224	ppm	1.848063	0.29	414331.712945	Y_R 377.433
Cd (214.439 nm)	0.115345	ppm	0.000098	0.09	2860.940000	Y 377.433
Co (228.615 nm)	0.576894	ppm	0.003132	0.54	13976.300000	Y 242.219
Cr (205.560 nm)	2.972530	ppm	0.004840	0.16	14173.800000	Y 377.433
Cu (324.754 nm)	0.943985 b	ppm	0.001297	0.14	47837.800000	Y 377.433
Fe (238.204 nm)	203.599853 o	ppm	0.399989	0.20	339243.383756	Y_R 377.433
Fe H (259.940 nm)	204.878000	ppm	0.487750	0.24	187995.000000	Y_R 377.433
K (766.491 nm)	64.512800	ppm	0.020176	0.03	64786.900000	Y_R2 488.368
Li (670.783 nm)	1.134560	ppm	0.002362	0.21	15622.500000	Y_R2 488.368
Mg (279.078 nm)	95.205200	ppm	0.064956	0.07	207219.000000	Y 377.433
Mn (257.610 nm)	2.243870	ppm	0.001052	0.05	469493.000000	Y 377.433
Mo (202.032 nm)	1.478450	ppm	0.000392	0.03	16838.400000	Y 377.433
Na (589.592 nm)	59.080800 o	ppm	0.191324	0.32	29486.800000	Y_R2 488.368
Na H (589.593 nm)	67.238368	ppm	0.166283	0.25	23239.264814	Y_R4
Ni (231.604 nm)	1.296190	ppm	0.002852	0.22	5008.580000	Y 377.433
P (213.618 nm)	25.154900	ppm	0.169140	0.67	29134.400000	Y 242.219
Pb (220.353 nm)	0.885635	ppm	0.004165	0.47	1981.270000	Y 242.219
S (181.972 nm)	20.306071	ppm	0.012475	0.06	9712.322058	Y 377.433
Sb (206.834 nm)	0.512530	ppm	0.001489	0.29	870.852000	Y 377.433
Se (196.026 nm)	2.104440	ppm	0.008877	0.42	3116.240000	Y 242.219
Si (288.158 nm)	7.480550	ppm	0.001827	0.02	34796.900000	Y 377.433
Sn (189.925 nm)	2.057610	ppm	0.005507	0.27	2410.040000	Y 377.433
Sr (421.552 nm)	3.231523	ppm	0.006397	0.20	375413.056077	Y_R 488.368
Th (288.505 nm)	-8.467700 bu	ppm	0.111717	1.32	-23744.400000	Y 377.433
Ti (336.122 nm)	2.041360	ppm	0.000319	0.02	195341.000000	Y 377.433
Tl (190.794 nm)	2.133930	ppm	0.000165	0.01	1197.030000	Y 377.433
U (409.013 nm)	0.786031	ppm	0.009311	1.18	1916.130000	Y 377.433
V (292.401 nm)	211.440000 bo	ppm	0.214166	0.10	10258000.000000	Y 377.433
Zn (206.200 nm)	5.423410	ppm	0.007038	0.13	18770.100000	Y 377.433
Zr (343.823 nm)	0.482949	ppm	0.000409	0.08	19453.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.083154	11537.963933	0.006948	0.64
Y 377.433	1.078379	497820.203574	0.002817	0.26
Y_R 377.433	1.155240	43654.000000	0.000573	0.05
Y_R 488.368	1.189720	42936.900000	0.000679	0.06
Y_R2 488.368	1.161147	81717.748912	0.004239	0.37
Y_R4	1.063620	32636.400000	0.003549	0.33

Sample Name: 280-116077-A-1-C MSD

Date: 11/6/2018 6:20:34 AM Rack:Tube: 4:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.350062 bu	ppm	0.000166	0.05	-55691.200000	Y 377.433
Al (394.401 nm)	37.989100 o	ppm	0.033543	0.09	471317.000000	Y 377.433
Al H (396.152 nm)	37.521500	ppm	0.028651	0.08	62624.600000	Y_R 377.433
As (188.980 nm)	1.113610	ppm	0.006989	0.63	1539.800000	Y 242.219
B (249.678 nm)	1.438200	ppm	0.005614	0.39	5759.530000	Y 242.219
Ba (493.408 nm)	3.751600	ppm	0.008784	0.23	344283.000000	Y_R 488.368
Be (234.861 nm)	0.056848	ppm	0.001371	2.41	261.268000	Y_R 488.368
Bi (223.061 nm)	2.125200	ppm	0.012114	0.57	3570.980000	Y 377.433
Ca (315.887 nm)	582.313225	ppm	0.315981	0.05	384634.486797	Y_R 377.433
Cd (214.439 nm)	0.117544	ppm	0.000936	0.80	2915.690000	Y 377.433
Co (228.615 nm)	0.577868	ppm	0.001822	0.32	13980.900000	Y 242.219
Cr (205.560 nm)	2.724680	ppm	0.010808	0.40	12990.500000	Y 377.433
Cu (324.754 nm)	0.900882	ppm	0.005420	0.60	45408.000000	Y 377.433
Fe (238.204 nm)	188.854231 o	ppm	0.699055	0.37	314674.679757	Y_R 377.433
Fe H (259.940 nm)	190.226000	ppm	0.365197	0.19	174551.000000	Y_R 377.433
K (766.491 nm)	64.566000	ppm	0.064245	0.10	64838.900000	Y_R2 488.368
Li (670.783 nm)	1.139410	ppm	0.001149	0.10	15691.200000	Y_R2 488.368
Mg (279.078 nm)	93.484700	ppm	0.440990	0.47	203483.000000	Y 377.433
Mn (257.610 nm)	2.111350	ppm	0.023471	1.11	441768.000000	Y 377.433
Mo (202.032 nm)	1.492420	ppm	0.005424	0.36	16997.200000	Y 377.433
Na (589.592 nm)	59.184500 o	ppm	0.089807	0.15	29540.300000	Y_R2 488.368
Na H (589.593 nm)	66.255839	ppm	0.216946	0.33	22897.563759	Y_R4
Ni (231.604 nm)	1.300700	ppm	0.003330	0.26	5023.570000	Y 377.433
P (213.618 nm)	23.615800	ppm	0.062154	0.26	27351.500000	Y 242.219
Pb (220.353 nm)	0.838664	ppm	0.003989	0.48	1877.050000	Y 242.219
S (181.972 nm)	18.084836	ppm	0.105172	0.58	8648.708721	Y 377.433
Sb (206.834 nm)	0.510456	ppm	0.006537	1.28	863.692000	Y 377.433
Se (196.026 nm)	2.153800	ppm	0.005040	0.23	3194.110000	Y 242.219
Si (288.158 nm)	17.090300	ppm	0.062011	0.36	77847.500000	Y 377.433
Sn (189.925 nm)	2.064730	ppm	0.003640	0.18	2418.360000	Y 377.433
Sr (421.552 nm)	3.105478	ppm	0.016936	0.55	360780.087992	Y_R 488.368
Th (288.505 nm)	-6.792740 bu	ppm	0.144285	2.12	-19732.400000	Y 377.433
Ti (336.122 nm)	1.999910	ppm	0.006557	0.33	191288.000000	Y 377.433
Tl (190.794 nm)	2.156740	ppm	0.014982	0.69	1211.090000	Y 377.433
U (409.013 nm)	1.033850	ppm	0.005526	0.53	2484.980000	Y 377.433
V (292.401 nm)	179.471000 bo	ppm	1.013920	0.56	8706970.000000	Y 377.433
Zn (206.200 nm)	5.105820	ppm	0.040116	0.79	17670.900000	Y 377.433
Zr (343.823 nm)	0.414885	ppm	0.001406	0.34	16694.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.083987	11546.841805	0.006132	0.57
Y 377.433	1.082291	499625.949070	0.012588	1.16
Y_R 377.433	1.148350	43393.700000	0.002622	0.23
Y_R 488.368	1.174510	42388.100000	0.001826	0.16
Y_R2 488.368	1.164263	81937.049694	0.008593	0.74
Y_R4	1.080120	33142.500000	0.005408	0.50

Sample Name: 280-116077-A-1-Apds

Date: 11/6/2018 6:24:12 AM Rack:Tube: 4:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.321328 bu	ppm	0.003117	0.97	-51759.300000	Y 377.433
Al (394.401 nm)	28.417400 o	ppm	0.010427	0.04	352034.000000	Y 377.433
Al H (396.152 nm)	27.971300	ppm	0.012367	0.04	46447.800000	Y_R 377.433
As (188.980 nm)	0.245531	ppm	0.002286	0.93	324.175000	Y 242.219
B (249.678 nm)	0.474311	ppm	0.001687	0.36	1896.190000	Y 242.219
Ba (493.408 nm)	1.926210	ppm	0.003732	0.19	177210.000000	Y_R 488.368
Be (234.861 nm)	0.055735	ppm	0.000768	1.38	499.854000	Y_R 488.368
Bi (223.061 nm)	0.040253	ppm	0.003364	8.36	131.673000	Y 377.433
Ca (315.887 nm)	512.806342	ppm	0.029204	0.01	338721.835905	Y_R 377.433
Cd (214.439 nm)	0.062480	ppm	0.000045	0.07	1544.590000	Y 377.433
Co (228.615 nm)	0.112778	ppm	0.000152	0.13	2866.340000	Y 242.219
Cr (205.560 nm)	2.195380	ppm	0.000306	0.01	10468.400000	Y 377.433
Cu (324.754 nm)	0.518124	ppm	0.001808	0.35	26805.400000	Y 377.433
Fe (238.204 nm)	168.034254 o	ppm	0.172196	0.10	279985.070650	Y_R 377.433
Fe H (259.940 nm)	169.092000	ppm	0.019463	0.01	155156.000000	Y_R 377.433
K (766.491 nm)	29.503400	ppm	0.243233	0.82	30570.800000	Y_R2 488.368
Li (670.783 nm)	0.144411	ppm	0.002302	1.59	1598.470000	Y_R2 488.368
Mg (279.078 nm)	57.539800	ppm	0.112757	0.20	125213.000000	Y 377.433
Mn (257.610 nm)	1.542460	ppm	0.003068	0.20	322742.000000	Y 377.433
Mo (202.032 nm)	0.377511	ppm	0.000030	0.01	4313.450000	Y 377.433
Na (589.592 nm)	25.567200	ppm	0.010886	0.04	12679.200000	Y_R2 488.368
Na H (589.593 nm)	29.453222 u	ppm	0.056774	0.19	9936.436734	Y_R4
Ni (231.604 nm)	0.697522	ppm	0.002243	0.32	2707.670000	Y 377.433
P (213.618 nm)	17.793100	ppm	0.136768	0.77	20614.300000	Y 242.219
Pb (220.353 nm)	0.755621	ppm	0.004012	0.53	1694.610000	Y 242.219
S (181.972 nm)	15.286978	ppm	0.063235	0.41	7306.880415	Y 377.433
Sb (206.834 nm)	0.121471	ppm	0.002801	2.31	230.621000	Y 377.433
Se (196.026 nm)	0.206243	ppm	0.001844	0.89	270.486000	Y 242.219
Si (288.158 nm)	69.047200	ppm	0.194691	0.28	310609.000000	Y 377.433
Sn (189.925 nm)	0.125682	ppm	0.000692	0.55	154.780000	Y 377.433
Sr (421.552 nm)	1.940740	ppm	0.001306	0.07	225576.389054	Y_R 488.368
Th (288.505 nm)	-6.993210 bu	ppm	0.134669	1.93	-19083.100000	Y 377.433
Ti (336.122 nm)	0.678863	ppm	0.001074	0.16	65494.600000	Y 377.433
Tl (190.794 nm)	0.292041	ppm	0.000463	0.16	146.161000	Y 377.433
U (409.013 nm)	-0.542171 u	ppm	0.001205	0.22	-1092.460000	Y 377.433
V (292.401 nm)	167.032000 bo	ppm	0.109790	0.07	8103630.000000	Y 377.433
Zn (206.200 nm)	4.213380	ppm	0.006670	0.16	14584.300000	Y 377.433
Zr (343.823 nm)	0.086177	ppm	0.000143	0.17	3373.820000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.105561	11776.643454	0.002400	0.22
Y 377.433	1.097674	506727.420758	0.003674	0.33
Y_R 377.433	1.155350	43658.100000	0.000015	0.00
Y_R 488.368	1.181630	42644.800000	0.001027	0.09
Y_R2 488.368	1.177491	82867.999333	0.011089	0.94
Y_R4	1.088930	33413.000000	0.009732	0.89

Sample Name: 280-116077-A-2-A

Date: 11/6/2018 6:27:52 AM Rack:Tube: 4:5

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.137329 bu	ppm	0.000572	0.42	-24007.000000	Y 377.433
Al (394.401 nm)	28.478200 o	ppm	0.023014	0.08	353972.000000	Y 377.433
Al H (396.152 nm)	28.046200	ppm	0.009165	0.03	46432.800000	Y_R 377.433
As (188.980 nm)	0.052143	ppm	0.002022	3.88	52.933900	Y 242.219
B (249.678 nm)	0.406513	ppm	0.001274	0.31	1620.450000	Y 242.219
Ba (493.408 nm)	1.359590	ppm	0.000438	0.03	125361.000000	Y_R 488.368
Be (234.861 nm)	0.000938	ppm	0.000699	74.50	-2489.880000	Y_R 488.368
Bi (223.061 nm)	0.020788	ppm	0.000133	0.64	100.962000	Y 377.433
Ca (315.887 nm)	393.359265	ppm	0.245789	0.06	259824.781975	Y_R 377.433
Cd (214.439 nm)	0.009569	ppm	0.000000	0.00	227.105000	Y 377.433
Co (228.615 nm)	0.042446	ppm	0.000225	0.53	1211.850000	Y 242.219
Cr (205.560 nm)	1.285020	ppm	0.001497	0.12	6123.440000	Y 377.433
Cu (324.754 nm)	0.542902	ppm	0.000498	0.09	27080.900000	Y 377.433
Fe (238.204 nm)	178.688599 o	ppm	0.241736	0.14	297737.014706	Y_R 377.433
Fe H (259.940 nm)	179.982000	ppm	0.054044	0.03	165150.000000	Y_R 377.433
K (766.491 nm)	8.845020	ppm	0.058684	0.66	10380.500000	Y_R2 488.368
Li (670.783 nm)	0.039155	ppm	0.001580	4.03	107.677000	Y_R2 488.368
Mg (279.078 nm)	29.130800	ppm	0.019985	0.07	63317.600000	Y 377.433
Mn (257.610 nm)	1.467950	ppm	0.000493	0.03	307152.000000	Y 377.433
Mo (202.032 nm)	0.165470	ppm	0.000588	0.36	1901.160000	Y 377.433
Na (589.592 nm)	4.362780	ppm	0.028731	0.66	2034.830000	Y_R2 488.368
Na H (589.593 nm)	6.372361 u	ppm	0.031680	0.50	1750.713190	Y_R4
Ni (231.604 nm)	0.508601	ppm	0.001473	0.29	1984.980000	Y 377.433
P (213.618 nm)	14.968500	ppm	0.032360	0.22	17338.400000	Y 242.219
Pb (220.353 nm)	0.367420	ppm	0.002340	0.64	828.648000	Y 242.219
S (181.972 nm)	11.221178	ppm	0.006904	0.06	5358.442476	Y 377.433
Sb (206.834 nm)	0.008839	ppm	0.000417	4.72	37.668500	Y 377.433
Se (196.026 nm)	0.001058	ppm	0.000070	6.63	-40.913900	Y 242.219
Si (288.158 nm)	23.266800	ppm	0.037294	0.16	105518.000000	Y 377.433
Sn (189.925 nm)	0.030323	ppm	0.001136	3.74	43.460700	Y 377.433
Sr (421.552 nm)	1.480606	ppm	0.002056	0.14	172165.945938	Y_R 488.368
Th (288.505 nm)	-2.999470 bu	ppm	0.005585	0.19	-8641.980000	Y 377.433
Ti (336.122 nm)	0.716888	ppm	0.000699	0.10	68805.800000	Y 377.433
Tl (190.794 nm)	0.035847	ppm	0.001603	4.47	0.276860	Y 377.433
U (409.013 nm)	-0.476826 u	ppm	0.006652	1.40	-921.014000	Y 377.433
V (292.401 nm)	78.252600 bo	ppm	0.063755	0.08	3796260.000000	Y 377.433
Zn (206.200 nm)	3.422990	ppm	0.003634	0.11	11853.800000	Y 377.433
Zr (343.823 nm)	0.033481	ppm	0.000093	0.28	1238.310000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.096423	11679.308954	0.003887	0.35
Y 377.433	1.101337	508418.390846	0.003351	0.30
Y_R 377.433	1.154170	43613.600000	0.002894	0.25
Y_R 488.368	1.163290	41983.200000	0.002531	0.22
Y_R2 488.368	1.173339	82575.737034	0.013489	1.15
Y_R4	1.143820	35097.000000	0.004670	0.41

Sample Name: CCVH-5408055

Date: 11/6/2018 6:31:33 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001179	ppm	0.000084	7.11	-322.008000	Y 377.433
Al (394.401 nm)	52.071300 o	ppm	0.116141	0.22	648486.000000	Y 377.433
Al H (396.152 nm)	50.905800	ppm	0.032835	0.06	83722.200000	Y_R 377.433
As (188.980 nm)	-0.005075 u	ppm	0.002284	45.00	-24.352600	Y 242.219
B (249.678 nm)	-0.013726 u	ppm	0.000040	0.29	-24.809000	Y 242.219
Ba (493.408 nm)	-0.000339 u	ppm	0.000214	63.09	806.946000	Y_R 488.368
Be (234.861 nm)	0.000373	ppm	0.000233	62.58	-696.672000	Y_R 488.368
Bi (223.061 nm)	1.018510	ppm	0.007087	0.70	1728.590000	Y 377.433
Ca (315.887 nm)	0.010416	ppm	0.008210	78.82	15.107952	Y_R 377.433
Cd (214.439 nm)	0.000162	ppm	0.000036	22.08	-7.128360	Y 377.433
Co (228.615 nm)	0.001465	ppm	0.000149	10.18	62.998300	Y 242.219
Cr (205.560 nm)	0.000110 u	ppm	0.000258	> 100.00	-9.792220	Y 377.433
Cu (324.754 nm)	0.000676	ppm	0.000809	> 100.00	700.600000	Y 377.433
Fe (238.204 nm)	50.126223 o	ppm	0.034934	0.07	83530.315108	Y_R 377.433
Fe H (259.940 nm)	50.540500	ppm	0.018199	0.04	46367.600000	Y_R 377.433
K (766.491 nm)	0.138634	ppm	0.031243	22.54	1871.410000	Y_R2 488.368
Li (670.783 nm)	0.025343	ppm	0.005763	22.74	-87.944200	Y_R2 488.368
Mg (279.078 nm)	-0.031123 u	ppm	0.002420	7.78	-209.607000	Y 377.433
Mn (257.610 nm)	0.000364	ppm	0.000021	5.83	98.793200	Y 377.433
Mo (202.032 nm)	-0.001134 u	ppm	0.000580	51.13	5.782390	Y 377.433
Na (589.592 nm)	257.710000 o	ppm	1.885020	0.73	129337.000000	Y_R2 488.368
Na H (589.593 nm)	257.351674	ppm	0.622325	0.24	91503.107706	Y_R4
Ni (231.604 nm)	-0.000149 u	ppm	0.000117	78.52	16.049000	Y 377.433
P (213.618 nm)	-0.010554 u	ppm	0.002394	22.68	-14.644800	Y 242.219
Pb (220.353 nm)	-0.002595 u	ppm	0.000214	8.26	19.490100	Y 242.219
S (181.972 nm)	5.154152	ppm	0.003186	0.06	2435.907391	Y 377.433
Sb (206.834 nm)	0.002482	ppm	0.001641	66.13	7.109950	Y 377.433
Se (196.026 nm)	0.001420	ppm	0.000384	27.05	-9.182690	Y 242.219
Si (288.158 nm)	0.094724	ppm	0.039428	41.62	1709.160000	Y 377.433
Sn (189.925 nm)	-0.005299 u	ppm	0.000028	0.52	1.876960	Y 377.433
Sr (421.552 nm)	-0.000029 u	ppm	0.000028	99.26	280.750021	Y_R 488.368
Th (288.505 nm)	5.048480	ppm	0.028106	0.56	5416.370000	Y 377.433
Ti (336.122 nm)	0.001096	ppm	0.000072	6.58	-260.743000	Y 377.433
Tl (190.794 nm)	-0.000517 u	ppm	0.000521	> 100.00	-12.475700	Y 377.433
U (409.013 nm)	10.657900	ppm	0.003196	0.03	24502.800000	Y 377.433
V (292.401 nm)	-0.000150 u	ppm	0.000319	> 100.00	-213.054000	Y 377.433
Zn (206.200 nm)	0.000049 u	ppm	0.001020	> 100.00	9.948280	Y 377.433
Zr (343.823 nm)	-0.006774 u	ppm	0.000286	4.22	-393.048000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115108	11878.341143	0.001691	0.15
Y 377.433	1.111561	513138.004818	0.000768	0.07
Y_R 377.433	1.165030	44023.900000	0.008049	0.69
Y_R 488.368	1.168500	42171.300000	0.007740	0.66
Y_R2 488.368	1.172097	82488.359424	0.010086	0.86
Y_R4	1.196150	36702.800000	0.008689	0.73

Sample Name: CCV-5407762

Date: 11/6/2018 6:35:08 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.519582	ppm	0.000485	0.09	14136.800000	Y 377.433
Al (394.401 nm)	0.513129	ppm	0.000795	0.15	6602.050000	Y 377.433
Al H (396.152 nm)	0.554216 u	ppm	0.004057	0.73	897.625000	Y_R 377.433
As (188.980 nm)	1.012960	ppm	0.005374	0.53	1404.140000	Y 242.219
B (249.678 nm)	0.491373	ppm	0.004244	0.86	2018.820000	Y 242.219
Ba (493.408 nm)	0.508191	ppm	0.000109	0.02	47312.000000	Y_R 488.368
Be (234.861 nm)	0.521661	ppm	0.000173	0.03	26972.500000	Y_R 488.368
Bi (223.061 nm)	-0.007706 u	ppm	0.000431	5.59	30.988700	Y 377.433
Ca (315.887 nm)	5.104998	ppm	0.010655	0.21	3369.738832	Y_R 377.433
Cd (214.439 nm)	0.523523	ppm	0.000292	0.06	13024.600000	Y 377.433
Co (228.615 nm)	0.510453	ppm	0.004056	0.79	12105.700000	Y 242.219
Cr (205.560 nm)	0.532594	ppm	0.000775	0.15	2530.430000	Y 377.433
Cu (324.754 nm)	0.519197	ppm	0.000700	0.13	25188.000000	Y 377.433
Fe (238.204 nm)	2.554267	ppm	0.004482	0.18	4267.377325	Y_R 377.433
Fe H (259.940 nm)	2.569370 u	ppm	0.003164	0.12	2346.780000	Y_R 377.433
K (766.491 nm)	51.354000	ppm	0.097464	0.19	51926.200000	Y_R2 488.368
Li (670.783 nm)	1.044740	ppm	0.008064	0.77	14350.300000	Y_R2 488.368
Mg (279.078 nm)	20.636200	ppm	0.009234	0.04	44966.600000	Y 377.433
Mn (257.610 nm)	0.518972	ppm	0.000050	0.01	108604.000000	Y 377.433
Mo (202.032 nm)	0.524736	ppm	0.001142	0.22	5988.370000	Y 377.433
Na (589.592 nm)	25.913300	ppm	0.049083	0.19	12875.000000	Y_R2 488.368
Na H (589.593 nm)	27.459802 u	ppm	0.100354	0.37	9364.579606	Y_R4
Ni (231.604 nm)	0.517516	ppm	0.000373	0.07	1993.380000	Y 377.433
P (213.618 nm)	1.027280	ppm	0.000079	0.01	1167.250000	Y 242.219
Pb (220.353 nm)	1.018210	ppm	0.000523	0.05	2286.850000	Y 242.219
S (181.972 nm)	0.001139 u	ppm	0.008336	> 100.00	-23.188416	Y 377.433
Sb (206.834 nm)	1.042970	ppm	0.001215	0.12	1713.660000	Y 377.433
Se (196.026 nm)	1.038390	ppm	0.001098	0.11	1562.960000	Y 242.219
Si (288.158 nm)	6.119660 Q	ppm	0.065398	1.07	28700.300000 Q	Y 377.433
Sn (189.925 nm)	1.037980	ppm	0.001635	0.16	1219.760000	Y 377.433
Sr (421.552 nm)	0.518639	ppm	0.000476	0.09	60481.458947	Y_R 488.368
Th (288.505 nm)	-0.027685 u	ppm	0.008166	29.50	-48.922200	Y 377.433
Ti (336.122 nm)	0.525285	ppm	0.000170	0.03	49596.800000	Y 377.433
Tl (190.794 nm)	1.047380	ppm	0.009423	0.90	590.858000	Y 377.433
U (409.013 nm)	-0.016509 u	ppm	0.007298	44.21	31.142900	Y 377.433
V (292.401 nm)	0.519370	ppm	0.000086	0.02	24812.400000	Y 377.433
Zn (206.200 nm)	0.521687	ppm	0.002673	0.51	1807.650000	Y 377.433
Zr (343.823 nm)	0.523429	ppm	0.000786	0.15	21093.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.140954	12153.665188	0.005362	0.47
Y 377.433	1.136222	524522.604140	0.002460	0.22
Y_R 377.433	1.177910	44510.700000	0.001667	0.14
Y_R 488.368	1.175680	42430.200000	0.003525	0.30
Y_R2 488.368	1.168396	82227.869635	0.010867	0.93
Y_R4	1.207950	37064.900000	0.012331	1.02

Sample Name: CCB

Date: 11/6/2018 6:38:37 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000627	ppm	0.000427	68.07	-221.789000	Y 377.433
Al (394.401 nm)	-0.000727 u	ppm	0.000408	56.11	78.643300	Y 377.433
Al H (396.152 nm)	0.132772 Zu	ppm	0.006507	4.90	3.481760 Z	Y_R 377.433
As (188.980 nm)	-0.002729 u	ppm	0.000932	34.16	-18.939100	Y 242.219
B (249.678 nm)	-0.012126 u	ppm	0.001079	8.90	-1.986860	Y 242.219
Ba (493.408 nm)	-0.001734 u	ppm	0.000192	11.06	642.287000	Y_R 488.368
Be (234.861 nm)	0.000123	ppm	0.000077	62.88	0.512802	Y_R 488.368
Bi (223.061 nm)	-0.003939 u	ppm	0.000485	12.32	36.778800	Y 377.433
Ca (315.887 nm)	-0.009847 u	ppm	0.003584	36.40	-8.823511	Y_R 377.433
Cd (214.439 nm)	0.000198	ppm	0.000002	1.07	-6.226520	Y 377.433
Co (228.615 nm)	0.000781	ppm	0.000021	2.70	-9.420530	Y 242.219
Cr (205.560 nm)	0.000681	ppm	0.000129	18.95	-6.094230	Y 377.433
Cu (324.754 nm)	0.000449	ppm	0.000015	3.36	223.236000	Y 377.433
Fe (238.204 nm)	-0.002569 u	ppm	0.000785	30.55	7.255187	Y_R 377.433
Fe H (259.940 nm)	0.014883 u	ppm	0.005116	34.37	2.650480	Y_R 377.433
K (766.491 nm)	-0.249243 u	ppm	0.099952	40.10	1492.320000	Y_R2 488.368
Li (670.783 nm)	0.013675 Z	ppm	0.001081	7.91	-253.209000 Z	Y_R2 488.368
Mg (279.078 nm)	-0.001171 u	ppm	0.000727	62.09	11.578300	Y 377.433
Mn (257.610 nm)	0.000030	ppm	0.000003	10.06	28.989500	Y 377.433
Mo (202.032 nm)	-0.000620 u	ppm	0.000121	19.50	11.621700	Y 377.433
Na (589.592 nm)	0.120013	ppm	0.034398	28.66	-75.705000	Y_R2 488.368
Na H (589.593 nm)	2.006372 u	ppm	0.007365	0.37	326.114215	Y_R4
Ni (231.604 nm)	0.000181	ppm	0.000079	43.79	9.771820	Y 377.433
P (213.618 nm)	0.003987	ppm	0.003084	77.36	3.543530	Y 242.219
Pb (220.353 nm)	-0.003711 u	ppm	0.000382	10.28	6.202830	Y 242.219
S (181.972 nm)	0.011492	ppm	0.007108	61.85	-20.221909	Y 377.433
Sb (206.834 nm)	0.000836 u	ppm	0.001750	> 100.00	0.252828	Y 377.433
Se (196.026 nm)	0.002210	ppm	0.000709	32.07	4.964340	Y 242.219
Si (288.158 nm)	0.023226	ppm	0.014752	63.52	1388.860000	Y 377.433
Sn (189.925 nm)	-0.005855 u	ppm	0.000259	4.42	1.228020	Y 377.433
Sr (421.552 nm)	-0.000272 u	ppm	0.000148	54.35	246.621675	Y_R 488.368
Th (288.505 nm)	0.002404	ppm	0.001793	74.56	16.929800	Y 377.433
Ti (336.122 nm)	0.000731	ppm	0.000155	21.27	-295.612000	Y 377.433
Tl (190.794 nm)	0.004126	ppm	0.000727	17.62	-6.448080	Y 377.433
U (409.013 nm)	-0.011285 u	ppm	0.001937	17.17	89.021600	Y 377.433
V (292.401 nm)	0.001294	ppm	0.000267	20.67	-131.848000	Y 377.433
Zn (206.200 nm)	0.000433	ppm	0.000278	64.32	5.874310	Y 377.433
Zr (343.823 nm)	0.000745	ppm	0.000022	2.98	-88.327300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.150538	12255.755600	0.000363	0.03
Y 377.433	1.143214	527750.281431	0.000638	0.06
Y_R 377.433	1.177090	44479.700000	0.000134	0.01
Y_R 488.368	1.179850	42580.900000	0.001575	0.13
Y_R2 488.368	1.188429	83637.748764	0.002244	0.19
Y_R4	1.190200	36520.300000	0.003301	0.28

Sample Name: CCVL-5412564

Date: 11/6/2018 6:41:49 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010491	ppm	0.000084	0.80	51.799100	Y 377.433
Al (394.401 nm)	0.099747	ppm	0.000392	0.39	1333.760000	Y 377.433
Al H (396.152 nm)	0.238123 u	ppm	0.000626	0.26	181.606000	Y_R 377.433
As (188.980 nm)	0.014602	ppm	0.000184	1.26	5.340310	Y 242.219
B (249.678 nm)	0.089547	ppm	0.001219	1.36	406.216000	Y 242.219
Ba (493.408 nm)	0.009246	ppm	0.000102	1.10	1647.240000	Y_R 488.368
Be (234.861 nm)	0.001140	ppm	0.000060	5.25	51.700900	Y_R 488.368
Bi (223.061 nm)	0.097229	ppm	0.004022	4.14	203.549000	Y 377.433
Ca (315.887 nm)	0.207436	ppm	0.002518	1.21	134.718809	Y_R 377.433
Cd (214.439 nm)	0.005324	ppm	0.000350	6.57	121.411000	Y 377.433
Co (228.615 nm)	0.011272	ppm	0.000145	1.29	240.010000	Y 242.219
Cr (205.560 nm)	0.011428	ppm	0.000328	2.87	45.080300	Y 377.433
Cu (324.754 nm)	0.015963	ppm	0.000134	0.84	970.380000	Y 377.433
Fe (238.204 nm)	0.101395	ppm	0.001360	1.34	180.476506	Y_R 377.433
Fe H (259.940 nm)	0.110257 u	ppm	0.004261	3.86	90.170600	Y_R 377.433
K (766.491 nm)	2.995610	ppm	0.009396	0.31	4663.640000	Y_R2 488.368
Li (670.783 nm)	0.039242 Q	ppm	0.004734	12.06	108.908000 Q	Y_R2 488.368
Mg (279.078 nm)	0.209739	ppm	0.000908	0.43	470.534000	Y 377.433
Mn (257.610 nm)	0.010757	ppm	0.000012	0.12	2273.290000	Y 377.433
Mo (202.032 nm)	0.020679	ppm	0.000031	0.15	253.935000	Y 377.433
Na (589.592 nm)	1.197000	ppm	0.038802	3.24	465.213000	Y_R2 488.368
Na H (589.593 nm)	2.882567 u	ppm	0.027729	0.96	637.946934	Y_R4
Ni (231.604 nm)	0.043217	ppm	0.000515	1.19	174.709000	Y 377.433
P (213.618 nm)	2.935610	ppm	0.000162	0.01	3403.820000	Y 242.219
Pb (220.353 nm)	0.009042	ppm	0.001553	17.18	34.681400	Y 242.219
S (181.972 nm)	0.104525	ppm	0.004959	4.74	24.257220	Y 377.433
Sb (206.834 nm)	0.020635	ppm	0.001083	5.25	32.681000	Y 377.433
Se (196.026 nm)	0.022605	ppm	0.003639	16.10	35.618700	Y 242.219
Si (288.158 nm)	0.524047	ppm	0.004820	0.92	3632.490000	Y 377.433
Sn (189.925 nm)	0.094095	ppm	0.000048	0.05	117.906000	Y 377.433
Sr (421.552 nm)	0.009322	ppm	0.000092	0.99	1360.302769	Y_R 488.368
Th (288.505 nm)	0.013252	ppm	0.002170	16.38	28.052900	Y 377.433
Ti (336.122 nm)	0.011152	ppm	0.000002	0.02	695.957000	Y 377.433
Tl (190.794 nm)	0.015587	ppm	0.000930	5.97	0.087338	Y 377.433
U (409.013 nm)	0.045366	ppm	0.004239	9.35	217.211000	Y 377.433
V (292.401 nm)	0.011139	ppm	0.000145	1.30	341.277000	Y 377.433
Zn (206.200 nm)	0.021770	ppm	0.000298	1.37	79.629200	Y 377.433
Zr (343.823 nm)	0.016357	ppm	0.000070	0.43	544.335000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.176899	12536.553806	0.000410	0.03
Y 377.433	1.171393	540758.921983	0.000387	0.03
Y_R 377.433	1.177650	44500.800000	0.001546	0.13
Y_R 488.368	1.181710	42647.800000	0.008252	0.70
Y_R2 488.368	1.193678	84007.188609	0.002175	0.18
Y_R4	1.213190	37225.800000	0.004564	0.38

Sample Name: MB 280-436046/1-A

Date: 11/6/2018 6:45:14 AM Rack:Tube: 4:6

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000335	ppm	0.000035	10.31	-229.844000	Y 377.433
Al (394.401 nm)	0.000789	ppm	0.000986	> 100.00	98.044300	Y 377.433
Al H (396.152 nm)	0.130362 u	ppm	0.001586	1.22	-0.481088	Y_R 377.433
As (188.980 nm)	0.001046	ppm	0.000759	72.57	-13.649100	Y 242.219
B (249.678 nm)	-0.011616 u	ppm	0.000744	6.41	0.057530	Y 242.219
Ba (493.408 nm)	-0.001208 u	ppm	0.000376	31.15	690.463000	Y_R 488.368
Be (234.861 nm)	0.000068 u	ppm	0.000100	> 100.00	-2.424350	Y_R 488.368
Bi (223.061 nm)	-0.007480 u	ppm	0.001932	25.83	30.942600	Y 377.433
Ca (315.887 nm)	0.005160 u	ppm	0.014499	> 100.00	1.088408	Y_R 377.433
Cd (214.439 nm)	0.000092	ppm	0.000030	32.82	-8.868950	Y 377.433
Co (228.615 nm)	0.000512	ppm	0.000107	20.91	-15.803000	Y 242.219
Cr (205.560 nm)	0.000497	ppm	0.000233	46.80	-6.970520	Y 377.433
Cu (324.754 nm)	0.000701	ppm	0.000269	38.35	234.783000	Y 377.433
Fe (238.204 nm)	0.003129	ppm	0.000405	12.96	16.748833	Y_R 377.433
Fe H (259.940 nm)	0.012757 u	ppm	0.001847	14.47	0.699279	Y_R 377.433
K (766.491 nm)	-0.242599 u	ppm	0.102758	42.36	1498.810000	Y_R2 488.368
Li (670.783 nm)	0.013852	ppm	0.002138	15.44	-250.703000	Y_R2 488.368
Mg (279.078 nm)	0.001419	ppm	0.000185	13.01	17.247600	Y 377.433
Mn (257.610 nm)	0.000077	ppm	0.000005	7.15	38.748200	Y 377.433
Mo (202.032 nm)	-0.000207 u	ppm	0.000156	75.59	16.328900	Y 377.433
Na (589.592 nm)	0.078769	ppm	0.001402	1.78	-96.434800	Y_R2 488.368
Na H (589.593 nm)	1.798128 u	ppm	0.000461	0.03	251.698014	Y_R4
Ni (231.604 nm)	-0.000092 u	ppm	0.001107	> 100.00	8.730340	Y 377.433
P (213.618 nm)	0.001661	ppm	0.000392	23.58	0.850374	Y 242.219
Pb (220.353 nm)	-0.002894 u	ppm	0.000097	3.37	8.021990	Y 242.219
S (181.972 nm)	0.010534	ppm	0.002090	19.84	-20.678785	Y 377.433
Sb (206.834 nm)	0.002174	ppm	0.001273	58.56	2.453300	Y 377.433
Se (196.026 nm)	0.001668	ppm	0.002196	> 100.00	4.148880	Y 242.219
Si (288.158 nm)	-0.132077 u	ppm	0.005809	4.40	693.116000	Y 377.433
Sn (189.925 nm)	-0.006376 u	ppm	0.000776	12.18	0.619551	Y 377.433
Sr (421.552 nm)	-0.000180 u	ppm	0.000070	38.80	257.275768	Y_R 488.368
Th (288.505 nm)	0.001747	ppm	0.002430	> 100.00	16.221500	Y 377.433
Ti (336.122 nm)	0.000841	ppm	0.000067	7.97	-285.141000	Y 377.433
Tl (190.794 nm)	0.003018	ppm	0.002223	73.65	-7.083460	Y 377.433
U (409.013 nm)	-0.014400 u	ppm	0.006000	41.67	81.893200	Y 377.433
V (292.401 nm)	0.000907	ppm	0.000282	31.06	-150.710000	Y 377.433
Zn (206.200 nm)	0.000906	ppm	0.000093	10.24	7.510700	Y 377.433
Zr (343.823 nm)	0.000728	ppm	0.000162	22.30	-89.016300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.169593	12458.732203	0.000808	0.07
Y 377.433	1.163296	537021.122681	0.000204	0.02
Y_R 377.433	1.183270	44713.000000	0.002546	0.22
Y_R 488.368	1.184640	42753.500000	0.005281	0.45
Y_R2 488.368	1.194104	84037.128203	0.001080	0.09
Y_R4	1.200610	36839.800000	0.005250	0.44

Sample Name: LCS 280-436046/2-A

Date: 11/6/2018 6:48:26 AM Rack:Tube: 4:7

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055162	ppm	0.000289	0.52	1233.430000	Y 377.433
Al (394.401 nm)	2.126440	ppm	0.001599	0.08	26882.300000	Y 377.433
Al H (396.152 nm)	2.033340	ppm	0.000488	0.02	3535.190000	Y_R 377.433
As (188.980 nm)	1.024370	ppm	0.001687	0.16	1420.130000	Y 242.219
B (249.678 nm)	1.042700	ppm	0.000549	0.05	4233.010000	Y 242.219
Ba (493.408 nm)	2.075730	ppm	0.021931	1.06	190770.000000	Y_R 488.368
Be (234.861 nm)	0.053184	ppm	0.000659	1.24	2733.560000	Y_R 488.368
Bi (223.061 nm)	2.060080	ppm	0.002533	0.12	3439.020000	Y 377.433
Ca (315.887 nm)	52.196710	ppm	0.999306	1.91	34475.037969	Y_R 377.433
Cd (214.439 nm)	0.107003	ppm	0.000063	0.06	2653.220000	Y 377.433
Co (228.615 nm)	0.503815	ppm	0.001480	0.29	11970.700000	Y 242.219
Cr (205.560 nm)	0.219963	ppm	0.000316	0.14	1036.360000	Y 377.433
Cu (324.754 nm)	0.262681	ppm	0.000389	0.15	12883.700000	Y 377.433
Fe (238.204 nm)	1.045224	ppm	0.019264	1.84	1753.055150	Y_R 377.433
Fe H (259.940 nm)	1.041640 u	ppm	0.017485	1.68	944.852000	Y_R 377.433
K (766.491 nm)	53.372200	ppm	0.042134	0.08	53898.700000	Y_R2 488.368
Li (670.783 nm)	1.077070	ppm	0.004434	0.41	14808.300000	Y_R2 488.368
Mg (279.078 nm)	52.249500	ppm	0.031302	0.06	113811.000000	Y 377.433
Mn (257.610 nm)	0.527364	ppm	0.000360	0.07	110360.000000	Y 377.433
Mo (202.032 nm)	1.091260	ppm	0.002225	0.20	12433.500000	Y 377.433
Na (589.592 nm)	52.737500	ppm	0.080342	0.15	26327.200000	Y_R2 488.368
Na H (589.593 nm)	53.294600	ppm	0.233532	0.44	18434.728482	Y_R4
Ni (231.604 nm)	0.512632	ppm	0.001297	0.25	1975.410000	Y 377.433
P (213.618 nm)	10.632100	ppm	0.001824	0.02	12321.200000	Y 242.219
Pb (220.353 nm)	0.521114	ppm	0.002333	0.45	1178.650000	Y 242.219
S (181.972 nm)	2.079829	ppm	0.004383	0.21	972.159183	Y 377.433
Sb (206.834 nm)	0.536602	ppm	0.003391	0.63	870.617000	Y 377.433
Se (196.026 nm)	2.155520	ppm	0.005462	0.25	3243.010000	Y 242.219
Si (288.158 nm)	10.798300	ppm	0.019558	0.18	49660.000000	Y 377.433
Sn (189.925 nm)	2.143330	ppm	0.003470	0.16	2510.110000	Y 377.433
Sr (421.552 nm)	1.049363	ppm	0.006357	0.61	122087.044443	Y_R 488.368
Th (288.505 nm)	1.019810	ppm	0.004391	0.43	1074.480000	Y 377.433
Ti (336.122 nm)	1.071170	ppm	0.001627	0.15	101622.000000	Y 377.433
Tl (190.794 nm)	2.146480	ppm	0.007511	0.35	1219.150000	Y 377.433
U (409.013 nm)	2.214380	ppm	0.006698	0.30	5124.470000	Y 377.433
V (292.401 nm)	0.536727	ppm	0.000162	0.03	25729.300000	Y 377.433
Zn (206.200 nm)	0.526890	ppm	0.000736	0.14	1825.470000	Y 377.433
Zr (343.823 nm)	0.531674	ppm	0.000279	0.05	21427.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.129390	12030.477313	0.000345	0.03
Y 377.433	1.124023	518891.135314	0.002118	0.19
Y_R 377.433	1.182020	44666.000000	0.008972	0.76
Y_R 488.368	1.181090	42625.700000	0.011576	0.98
Y_R2 488.368	1.180878	83106.337510	0.000899	0.08
Y_R4	1.217380	37354.300000	0.005179	0.43

Sample Name: LCSD 280-436046/3-A

Date: 11/6/2018 6:51:58 AM Rack:Tube: 4:8

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.057063	ppm	0.000165	0.29	1283.720000	Y 377.433
Al (394.401 nm)	2.174630	ppm	0.002804	0.13	27486.900000	Y 377.433
Al H (396.152 nm)	2.070990	ppm	0.001206	0.06	3607.630000	Y_R 377.433
As (188.980 nm)	1.061520	ppm	0.009034	0.85	1472.180000	Y 242.219
B (249.678 nm)	1.072520	ppm	0.005912	0.55	4352.710000	Y 242.219
Ba (493.408 nm)	2.119150	ppm	0.004270	0.20	194744.000000	Y_R 488.368
Be (234.861 nm)	0.055483	ppm	0.000393	0.71	2851.900000	Y_R 488.368
Bi (223.061 nm)	2.118170	ppm	0.008006	0.38	3534.790000	Y 377.433
Ca (315.887 nm)	54.474475	ppm	0.094615	0.17	35979.554102	Y_R 377.433
Cd (214.439 nm)	0.111621	ppm	0.000191	0.17	2768.210000	Y 377.433
Co (228.615 nm)	0.522634	ppm	0.000909	0.17	12418.600000	Y 242.219
Cr (205.560 nm)	0.228072	ppm	0.000307	0.13	1074.920000	Y 377.433
Cu (324.754 nm)	0.268078	ppm	0.001023	0.38	13146.600000	Y 377.433
Fe (238.204 nm)	1.095506	ppm	0.000761	0.07	1836.833531	Y_R 377.433
Fe H (259.940 nm)	1.078980 u	ppm	0.008089	0.75	979.117000	Y_R 377.433
K (766.491 nm)	54.695800	ppm	0.098128	0.18	55192.300000	Y_R2 488.368
Li (670.783 nm)	1.103880	ppm	0.001869	0.17	15188.000000	Y_R2 488.368
Mg (279.078 nm)	54.619100	ppm	0.129764	0.24	118973.000000	Y 377.433
Mn (257.610 nm)	0.545798	ppm	0.000707	0.13	114217.000000	Y 377.433
Mo (202.032 nm)	1.130260	ppm	0.001526	0.13	12877.100000	Y 377.433
Na (589.592 nm)	54.054900	ppm	0.205918	0.38	26988.400000	Y_R2 488.368
Na H (589.593 nm)	54.585159	ppm	0.332472	0.61	18891.540731	Y_R4
Ni (231.604 nm)	0.529634	ppm	0.002601	0.49	2040.630000	Y 377.433
P (213.618 nm)	11.069700	ppm	0.043753	0.40	12828.500000	Y 242.219
Pb (220.353 nm)	0.535998	ppm	0.000880	0.16	1211.880000	Y 242.219
S (181.972 nm)	2.159429	ppm	0.007666	0.36	1010.355617	Y 377.433
Sb (206.834 nm)	0.557822	ppm	0.001950	0.35	905.164000	Y 377.433
Se (196.026 nm)	2.222800	ppm	0.011857	0.53	3344.170000	Y 242.219
Si (288.158 nm)	11.053800	ppm	0.009534	0.09	50804.800000	Y 377.433
Sn (189.925 nm)	2.234630	ppm	0.002700	0.12	2616.690000	Y 377.433
Sr (421.552 nm)	1.074378	ppm	0.001665	0.16	124990.742096	Y_R 488.368
Th (288.505 nm)	1.053260	ppm	0.002228	0.21	1109.180000	Y 377.433
Ti (336.122 nm)	1.102620	ppm	0.001199	0.11	104618.000000	Y 377.433
Tl (190.794 nm)	2.225300	ppm	0.006304	0.28	1264.250000	Y 377.433
U (409.013 nm)	2.265160	ppm	0.023922	1.06	5239.060000	Y 377.433
V (292.401 nm)	0.554771	ppm	0.000690	0.12	26601.500000	Y 377.433
Zn (206.200 nm)	0.553050	ppm	0.001070	0.19	1915.880000	Y 377.433
Zr (343.823 nm)	0.545818	ppm	0.001671	0.31	22001.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.152463	12276.257955	0.000757	0.07
Y 377.433	1.138174	525423.444902	0.001089	0.10
Y_R 377.433	1.185340	44791.500000	0.010160	0.86
Y_R 488.368	1.184200	42737.800000	0.011926	1.01
Y_R2 488.368	1.180119	83052.944055	0.002311	0.20
Y_R4	1.232480	37817.600000	0.000320	0.03

Sample Name: 280-116289-E-3-B

Date: 11/6/2018 6:55:29 AM Rack:Tube: 4:9

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001402	ppm	0.000118	8.43	-200.222000	Y 377.433
Al (394.401 nm)	-0.015915 u	ppm	0.000089	0.56	401.089000	Y 377.433
Al H (396.152 nm)	-0.245483 u	ppm	0.000648	0.26	-34.936900	Y_R 377.433
As (188.980 nm)	-0.002791 u	ppm	0.001906	68.29	-19.027800	Y 242.219
B (249.678 nm)	0.214060	ppm	0.001278	0.60	906.170000	Y 242.219
Ba (493.408 nm)	0.024436	ppm	0.000114	0.47	3037.440000	Y_R 488.368
Be (234.861 nm)	0.000134	ppm	0.000169	> 100.00	-0.013544	Y_R 488.368
Bi (223.061 nm)	0.005507	ppm	0.000161	2.92	52.369800	Y 377.433
Ca (315.887 nm)	183.701672	ppm	0.305470	0.17	121336.108733	Y_R 377.433
Cd (214.439 nm)	0.000270	ppm	0.000059	22.03	-4.441880	Y 377.433
Co (228.615 nm)	0.000320	ppm	0.000051	15.94	-20.297200	Y 242.219
Cr (205.560 nm)	0.000917	ppm	0.000396	43.22	-4.975690	Y 377.433
Cu (324.754 nm)	-0.000613 u	ppm	0.000119	19.43	62.758500	Y 377.433
Fe (238.204 nm)	0.076181	ppm	0.002347	3.08	138.465588	Y_R 377.433
Fe H (259.940 nm)	0.064579 u	ppm	0.004489	6.95	48.253500	Y_R 377.433
K (766.491 nm)	6.550620	ppm	0.096415	1.47	8138.100000	Y_R2 488.368
Li (670.783 nm)	0.078243	ppm	0.002936	3.75	661.307000	Y_R2 488.368
Mg (279.078 nm)	42.468700	ppm	0.019410	0.05	92528.200000	Y 377.433
Mn (257.610 nm)	0.044566	ppm	0.000126	0.28	9347.010000	Y 377.433
Mo (202.032 nm)	0.002475	ppm	0.000314	12.68	46.836500	Y 377.433
Na (589.592 nm)	115.554000 o	ppm	0.215601	0.19	57917.800000	Y_R2 488.368
Na H (589.593 nm)	115.862104	ppm	0.074607	0.06	40978.446971	Y_R4
Ni (231.604 nm)	-0.000379 u	ppm	0.001110	> 100.00	7.642000	Y 377.433
P (213.618 nm)	0.035710	ppm	0.002710	7.59	40.298100	Y 242.219
Pb (220.353 nm)	-0.001938 u	ppm	0.001244	64.21	10.107100	Y 242.219
S (181.972 nm)	104.942744	ppm	0.214315	0.20	50108.798897	Y 377.433
Sb (206.834 nm)	-0.007654 u	ppm	0.000753	9.84	-13.720400	Y 377.433
Se (196.026 nm)	0.003685	ppm	0.001122	30.45	7.224110	Y 242.219
Si (288.158 nm)	21.681300	ppm	0.057716	0.27	98414.800000	Y 377.433
Sn (189.925 nm)	-0.006293 u	ppm	0.000074	1.17	0.716760	Y 377.433
Sr (421.552 nm)	1.948002	ppm	0.035772	1.84	226399.717095	Y_R 488.368
Th (288.505 nm)	-0.013087 u	ppm	0.001532	11.70	-0.449144	Y 377.433
Ti (336.122 nm)	0.000168	ppm	0.000014	8.20	119.748000	Y 377.433
Tl (190.794 nm)	-0.006126 u	ppm	0.001236	20.18	-14.181900	Y 377.433
U (409.013 nm)	-0.010709 u	ppm	0.003229	30.15	72.586500	Y 377.433
V (292.401 nm)	0.001470	ppm	0.000153	10.43	-123.158000	Y 377.433
Zn (206.200 nm)	0.004633	ppm	0.000823	17.77	20.398600	Y 377.433
Zr (343.823 nm)	0.000329	ppm	0.000147	44.86	-105.211000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.141423	12158.655469	0.000603	0.05
Y 377.433	1.127514	520502.609179	0.000266	0.02
Y_R 377.433	1.189530	44949.700000	0.002403	0.20
Y_R 488.368	1.189350	42923.700000	0.018999	1.60
Y_R2 488.368	1.180351	83069.279533	0.003764	0.32
Y_R4	1.208900	37094.200000	0.001300	0.11

Sample Name: 280-116289-E-4-D

Date: 11/6/2018 6:58:59 AM Rack:Tube: 4:10

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002170	ppm	0.000273	12.60	-178.828000	Y 377.433
Al (394.401 nm)	-0.110740 u	ppm	0.000712	0.64	517.042000	Y 377.433
Al H (396.152 nm)	-1.208760 u	ppm	0.020166	1.67	-108.313000	Y_R 377.433
As (188.980 nm)	-0.002251 u	ppm	0.001605	71.31	-18.328700	Y 242.219
B (249.678 nm)	0.321658	ppm	0.002112	0.66	1337.450000	Y 242.219
Ba (493.408 nm)	0.008647	ppm	0.000293	3.39	1594.110000	Y_R 488.368
Be (234.861 nm)	0.000121	ppm	0.000067	55.31	-33.044300	Y_R 488.368
Bi (223.061 nm)	0.015839	ppm	0.000071	0.45	69.715100	Y 377.433
Ca (315.887 nm)	470.569461	ppm	0.790878	0.17	310817.698714	Y_R 377.433
Cd (214.439 nm)	0.000231	ppm	0.000101	43.49	-5.395730	Y 377.433
Co (228.615 nm)	-0.000267 u	ppm	0.000189	71.06	-31.637900	Y 242.219
Cr (205.560 nm)	0.000927	ppm	0.000181	19.48	-4.973110	Y 377.433
Cu (324.754 nm)	-0.001725 u	ppm	0.000457	26.49	-155.728000	Y 377.433
Fe (238.204 nm)	2.356631	ppm	0.005870	0.25	3938.081375	Y_R 377.433
Fe H (259.940 nm)	2.320410 u	ppm	0.002700	0.12	2118.320000	Y_R 377.433
K (766.491 nm)	17.270200	ppm	0.013146	0.08	18614.800000	Y_R2 488.368
Li (670.783 nm)	0.203381	ppm	0.003369	1.66	2433.700000	Y_R2 488.368
Mg (279.078 nm)	242.873000	ppm	0.423185	0.17	529087.000000	Y 377.433
Mn (257.610 nm)	0.103928	ppm	0.000029	0.03	21766.900000	Y 377.433
Mo (202.032 nm)	0.014661	ppm	0.000009	0.06	185.468000	Y 377.433
Na (589.592 nm)	94.882300 o	ppm	0.090947	0.10	47532.600000	Y_R2 488.368
Na H (589.593 nm)	94.478049	ppm	0.120535	0.13	33344.352010	Y_R4
Ni (231.604 nm)	0.000744	ppm	0.000360	48.42	12.292700	Y 377.433
P (213.618 nm)	0.071735	ppm	0.003955	5.51	82.090300	Y 242.219
Pb (220.353 nm)	-0.002084 u	ppm	0.002866	> 100.00	9.746900	Y 242.219
S (181.972 nm)	587.422962 bo	ppm	0.385424	0.07	280575.670274	Y 377.433
Sb (206.834 nm)	-0.013226 u	ppm	0.002588	19.57	-22.780900	Y 377.433
Se (196.026 nm)	0.004455	ppm	0.000384	8.63	7.877200	Y 242.219
Si (288.158 nm)	22.316600	ppm	0.192201	0.86	101261.000000	Y 377.433
Sn (189.925 nm)	-0.006743 u	ppm	0.000659	9.77	0.191721	Y 377.433
Sr (421.552 nm)	6.909862	ppm	0.110142	1.59	802366.237866	Y_R 488.368
Th (288.505 nm)	-0.008301 u	ppm	0.001185	14.27	3.139950	Y 377.433
Ti (336.122 nm)	-0.000018 u	ppm	0.000173	> 100.00	833.534000	Y 377.433
Tl (190.794 nm)	-0.007351 u	ppm	0.002475	33.67	-17.854000	Y 377.433
U (409.013 nm)	-0.025885 u	ppm	0.000937	3.62	11.406500	Y 377.433
V (292.401 nm)	0.001678	ppm	0.000122	7.27	-112.175000	Y 377.433
Zn (206.200 nm)	0.003757	ppm	0.000531	14.14	17.617000	Y 377.433
Zr (343.823 nm)	0.000047 u	ppm	0.000272	> 100.00	-116.620000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090503	11616.245268	0.007064	0.65
Y 377.433	1.092231	504214.667499	0.004612	0.42
Y_R 377.433	1.164920	44019.600000	0.000663	0.06
Y_R 488.368	1.166840	42111.100000	0.017169	1.47
Y_R2 488.368	1.171209	82425.865226	0.010468	0.89
Y_R4	1.186470	36405.800000	0.013698	1.15

Sample Name: 280-116289-E-4-Dsd@5

Date: 11/6/2018 7:04:18 AM Rack:Tube: 4:11

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001399	ppm	0.000255	18.26	-200.495000	Y 377.433
Al (394.401 nm)	-0.013892 u	ppm	0.001375	9.90	281.281000	Y 377.433
Al H (396.152 nm)	-0.134742 u	ppm	0.001077	0.80	-14.595400	Y_R 377.433
As (188.980 nm)	0.000511 u	ppm	0.001443	> 100.00	-14.411000	Y 242.219
B (249.678 nm)	0.052084	ppm	0.001149	2.21	255.671000	Y 242.219
Ba (493.408 nm)	0.000796	ppm	0.000137	17.19	874.216000	Y_R 488.368
Be (234.861 nm)	0.000131	ppm	0.000013	9.72	-5.914430	Y_R 488.368
Bi (223.061 nm)	0.006744	ppm	0.002037	30.20	54.456600	Y 377.433
Ca (315.887 nm)	95.740518	ppm	0.091814	0.10	63236.103538	Y_R 377.433
Cd (214.439 nm)	0.000222	ppm	0.000057	25.78	-5.638310	Y 377.433
Co (228.615 nm)	0.000321	ppm	0.000112	35.01	-19.806000	Y 242.219
Cr (205.560 nm)	0.001025	ppm	0.000610	59.56	-4.466650	Y 377.433
Cu (324.754 nm)	-0.000818 u	ppm	0.000118	14.42	105.063000	Y 377.433
Fe (238.204 nm)	0.480383	ppm	0.000019	0.00	811.935440	Y_R 377.433
Fe H (259.940 nm)	0.463041 u	ppm	0.004562	0.99	413.904000	Y_R 377.433
K (766.491 nm)	3.117700	ppm	0.048019	1.54	4782.970000	Y_R2 488.368
Li (670.783 nm)	0.046737	ppm	0.000152	0.32	215.062000	Y_R2 488.368
Mg (279.078 nm)	48.478300	ppm	0.095158	0.20	105619.000000	Y 377.433
Mn (257.610 nm)	0.021073	ppm	0.000002	0.01	4431.590000	Y 377.433
Mo (202.032 nm)	0.003335	ppm	0.000345	10.33	56.616900	Y 377.433
Na (589.592 nm)	18.612000	ppm	0.181938	0.98	9214.630000	Y_R2 488.368
Na H (589.593 nm)	19.825406 u	ppm	0.010890	0.05	6688.578062	Y_R4
Ni (231.604 nm)	-0.000539 u	ppm	0.000257	47.72	7.092350	Y 377.433
P (213.618 nm)	0.011492	ppm	0.000821	7.15	12.257700	Y 242.219
Pb (220.353 nm)	-0.001648 u	ppm	0.001675	> 100.00	10.798700	Y 242.219
S (181.972 nm)	118.752184 bo	ppm	0.551052	0.46	56700.099942	Y 377.433
Sb (206.834 nm)	-0.010076 u	ppm	0.002555	25.36	-17.677500	Y 377.433
Se (196.026 nm)	0.000324 u	ppm	0.002747	> 100.00	2.033470	Y 242.219
Si (288.158 nm)	4.193310	ppm	0.007588	0.18	20070.400000	Y 377.433
Sn (189.925 nm)	-0.007794 u	ppm	0.001922	24.66	-1.036000	Y 377.433
Sr (421.552 nm)	1.392210	ppm	0.010284	0.74	161884.203081	Y_R 488.368
Th (288.505 nm)	-0.009561 u	ppm	0.002286	23.91	3.693800	Y 377.433
Ti (336.122 nm)	0.000327	ppm	0.000032	9.87	-89.897300	Y 377.433
Tl (190.794 nm)	-0.001702 u	ppm	0.005344	> 100.00	-10.773200	Y 377.433
U (409.013 nm)	0.006711 u	ppm	0.011180	> 100.00	121.148000	Y 377.433
V (292.401 nm)	0.001166	ppm	0.000109	9.30	-138.871000	Y 377.433
Zn (206.200 nm)	0.001137	ppm	0.001380	> 100.00	8.360710	Y 377.433
Zr (343.823 nm)	0.000267	ppm	0.000219	81.83	-107.704000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.162264	12380.663394	0.000903	0.08
Y 377.433	1.149683	530736.680335	0.001350	0.12
Y_R 377.433	1.214760	45903.000000	0.002047	0.17
Y_R 488.368	1.208410	43611.400000	0.012172	1.01
Y_R2 488.368	1.204438	84764.421409	0.014218	1.18
Y_R4	1.232140	37807.100000	0.003287	0.27

Sample Name: 280-116289-E-4-E MS

Date: 11/6/2018 7:07:41 AM Rack:Tube: 4:12

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.058416	ppm	0.000292	0.50	1323.680000	Y 377.433
Al (394.401 nm)	2.052470	ppm	0.007318	0.36	27758.300000	Y 377.433
Al H (396.152 nm)	0.747003 u	ppm	0.002420	0.32	3508.620000	Y_R 377.433
As (188.980 nm)	1.088360	ppm	0.005424	0.50	1509.730000	Y 242.219
B (249.678 nm)	1.436570	ppm	0.000387	0.03	5813.700000	Y 242.219
Ba (493.408 nm)	2.131920	ppm	0.001562	0.07	195915.000000	Y_R 488.368
Be (234.861 nm)	0.053129	ppm	0.000997	1.88	2697.610000	Y_R 488.368
Bi (223.061 nm)	2.154570	ppm	0.009247	0.43	3595.120000	Y 377.433
Ca (315.887 nm)	517.721903	ppm	0.247359	0.05	341963.241405	Y_R 377.433
Cd (214.439 nm)	0.104329	ppm	0.000168	0.16	2586.650000	Y 377.433
Co (228.615 nm)	0.497134	ppm	0.000939	0.19	11815.000000	Y 242.219
Cr (205.560 nm)	0.217508	ppm	0.000203	0.09	1024.580000	Y 377.433
Cu (324.754 nm)	0.269526	ppm	0.000602	0.22	12945.100000	Y 377.433
Fe (238.204 nm)	3.379941	ppm	0.008280	0.24	5643.089488	Y_R 377.433
Fe H (259.940 nm)	3.364060 u	ppm	0.023382	0.70	3076.030000	Y_R 377.433
K (766.491 nm)	73.939400	ppm	0.104807	0.14	73999.900000	Y_R2 488.368
Li (670.783 nm)	1.320980	ppm	0.006223	0.47	18262.800000	Y_R2 488.368
Mg (279.078 nm)	292.660000	ppm	0.265671	0.09	637520.000000	Y 377.433
Mn (257.610 nm)	0.630068	ppm	0.000763	0.12	131848.000000	Y 377.433
Mo (202.032 nm)	1.114750	ppm	0.000963	0.09	12700.700000	Y 377.433
Na (589.592 nm)	146.118000 o	ppm	1.257610	0.86	73240.800000	Y_R2 488.368
Na H (589.593 nm)	149.929411	ppm	0.432462	0.29	52934.949883	Y_R4
Ni (231.604 nm)	0.500848	ppm	0.000244	0.05	1930.520000	Y 377.433
P (213.618 nm)	11.399400	ppm	0.002394	0.02	13210.800000	Y 242.219
Pb (220.353 nm)	0.510690	ppm	0.001709	0.33	1155.230000	Y 242.219
S (181.972 nm)	587.523402 bo	ppm	2.179404	0.37	280627.838093	Y 377.433
Sb (206.834 nm)	0.560507	ppm	0.003591	0.64	909.952000	Y 377.433
Se (196.026 nm)	2.264330	ppm	0.002696	0.12	3406.130000	Y 242.219
Si (288.158 nm)	32.912100	ppm	0.295136	0.90	148728.000000	Y 377.433
Sn (189.925 nm)	2.136450	ppm	0.001087	0.05	2502.080000	Y 377.433
Sr (421.552 nm)	7.954885	ppm	0.006988	0.09	923671.372671	Y_R 488.368
Th (288.505 nm)	1.025470	ppm	0.005304	0.52	1077.800000	Y 377.433
Ti (336.122 nm)	1.084460	ppm	0.002373	0.22	104073.000000	Y 377.433
Tl (190.794 nm)	2.050420	ppm	0.006671	0.33	1159.270000	Y 377.433
U (409.013 nm)	2.216190	ppm	0.000771	0.03	5084.400000	Y 377.433
V (292.401 nm)	0.541904	ppm	0.001604	0.30	25983.400000	Y 377.433
Zn (206.200 nm)	0.514829	ppm	0.001234	0.24	1784.030000	Y 377.433
Zr (343.823 nm)	0.535991	ppm	0.000740	0.14	21602.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090374	11614.871794	0.001571	0.14
Y 377.433	1.096375	506127.673469	0.000767	0.07
Y_R 377.433	1.189770	44958.700000	0.019245	1.62
Y_R 488.368	1.186650	42826.000000	0.020399	1.72
Y_R2 488.368	1.193692	84008.170370	0.008816	0.74
Y_R4	1.233000	37833.600000	0.002511	0.20

Sample Name: 280-116289-E-4-F MSD

Date: 11/6/2018 7:11:46 AM Rack:Tube: 4:13

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.058342	ppm	0.000146	0.25	1321.640000	Y 377.433
Al (394.401 nm)	2.041740	ppm	0.003520	0.17	27669.900000	Y 377.433
Al H (396.152 nm)	0.713371 u	ppm	0.018267	2.56	3499.900000	Y_R 377.433
As (188.980 nm)	1.100920	ppm	0.000306	0.03	1527.330000	Y 242.219
B (249.678 nm)	1.442780	ppm	0.006924	0.48	5838.630000	Y 242.219
Ba (493.408 nm)	2.127520	ppm	0.004867	0.23	195512.000000	Y_R 488.368
Be (234.861 nm)	0.053370	ppm	0.000658	1.23	2709.840000	Y_R 488.368
Bi (223.061 nm)	2.153910	ppm	0.003640	0.17	3594.020000	Y 377.433
Ca (315.887 nm)	521.993402	ppm	0.823183	0.16	344784.647207	Y_R 377.433
Cd (214.439 nm)	0.103971	ppm	0.000004	0.00	2577.730000	Y 377.433
Co (228.615 nm)	0.493000	ppm	0.000367	0.07	11716.700000	Y 242.219
Cr (205.560 nm)	0.218978	ppm	0.000139	0.06	1031.610000	Y 377.433
Cu (324.754 nm)	0.269416	ppm	0.000917	0.34	12933.400000	Y 377.433
Fe (238.204 nm)	3.393942	ppm	0.002702	0.08	5666.417735	Y_R 377.433
Fe H (259.940 nm)	3.380800 u	ppm	0.002522	0.07	3091.400000	Y_R 377.433
K (766.491 nm)	73.746200	ppm	0.115794	0.16	73811.000000	Y_R2 488.368
Li (670.783 nm)	1.321470	ppm	0.001893	0.14	18269.800000	Y_R2 488.368
Mg (279.078 nm)	293.315000	ppm	0.106226	0.04	638947.000000	Y 377.433
Mn (257.610 nm)	0.628396	ppm	0.001095	0.17	131498.000000	Y 377.433
Mo (202.032 nm)	1.111990	ppm	0.001665	0.15	12669.300000	Y 377.433
Na (589.592 nm)	146.692000 o	ppm	0.549960	0.37	73528.900000	Y_R2 488.368
Na H (589.593 nm)	150.142368	ppm	0.160907	0.11	53011.446374	Y_R4
Ni (231.604 nm)	0.497666	ppm	0.000333	0.07	1918.320000	Y 377.433
P (213.618 nm)	11.367400	ppm	0.024326	0.21	13173.700000	Y 242.219
Pb (220.353 nm)	0.513524	ppm	0.001877	0.37	1161.590000	Y 242.219
S (181.972 nm)	594.518493 bo	ppm	1.743839	0.29	283969.212414	Y 377.433
Sb (206.834 nm)	0.560973	ppm	0.002355	0.42	910.791000	Y 377.433
Se (196.026 nm)	2.281200	ppm	0.008106	0.36	3431.490000	Y 242.219
Si (288.158 nm)	33.078200	ppm	0.141193	0.43	149472.000000	Y 377.433
Sn (189.925 nm)	2.112310	ppm	0.004190	0.20	2473.900000	Y 377.433
Sr (421.552 nm)	8.033337	ppm	0.025081	0.31	932777.896250	Y_R 488.368
Th (288.505 nm)	1.019870	ppm	0.008670	0.85	1071.970000	Y 377.433
Ti (336.122 nm)	1.079260	ppm	0.001229	0.11	103591.000000	Y 377.433
Tl (190.794 nm)	2.040740	ppm	0.007527	0.37	1153.680000	Y 377.433
U (409.013 nm)	2.229780	ppm	0.003007	0.13	5115.200000	Y 377.433
V (292.401 nm)	0.539703	ppm	0.000443	0.08	25874.400000	Y 377.433
Zn (206.200 nm)	0.512189	ppm	0.000930	0.18	1774.910000	Y 377.433
Zr (343.823 nm)	0.534330	ppm	0.000388	0.07	21535.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.108548	11808.466497	0.002100	0.19
Y 377.433	1.121633	517787.655040	0.002875	0.26
Y_R 377.433	1.210700	45749.700000	0.006831	0.56
Y_R 488.368	1.209560	43652.900000	0.009530	0.79
Y_R2 488.368	1.240957	87334.481881	0.002957	0.24
Y_R4	1.279200	39251.300000	0.000997	0.08

Sample Name: 280-116289-G-5-B

Date: 11/6/2018 7:15:32 AM Rack:Tube: 4:14

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002051	ppm	0.000049	2.40	-181.883000	Y 377.433
Al (394.401 nm)	-0.045594 u	ppm	0.000795	1.74	470.549000	Y 377.433
Al H (396.152 nm)	-0.573186 u	ppm	0.005551	0.97	-54.596800	Y_R 377.433
As (188.980 nm)	-0.000375 u	ppm	0.000868	> 100.00	-15.673500	Y 242.219
B (249.678 nm)	0.479537	ppm	0.001061	0.22	1971.700000	Y 242.219
Ba (493.408 nm)	0.012007	ppm	0.000236	1.96	1900.890000	Y_R 488.368
Be (234.861 nm)	0.000213	ppm	0.000046	21.75	-13.483700	Y_R 488.368
Bi (223.061 nm)	0.008371	ppm	0.001399	16.71	57.256800	Y 377.433
Ca (315.887 nm)	260.595730	ppm	1.164791	0.45	172126.081660	Y_R 377.433
Cd (214.439 nm)	0.000378	ppm	0.000047	12.47	-1.743910	Y 377.433
Co (228.615 nm)	-0.000230 u	ppm	0.000089	38.90	-31.932900	Y 242.219
Cr (205.560 nm)	0.001510	ppm	0.000184	12.17	-2.145310	Y 377.433
Cu (324.754 nm)	-0.000960 u	ppm	0.000310	32.28	4.188110	Y 377.433
Fe (238.204 nm)	1.308972	ppm	0.003315	0.25	2192.503751	Y_R 377.433
Fe H (259.940 nm)	1.307140 u	ppm	0.007558	0.58	1188.490000	Y_R 377.433
K (766.491 nm)	9.613170	ppm	0.020573	0.21	11131.200000	Y_R2 488.368
Li (670.783 nm)	0.137467	ppm	0.000509	0.37	1500.120000	Y_R2 488.368
Mg (279.078 nm)	103.343000	ppm	0.155282	0.15	225136.000000	Y 377.433
Mn (257.610 nm)	0.062999	ppm	0.000007	0.01	13203.600000	Y 377.433
Mo (202.032 nm)	0.001248	ppm	0.000130	10.40	32.875700	Y 377.433
Na (589.592 nm)	222.171000 o	ppm	1.201040	0.54	111482.000000	Y_R2 488.368
Na H (589.593 nm)	221.499577	ppm	0.569889	0.26	78700.062545	Y_R4
Ni (231.604 nm)	0.001211	ppm	0.001108	91.52	13.920100	Y 377.433
P (213.618 nm)	0.059523	ppm	0.002789	4.69	67.947500	Y 242.219
Pb (220.353 nm)	-0.002575 u	ppm	0.000877	34.08	8.639670	Y 242.219
S (181.972 nm)	293.804076 bo	ppm	2.086034	0.71	140320.569770	Y 377.433
Sb (206.834 nm)	-0.010692 u	ppm	0.000034	0.32	-18.611000	Y 377.433
Se (196.026 nm)	0.001995 u	ppm	0.003117	> 100.00	4.388910	Y 242.219
Si (288.158 nm)	22.483000	ppm	0.084336	0.38	102007.000000	Y 377.433
Sn (189.925 nm)	-0.007013 u	ppm	0.000329	4.69	-0.123801	Y 377.433
Sr (421.552 nm)	3.617006	ppm	0.030458	0.84	420135.769116	Y_R 488.368
Th (288.505 nm)	-0.012764 u	ppm	0.008149	63.84	-0.632937	Y 377.433
Ti (336.122 nm)	0.000340	ppm	0.000071	20.99	332.777000	Y 377.433
Tl (190.794 nm)	-0.006949 u	ppm	0.003808	54.79	-15.465500	Y 377.433
U (409.013 nm)	-0.020560 u	ppm	0.003912	19.03	43.276100	Y 377.433
V (292.401 nm)	0.001704	ppm	0.000350	20.55	-109.840000	Y 377.433
Zn (206.200 nm)	0.003844	ppm	0.000264	6.86	17.805600	Y 377.433
Zr (343.823 nm)	-0.000039 u	ppm	0.000461	> 100.00	-120.130000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.151564	12266.681431	0.010974	0.95
Y 377.433	1.154231	532836.256960	0.011929	1.03
Y_R 377.433	1.237810	46773.900000	0.018833	1.52
Y_R 488.368	1.234570	44555.700000	0.008724	0.71
Y_R2 488.368	1.228292	86443.190809	0.009666	0.79
Y_R4	1.288280	39529.700000	0.001489	0.12

Sample Name: 280-116259-D-1-F

Date: 11/6/2018 7:19:39 AM Rack:Tube: 4:15

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001728	ppm	0.000003	0.17	-190.906000	Y 377.433
Al (394.401 nm)	-0.004091 u	ppm	0.000466	11.39	387.597000	Y 377.433
Al H (396.152 nm)	-0.122625 u	ppm	0.001268	1.03	6.084930	Y_R 377.433
As (188.980 nm)	0.005891	ppm	0.002315	39.30	-6.860970	Y 242.219
B (249.678 nm)	3.655720	ppm	0.015330	0.42	14725.100000	Y 242.219
Ba (493.408 nm)	0.020558	ppm	0.000555	2.70	2682.460000	Y_R 488.368
Be (234.861 nm)	0.000180	ppm	0.000034	18.79	3.268620	Y_R 488.368
Bi (223.061 nm)	0.001714 u	ppm	0.003270	> 100.00	46.129100	Y 377.433
Ca (315.887 nm)	82.706856	ppm	0.319807	0.39	54627.122893	Y_R 377.433
Cd (214.439 nm)	0.000268	ppm	0.000072	26.87	-4.474190	Y 377.433
Co (228.615 nm)	0.000261	ppm	0.000078	29.77	-21.740700	Y 242.219
Cr (205.560 nm)	0.000792	ppm	0.000569	71.82	-5.846830	Y 377.433
Cu (324.754 nm)	0.000084 u	ppm	0.000238	> 100.00	160.629000	Y 377.433
Fe (238.204 nm)	0.009736	ppm	0.000718	7.38	27.757038	Y_R 377.433
Fe H (259.940 nm)	0.017124 u	ppm	0.004483	26.18	4.706940	Y_R 377.433
K (766.491 nm)	18.897700	ppm	0.063247	0.33	20205.400000	Y_R2 488.368
Li (670.783 nm)	0.129715	ppm	0.002832	2.18	1390.320000	Y_R2 488.368
Mg (279.078 nm)	46.581500	ppm	0.033550	0.07	101488.000000	Y 377.433
Mn (257.610 nm)	0.265459	ppm	0.000138	0.05	55563.100000	Y 377.433
Mo (202.032 nm)	0.083917	ppm	0.000351	0.42	973.364000	Y 377.433
Na (589.592 nm)	591.778000 o	ppm	1.289420	0.22	297173.000000	Y_R2 488.368
Na H (589.593 nm)	621.003543	ppm	3.935128	0.63	221351.524484	Y_R4
Ni (231.604 nm)	0.003023	ppm	0.000787	26.04	20.666100	Y 377.433
P (213.618 nm)	0.093669	ppm	0.001376	1.47	107.536000	Y 242.219
Pb (220.353 nm)	-0.003541 u	ppm	0.001482	41.86	6.299000	Y 242.219
S (181.972 nm)	220.015142 bo	ppm	0.815563	0.37	105067.478989	Y 377.433
Sb (206.834 nm)	-0.006034 u	ppm	0.001460	24.19	-11.584100	Y 377.433
Se (196.026 nm)	0.002253	ppm	0.000982	43.58	5.413540	Y 242.219
Si (288.158 nm)	6.519470	ppm	0.007070	0.11	30491.400000	Y 377.433
Sn (189.925 nm)	-0.004635 u	ppm	0.001217	26.26	2.651670	Y 377.433
Sr (421.552 nm)	1.378953	ppm	0.012037	0.87	160345.296791	Y_R 488.368
Th (288.505 nm)	-0.016094 u	ppm	0.007322	45.49	-0.733140	Y 377.433
Ti (336.122 nm)	0.000660	ppm	0.000125	18.98	-91.767200	Y 377.433
Tl (190.794 nm)	-0.003963 u	ppm	0.003164	79.84	-12.029700	Y 377.433
U (409.013 nm)	-0.023632 u	ppm	0.000816	3.45	52.812400	Y 377.433
V (292.401 nm)	0.002462	ppm	0.000061	2.46	-78.000000	Y 377.433
Zn (206.200 nm)	0.003203	ppm	0.000396	12.35	15.449200	Y 377.433
Zr (343.823 nm)	0.000376	ppm	0.000354	94.10	-103.291000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.129406	12030.645040	0.001480	0.13
Y 377.433	1.121088	517536.338970	0.006154	0.55
Y_R 377.433	1.224800	46282.300000	0.014308	1.17
Y_R 488.368	1.222890	44134.100000	0.023190	1.90
Y_R2 488.368	1.230228	86579.414189	0.005363	0.44
Y_R4	1.291490	39628.200000	0.003252	0.25

Sample Name: CCVH-5408055

Date: 11/6/2018 7:23:45 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001488	ppm	0.000425	28.59	-312.508000	Y 377.433
Al (394.401 nm)	51.828700 o	ppm	0.044072	0.09	645457.000000	Y 377.433
Al H (396.152 nm)	50.512200	ppm	0.160845	0.32	83072.900000	Y_R 377.433
As (188.980 nm)	-0.002509 u	ppm	0.001449	57.77	-20.785400	Y 242.219
B (249.678 nm)	-0.010415 u	ppm	0.000728	6.99	-11.963000	Y 242.219
Ba (493.408 nm)	-0.000693 u	ppm	0.000096	13.81	775.491000	Y_R 488.368
Be (234.861 nm)	0.000698	ppm	0.000233	33.29	-699.277000	Y_R 488.368
Bi (223.061 nm)	1.033360	ppm	0.001096	0.11	1753.250000	Y 377.433
Ca (315.887 nm)	-0.001580 u	ppm	0.008199	> 100.00	7.106447	Y_R 377.433
Cd (214.439 nm)	0.000232	ppm	0.000223	95.88	-5.370530	Y 377.433
Co (228.615 nm)	0.001281	ppm	0.000055	4.26	60.179200	Y 242.219
Cr (205.560 nm)	0.001032	ppm	0.000556	53.87	-5.383930	Y 377.433
Cu (324.754 nm)	0.000769	ppm	0.000408	53.04	712.655000	Y 377.433
Fe (238.204 nm)	51.342882 o	ppm	0.160446	0.31	85557.475133	Y_R 377.433
Fe H (259.940 nm)	51.626500	ppm	0.115689	0.22	47364.100000	Y_R 377.433
K (766.491 nm)	0.251772	ppm	0.011539	4.58	1981.980000	Y_R2 488.368
Li (670.783 nm)	0.013313	ppm	0.001086	8.16	-258.332000	Y_R2 488.368
Mg (279.078 nm)	-0.031569 u	ppm	0.001547	4.90	-211.747000	Y 377.433
Mn (257.610 nm)	0.000322	ppm	0.000022	6.98	90.073700	Y 377.433
Mo (202.032 nm)	-0.001184 u	ppm	0.000302	25.49	5.212220	Y 377.433
Na (589.592 nm)	255.905000 o	ppm	0.595747	0.23	128431.000000	Y_R2 488.368
Na H (589.593 nm)	252.599164	ppm	0.953630	0.38	89806.157194	Y_R4
Ni (231.604 nm)	0.001599	ppm	0.000135	8.47	22.946000	Y 377.433
P (213.618 nm)	-0.016107 u	ppm	0.002694	16.73	-21.094300	Y 242.219
Pb (220.353 nm)	-0.002802 u	ppm	0.000473	16.89	19.073100	Y 242.219
S (181.972 nm)	5.350955	ppm	0.001261	0.02	2529.901945	Y 377.433
Sb (206.834 nm)	0.000871	ppm	0.001117	> 100.00	4.579130	Y 377.433
Se (196.026 nm)	0.002496	ppm	0.001009	40.45	-7.920600	Y 242.219
Si (288.158 nm)	-0.197315 u	ppm	0.005040	2.55	400.854000	Y 377.433
Sn (189.925 nm)	-0.004577 u	ppm	0.000324	7.07	2.719890	Y 377.433
Sr (421.552 nm)	-0.000284 u	ppm	0.000135	47.46	251.220691	Y_R 488.368
Th (288.505 nm)	5.075970	ppm	0.014174	0.28	5445.710000	Y 377.433
Ti (336.122 nm)	0.000918	ppm	0.000092	10.00	-277.706000	Y 377.433
Tl (190.794 nm)	-0.002365 u	ppm	0.001868	79.00	-13.563300	Y 377.433
U (409.013 nm)	10.668300	ppm	0.020839	0.20	24527.300000	Y 377.433
V (292.401 nm)	-0.003541 u	ppm	0.000181	5.11	-374.733000	Y 377.433
Zn (206.200 nm)	-0.000470 u	ppm	0.000091	19.34	8.305410	Y 377.433
Zr (343.823 nm)	-0.006471 u	ppm	0.000002	0.04	-380.779000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.164464	12404.096870	0.000555	0.05
Y 377.433	1.155305	533331.790663	0.002412	0.21
Y_R 377.433	1.226710	46354.600000	0.006623	0.54
Y_R 488.368	1.233210	44506.600000	0.004820	0.39
Y_R2 488.368	1.217631	85692.886513	0.007506	0.62
Y_R4	1.257860	38596.300000	0.001442	0.11

Sample Name: CCV-5407762

Date: 11/6/2018 7:27:21 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.522937	ppm	0.002377	0.45	14229.300000	Y 377.433
Al (394.401 nm)	0.509718	ppm	0.001133	0.22	6556.550000	Y 377.433
Al H (396.152 nm)	0.552395 u	ppm	0.011161	2.02	892.932000	Y_R 377.433
As (188.980 nm)	1.022940	ppm	0.000589	0.06	1418.110000	Y 242.219
B (249.678 nm)	0.495418	ppm	0.002182	0.44	2035.050000	Y 242.219
Ba (493.408 nm)	0.501322	ppm	0.001091	0.22	46683.500000	Y_R 488.368
Be (234.861 nm)	0.521819	ppm	0.000744	0.14	26979.800000	Y_R 488.368
Bi (223.061 nm)	-0.004074 u	ppm	0.001105	27.12	36.984400	Y 377.433
Ca (315.887 nm)	5.212320	ppm	0.022475	0.43	3440.625714	Y_R 377.433
Cd (214.439 nm)	0.535233	ppm	0.002897	0.54	13316.200000	Y 377.433
Co (228.615 nm)	0.511319	ppm	0.001325	0.26	12126.400000	Y 242.219
Cr (205.560 nm)	0.541029	ppm	0.000093	0.02	2570.670000	Y 377.433
Cu (324.754 nm)	0.523038	ppm	0.002058	0.39	25373.800000	Y 377.433
Fe (238.204 nm)	2.609231	ppm	0.002493	0.10	4358.956377	Y_R 377.433
Fe H (259.940 nm)	2.607100 u	ppm	0.003208	0.12	2381.410000	Y_R 377.433
K (766.491 nm)	51.651100	ppm	0.153319	0.30	52216.600000	Y_R2 488.368
Li (670.783 nm)	1.045890	ppm	0.002622	0.25	14366.600000	Y_R2 488.368
Mg (279.078 nm)	21.068900	ppm	0.028010	0.13	45909.300000	Y 377.433
Mn (257.610 nm)	0.523999	ppm	0.001662	0.32	109656.000000	Y 377.433
Mo (202.032 nm)	0.531142	ppm	0.001852	0.35	6061.240000	Y 377.433
Na (589.592 nm)	26.170700	ppm	0.040058	0.15	13004.400000	Y_R2 488.368
Na H (589.593 nm)	27.689040 u	ppm	0.076574	0.28	9447.090487	Y_R4
Ni (231.604 nm)	0.527173	ppm	0.000576	0.11	2030.410000	Y 377.433
P (213.618 nm)	1.041450	ppm	0.009544	0.92	1183.530000	Y 242.219
Pb (220.353 nm)	1.027130	ppm	0.002683	0.26	2306.750000	Y 242.219
S (181.972 nm)	0.014129	ppm	0.001212	8.58	-16.958784	Y 377.433
Sb (206.834 nm)	1.055990	ppm	0.006044	0.57	1735.100000	Y 377.433
Se (196.026 nm)	1.057910	ppm	0.006082	0.57	1592.300000	Y 242.219
Si (288.158 nm)	5.046350	ppm	0.010311	0.20	23891.900000	Y 377.433
Sn (189.925 nm)	1.059740	ppm	0.001182	0.11	1245.160000	Y 377.433
Sr (421.552 nm)	0.513364	ppm	0.000201	0.04	59869.145412	Y_R 488.368
Th (288.505 nm)	-0.030650 u	ppm	0.002023	6.60	-52.216500	Y 377.433
Ti (336.122 nm)	0.527726	ppm	0.001064	0.20	49829.300000	Y 377.433
Tl (190.794 nm)	1.052490	ppm	0.003504	0.33	593.779000	Y 377.433
U (409.013 nm)	-0.011687 u	ppm	0.007729	66.13	42.089300	Y 377.433
V (292.401 nm)	0.522551	ppm	0.001323	0.25	24964.700000	Y 377.433
Zn (206.200 nm)	0.532314	ppm	0.000059	0.01	1844.380000	Y 377.433
Zr (343.823 nm)	0.525051	ppm	0.000619	0.12	21159.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.209760	12886.599249	0.000685	0.06
Y 377.433	1.191475	550029.370377	0.002752	0.23
Y_R 377.433	1.250520	47254.200000	0.003406	0.27
Y_R 488.368	1.251270	45158.400000	0.000940	0.08
Y_R2 488.368	1.236007	86986.156807	0.003744	0.30
Y_R4	1.281730	39329.000000	0.005317	0.41

Sample Name: CCB

Date: 11/6/2018 7:30:51 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000356	ppm	0.000418	> 100.00	-229.181000	Y 377.433
Al (394.401 nm)	-0.000350 u	ppm	0.000728	> 100.00	81.337100	Y 377.433
Al H (396.152 nm)	0.130577 Zu	ppm	0.004965	3.80	-0.158407 Z	Y_R 377.433
As (188.980 nm)	0.000173 u	ppm	0.002751	> 100.00	-14.872600	Y 242.219
B (249.678 nm)	-0.010039 u	ppm	0.001205	12.00	6.393190	Y 242.219
Ba (493.408 nm)	-0.001364 u	ppm	0.000018	1.29	676.201000	Y_R 488.368
Be (234.861 nm)	0.000150	ppm	0.000014	9.12	1.914560	Y_R 488.368
Bi (223.061 nm)	-0.006004 u	ppm	0.001420	23.66	33.375200	Y 377.433
Ca (315.887 nm)	-0.002450 u	ppm	0.001460	59.60	-3.937050	Y_R 377.433
Cd (214.439 nm)	0.000170	ppm	0.000035	20.62	-6.927370	Y 377.433
Co (228.615 nm)	0.000506	ppm	0.000073	14.35	-15.965200	Y 242.219
Cr (205.560 nm)	0.000358	ppm	0.000258	72.09	-7.635190	Y 377.433
Cu (324.754 nm)	0.000332	ppm	0.000142	42.65	218.658000	Y 377.433
Fe (238.204 nm)	-0.000684 u	ppm	0.001401	> 100.00	10.396276	Y_R 377.433
Fe H (259.940 nm)	0.013915 u	ppm	0.000114	0.82	1.761490	Y_R 377.433
K (766.491 nm)	-0.239717 u	ppm	0.139148	58.05	1501.630000	Y_R2 488.368
Li (670.783 nm)	0.014484 Z	ppm	0.002782	19.21	-241.746000 Z	Y_R2 488.368
Mg (279.078 nm)	0.000968 u	ppm	0.001758	> 100.00	16.329300	Y 377.433
Mn (257.610 nm)	0.000022	ppm	0.000008	37.28	27.213300	Y 377.433
Mo (202.032 nm)	0.000041 u	ppm	0.000138	> 100.00	19.143700	Y 377.433
Na (589.592 nm)	0.197306	ppm	0.006073	3.08	-36.876300	Y_R2 488.368
Na H (589.593 nm)	2.662987 u	ppm	0.023023	0.86	560.552552	Y_R4
Ni (231.604 nm)	0.000124	ppm	0.000035	27.87	9.557960	Y 377.433
P (213.618 nm)	0.002073	ppm	0.002729	> 100.00	1.333870	Y 242.219
Pb (220.353 nm)	-0.003240 u	ppm	0.000363	11.21	7.238700	Y 242.219
S (181.972 nm)	0.019526	ppm	0.002785	14.26	-16.384957	Y 377.433
Sb (206.834 nm)	0.001517 u	ppm	0.002544	> 100.00	1.369250	Y 377.433
Se (196.026 nm)	0.000826 u	ppm	0.002167	> 100.00	2.883830	Y 242.219
Si (288.158 nm)	-0.204617 Zu	ppm	0.003267	1.60	368.144000 Z	Y 377.433
Sn (189.925 nm)	-0.006461 u	ppm	0.000724	11.20	0.520979	Y 377.433
Sr (421.552 nm)	-0.000460 u	ppm	0.000028	6.06	224.837502	Y_R 488.368
Th (288.505 nm)	0.001579	ppm	0.002055	> 100.00	16.034500	Y 377.433
Ti (336.122 nm)	0.000648	ppm	0.000091	13.97	-303.454000	Y 377.433
Tl (190.794 nm)	0.003899	ppm	0.003991	> 100.00	-6.579060	Y 377.433
U (409.013 nm)	-0.010181 u	ppm	0.002175	21.37	91.542800	Y 377.433
V (292.401 nm)	0.000722	ppm	0.000007	0.97	-158.890000	Y 377.433
Zn (206.200 nm)	-0.000207 u	ppm	0.000107	51.48	3.663390	Y 377.433
Zr (343.823 nm)	0.000602	ppm	0.000260	43.25	-94.154400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.220864	13004.877039	0.000731	0.06
Y 377.433	1.202577	555154.285011	0.001447	0.12
Y_R 377.433	1.239220	46827.400000	0.003476	0.28
Y_R 488.368	1.235130	44575.700000	0.018629	1.51
Y_R2 488.368	1.232852	86764.121064	0.004810	0.39
Y_R4	1.262760	38746.700000	0.002922	0.23

Sample Name: CCVL-5412564

Date: 11/6/2018 7:34:02 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010111	ppm	0.000556	5.50	41.413100	Y 377.433
Al (394.401 nm)	0.099660	ppm	0.001072	1.08	1332.260000	Y 377.433
Al H (396.152 nm)	0.230415 u	ppm	0.000259	0.11	168.850000	Y_R 377.433
As (188.980 nm)	0.014668	ppm	0.000309	2.11	5.432960	Y 242.219
B (249.678 nm)	0.088519	ppm	0.000250	0.28	402.088000	Y 242.219
Ba (493.408 nm)	0.009033	ppm	0.000132	1.46	1627.750000	Y_R 488.368
Be (234.861 nm)	0.001088	ppm	0.000063	5.80	48.991700	Y_R 488.368
Bi (223.061 nm)	0.097206	ppm	0.004972	5.11	203.510000	Y 377.433
Ca (315.887 nm)	0.206556	ppm	0.009457	4.58	134.138148	Y_R 377.433
Cd (214.439 nm)	0.005612	ppm	0.000030	0.53	128.583000	Y 377.433
Co (228.615 nm)	0.011095	ppm	0.000206	1.86	235.800000	Y 242.219
Cr (205.560 nm)	0.010814	ppm	0.000364	3.36	42.148300	Y 377.433
Cu (324.754 nm)	0.016275	ppm	0.000194	1.19	985.316000	Y 377.433
Fe (238.204 nm)	0.102647	ppm	0.003181	3.10	182.563429	Y_R 377.433
Fe H (259.940 nm)	0.106732 u	ppm	0.004079	3.82	86.935700	Y_R 377.433
K (766.491 nm)	2.907640	ppm	0.007543	0.26	4577.670000	Y_R2 488.368
Li (670.783 nm)	0.037120 Q	ppm	0.003441	9.27	78.855600 Q	Y_R2 488.368
Mg (279.078 nm)	0.212438	ppm	0.000547	0.26	476.484000	Y 377.433
Mn (257.610 nm)	0.010835	ppm	0.000036	0.34	2289.530000	Y 377.433
Mo (202.032 nm)	0.020320	ppm	0.000023	0.11	249.848000	Y 377.433
Na (589.592 nm)	1.297910	ppm	0.003989	0.31	515.911000	Y_R2 488.368
Na H (589.593 nm)	3.464717 u	ppm	0.009801	0.28	845.847189	Y_R4
Ni (231.604 nm)	0.042456	ppm	0.000873	2.06	171.796000	Y 377.433
P (213.618 nm)	2.954170	ppm	0.013217	0.45	3425.340000	Y 242.219
Pb (220.353 nm)	0.007157	ppm	0.000022	0.31	30.461000	Y 242.219
S (181.972 nm)	0.117001	ppm	0.006226	5.32	30.216936	Y 377.433
Sb (206.834 nm)	0.021528	ppm	0.002509	11.65	34.147700	Y 377.433
Se (196.026 nm)	0.021652	ppm	0.000162	0.75	34.185600	Y 242.219
Si (288.158 nm)	0.306054 Q	ppm	0.002218	0.72	2655.900000 Q	Y 377.433
Sn (189.925 nm)	0.098105	ppm	0.000307	0.31	122.587000	Y 377.433
Sr (421.552 nm)	0.009242	ppm	0.000023	0.25	1351.011146	Y_R 488.368
Th (288.505 nm)	0.017844	ppm	0.000638	3.57	32.945900	Y 377.433
Ti (336.122 nm)	0.011008	ppm	0.000078	0.71	682.300000	Y 377.433
Tl (190.794 nm)	0.016570	ppm	0.004441	26.80	0.651051	Y 377.433
U (409.013 nm)	0.047826	ppm	0.006046	12.64	222.838000	Y 377.433
V (292.401 nm)	0.010892	ppm	0.000245	2.25	329.573000	Y 377.433
Zn (206.200 nm)	0.021435	ppm	0.000224	1.04	78.471800	Y 377.433
Zr (343.823 nm)	0.016138	ppm	0.000155	0.96	535.460000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.239828	13206.889911	0.004423	0.36
Y 377.433	1.222640	564416.166791	0.005112	0.42
Y_R 377.433	1.250790	47264.600000	0.002578	0.21
Y_R 488.368	1.251990	45184.500000	0.003126	0.25
Y_R2 488.368	1.252699	88160.845726	0.002082	0.17
Y_R4	1.269600	38956.700000	0.001647	0.13

Sample Name: 280-116260-A-1-C

Date: 11/6/2018 7:37:29 AM Rack:Tube: 4:16

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001043	ppm	0.000194	18.61	-210.919000	Y 377.433
Al (394.401 nm)	0.024749	ppm	0.000954	3.86	532.428000	Y 377.433
Al H (396.152 nm)	0.044423 u	ppm	0.005760	12.97	-3.670540	Y_R 377.433
As (188.980 nm)	0.014508	ppm	0.002129	14.68	4.821510	Y 242.219
B (249.678 nm)	0.090432	ppm	0.002153	2.38	404.763000	Y 242.219
Ba (493.408 nm)	0.239881	ppm	0.000748	0.31	22766.100000	Y_R 488.368
Be (234.861 nm)	0.000273	ppm	0.000002	0.59	-209.942000	Y_R 488.368
Bi (223.061 nm)	0.003529	ppm	0.002089	59.21	51.140500	Y 377.433
Ca (315.887 nm)	133.308438	ppm	0.233353	0.18	88050.424152	Y_R 377.433
Cd (214.439 nm)	0.000502	ppm	0.000127	25.29	1.352550	Y 377.433
Co (228.615 nm)	0.001394	ppm	0.000143	10.28	22.389700	Y 242.219
Cr (205.560 nm)	0.000782	ppm	0.000383	48.99	-5.628040	Y 377.433
Cu (324.754 nm)	-0.000506 u	ppm	0.000122	24.20	115.054000	Y 377.433
Fe (238.204 nm)	15.374443 o	ppm	0.003146	0.02	25627.961573	Y_R 377.433
Fe H (259.940 nm)	15.447500	ppm	0.015574	0.10	14164.400000	Y_R 377.433
K (766.491 nm)	21.413400	ppm	0.014234	0.07	22664.100000	Y_R2 488.368
Li (670.783 nm)	0.041106	ppm	0.003150	7.66	135.308000	Y_R2 488.368
Mg (279.078 nm)	13.603900	ppm	0.012668	0.09	29635.400000	Y 377.433
Mn (257.610 nm)	0.209539	ppm	0.000016	0.01	43863.200000	Y 377.433
Mo (202.032 nm)	0.001704	ppm	0.000170	9.99	38.069400	Y 377.433
Na (589.592 nm)	39.328500	ppm	0.049856	0.13	19618.900000	Y_R2 488.368
Na H (589.593 nm)	39.704728 u	ppm	0.157437	0.40	13763.395067	Y_R4
Ni (231.604 nm)	0.007962	ppm	0.001395	17.52	41.907400	Y 377.433
P (213.618 nm)	1.142940	ppm	0.002238	0.20	1324.880000	Y 242.219
Pb (220.353 nm)	-0.001614 u	ppm	0.000756	46.86	10.875100	Y 242.219
S (181.972 nm)	19.020901	ppm	0.057333	0.30	9066.970393	Y 377.433
Sb (206.834 nm)	-0.006374 u	ppm	0.002888	45.31	-10.349600	Y 377.433
Se (196.026 nm)	0.001968	ppm	0.002645	> 100.00	0.910662	Y 242.219
Si (288.158 nm)	14.685100	ppm	0.038806	0.26	67072.800000	Y 377.433
Sn (189.925 nm)	-0.006813 u	ppm	0.000592	8.69	0.110048	Y 377.433
Sr (421.552 nm)	0.512274	ppm	0.000019	0.00	59744.068267	Y_R 488.368
Th (288.505 nm)	-0.008543 u	ppm	0.003165	37.05	4.727530	Y 377.433
Ti (336.122 nm)	0.000860	ppm	0.000010	1.12	57.308500	Y 377.433
Tl (190.794 nm)	-0.004809 u	ppm	0.002809	58.41	-13.386800	Y 377.433
U (409.013 nm)	0.008233	ppm	0.004620	56.11	128.903000	Y 377.433
V (292.401 nm)	0.004625	ppm	0.000249	5.38	29.081300	Y 377.433
Zn (206.200 nm)	0.005509	ppm	0.000107	1.94	25.077800	Y 377.433
Zr (343.823 nm)	0.000921	ppm	0.000242	26.24	-81.231700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.189130	12666.846039	0.004426	0.37
Y 377.433	1.184487	546803.495668	0.004433	0.37
Y_R 377.433	1.242430	46948.600000	0.000768	0.06
Y_R 488.368	1.252050	45186.600000	0.002182	0.17
Y_R2 488.368	1.239420	87226.335165	0.004037	0.33
Y_R4	1.275070	39124.500000	0.010385	0.81

Sample Name: CCVH-5408055

Date: 11/6/2018 7:41:05 AM Rack:Tube: S1:1

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001404	ppm	0.000787	56.08	-314.234000	Y 377.433
Al (394.401 nm)	51.586300 o	ppm	0.057583	0.11	642434.000000	Y 377.433
Al H (396.152 nm)	50.302400	ppm	0.084554	0.17	82727.200000	Y_R 377.433
As (188.980 nm)	-0.001809 u	ppm	0.002699	> 100.00	-19.792900	Y 242.219
B (249.678 nm)	-0.014814 u	ppm	0.002188	14.77	-29.522400	Y 242.219
Ba (493.408 nm)	-0.000483 u	ppm	0.000187	38.67	794.532000	Y_R 488.368
Be (234.861 nm)	0.000579	ppm	0.000297	51.32	-700.994000	Y_R 488.368
Bi (223.061 nm)	1.020710	ppm	0.006920	0.68	1732.360000	Y 377.433
Ca (315.887 nm)	-0.010361 u	ppm	0.007568	73.04	1.257332	Y_R 377.433
Cd (214.439 nm)	0.000236	ppm	0.000086	36.59	-5.273520	Y 377.433
Co (228.615 nm)	0.001528	ppm	0.000193	12.61	65.666500	Y 242.219
Cr (205.560 nm)	0.000683	ppm	0.000832	> 100.00	-7.045470	Y 377.433
Cu (324.754 nm)	0.000570	ppm	0.000342	60.09	703.943000	Y 377.433
Fe (238.204 nm)	51.137722 o	ppm	0.041370	0.08	85215.644649	Y_R 377.433
Fe H (259.940 nm)	51.418800	ppm	0.063936	0.12	47173.600000	Y_R 377.433
K (766.491 nm)	0.124653	ppm	0.030251	24.27	1857.740000	Y_R2 488.368
Li (670.783 nm)	0.013405	ppm	0.002420	18.06	-257.040000	Y_R2 488.368
Mg (279.078 nm)	-0.030598 u	ppm	0.001371	4.48	-208.733000	Y 377.433
Mn (257.610 nm)	0.000317	ppm	0.000059	18.58	89.056500	Y 377.433
Mo (202.032 nm)	-0.000722 u	ppm	0.000166	22.99	10.469000	Y 377.433
Na (589.592 nm)	255.469000 o	ppm	0.338176	0.13	128212.000000	Y_R2 488.368
Na H (589.593 nm)	252.323710	ppm	0.943378	0.37	89707.756778	Y_R4
Ni (231.604 nm)	0.000011 u	ppm	0.001716	> 100.00	16.812800	Y 377.433
P (213.618 nm)	-0.016665 u	ppm	0.002467	14.80	-21.721800	Y 242.219
Pb (220.353 nm)	-0.001829 u	ppm	0.000030	1.62	21.179500	Y 242.219
S (181.972 nm)	5.314940	ppm	0.003107	0.06	2512.699608	Y 377.433
Sb (206.834 nm)	0.001538 u	ppm	0.002228	> 100.00	5.648070	Y 377.433
Se (196.026 nm)	0.000729	ppm	0.000332	45.56	-10.494100	Y 242.219
Si (288.158 nm)	-0.196689 u	ppm	0.001924	0.98	403.662000	Y 377.433
Sn (189.925 nm)	-0.007142 u	ppm	0.000589	8.24	-0.274793	Y 377.433
Sr (421.552 nm)	-0.000196 u	ppm	0.000048	24.35	261.483299	Y_R 488.368
Th (288.505 nm)	5.047520	ppm	0.037164	0.74	5415.280000	Y 377.433
Ti (336.122 nm)	0.001022	ppm	0.000042	4.11	-267.924000	Y 377.433
Tl (190.794 nm)	-0.006432 u	ppm	0.005381	83.66	-15.877000	Y 377.433
U (409.013 nm)	10.612500	ppm	0.003067	0.03	24399.700000	Y 377.433
V (292.401 nm)	-0.003426 u	ppm	0.000227	6.64	-367.357000	Y 377.433
Zn (206.200 nm)	-0.000092 u	ppm	0.000558	> 100.00	9.577580	Y 377.433
Zr (343.823 nm)	-0.006570 u	ppm	0.000011	0.17	-384.773000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.173041	12495.453015	0.004972	0.42
Y 377.433	1.165015	537814.605778	0.002119	0.18
Y_R 377.433	1.231850	46548.900000	0.002398	0.19
Y_R 488.368	1.239480	44732.900000	0.009245	0.75
Y_R2 488.368	1.230924	86628.402247	0.009191	0.75
Y_R4	1.271160	39004.400000	0.005462	0.43

Sample Name: CCV-5407762

Date: 11/6/2018 7:44:41 AM Rack:Tube: S1:2

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.519953	ppm	0.001600	0.31	14146.700000	Y 377.433
Al (394.401 nm)	0.511213	ppm	0.000173	0.03	6574.690000	Y 377.433
Al H (396.152 nm)	0.543712 u	ppm	0.009627	1.77	878.098000	Y_R 377.433
As (188.980 nm)	1.014380	ppm	0.003506	0.35	1406.110000	Y 242.219
B (249.678 nm)	0.488657	ppm	0.001730	0.35	2007.900000	Y 242.219
Ba (493.408 nm)	0.500207	ppm	0.000212	0.04	46581.400000	Y_R 488.368
Be (234.861 nm)	0.520897	ppm	0.001664	0.32	26932.200000	Y_R 488.368
Bi (223.061 nm)	-0.003787 u	ppm	0.003503	92.52	37.456100	Y 377.433
Ca (315.887 nm)	5.221575	ppm	0.005997	0.11	3446.737554	Y_R 377.433
Cd (214.439 nm)	0.535004	ppm	0.001342	0.25	13310.500000	Y 377.433
Co (228.615 nm)	0.511143	ppm	0.002381	0.47	12122.200000	Y 242.219
Cr (205.560 nm)	0.539498	ppm	0.004077	0.76	2563.360000	Y 377.433
Cu (324.754 nm)	0.521871	ppm	0.000157	0.03	25317.700000	Y 377.433
Fe (238.204 nm)	2.609111	ppm	0.001983	0.08	4358.756907	Y_R 377.433
Fe H (259.940 nm)	2.602450 u	ppm	0.003905	0.15	2377.130000	Y_R 377.433
K (766.491 nm)	51.335100	ppm	0.031044	0.06	51907.700000	Y_R2 488.368
Li (670.783 nm)	1.039840	ppm	0.003057	0.29	14280.900000	Y_R2 488.368
Mg (279.078 nm)	21.059600	ppm	0.007988	0.04	45888.900000	Y 377.433
Mn (257.610 nm)	0.523402	ppm	0.000260	0.05	109531.000000	Y 377.433
Mo (202.032 nm)	0.530097	ppm	0.001021	0.19	6049.350000	Y 377.433
Na (589.592 nm)	25.952500	ppm	0.029363	0.11	12894.800000	Y_R2 488.368
Na H (589.593 nm)	27.294637 u	ppm	0.092296	0.34	9306.369887	Y_R4
Ni (231.604 nm)	0.526950	ppm	0.002206	0.42	2029.560000	Y 377.433
P (213.618 nm)	1.045280	ppm	0.002062	0.20	1188.010000	Y 242.219
Pb (220.353 nm)	1.023490	ppm	0.001479	0.14	2298.630000	Y 242.219
S (181.972 nm)	0.003195	ppm	0.002059	64.46	-22.186138	Y 377.433
Sb (206.834 nm)	1.055510	ppm	0.000143	0.01	1734.320000	Y 377.433
Se (196.026 nm)	1.049420	ppm	0.002615	0.25	1579.540000	Y 242.219
Si (288.158 nm)	5.035020	ppm	0.010953	0.22	23841.200000	Y 377.433
Sn (189.925 nm)	1.061830	ppm	0.000877	0.08	1247.610000	Y 377.433
Sr (421.552 nm)	0.512573	ppm	0.000850	0.17	59777.365263	Y_R 488.368
Th (288.505 nm)	-0.025749 u	ppm	0.001101	4.28	-46.896500	Y 377.433
Ti (336.122 nm)	0.526479	ppm	0.000542	0.10	49710.700000	Y 377.433
Tl (190.794 nm)	1.059370	ppm	0.000413	0.04	597.722000	Y 377.433
U (409.013 nm)	-0.012427 u	ppm	0.002089	16.81	40.524900	Y 377.433
V (292.401 nm)	0.520894	ppm	0.000041	0.01	24884.500000	Y 377.433
Zn (206.200 nm)	0.531809	ppm	0.000561	0.11	1842.640000	Y 377.433
Zr (343.823 nm)	0.523265	ppm	0.000592	0.11	21087.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.197128	12752.032601	0.003429	0.29
Y 377.433	1.174676	542274.263810	0.003617	0.31
Y_R 377.433	1.228120	46407.900000	0.001947	0.16
Y_R 488.368	1.229450	44370.700000	0.000313	0.03
Y_R2 488.368	1.222579	86041.153280	0.008678	0.71
Y_R4	1.274520	39107.600000	0.007123	0.56

Sample Name: CCB

Date: 11/6/2018 7:48:11 AM Rack:Tube: S1:4

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000012 u	ppm	0.000661	> 100.00	-238.722000	Y 377.433
Al (394.401 nm)	-0.001259 u	ppm	0.000263	20.91	70.835700	Y 377.433
Al H (396.152 nm)	0.142942 Zu	ppm	0.005876	4.11	20.215900 Z	Y_R 377.433
As (188.980 nm)	-0.000238 u	ppm	0.000550	> 100.00	-15.449000	Y 242.219
B (249.678 nm)	-0.011971 u	ppm	0.001148	9.59	-1.364430	Y 242.219
Ba (493.408 nm)	-0.001632 u	ppm	0.000088	5.40	651.658000	Y_R 488.368
Be (234.861 nm)	0.000127	ppm	0.000001	0.78	0.780664	Y_R 488.368
Bi (223.061 nm)	-0.004586 u	ppm	0.003901	85.07	35.711800	Y 377.433
Ca (315.887 nm)	-0.007654 u	ppm	0.001848	24.14	-7.372621	Y_R 377.433
Cd (214.439 nm)	0.000080	ppm	0.000047	58.22	-9.157600	Y 377.433
Co (228.615 nm)	0.000567	ppm	0.000119	21.08	-14.519100	Y 242.219
Cr (205.560 nm)	0.000421	ppm	0.000084	19.84	-7.331820	Y 377.433
Cu (324.754 nm)	0.000476	ppm	0.000211	44.23	224.855000	Y 377.433
Fe (238.204 nm)	-0.005486 u	ppm	0.002003	36.51	2.394991	Y_R 377.433
Fe H (259.940 nm)	0.015475 u	ppm	0.001254	8.11	3.193480	Y_R 377.433
K (766.491 nm)	-0.235431 u	ppm	0.013443	5.71	1505.820000	Y_R2 488.368
Li (670.783 nm)	0.012569 Z	ppm	0.000016	0.13	-268.871000 Z	Y_R2 488.368
Mg (279.078 nm)	0.001609	ppm	0.001308	81.32	17.753700	Y 377.433
Mn (257.610 nm)	-0.000006 u	ppm	0.000044	> 100.00	21.297200	Y 377.433
Mo (202.032 nm)	-0.000618 u	ppm	0.000250	40.40	11.644300	Y 377.433
Na (589.592 nm)	0.148165	ppm	0.041401	27.94	-61.557200	Y_R2 488.368
Na H (589.593 nm)	2.381457 u	ppm	0.031033	1.30	460.074838	Y_R4
Ni (231.604 nm)	-0.000266 u	ppm	0.000444	> 100.00	8.059460	Y 377.433
P (213.618 nm)	0.001703	ppm	0.002268	> 100.00	0.910876	Y 242.219
Pb (220.353 nm)	-0.003371 u	ppm	0.001658	49.20	6.942360	Y 242.219
S (181.972 nm)	0.013112	ppm	0.004949	37.74	-19.448786	Y 377.433
Sb (206.834 nm)	-0.001536 u	ppm	0.001409	91.70	-3.651710	Y 377.433
Se (196.026 nm)	0.003103	ppm	0.000443	14.28	6.308210	Y 242.219
Si (288.158 nm)	-0.204287 Zu	ppm	0.001524	0.75	369.622000 Z	Y 377.433
Sn (189.925 nm)	-0.005760 u	ppm	0.000186	3.23	1.338350	Y 377.433
Sr (421.552 nm)	-0.000395 u	ppm	0.000109	27.72	232.368939	Y_R 488.368
Th (288.505 nm)	0.002302	ppm	0.002247	97.61	16.791700	Y 377.433
Ti (336.122 nm)	0.000869	ppm	0.000044	5.06	-282.545000	Y 377.433
Tl (190.794 nm)	-0.005210 u	ppm	0.004194	80.50	-11.801300	Y 377.433
U (409.013 nm)	-0.008321 u	ppm	0.006203	74.55	95.799300	Y 377.433
V (292.401 nm)	0.000887	ppm	0.000268	30.24	-151.143000	Y 377.433
Zn (206.200 nm)	0.000011 u	ppm	0.000020	> 100.00	4.418300	Y 377.433
Zr (343.823 nm)	0.000695	ppm	0.000083	11.92	-90.351100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.228006	13080.954663	0.005747	0.47
Y 377.433	1.214492	560654.894113	0.006508	0.54
Y_R 377.433	1.253970	47384.800000	0.001274	0.10
Y_R 488.368	1.256160	45334.900000	0.003837	0.31
Y_R2 488.368	1.249034	87902.917276	0.011028	0.88
Y_R4	1.289040	39553.200000	0.002930	0.23

Sample Name: CCVL-5412564

Date: 11/6/2018 7:51:22 AM Rack:Tube: S1:3

Weight (g): 1 Volume (mL): 1 Dilution: 1

Analyte Results

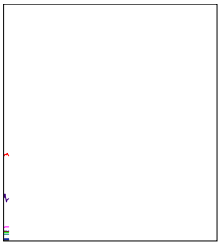
Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.010515	ppm	0.000015	0.14	52.587800	Y 377.433
Al (394.401 nm)	0.101256	ppm	0.001749	1.73	1353.240000	Y 377.433
Al H (396.152 nm)	0.235800 u	ppm	0.001473	0.62	177.791000	Y_R 377.433
As (188.980 nm)	0.014002	ppm	0.000167	1.19	4.498700	Y 242.219
B (249.678 nm)	0.087793	ppm	0.000667	0.76	399.171000	Y 242.219
Ba (493.408 nm)	0.008721	ppm	0.000503	5.77	1599.190000	Y_R 488.368
Be (234.861 nm)	0.001097	ppm	0.000011	1.04	49.464500	Y_R 488.368
Bi (223.061 nm)	0.092023	ppm	0.002722	2.96	194.966000	Y 377.433
Ca (315.887 nm)	0.203430	ppm	0.006715	3.30	132.072533	Y_R 377.433
Cd (214.439 nm)	0.005234	ppm	0.000276	5.28	119.171000	Y 377.433
Co (228.615 nm)	0.010944	ppm	0.000267	2.44	232.203000	Y 242.219
Cr (205.560 nm)	0.010621	ppm	0.000008	0.07	41.230400	Y 377.433
Cu (324.754 nm)	0.016401	ppm	0.000326	1.98	990.882000	Y 377.433
Fe (238.204 nm)	0.101558	ppm	0.004323	4.26	180.747427	Y_R 377.433
Fe H (259.940 nm)	0.115010 u	ppm	0.003075	2.67	94.531700	Y_R 377.433
K (766.491 nm)	2.892870	ppm	0.063242	2.19	4563.240000	Y_R2 488.368
Li (670.783 nm)	0.036198 Q	ppm	0.003365	9.29	65.799500 Q	Y_R2 488.368
Mg (279.078 nm)	0.207787	ppm	0.000932	0.45	466.293000	Y 377.433
Mn (257.610 nm)	0.010724	ppm	0.000029	0.27	2266.340000	Y 377.433
Mo (202.032 nm)	0.020399	ppm	0.000292	1.43	250.750000	Y 377.433
Na (589.592 nm)	1.254290	ppm	0.035628	2.84	494.001000	Y_R2 488.368
Na H (589.593 nm)	3.245076 u	ppm	0.017341	0.53	767.436979	Y_R4
Ni (231.604 nm)	0.042689	ppm	0.000181	0.42	172.688000	Y 377.433
P (213.618 nm)	2.929180	ppm	0.009165	0.31	3396.350000	Y 242.219
Pb (220.353 nm)	0.007611	ppm	0.000029	0.38	31.486000	Y 242.219
S (181.972 nm)	0.110480	ppm	0.001384	1.25	27.101647	Y 377.433
Sb (206.834 nm)	0.021922	ppm	0.003535	16.12	34.790100	Y 377.433
Se (196.026 nm)	0.022781	ppm	0.000310	1.36	35.882900	Y 242.219
Si (288.158 nm)	0.304101 Q	ppm	0.002733	0.90	2647.150000 Q	Y 377.433
Sn (189.925 nm)	0.094368	ppm	0.000300	0.32	118.225000	Y 377.433
Sr (421.552 nm)	0.009442	ppm	0.000053	0.56	1374.291964	Y_R 488.368
Th (288.505 nm)	0.016596	ppm	0.001699	10.24	31.640400	Y 377.433
Ti (336.122 nm)	0.011179	ppm	0.000013	0.12	698.490000	Y 377.433
Tl (190.794 nm)	0.018905	ppm	0.003257	17.23	1.990080	Y 377.433
U (409.013 nm)	0.055581	ppm	0.007923	14.26	240.557000	Y 377.433
V (292.401 nm)	0.011061	ppm	0.000290	2.62	337.618000	Y 377.433
Zn (206.200 nm)	0.021674	ppm	0.000399	1.84	79.297400	Y 377.433
Zr (343.823 nm)	0.016387	ppm	0.000252	1.54	545.567000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.215786	12950.783472	0.001989	0.16
Y 377.433	1.210455	558791.250572	0.001699	0.14
Y_R 377.433	1.268730	47942.400000	0.017245	1.36
Y_R 488.368	1.265270	45663.600000	0.019089	1.51
Y_R2 488.368	1.263450	88917.520337	0.009366	0.74
Y_R4	1.280300	39285.000000	0.003186	0.25

Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
7	50000	17960	18099.2	1.17
9	1000000	30726	30248.7	1.18
59	500000	18433	18464.4	1.15
66	500000	2147	2100.1	2.50
70	200000	785	734.8	6.87
75	500000	1633	1612.1	1.39
89	500000	28276	27867.3	1.75
105	500000	257	280.4	7.07
118	500000	540	556.1	5.05
137	100000	3642	3593.8	2.71
140	500	30684	30639.0	1.74
205	1000000	25416	25030.5	1.96
6	1000000	3550	3626.7	3.26
70/140	1000	2.559 %	2.400 %	8.00
156/140	10	1.744 %	1.772 %	7.78

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.00
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-65	V	Cell Entrance	-32	V	Deflect	15.4	V
Extract 2	-130.0	V	Omega Lens	7.1	V	Cell Exit	-60	V	Plate Bias	-50	V

Cell Parameters

Use Gas	false		H2 Flow	0.0	mL/min	OctP Bias	-8.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	128		Axis Gain	0.9999		QP Bias	-5.0	V
Mass Offset	124		Axis Offset	-0.02				

Torch Axis Parameters

Torch H	-0.8	mm	Torch V	-0.4	mm

EM Parameters

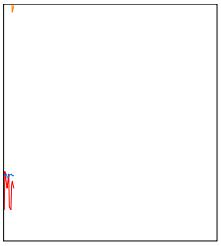
Discriminator	4.5	mV	Analog HV	1930	V	Pulse HV	1039	V

Meters

IF/BK Press	2.22E+2	Pa	Carrier Gas(BP)	3.57E+2	kPa	Reflected Power	7	W
Analyzer Press	1.46E-4	Pa	Carrier Gas	0.90	L/min			

Current Signal

[HMI He]



Mass	Range	Count	Avg. Count	RSD [%]
7	100	22	21.3	28.00
51	500	103	119.1	10.88
59	5000	2585	2565.1	2.11
66	200	199	211.3	5.68
70	200	83	84.2	13.61
75	20	5	4.2	47.35
78	20	0	0.2	210.82
115	5000	1882	1890.5	4.58
118	50	56	46.4	20.68
137	500	277	291.5	8.15
140	10000	6019	5983.0	1.85
205	20000	8051	8066.4	1.37
238	50000	13641	13709.6	1.92
70/140	2	1.379 %	1.408 %	14.15
156/140	1	0.100 %	0.209 %	28.09

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.23
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-75	V	Cell Entrance	-36	V	Deflect	1.2	V
Extract 2	-140.0	V	Omega Lens	7.5	V	Cell Exit	-64	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	0.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	5.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	128		Axis Gain	0.9999		QP Bias	-15.0	V			
Mass Offset	124		Axis Offset	-0.02							

Torch Axis Parameters

Torch H	-0.8	mm	Torch V	-0.4	mm						

EM Parameters

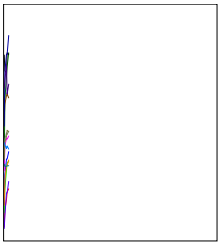
Discriminator	4.5	mV	Analog HV	1930	V	Pulse HV	1039	V			

Meters

IF/BK Press	2.22E+2	Pa	Carrier Gas(BP)	2.39E+2	kPa	Reflected Power	6	W			
Analyzer Press	2.33E-4	Pa	Carrier Gas	0.66	L/min						

Current Signal

[HMI H2]



Mass	Range	Count	Avg. Count	RSD [%]
7	2000	435	312.6	41.89
9	5000	1660	1293.4	35.62
59	10000	3763	2983.4	30.37
63	2000	682	551.7	28.17
70	500	398	315.2	29.22
78	20	5	3.2	51.35
89	50000	22103	19960.2	14.99
115	50000	23196	21431.9	11.05
118	500	394	379.9	5.52
137	5000	3024	2939.3	7.05
140	50000	22918	21234.6	12.08
205	50000	15740	15788.9	1.39
238	50000	19276	19922.8	2.87
70/140	2	1.737 %	1.457 %	20.29
156/140	2	1.327 %	1.340 %	6.84

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.14
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-65	V	Cell Entrance	-40	V	Deflect	1.8	V
Extract 2	-140.0	V	Omega Lens	7.7	V	Cell Exit	-58	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	4.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	128		Axis Gain	0.9999		QP Bias	-15.0	V
Mass Offset	124		Axis Offset	-0.02				

Torch Axis Parameters

Torch H	-0.8	mm	Torch V	-0.4	mm

EM Parameters

Discriminator	4.5	mV	Analog HV	1930	V	Pulse HV	1039	V

Meters

IF/BK Press	2.28E+2	Pa	Carrier Gas(BP)	2.84E+2	kPa	Reflected Power	8	W
Analyzer Press	5.31E-4	Pa	Carrier Gas	0.75	L/min			

US EPA Tune Check Sample Report

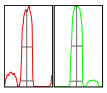
Batch Folder D:\MassHunter Data\li111218.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	2704	2.08	5.00	
9	11534	1.18	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	2712	2682	2796	2683	2647
9	11654	11376	11676	11551	11416

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	427	6.95	6.9 - 7.1		0.792	0.750	[F]
9	1785	8.95	8.9 - 9.1		0.793	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.7	V	Deflect	1.8	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-65	V	Cell Exit	-58	V			

 # # Cell Parameters # #

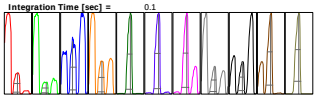
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
CctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
CctP RF	190	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	6331	1.37	5.00	
25	914	3.04	5.00	
26	1108	3.25	5.00	
59	16374	1.55	5.00	
103	41597	2.08	5.00	
115	12135	2.37	5.00	
205	43456	1.29	5.00	
206	14611	1.82	5.00	
207	12783	1.88	5.00	
208	30734	1.51	5.00	
238	74941	2.12	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	6252	6322	6242	6433	6404
25	887	895	932	901	953
26	1063	1149	1131	1079	1120
59	15993	16251	16457	16543	16624
103	40425	40997	42212	41844	42507
115	11843	11906	12064	12354	12509
205	42998	42930	43293	43828	44233
206	14344	14446	14492	14797	14979
207	12599	12694	12543	13039	13038
208	30086	30453	30823	31121	31189
238	72652	73997	75481	76328	76247

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	994	24.000	23.9 - 24.1		0.788	0.750	[F]
25	141	25.050	24.9 - 25.1		0.788	0.750	[F]
26	180	25.850	25.9 - 26.1	[F]	0.777	0.750	[F]
59	2793	59.000	58.9 - 59.1		0.763	0.750	[F]
103	7663	103.050	102.9 - 103.1		0.751	0.750	[F]
115	2226	115.050	114.9 - 115.1		0.735	0.750	
205	8176	205.050	204.9 - 205.1		0.753	0.750	[F]
206	2778	206.050	205.9 - 206.1		0.750	0.750	[F]
207	2345	207.000	206.9 - 207.1		0.741	0.750	
208	5852	208.000	207.9 - 208.1		0.749	0.750	
238	13635	238.000	237.9 - 238.1		0.758	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.5	V	Deflect	1.2	V
Extract 2	-140.0	V	Cell Entrance	-36	V	Plate Bias	-60	V
Omega Bias	-75	V	Cell Exit	-64	V			

 # # Cell Parameters # #

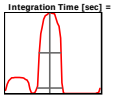
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
CctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
CctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	103323	2.31	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	107476	101920	101632	102468	103116

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	16466	6.950	6.9 - 7.1		0.795	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.1	V	Deflect	15.4	V
Extract 2	-130.0	V	Cell Entrance	-32	V	Plate Bias	-50	V
Omega Bias	-65	V	Cell Exit	-60	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
CctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
CctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

US EPA Tune Check Sample Report

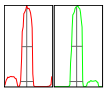
Batch Folder D:\MassHunter Data\li111218.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	2777	2.53	5.00	
9	12250	0.62	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	2801	2826	2714	2852	2691
9	12368	12276	12213	12228	12168

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	446	6.95	6.9 - 7.1		0.794	0.750	[F]
9	1905	8.95	8.9 - 9.1		0.795	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.7	V	Deflect	1.8	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-65	V	Cell Exit	-58	V			

 # # Cell Parameters # #

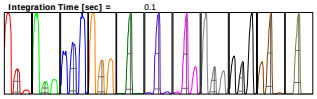
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	6825	2.61	5.00	
25	970	3.49	5.00	
26	1195	2.33	5.00	
59	18756	1.87	5.00	
103	47879	1.71	5.00	
115	14014	3.38	5.00	
205	51092	2.44	5.00	
206	17138	1.81	5.00	
207	14985	2.02	5.00	
208	36277	2.00	5.00	
238	88949	1.89	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	6531	6837	6827	6951	6981
25	912	986	999	974	979
26	1146	1201	1204	1208	1215
59	18221	18621	18826	19013	19099
103	46639	47569	48006	48499	48682
115	13347	13723	14137	14473	14392
205	49467	50667	50630	52233	52465
206	16708	17096	17015	17370	17498
207	14644	14768	14931	15366	15216
208	35253	35885	36383	36785	37079
238	86444	88322	89057	90518	90401

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	1086	24.000	23.9 - 24.1		0.784	0.750	[F]
25	158	24.900	24.9 - 25.1		0.787	0.750	[F]
26	193	25.950	25.9 - 26.1		0.772	0.750	[F]
59	3258	59.000	58.9 - 59.1		0.758	0.750	[F]
103	9100	103.050	102.9 - 103.1		0.738	0.750	
115	2655	115.050	114.9 - 115.1		0.694	0.750	
205	10196	205.000	204.9 - 205.1		0.725	0.750	
206	3451	206.000	205.9 - 206.1		0.731	0.750	
207	2935	207.000	206.9 - 207.1		0.722	0.750	
208	7390	208.000	207.9 - 208.1		0.728	0.750	
238	17186	238.000	237.9 - 238.1		0.728	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.5	V	Deflect	1.2	V
Extract 2	-140.0	V	Cell Entrance	-36	V	Plate Bias	-60	V
Omega Bias	-75	V	Cell Exit	-64	V			

 # # Cell Parameters # #

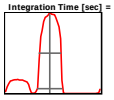
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	112405	2.52	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	117405	111350	111068	110431	111773

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	18051	6.950	6.9 - 7.1		0.783	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.1	V	Deflect	15.4	V
Extract 2	-130.0	V	Cell Entrance	-32	V	Plate Bias	-50	V
Omega Bias	-65	V	Cell Exit	-60	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

	Mass	Element Name	Current Value
	9		0.106390114109827
	23		0.11589235505883
	24		0.120663332911354
	27		0.124504001297694
	39		0.125503848439884
	45		0.127184556198924
	51		0.134783869034839
	55		0.135316249887699
	56		0.126597551486872
	59		0.139320202039831
	60		0.138562832528265
	63		0.141602666582398
	66		0.140611111172532
	72		0.140330991051848
	75		0.139207693710312
	77		Signal too low
	82		Signal too low
	95		0.139154437168386
	100		0.143072520374968
	101		0.142953530485216
	102		0.145772609542486
	104		0.146872725672989
	105		0.147018794933383
	106		0.148288901930564
	111		0.149108183092987
	114		0.152466349215108

	Mass	Element Name	Current Value
	115		0.1530231541297
	118		0.149357282750632
	121		0.149705558826922
	137		Signal too low
	175		0.162072800788093
	193		0.160077560459131
	208		0.165352460613399
	209		0.163176806851776
	232		0.165850272185155
	238		0.165592134510105

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	001WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:10:17-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	002WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:14:02-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	003WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:18:04-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	004WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:22:10-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	005WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:25:57-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	006WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:29:47-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name	icis-5424511
Data File Name	007CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:33:34-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	149872	0.00
Li	7	2	HMI He	7442	0.02
Li	7	3	No Gas	5309846	0.00
Be	9	1	HMI H2	33	363.73
B	11	1	HMI H2	483	2.36
Na	23	1	HMI H2	238552	0.00
Na	23	2	HMI He	17051	0.01
Mg	24	2	HMI He	260	7.40
Al	27	2	HMI He	383	5.50
K	39	2	HMI He	17544	0.01
Ca	44	2	HMI He	77	9.82
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2017	0.21
Cr	52	2	HMI He	230	5.67
Mn	55	2	HMI He	163	7.80
Fe	57	2	HMI He	250	8.47
Co	59	2	HMI He	13	859.23
Ni	60	2	HMI He	287	12.19
Cu	63	2	HMI He	1570	0.31
Zn	66	2	HMI He	437	8.36
As	75	2	HMI He	29	13.68
Se	78	1	HMI H2	37	72.22
Sr	88	2	HMI He	20	0.00
Zr	90	2	HMI He	97	34.40
Nb	93	2	HMI He	687	3.61
Mo	95	2	HMI He	50	40.00
Pd	105	2	HMI He	10	1732.05
Ag	107	2	HMI He	90	68.73
Cd	111	2	HMI He	3	5196.15
Sn	120	2	HMI He	197	14.70
Sb	121	2	HMI He	60	96.22
Ba	137	2	HMI He	13	649.52
W	182	2	HMI He	1477	0.73
Pt	195	2	HMI He	60	127.29
Tl	205	2	HMI He	370	5.06
Pb	208	2	HMI He	1917	0.39
Th	232	2	HMI He	713	2.68
U	238	2	HMI He	250	8.91

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	962768	0.52
Sc (IS)	45	1	HMI H2	35850229	0.81
Sc (IS)	45	2	HMI He	1169942	0.28
Sc (IS)	45	3	No Gas	64035761	0.81
Ge Internal Standard	72	1	HMI H2	13887730	0.70
Ge Internal Standard	72	2	HMI He	1316994	0.56
In Internal Standard	115	2	HMI He	4006527	0.50
Ho-165	165	2	HMI He	19709190	1.07

Calibration Standard Report

Sample Table

Sample Name	ic-5424512
Data File Name	008CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:37:25-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	525278	0.00
Li	7	2	HMI He	25579	0.01
Li	7	3	No Gas	18137509	0.00
Be	9	1	HMI H2	43651	0.01
B	11	1	HMI H2	42424	0.00
Na	23	1	HMI H2	41027154	0.00
Na	23	2	HMI He	2797835	0.00
Mg	24	2	HMI He	1312348	0.00
Al	27	2	HMI He	325882	0.00
K	39	1	HMI H2	50789463	0.00
K	39	2	HMI He	649661	0.00
Ca	40	1	HMI H2	61287817	0.00
Ca	44	2	HMI He	34675	0.00
Ti	47	2	HMI He	2994	0.21
V	51	2	HMI He	126339	0.00
Cr	52	2	HMI He	164319	0.00
Mn	55	2	HMI He	61370	0.00
Fe	57	2	HMI He	303199	0.00
Co	59	2	HMI He	283723	0.00
Ni	60	2	HMI He	81693	0.00
Cu	63	2	HMI He	228963	0.00
Zn	66	2	HMI He	31375	0.00
As	75	2	HMI He	19898	0.01
Se	78	1	HMI H2	32405	0.00
Sr	88	2	HMI He	63044	0.00
Zr	90	2	HMI He	960	0.94
Nb	93	2	HMI He	729847	0.00
Mo	95	2	HMI He	105154	0.00
Pd	105	2	HMI He	166328	0.00
Ag	107	2	HMI He	349549	0.00
Cd	111	2	HMI He	44880	0.00
Sn	120	2	HMI He	117267	0.00
Sb	121	2	HMI He	102872	0.00
Ba	137	2	HMI He	34180	0.01
Nd	146	2	HMI He	131835	0.00
Sm	147	2	HMI He	111753	0.00
Sm	150	2	HMI He	108878	0.00
Gd	156	1	HMI H2	683775	0.00
Gd	157	1	HMI H2	512950	0.00
W	182	2	HMI He	496202	0.00
Pt	195	2	HMI He	412665	0.00
Tl	205	2	HMI He	905677	0.00
Pb	208	2	HMI He	1194441	0.00
Th	232	2	HMI He	1422008	0.00
U	238	2	HMI He	1605597	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	903665	0.97	962768	93.86	60	120	
Sc (IS)	45	1	HMI H2	35074963	0.38	35850229	97.84	60	120	
Sc (IS)	45	2	HMI He	1158941	0.80	1169942	99.06	60	120	
Sc (IS)	45	3	No Gas	60866032	0.51	64035761	95.05	60	120	
Ge Internal Standard	72	1	HMI H2	13468552	0.90	13887730	96.98	60	120	
Ge Internal Standard	72	2	HMI He	1302152	0.82	1316994	98.87	60	120	
In Internal Standard	115	2	HMI He	3903931	2.16	4006527	97.44	60	120	
Ho-165	165	2	HMI He	19561831	0.70	19709190	99.25	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5424514
Data File Name	009_ICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:41:13-07:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	452.115	ppb	3.104	324338	400	113.0	90	110	>+\-10%
Li	7	2	45	438.096	ppb	4.335	15695	400	109.5	90	110	
Li	7	3	45	461.098	ppb	3.294	11314460	400	115.3	90	110	>+\-10%
Be	9	1	6	37.929	ppb	3.740	17020	40	94.8	90	110	
B	11	1	6	41.168	ppb	2.341	18212	40	102.9	90	110	
Na	23	1	45	3896.507	ppb	0.813	16459713	4000	97.4	90	110	>+\-10%
Na	23	2	45	4108.815	ppb	1.354	1185737	4000	102.7	90	110	
Mg	24	2	45	3778.498	ppb	1.019	507223	4000	94.5	90	110	
Al	27	2	45	7917.536	ppb	0.184	263938	4000	197.9	90	110	>+\-10%
K	39	1	45	3851.912	ppb	0.915	27193119	4000	96.3	90	110	
K	39	2	45	3981.382	ppb	0.543	275207	4000	99.5	90	110	
Ca	40	1	45	3868.154	ppb	0.553	24229134	4000	96.7	90	110	
Ca	44	2	45	3960.334	ppb	2.553	14091	4000	99.0	90	110	
Ti	47	2	45	44.767	ppb	15.461	1370	40	111.9	90	110	>+\-10%
V	51	2	72	40.426	ppb	0.724	52697	40	101.1	90	110	
Cr	52	2	72	39.974	ppb	2.012	66370	40	99.9	90	110	
Mn	55	2	72	40.900	ppb	3.161	25407	40	102.2	90	110	
Fe	57	2	72	7985.376	ppb	2.007	244152	4000	199.6	90	110	>+\-10%
Co	59	2	72	39.546	ppb	3.750	113125	40	98.9	90	110	
Ni	60	2	72	39.221	ppb	2.846	32481	40	98.1	90	110	
Cu	63	2	72	40.038	ppb	1.402	93363	40	100.1	90	110	
Zn	66	2	72	38.577	ppb	2.924	12473	40	96.4	90	110	
As	75	2	72	37.993	ppb	1.294	7640	40	95.0	90	110	
Se	78	1	72	36.027	ppb	2.474	12028	40	90.1	90	110	
Sr	88	2	72	42.851	ppb	0.984	27248	40	107.1	90	110	
Zr	90	2	72	6.921	ppb	74.127	157	40	17.3	90	110	>+\-10%
Nb	93	2	72	72.689	ppb	1.394	267880	80	90.9	90	110	
Mo	95	2	115	38.752	ppb	2.585	41647	40	96.9	90	110	
Pd	105	2	115	39.763	ppb	2.956	67547	40	99.4	90	110	
Ag	107	2	115	37.784	ppb	2.748	134936	40	94.5	90	110	
Cd	111	2	115	38.295	ppb	4.216	17555	40	95.7	90	110	
Sn	120	2	115	40.154	ppb	3.795	48215	40	100.4	90	110	
Sb	121	2	115	40.485	ppb	1.782	42570	40	101.2	90	110	
Ba	137	2	115	40.036	ppb	4.686	13981	40	100.1	90	110	
W	182	2	165	79.934	ppb	0.376	397230	40	199.8	90	110	>+\-10%
Pt	195	2	165	38.805	ppb	0.321	160289	40	97.0	90	110	
Tl	205	2	165	39.782	ppb	0.822	360778	40	99.5	90	110	
Pb	208	2	165	39.666	ppb	1.083	475273	40	99.2	90	110	
Th	232	2	165	39.909	ppb	1.333	568341	40	99.8	90	110	
U	238	2	165	38.367	ppb	0.275	616641	40	95.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	928185	1.90	962768	96.41	60	120	
Sc (IS)	45	1	HMI H2	35796023	0.77	35850229	99.85	60	120	
Sc (IS)	45	2	HMI He	1185130	0.33	1169942	101.30	60	120	
Sc (IS)	45	3	No Gas	62138892	0.62	64035761	97.04	60	120	
Ge Internal Standard	72	1	HMI H2	13848676	0.18	13887730	99.72	60	120	
Ge Internal Standard	72	2	HMI He	1312953	0.78	1316994	99.69	60	120	
In Internal Standard	115	2	HMI He	3986679	1.01	4006527	99.50	60	120	
Ho-165	165	2	HMI He	19576485	0.52	19709190	99.33	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-5424511
Data File Name	010_ICB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:45:02-07:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	-5.764	ppb	-55.8	5294518	10	
Be	9	1	-0.036	ppb	-88.4	17	0.5	
B	11	1	1.935	ppb	12.0	1357	0.5	>RL
Na	23	1	3.437	ppb	7.5	250554	25	
Na	23	2	0.843	ppb	394.7	18559	25	
Mg	24	2	0.381	ppb	46.5	333	25	
Al	27	2	-3.742	ppb	-28.2	280	15	
K	39	1	94.741	ppb	25.3	12041283	50	>RL
K	39	2	-6.894	ppb	-134.7	18372	50	
Ca	40	1	0.308	ppb	116.5	59448	50	
Ca	44	2	-9.560	ppb	-40.9	47	25	
Ti	47	2	0.102	ppb	173.2	3	0.5	
V	51	2	0.856	ppb	21.8	3194	1	
Cr	52	2	0.046	ppb	107.1	317	1	
Mn	55	2	-0.113	ppb	-78.0	97	0.5	
Fe	57	2	1.341	ppb	308.5	300	25	
Co	59	2	0.001	ppb	726.1	17	0.5	
Ni	60	2	-0.039	ppb	-71.8	263	1	
Cu	63	2	0.024	ppb	311.1	1677	1	
Zn	66	2	-0.179	ppb	-241.3	393	5	
As	75	2	-0.007	ppb	-721.3	28	1	
Se	78	1	0.032	ppb	211.4	48	1	
Sr	88	2	-0.016	ppb	-161.3	10	0.5	
Zr	90	2	0.768	ppb	89.6	107	1	
Nb	93	2	7.169	ppb	5.9	28012	2	>RL
Mo	95	2	0.103	ppb	71.8	167	0.5	
Pd	105	2	0.030	ppb	71.3	63	1	
Ag	107	2	0.006	ppb	148.0	117	1	
Cd	111	2	0.007	ppb	180.0	7	0.5	
Sn	120	2	0.043	ppb	103.7	257	1	
Sb	121	2	0.378	ppb	16.0	473	0.6	
Ba	137	2	0.036	ppb	223.4	27	0.5	
W	182	2	0.215	ppb	25.6	2604	1	
Pt	195	2	-0.001	ppb	-679.1	57	1	
Tl	205	2	0.004	ppb	169.8	417	0.1	
Pb	208	2	0.000	ppb	16813.9	1960	0.5	
Th	232	2	0.034	ppb	13.1	1223	1	
U	238	2	0.030	ppb	3.0	753	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	969611	1.79	962768	100.71	60	120	
Sc (IS)	45	1	HMI H2	35517948	0.72	35850229	99.07	60	120	
Sc (IS)	45	2	HMI He	1256742	2.51	1169942	107.42	60	120	
Sc (IS)	45	3	No Gas	64817777	0.52	64035761	101.22	60	120	
Ge Internal Standard	72	1	HMI H2	13923715	0.94	13887730	100.26	60	120	
Ge Internal Standard	72	2	HMI He	1359828	0.80	1316994	103.25	60	120	
In Internal Standard	115	2	HMI He	4138299	0.43	4006527	103.29	60	120	
Ho-165	165	2	HMI He	20131530	0.51	19709190	102.14	60	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	icvl-5424515
Data File Name	011LICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:48:50-07:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	1.457	ppb	141.283	5426382	50	2.9	70	130	>+/-30%
Be	9	1	6	0.751	ppb	22.755	383	1	75.1	70	130	
Na	23	2	45	50.302	ppb	1.532	32941	50	100.6	70	130	>+/-30%
Mg	24	2	45	51.926	ppb	6.391	7542	50	103.9	70	130	
Al	27	2	45	27.302	ppb	6.368	1353	30	91.0	70	130	
K	39	2	45	89.980	ppb	12.649	24602	100	90.0	70	130	
Ca	44	2	45	52.689	ppb	60.076	277	50	105.4	70	130	
V	51	2	72	5.586	ppb	5.229	9360	5	111.7	70	130	
Cr	52	2	72	2.076	ppb	4.423	3804	2	103.8	70	130	
Mn	55	2	72	0.974	ppb	12.215	793	1	97.4	70	130	
Fe	57	2	72	57.220	ppb	3.325	2074	50	114.4	70	130	
Co	59	2	72	1.050	ppb	3.705	3134	1	105.0	70	130	
Ni	60	2	72	2.186	ppb	3.193	2160	2	109.3	70	130	
Cu	63	2	72	2.036	ppb	5.253	6475	2	101.8	70	130	
Zn	66	2	72	10.078	ppb	4.238	3717	10	100.8	70	130	
As	75	2	72	4.760	ppb	4.314	1020	5	95.2	70	130	
Se	78	1	72	4.821	ppb	8.625	1673	5	96.4	70	130	
Sr	88	2	72	1.111	ppb	9.029	753	1	111.1	70	130	
Zr	90	2	72	15.879	ppb	63.497	243	0.5	3175.7	70	130	>+/-30%
Nb	93	2	72	13.404	ppb	2.353	51886	2	670.2	70	130	>+/-30%
Mo	95	2	115	1.994	ppb	12.830	2274	2	99.7	70	130	
Pd	105	2	115	0.019	ppb	105.741	43	1	1.9	70	130	>+/-30%
Ag	107	2	115	5.089	ppb	0.942	18954	5	101.8	70	130	
Cd	111	2	115	0.925	ppb	23.451	443	1	92.5	70	130	
Sn	120	2	115	9.753	ppb	7.985	12313	10	97.5	70	130	
Sb	121	2	115	2.189	ppb	12.116	2447	2	109.4	70	130	
Ba	137	2	115	0.945	ppb	24.360	357	1	94.5	70	130	
W	182	2	165	5.003	ppb	2.945	26821	1	500.3	70	130	>+/-30%
Pt	195	2	165	0.028	ppb	22.173	180	1	2.8	70	130	>+/-30%
Tl	205	2	165	0.967	ppb	5.908	9330	1	96.7	70	130	
Pb	208	2	165	0.973	ppb	2.819	13814	1	97.3	70	130	
Th	232	2	165	2.040	ppb	1.526	30390	2	102.0	70	130	
U	238	2	165	0.985	ppb	2.169	16435	1	98.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	964466	1.37	962768	100.18	60	120	
Sc (IS)	45	1	HMI H2	36531319	0.49	35850229	101.90	60	120	
Sc (IS)	45	2	HMI He	1236249	1.57	1169942	105.67	60	120	
Sc (IS)	45	3	No Gas	65191587	0.50	64035761	101.80	60	120	
Ge Internal Standard	72	1	HMI H2	14120133	0.68	13887730	101.67	60	120	
Ge Internal Standard	72	2	HMI He	1363422	1.00	1316994	103.53	60	120	
In Internal Standard	115	2	HMI He	4139850	0.80	4006527	103.33	60	120	
Ho-165	165	2	HMI He	20012434	0.01	19709190	101.54	60	120	

CRI Report

Sample Table

Sample Name	cri-5424516
Data File Name	012RLST.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:53:11-07:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	6.435	ppb	88.463	157266	10	64.3	80	120	>+\-20%
Li	7	2	45	-36.497	ppb	-38.158	7516	10	-365.0	80	120	>+\-20%
Li	7	3	45	7.030	ppb	16.090	5580015	10	70.3	80	120	>+\-20%
Be	9	1	6	0.973	ppb	13.077	500	1	97.3	80	120	
B	11	1	6	1.378	ppb	16.430	1133	1	137.8	80	120	>+\-20%
Na	23	1	45	99.413	ppb	19.051	670067	100	99.4	80	120	
Na	23	2	45	89.317	ppb	5.597	46755	100	89.3	80	120	
Mg	24	2	45	88.314	ppb	3.019	13273	100	88.3	80	120	
Al	27	2	45	93.758	ppb	12.300	3841	100	93.8	80	120	
K	39	2	45	91.067	ppb	3.855	25941	100	91.1	80	120	
Ca	40	1	45	102.819	ppb	16.271	718709	100	102.8	80	120	
Ca	44	2	45	115.942	ppb	39.600	533	100	115.9	80	120	
Ti	47	2	45	1.878	ppb	37.522	63	1	187.8	80	120	>+\-20%
V	51	2	72	1.610	ppb	10.374	4261	1	161.0	80	120	>+\-20%
Cr	52	2	72	1.115	ppb	11.746	2190	1	111.5	80	120	
Mn	55	2	72	1.151	ppb	23.047	923	1	115.1	80	120	
Fe	57	2	72	97.157	ppb	11.430	3397	100	97.2	80	120	
Co	59	2	72	1.053	ppb	9.278	3197	1	105.3	80	120	
Ni	60	2	72	1.060	ppb	16.292	1220	1	106.0	80	120	
Cu	63	2	72	1.032	ppb	3.821	4157	1	103.2	80	120	
Zn	66	2	72	0.324	ppb	113.632	567	1	32.4	80	120	>+\-20%
As	75	2	72	0.909	ppb	8.992	223	1	90.9	80	120	
Se	78	1	72	0.936	ppb	31.687	360	1	93.6	80	120	
Sr	88	2	72	1.129	ppb	4.730	780	1	112.9	80	120	
Zr	90	2	72	4.404	ppb	183.241	143	1	440.4	80	120	>+\-20%
Nb	93	2	72	3.018	ppb	4.756	12456	2	150.9	80	120	>+\-20%
Mo	95	2	115	1.020	ppb	5.535	1210	1	102.0	80	120	
Pd	105	2	115	1.013	ppb	7.806	1830	1	101.3	80	120	
Ag	107	2	115	1.016	ppb	10.151	3927	1	101.6	80	120	
Cd	111	2	115	0.998	ppb	10.590	487	1	99.8	80	120	
Sn	120	2	115	0.899	ppb	10.443	1343	1	89.9	80	120	
Sb	121	2	115	1.055	ppb	8.689	1233	1	105.5	80	120	
Ba	137	2	115	0.911	ppb	10.887	350	1	91.1	80	120	
W	182	2	165	0.994	ppb	2.938	6565	1	99.4	80	120	
Pt	195	2	165	0.946	ppb	5.131	4074	1	94.6	80	120	
Tl	205	2	165	1.010	ppb	1.671	9781	1	101.0	80	120	
Pb	208	2	165	1.000	ppb	2.110	14224	1	100.0	80	120	
Th	232	2	165	0.900	ppb	2.043	13888	1	90.0	80	120	
U	238	2	165	0.944	ppb	3.648	15840	1	94.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	996632	7.04	962768	103.52	60	120	
Sc (IS)	45	1	HMI H2	37023876	8.10	35850229	103.27	60	120	
Sc (IS)	45	2	HMI He	1299196	2.29	1169942	111.05	60	120	
Sc (IS)	45	3	No Gas	66086476	1.08	64035761	103.20	60	120	
Ge Internal Standard	72	1	HMI H2	14481953	7.52	13887730	104.28	60	120	
Ge Internal Standard	72	2	HMI He	1388193	1.90	1316994	105.41	60	120	
In Internal Standard	115	2	HMI He	4213563	0.49	4006527	105.17	60	120	
Ho-165	165	2	HMI He	20113926	0.29	19709190	102.05	60	120	

CRI Report

Sample Table

Sample Name	cri5424517
Data File Name	013_CRI.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T10:56:59-07:00
Sample Type	AFCRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	0.118	ppb	53.119	90	0.2	59.2	80	120	AFCRI Main CR1 Failed
Na	23	2	45	20.073	ppb	8.374	24471	20	100.4	80	120	
Mg	24	2	45	18.889	ppb	8.266	2977	20	94.4	80	120	
Al	27	2	45	16.314	ppb	57.251	987	20	81.6	80	120	
K	39	2	45	21.971	ppb	83.438	20415	20	109.9	80	120	
Ca	44	2	45	11.695	ppb	93.849	127	20	58.5	80	120	AFCRI Main CR1 Failed
V	51	2	72	0.705	ppb	7.947	3070	0.2	352.7	80	120	AFCRI Main CR1 Failed
Cr	52	2	72	0.293	ppb	21.048	757	0.2	146.5	80	120	AFCRI Main CR1 Failed
(Cr)	53	2	72	0.781	ppb	48.102	1063	0.2	390.6	80	120	AFCRI Main CR1 Failed
Mn	55	2	72	0.132	ppb	74.843	260	0.2	66.2	80	120	AFCRI Main CR1 Failed
Fe	57	2	72	19.753	ppb	19.022	903	20	98.8	80	120	
Co	59	2	72	0.185	ppb	12.492	577	0.2	92.6	80	120	
Ni	60	2	72	0.238	ppb	40.564	510	0.2	118.9	80	120	
Cu	63	2	72	0.465	ppb	9.306	2790	0.2	232.4	80	120	AFCRI Main CR1 Failed
Zn	66	2	72	0.229	ppb	156.331	537	0.2	114.4	80	120	
As	75	2	72	0.161	ppb	40.430	65	0.2	80.7	80	120	
Se	78	1	72	0.146	ppb	32.650	89	0.2	73.2	80	120	AFCRI Main CR1 Failed
(Se)	82	1	72	1.189	ppb	22.387	893	0.2	594.3	80	120	AFCRI Main CR1 Failed
Nb	93	2	72	1.270	ppb	4.035	5681	0.4	317.6	80	120	AFCRI Main CR1 Failed
Mo	95	2	115	0.323	ppb	23.512	417	0.2	161.4	80	120	AFCRI Main CR1 Failed
Pd	105	2	115	0.205	ppb	12.716	377	0.2	102.7	80	120	
Ag	107	2	115	0.186	ppb	4.496	793	0.2	93.2	80	120	
Cd	111	2	115	0.228	ppb	42.721	113	0.2	114.0	80	120	
(Cd)	114	2	115	0.183	ppb	18.592	247	0.2	91.4	80	120	
Sn	120	2	115	0.529	ppb	22.215	870	0.2	264.3	80	120	AFCRI Main CR1 Failed
Sb	121	2	115	0.203	ppb	55.913	287	0.2	101.5	80	120	
Ba	137	2	115	0.326	ppb	18.144	133	0.2	163.1	80	120	AFCRI Main CR1 Failed
W	182	2	165	0.207	ppb	13.775	2567	0.2	103.6	80	120	
Pt	195	2	165	0.218	ppb	6.113	987	0.2	108.9	80	120	
Tl	205	2	165	0.205	ppb	4.559	2287	0.2	102.3	80	120	
(Pb)	206	2	165	0.173	ppb	1.709	1020	0.2	86.3	80	120	
(Pb)	207	2	165	0.228	ppb	11.470	1043	0.2	113.8	80	120	
Pb	208	2	165	0.191	ppb	6.519	4311	0.2	95.6	80	120	
Th	232	2	165	0.182	ppb	9.360	3394	0.2	90.9	80	120	
U	238	2	165	0.187	ppb	11.311	3341	0.2	93.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	979655	0.46	962768	101.75	60	120	
Sc (IS)	45	1	HMI H2	37070374	0.67	35850229	103.40	60	120	
Sc (IS)	45	2	HMI He	1262043	2.99	1169942	107.87	60	120	
Sc (IS)	45	3	No Gas	66153339	0.21	64035761	103.31	60	120	
Ge Internal Standard	72	1	HMI H2	14394362	0.16	13887730	103.65	60	120	
Ge Internal Standard	72	2	HMI He	1392653	1.78	1316994	105.74	60	120	
In Internal Standard	115	2	HMI He	4186308	0.95	4006527	104.49	60	120	
Ho-165	165	2	HMI He	20157571	0.55	19709190	102.27	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	014RLST.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:01:47-07:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-7.576	ppb	-68.568	153813	10	-75.8	80	120	>+\-20%
Li	7	2	45	-37.248	ppb	-65.578	7712	10	-372.5	80	120	>+\-20%
Li	7	3	45	-4.132	ppb	-113.301	5409287	10	-41.3	80	120	>+\-20%
Be	9	1	6	-0.024	ppb	-181.489	23	1	-2.4	80	120	>+\-20%
B	11	1	6	0.292	ppb	72.400	637	1	29.2	80	120	>+\-20%
Na	23	1	45	-0.123	ppb	-621.409	249158	100	-0.1	80	120	>+\-20%
Na	23	2	45	-2.428	ppb	-50.734	18689	100	-2.4	80	120	>+\-20%
Mg	24	2	45	0.110	ppb	225.568	313	100	0.1	80	120	>+\-20%
Al	27	2	45	-5.566	ppb	-60.674	230	100	-5.6	80	120	>+\-20%
K	39	2	45	-8.609	ppb	-72.851	19404	100	-8.6	80	120	>+\-20%
Ca	40	1	45	4.856	ppb	5.639	92588	100	4.9	80	120	>+\-20%
Ca	44	2	45	-5.990	ppb	-169.944	63	100	-6.0	80	120	>+\-20%
Ti	47	2	45	0.099	ppb	173.205	3	1	9.9	80	120	>+\-20%
V	51	2	72	5.302	ppb	5.356	9457	1	530.2	80	120	>+\-20%
Cr	52	2	72	0.053	ppb	29.146	347	1	5.3	80	120	>+\-20%
Mn	55	2	72	0.109	ppb	163.733	250	1	10.9	80	120	>+\-20%
Fe	57	2	72	0.927	ppb	66.493	303	100	0.9	80	120	>+\-20%
Co	59	2	72	-0.004	ppb	-53.150	3	1	-0.4	80	120	>+\-20%
Ni	60	2	72	0.083	ppb	40.330	387	1	8.3	80	120	>+\-20%
Cu	63	2	72	0.188	ppb	32.967	2180	1	18.8	80	120	>+\-20%
Zn	66	2	72	8.666	ppb	10.010	3434	1	866.6	80	120	>+\-20%
As	75	2	72	-0.006	ppb	-717.402	30	1	-0.6	80	120	>+\-20%
Se	78	1	72	-0.077	ppb	-14.984	12	1	-7.7	80	120	>+\-20%
Sr	88	2	72	-0.017	ppb	-153.692	10	1	-1.7	80	120	>+\-20%
Zr	90	2	72	1.488	ppb	380.636	120	1	148.8	80	120	>+\-20%
Nb	93	2	72	0.567	ppb	4.421	3027	2	28.4	80	120	>+\-20%
Mo	95	2	115	0.018	ppb	110.985	73	1	1.8	80	120	>+\-20%
Pd	105	2	115	0.016	ppb	122.411	40	1	1.6	80	120	>+\-20%
Ag	107	2	115	-0.006	ppb	-229.154	73	1	-0.6	80	120	>+\-20%
Cd	111	2	115	-0.007	ppb	0.000	0	1	-0.7	80	120	>+\-20%
Sn	120	2	115	-0.043	ppb	-22.497	153	1	-4.3	80	120	>+\-20%
Sb	121	2	115	0.084	ppb	52.811	157	1	8.4	80	120	>+\-20%
Ba	137	2	115	-0.002	ppb	-1496.370	13	1	-0.2	80	120	>+\-20%
W	182	2	165	0.019	ppb	140.777	1620	1	1.9	80	120	>+\-20%
Pt	195	2	165	0.000	ppb	-960.884	60	1	0.0	80	120	>+\-20%
Tl	205	2	165	-0.010	ppb	-54.125	283	1	-1.0	80	120	>+\-20%
Pb	208	2	165	-0.016	ppb	-177.379	1780	1	-1.6	80	120	>+\-20%
Th	232	2	165	0.002	ppb	138.419	767	1	0.2	80	120	>+\-20%
U	238	2	165	-0.001	ppb	-121.358	247	1	-0.1	80	120	>+\-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1000782	2.12	962768	103.95	60	120	
Sc (IS)	45	1	HMI H2	37524089	0.61	35850229	104.67	60	120	
Sc (IS)	45	2	HMI He	1336207	2.54	1169942	114.21	60	120	
Sc (IS)	45	3	No Gas	65936277	0.48	64035761	102.97	60	120	
Ge Internal Standard	72	1	HMI H2	14521422	0.45	13887730	104.56	60	120	
Ge Internal Standard	72	2	HMI He	1434916	2.07	1316994	108.95	60	120	
In Internal Standard	115	2	HMI He	4237719	0.54	4006527	105.77	60	120	
Ho-165	165	2	HMI He	20338831	0.72	19709190	103.19	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5415696
Data File Name	015ICSA.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:05:35-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-14.456	ppb	-31.9	4652160	1	
Be	9	1	6	-0.032	ppb	-152.6	17	1	
B	11	1	6	0.659	ppb	12.2	707	1	
Na	23	1	45	97595.311	ppb	1.3	376737314	100000	
K	39	1	45	98318.071	ppb	0.1	376036034	100000	
Ca	40	1	45	96755.549	ppb	0.2	560334365	100000	
Ti	47	2	45	1929.942	ppb	2.4	55620	1	>RL or LOD
V	51	2	72	0.998	ppb	13.8	3064	1	
Cr	52	2	72	0.284	ppb	29.2	657	1	
Mn	55	2	72	0.599	ppb	8.3	500	1	
Co	59	2	72	0.013	ppb	84.7	47	1	
Ni	60	2	72	0.317	ppb	21.7	513	1	
Cu	63	2	72	0.632	ppb	3.7	2830	1	
Zn	66	2	72	0.639	ppb	47.9	597	1	
As	75	2	72	0.045	ppb	85.7	35	1	
Se	78	1	72	-0.068	ppb	-66.8	13	1	
Sr	88	2	72	0.857	ppb	7.9	530	1	
Zr	90	2	72	12.940	ppb	74.2	197	1	>RL or LOD
Nb	93	2	72	1.272	ppb	11.8	5035	1	>RL or LOD
Mo	95	2	115	1966.738	ppb	2.3	1976023	2000	
Pd	105	2	115	0.009	ppb	38.1	23	1	
Ag	107	2	115	0.008	ppb	72.7	110	1	
Cd	111	2	115	0.537	ppb	4.4	233	1	
Sn	120	2	115	0.015	ppb	220.4	200	1	
Sb	121	2	115	0.075	ppb	72.0	130	1	
Ba	137	2	115	0.052	ppb	248.7	30	1	
W	182	2	165	0.238	ppb	7.7	2574	1	
Pt	195	2	165	-0.001	ppb	-126.8	53	1	
Tl	205	2	165	0.001	ppb	743.9	367	1	
Pb	208	2	165	0.107	ppb	18.5	3094	1	
Th	232	2	165	0.012	ppb	82.4	853	1	
U	238	2	165	0.004	ppb	41.4	300	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	874687	1.30	962768	90.85	60	120	
Sc (IS)	45	1	HMI H2	33171286	0.17	35850229	92.53	60	120	
Sc (IS)	45	2	HMI He	1115868	0.97	1169942	95.38	60	120	
Sc (IS)	45	3	No Gas	58287809	0.66	64035761	91.02	60	120	
Ge Internal Standard	72	1	HMI H2	12749089	0.41	13887730	91.80	60	120	
Ge Internal Standard	72	2	HMI He	1232921	0.95	1316994	93.62	60	120	
In Internal Standard	115	2	HMI He	3731936	1.99	4006527	93.15	60	120	
Ho-165	165	2	HMI He	19031578	0.74	19709190	96.56	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5415697
Data File Name	016ICSB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:09:21-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	945.983	ppb	0.766	470632	100	946.0	80	120	
Li	7	2	45	958.320	ppb	2.555	23713	100	958.3	80	120	
Li	7	3	45	900.177	ppb	0.107	15975458	100	900.2	80	120	
Be	9	1	6	102.575	ppb	1.563	40228	100	102.6	80	120	
B	11	1	6	91.814	ppb	1.520	35035	100	91.8	80	120	
Na	23	1	45	105695.287	ppb	0.433	402180301	100	105695.3	80	120	
K	39	1	45	106614.369	ppb	0.158	401054541	100	106614.4	80	120	
Ca	40	1	45	105564.981	ppb	0.284	602642644	100	105565.0	80	120	
V	51	2	72	100.011	ppb	2.299	119939	100	100.0	80	120	
Cr	52	2	72	98.127	ppb	0.971	153079	100	98.1	80	120	
Mn	55	2	72	102.565	ppb	1.512	59747	100	102.6	80	120	
Co	59	2	72	99.588	ppb	0.703	268206	100	99.6	80	120	
Ni	60	2	72	96.907	ppb	0.674	75152	100	96.9	80	120	
Cu	63	2	72	96.693	ppb	1.071	210202	100	96.7	80	120	
Zn	66	2	72	92.873	ppb	2.792	27691	100	92.9	80	120	
As	75	2	72	95.768	ppb	1.806	18087	100	95.8	80	120	
Se	78	1	72	96.782	ppb	2.111	28948	100	96.8	80	120	
Sr	88	2	72	101.181	ppb	2.701	60550	100	101.2	80	120	
Zr	90	2	72	12.540	ppb	29.922	193	100	12.5	80	120	>+\-20%
Nb	93	2	72	137.499	ppb	0.669	476483	100	137.5	80	120	>+\-20%
Mo	95	2	115	2033.690	ppb	1.617	2037191	100	2033.7	80	120	>+\-20%
Pd	105	2	115	93.986	ppb	0.611	148991	100	94.0	80	120	
Ag	107	2	115	94.518	ppb	1.073	314876	100	94.5	80	120	
Cd	111	2	115	97.166	ppb	1.656	41556	100	97.2	80	120	
Sn	120	2	115	94.884	ppb	0.426	106086	100	94.9	80	120	
Sb	121	2	115	106.658	ppb	1.409	104567	100	106.7	80	120	
Ba	137	2	115	102.424	ppb	0.739	33358	100	102.4	80	120	
W	182	2	165	97.227	ppb	0.018	465570	100	97.2	80	120	
Pt	195	2	165	94.488	ppb	1.995	376223	100	94.5	80	120	
Tl	205	2	165	95.817	ppb	0.811	837385	100	95.8	80	120	
Pb	208	2	165	95.686	ppb	0.883	1102899	100	95.7	80	120	
Th	232	2	165	99.177	ppb	0.846	1360830	100	99.2	80	120	
U	238	2	165	94.876	ppb	0.164	1469978	100	94.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	811938	0.06	962768	84.33	60	120	
Sc (IS)	45	1	HMI H2	32698986	0.22	35850229	91.21	60	120	
Sc (IS)	45	2	HMI He	1107330	1.04	1169942	94.65	60	120	
Sc (IS)	45	3	No Gas	57771427	0.77	64035761	90.22	60	120	
Ge Internal Standard	72	1	HMI H2	12431066	0.67	13887730	89.51	60	120	
Ge Internal Standard	72	2	HMI He	1236042	1.22	1316994	93.85	60	120	
In Internal Standard	115	2	HMI He	3720078	1.12	4006527	92.85	60	120	
Ho-165	165	2	HMI He	18876014	0.53	19709190	95.77	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	017SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:14:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.518	ppb	-10.518	-84.86	154113	500000	
Li	7	2	45	-40.568	ppb	-40.568	-8.59	7469	500000	
Li	7	3	45	-10.520	ppb	-10.520	-16.76	5121257	50000	
Be	9	1	6	-0.037	ppb	-0.037	-85.09	17	2000	
B	11	1	6	0.624	ppb	0.624	53.43	770	2000	
Na	23	1	45	45.993	ppb	45.993	9.67	454489	2000	
Na	23	2	45	33.728	ppb	33.728	14.19	29570	400000	
Mg	24	2	45	2.322	ppb	2.322	17.78	633	400000	
Al	27	2	45	-0.676	ppb	-0.676	-255.31	403	400000	
K	39	1	45	-2.163	ppb	-2.163	-6500.72	12423354	400000	
K	39	2	45	-8.446	ppb	-8.446	-166.94	18960	400000	
Ca	40	1	45	3.010	ppb	3.010	12.90	81258	400000	
Ca	44	2	45	-9.970	ppb	-9.970	-53.49	47	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	1.427	ppb	1.427	19.42	3997	2000	
Cr	52	2	72	0.043	ppb	0.043	65.65	317	5000	
Mn	55	2	72	-0.053	ppb	-0.053	-152.77	137	10000	
Fe	57	2	72	5.737	ppb	5.737	19.36	447	400000	
Co	59	2	72	0.008	ppb	0.008	203.78	37	2000	
Ni	60	2	72	0.003	ppb	0.003	785.01	303	5000	
Cu	63	2	72	0.193	ppb	0.193	40.09	2110	5000	
Zn	66	2	72	-0.084	ppb	-0.084	-622.78	430	5000	
As	75	2	72	0.031	ppb	0.031	70.56	37	2000	
Se	78	1	72	-0.066	ppb	-0.066	-35.12	16	2000	
Sr	88	2	72	-0.011	ppb	-0.011	-312.79	13	4000	
Zr	90	2	72	-0.490	ppb	-0.490	-492.39	97	1000	
Nb	93	2	72	3.049	ppb	3.049	5.70	12519	200	
Mo	95	2	115	1.168	ppb	1.168	13.31	1397	2000	
Pd	105	2	115	0.034	ppb	0.034	24.82	73	100	
Ag	107	2	115	-0.007	ppb	-0.007	-67.37	70	100	
Cd	111	2	115	0.006	ppb	0.006	372.07	7	2000	
Sn	120	2	115	-0.002	ppb	-0.002	-3568.26	207	2000	
Sb	121	2	115	0.017	ppb	0.017	194.75	83	1000	
Ba	137	2	115	0.007	ppb	0.007	831.45	17	5000	
W	182	2	165	0.035	ppb	0.035	109.79	1697	100	
Pt	195	2	165	0.002	ppb	0.002	416.85	70	100	
Tl	205	2	165	0.008	ppb	0.008	106.99	457	2000	
Pb	208	2	165	-0.011	ppb	-0.011	-54.21	1827	5000	
Th	232	2	165	0.017	ppb	0.017	59.35	983	2000	
U	238	2	165	0.026	ppb	0.026	29.86	680	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	971243	4.01	962768	100.88	60	120	
Sc (IS)	45	1	HMI H2	37918919	5.23	35850229	105.77	60	120	
Sc (IS)	45	2	HMI He	1304921	1.19	1169942	111.54	60	120	
Sc (IS)	45	3	No Gas	63490907	0.62	64035761	99.15	60	120	
Ge Internal Standard	72	1	HMI H2	14611534	3.62	13887730	105.21	60	120	
Ge Internal Standard	72	2	HMI He	1381501	1.42	1316994	104.90	60	120	
In Internal Standard	115	2	HMI He	4271063	0.41	4006527	106.60	60	120	
Ho-165	165	2	HMI He	20227581	0.69	19709190	102.63	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-5347646
Data File Name	018_LR.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:18:00-07:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1934.795	ppb	1.011	836752	2000	96.7	90	110	
V	51	2	72	2081.768	ppb	0.839	2572934	2000	104.1	90	110	
Cr	52	2	72	4834.029	ppb	0.612	7878740	5000	96.7	90	110	
(Cr)	53	2	72	4779.088	ppb	0.479	970080	5000	95.6	90	110	
Mn	55	2	72	9937.211	ppb	0.427	6041419	10000	99.4	90	110	
Co	59	2	72	1995.189	ppb	0.553	5622211	2000	99.8	90	110	
Ni	60	2	72	4889.180	ppb	0.259	3953480	5000	97.8	90	110	
Cu	63	2	72	4761.710	ppb	0.460	10756073	5000	95.2	90	110	
Zn	66	2	72	4718.806	ppb	1.147	1450657	5000	94.4	90	110	
As	75	2	72	1868.846	ppb	0.486	368803	2000	93.4	90	110	
Se	78	1	72	1947.334	ppb	0.777	618441	2000	97.4	90	110	
(Se)	82	1	72	1827.748	ppb	1.811	262151	2000	91.4	90	110	
Mo	95	2	115	1939.374	ppb	1.268	2041321	2000	97.0	90	110	
Cd	111	2	115	1972.708	ppb	1.002	886462	2000	98.6	90	110	
(Cd)	114	2	115	2026.143	ppb	0.958	2339216	2000	101.3	90	110	
Sn	120	2	115	2011.833	ppb	1.309	2359396	2000	100.6	90	110	
Sb	121	2	115	991.842	ppb	0.497	1021109	1000	99.2	90	110	
Ba	137	2	115	5206.077	ppb	0.854	1780938	5000	104.1	90	110	
Tl	205	2	165	984.200	ppb	0.618	8852282	2000	49.2	90	110	LRS Main CR1 Failed
(Pb)	206	2	165	4817.371	ppb	0.322	13861478	5000	96.3	90	110	
(Pb)	207	2	165	4831.323	ppb	0.336	12847233	5000	96.6	90	110	
Pb	208	2	165	4909.278	ppb	0.470	58163544	5000	98.2	90	110	
Th	232	2	165	990.631	ppb	0.876	13988210	2000	49.5	90	110	LRS Main CR1 Failed
U	238	2	165	1919.300	ppb	1.192	30610572	2000	96.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	896023	1.36	962768	93.07	60	120	
Sc (IS)	45	1	HMI H2	33779160	0.16	35850229	94.22	60	120	
Sc (IS)	45	2	HMI He	1147677	0.91	1169942	98.10	60	120	
Sc (IS)	45	3	No Gas	60091036	0.42	64035761	93.84	60	120	
Ge Internal Standard	72	1	HMI H2	13213618	0.37	13887730	95.15	60	120	
Ge Internal Standard	72	2	HMI He	1293291	0.86	1316994	98.20	60	120	
In Internal Standard	115	2	HMI He	3908840	1.08	4006527	97.56	60	120	
Ho-165	165	2	HMI He	19434121	0.58	19709190	98.60	60	120	

Sample Report

Sample Table

Sample Name	RINSE
Data File Name	019SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:21:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	3.838	ppb	3.838	123.99	148762	500000	
Li	7	2	45	-3.021	ppb	-3.021	-277.70	7432	500000	
Li	7	3	45	-5.207	ppb	-5.207	-170.41	5138685	50000	
Be	9	1	6	0.425	ppb	0.425	45.32	227	2000	
B	11	1	6	0.266	ppb	0.266	99.98	590	2000	
Na	23	1	45	-2.072	ppb	-2.072	-52.95	225959	2000	
Na	23	2	45	-1.990	ppb	-1.990	-117.40	16590	400000	
Mg	24	2	45	0.518	ppb	0.518	118.28	330	400000	
Al	27	2	45	2.637	ppb	2.637	40.36	473	400000	
K	39	1	45	48.866	ppb	48.866	56.77	11763735	400000	
K	39	2	45	0.822	ppb	0.822	855.17	17701	400000	
Ca	40	1	45	1.929	ppb	1.929	19.57	68936	400000	
Ca	44	2	45	-15.322	ppb	-15.322	-46.96	23	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.605	ppb	0.605	51.77	2810	2000	
Cr	52	2	72	0.413	ppb	0.413	21.85	927	5000	
Mn	55	2	72	0.731	ppb	0.731	23.26	623	10000	
Fe	57	2	72	1.722	ppb	1.722	227.20	307	400000	
Co	59	2	72	0.202	ppb	0.202	17.46	600	2000	
Ni	60	2	72	0.485	ppb	0.485	40.35	693	5000	
Cu	63	2	72	0.382	ppb	0.382	24.75	2477	5000	
Zn	66	2	72	0.446	ppb	0.446	126.03	583	5000	
As	75	2	72	0.157	ppb	0.157	101.09	61	2000	
Se	78	1	72	0.410	ppb	0.410	25.84	172	2000	
Sr	88	2	72	0.015	ppb	0.015	100.64	30	4000	
Zr	90	2	72	0.259	ppb	0.259	1733.66	100	1000	
Nb	93	2	72	0.838	ppb	0.838	7.83	3821	200	
Mo	95	2	115	2.928	ppb	2.928	5.48	3244	2000	
Pd	105	2	115	0.019	ppb	0.019	125.87	43	100	
Ag	107	2	115	-0.007	ppb	-0.007	-21.40	67	100	
Cd	111	2	115	0.179	ppb	0.179	68.49	87	2000	
Sn	120	2	115	5.063	ppb	5.063	10.12	6355	2000	
Sb	121	2	115	4.422	ppb	4.422	3.68	4778	1000	
Ba	137	2	115	0.216	ppb	0.216	25.90	90	5000	
W	182	2	165	-0.012	ppb	-0.012	-55.49	1413	100	
Pt	195	2	165	-0.002	ppb	-0.002	-183.00	50	100	
Tl	205	2	165	0.084	ppb	0.084	10.30	1133	2000	
Pb	208	2	165	0.452	ppb	0.452	17.18	7328	5000	
Th	232	2	165	0.578	ppb	0.578	7.59	8954	2000	
U	238	2	165	0.935	ppb	0.935	3.75	15316	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	941368	1.79	962768	97.78	60	120	
Sc (IS)	45	1	HMI H2	35233567	0.62	35850229	98.28	60	120	
Sc (IS)	45	2	HMI He	1177131	1.32	1169942	100.61	60	120	
Sc (IS)	45	3	No Gas	62819131	0.32	64035761	98.10	60	120	
Ge Internal Standard	72	1	HMI H2	13707162	0.39	13887730	98.70	60	120	
Ge Internal Standard	72	2	HMI He	1331516	1.06	1316994	101.10	60	120	
In Internal Standard	115	2	HMI He	4049896	1.16	4006527	101.08	60	120	
Ho-165	165	2	HMI He	19626767	1.04	19709190	99.58	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	020_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:25:33-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	489.844	ppb	1.523	336252	500	98.0	90	110	
Li	7	2	45	474.122	ppb	8.109	16730	500	94.8	90	110	
Li	7	3	45	480.965	ppb	0.888	11744616	500	96.2	90	110	
Be	9	1	6	49.113	ppb	0.805	22050	50	98.2	90	110	
B	11	1	6	49.734	ppb	2.894	21927	50	99.5	90	110	
Na	23	1	45	4996.657	ppb	1.221	20872977	5000	99.9	90	110	
Na	23	2	45	5071.446	ppb	2.982	1492385	5000	101.4	90	110	
Mg	24	2	45	4668.172	ppb	2.923	640713	5000	93.4	90	110	
Al	27	2	45	4944.369	ppb	2.761	168704	5000	98.9	90	110	
K	39	1	45	5044.459	ppb	1.491	31718723	5000	100.9	90	110	
K	39	2	45	4903.842	ppb	2.266	342462	5000	98.1	90	110	
Ca	40	1	45	4921.592	ppb	0.819	30567637	5000	98.4	90	110	
Ca	44	2	45	4965.271	ppb	4.502	18045	5000	99.3	90	110	
Ti	47	2	45	46.557	ppb	9.875	1457	50	93.1	90	110	
V	51	2	72	51.843	ppb	2.096	68310	50	103.7	90	110	
Cr	52	2	72	50.778	ppb	0.875	85883	50	101.6	90	110	
Mn	55	2	72	51.091	ppb	3.084	32311	50	102.2	90	110	
Fe	57	2	72	4979.473	ppb	1.184	155315	5000	99.6	90	110	
Co	59	2	72	50.509	ppb	0.639	147311	50	101.0	90	110	
Ni	60	2	72	50.937	ppb	1.388	42911	50	101.9	90	110	
Cu	63	2	72	50.812	ppb	0.626	120364	50	101.6	90	110	
Zn	66	2	72	48.520	ppb	1.204	15876	50	97.0	90	110	
As	75	2	72	51.337	ppb	1.825	10513	50	102.7	90	110	
Se	78	1	72	50.347	ppb	0.338	16625	50	100.7	90	110	
Sr	88	2	72	50.928	ppb	3.379	33010	50	101.9	90	110	
Zr	90	2	72	42.600	ppb	3.287	477	50	85.2	90	110	>+\-10%
Nb	93	2	72	92.085	ppb	0.917	345762	100	92.1	90	110	
Mo	95	2	115	49.895	ppb	2.261	53964	50	99.8	90	110	
Pd	105	2	115	49.900	ppb	1.703	85332	50	99.8	90	110	
Ag	107	2	115	50.340	ppb	0.649	180974	50	100.7	90	110	
Cd	111	2	115	50.531	ppb	3.209	23320	50	101.1	90	110	
Sn	120	2	115	50.471	ppb	0.579	60968	50	100.9	90	110	
Sb	121	2	115	51.578	ppb	0.459	54575	50	103.2	90	110	
Ba	137	2	115	51.237	ppb	3.686	18006	50	102.5	90	110	
W	182	2	165	49.147	ppb	2.425	247805	50	98.3	90	110	
Pt	195	2	165	49.599	ppb	1.263	207390	50	99.2	90	110	
Tl	205	2	165	50.570	ppb	0.940	464189	50	101.1	90	110	
Pb	208	2	165	50.898	ppb	1.295	616864	50	101.8	90	110	
Th	232	2	165	50.982	ppb	1.245	734797	50	102.0	90	110	
U	238	2	165	48.597	ppb	1.006	790656	50	97.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	928742	1.71	962768	96.47	60	120	
Sc (IS)	45	1	HMI H2	35512970	0.85	35850229	99.06	60	120	
Sc (IS)	45	2	HMI He	1212523	2.98	1169942	103.64	60	120	
Sc (IS)	45	3	No Gas	63018432	0.14	64035761	98.41	60	120	
Ge Internal Standard	72	1	HMI H2	13708593	0.09	13887730	98.71	60	120	
Ge Internal Standard	72	2	HMI He	1338397	0.61	1316994	101.63	60	120	
In Internal Standard	115	2	HMI He	4013062	0.98	4006527	100.16	60	120	
Ho-165	165	2	HMI He	19818757	0.70	19709190	100.56	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	021_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:29:19-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-6.771	ppb	-8.1	5267956	10	
Be	9	1	6	0.031	ppb	292.5	47	0.5	
B	11	1	6	1.560	ppb	23.8	1173	0.5	>RL
Na	23	1	45	7.151	ppb	8.4	270666	25	
Na	23	2	45	7.057	ppb	26.9	19527	25	
Mg	24	2	45	1.494	ppb	46.8	470	25	
Al	27	2	45	2.663	ppb	22.8	483	15	
K	39	1	45	32.230	ppb	32.9	12004790	50	
K	39	2	45	13.000	ppb	147.2	18846	50	
Ca	40	1	45	17.600	ppb	0.8	169654	50	
Ca	44	2	45	17.951	ppb	93.2	143	25	
Ti	47	2	45	0.217	ppb	173.2	7	0.5	
V	51	2	72	1.480	ppb	19.3	4007	1	>RL
Cr	52	2	72	0.116	ppb	69.4	437	1	
Mn	55	2	72	0.075	ppb	64.6	217	0.5	
Fe	57	2	72	1.323	ppb	46.7	300	25	
Co	59	2	72	0.018	ppb	125.8	67	0.5	
Ni	60	2	72	0.177	ppb	30.0	447	1	
Cu	63	2	72	0.485	ppb	31.2	2774	1	
Zn	66	2	72	1.047	ppb	28.1	790	5	
As	75	2	72	0.046	ppb	71.7	39	1	
Se	78	1	72	0.051	ppb	108.3	55	1	
Sr	88	2	72	0.070	ppb	25.0	67	0.5	
Zr	90	2	72	1.857	ppb	387.0	117	1	>RL
Nb	93	2	72	4.624	ppb	11.4	18326	2	>RL
Mo	95	2	115	0.246	ppb	36.1	323	0.5	
Pd	105	2	115	0.042	ppb	51.6	83	1	
Ag	107	2	115	-0.011	ppb	-40.6	53	1	
Cd	111	2	115	0.014	ppb	264.0	10	0.5	
Sn	120	2	115	0.720	ppb	23.2	1093	1	
Sb	121	2	115	0.881	ppb	4.4	1017	0.6	>RL
Ba	137	2	115	0.101	ppb	28.7	50	0.5	
W	182	2	165	0.074	ppb	76.8	1860	1	
Pt	195	2	165	0.007	ppb	1.1	90	1	
Tl	205	2	165	-0.008	ppb	-99.6	300	0.1	
Pb	208	2	165	0.050	ppb	66.2	2544	0.5	
Th	232	2	165	0.026	ppb	28.1	1097	1	
U	238	2	165	0.093	ppb	16.7	1764	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	955385	2.59	962768	99.23	60	120	
Sc (IS)	45	1	HMI H2	36155875	0.43	35850229	100.85	60	120	
Sc (IS)	45	2	HMI He	1200487	0.98	1169942	102.61	60	120	
Sc (IS)	45	3	No Gas	64662699	0.76	64035761	100.98	60	120	
Ge Internal Standard	72	1	HMI H2	13996529	0.61	13887730	100.78	60	120	
Ge Internal Standard	72	2	HMI He	1360662	0.19	1316994	103.32	60	120	
In Internal Standard	115	2	HMI He	4116999	1.39	4006527	102.76	60	120	
Ho-165	165	2	HMI He	19884041	0.37	19709190	100.89	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	022LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:33:09-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	7.569	ppb	74.626	5500235	50	15.1	70	130	>+/-30%
Be	9	1	6	0.888	ppb	12.355	450	1	88.8	70	130	
Na	23	2	45	38.943	ppb	13.816	30108	50	77.9	70	130	
Mg	24	2	45	48.082	ppb	6.307	7142	50	96.2	70	130	
Al	27	2	45	27.369	ppb	8.638	1380	30	91.2	70	130	
K	39	2	45	91.315	ppb	13.386	25166	100	91.3	70	130	
Ca	44	2	45	40.879	ppb	62.663	237	50	81.8	70	130	
V	51	2	72	5.956	ppb	2.473	9894	5	119.1	70	130	
Cr	52	2	72	2.135	ppb	5.766	3927	2	106.7	70	130	
Mn	55	2	72	0.999	ppb	7.853	813	1	99.9	70	130	
Fe	57	2	72	53.079	ppb	22.923	1950	50	106.2	70	130	
Co	59	2	72	1.089	ppb	3.944	3264	1	108.9	70	130	
Ni	60	2	72	2.629	ppb	10.053	2550	2	131.5	70	130	>+/-30%
Cu	63	2	72	1.911	ppb	5.101	6208	2	95.6	70	130	
Zn	66	2	72	10.249	ppb	9.722	3791	10	102.5	70	130	
As	75	2	72	4.776	ppb	3.731	1029	5	95.5	70	130	
Se	78	1	72	4.559	ppb	3.515	1595	5	91.2	70	130	
Sr	88	2	72	0.872	ppb	19.052	600	1	87.2	70	130	
Zr	90	2	72	9.109	ppb	71.230	183	0.5	1821.8	70	130	>+/-30%
Nb	93	2	72	8.988	ppb	1.576	35205	2	449.4	70	130	>+/-30%
Mo	95	2	115	1.873	ppb	9.819	2140	2	93.7	70	130	
Pd	105	2	115	0.036	ppb	25.330	73	1	3.6	70	130	>+/-30%
Ag	107	2	115	5.001	ppb	2.483	18616	5	100.0	70	130	
Cd	111	2	115	0.812	ppb	11.905	390	1	81.2	70	130	
Sn	120	2	115	10.070	ppb	5.094	12700	10	100.7	70	130	
Sb	121	2	115	2.515	ppb	8.439	2800	2	125.8	70	130	
Ba	137	2	115	1.113	ppb	6.451	417	1	111.3	70	130	
W	182	2	165	4.970	ppb	3.327	26481	1	497.0	70	130	>+/-30%
Pt	195	2	165	0.017	ppb	15.593	133	1	1.7	70	130	>+/-30%
Tl	205	2	165	0.966	ppb	4.232	9264	1	96.6	70	130	
Pb	208	2	165	0.998	ppb	5.469	14027	1	99.8	70	130	
Th	232	2	165	2.162	ppb	2.596	31957	2	108.1	70	130	
U	238	2	165	0.985	ppb	3.289	16321	1	98.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	971140	1.63	962768	100.87	60	120	
Sc (IS)	45	1	HMI H2	36542843	0.53	35850229	101.93	60	120	
Sc (IS)	45	2	HMI He	1260244	3.27	1169942	107.72	60	120	
Sc (IS)	45	3	No Gas	65052437	0.41	64035761	101.59	60	120	
Ge Internal Standard	72	1	HMI H2	14207306	0.40	13887730	102.30	60	120	
Ge Internal Standard	72	2	HMI He	1370424	0.84	1316994	104.06	60	120	
In Internal Standard	115	2	HMI He	4137358	1.45	4006527	103.27	60	120	
Ho-165	165	2	HMI He	19883362	0.28	19709190	100.88	60	120	

Blank Report

Sample Table

Sample Name	MB 280-434052/1-A
Data File Name	023_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:36:57-07:00
Sample Type	Blank
Dilution	1
Comment	434052 6020b
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-7.934	ppb	-79.57278801	153368	0.5
Li	7	2	45	-32.915	ppb	-40.26127655	7842	0.5
Li	7	3	45	-11.090	ppb	-23.39714377	5645821	10
Be	9	1	6	-0.051	ppb	-0.225499648	10	0.5
B	11	1	6	0.734	ppb	39.44465912	827	0.5
Na	23	1	45	18.948	ppb	6.938708606	331745	25
Na	23	2	45	10.511	ppb	31.09366228	22935	25
Mg	24	2	45	2.381	ppb	21.59220324	660	25
Al	27	2	45	-3.165	ppb	-63.03340017	320	15
K	39	1	45	-1215.236	ppb	-2.125128623	7204026	50
K	39	2	45	-3.168	ppb	-258.9987576	19884	50
Ca	40	1	45	14.289	ppb	3.078948419	154089	50
Ca	44	2	45	3.033	ppb	90.76095949	100	25
Ti	47	2	45	0.385	ppb	43.46239562	13	0.5
V	51	2	72	-0.032	ppb	-528.0591614	2184	1
Cr	52	2	72	0.302	ppb	30.27902342	807	1
Mn	55	2	72	0.107	ppb	76.76422896	253	0.5
Fe	57	2	72	10.757	ppb	8.266095986	640	25
Co	59	2	72	0.064	ppb	17.21924533	217	0.5
Ni	60	2	72	0.421	ppb	11.40704176	700	1
Cu	63	2	72	0.074	ppb	114.168291	1924	1
Zn	66	2	72	1.186	ppb	16.02796361	893	5
As	75	2	72	-0.014	ppb	-216.5933291	29	1
Se	78	1	72	-0.046	ppb	-138.3787455	23	1
Sr	88	2	72	0.068	ppb	43.91780536	70	0.5
Zr	90	2	72	5.891	ppb	61.29566399	163	1
Nb	93	2	72	1.247	ppb	7.031982199	5842	2
Mo	95	2	115	0.152	ppb	17.51987269	223	0.5
Pd	105	2	115	0.017	ppb	117.3939365	40	1
Ag	107	2	115	-0.003	ppb	-101.0475563	83	1
Cd	111	2	115	-0.007	ppb	0	0	0.5
Sn	120	2	115	0.491	ppb	24.81982374	823	1
Sb	121	2	115	0.548	ppb	10.80689242	667	0.6
Ba	137	2	115	0.216	ppb	43.32211113	93	0.5
W	182	2	165	0.377	ppb	2.029666719	3424	1
Pt	195	2	165	0.004	ppb	139.9055029	80	1
Tl	205	2	165	-0.004	ppb	-266.7881784	343	0.1
Pb	208	2	165	0.096	ppb	20.75909277	3130	0.5
Th	232	2	165	0.095	ppb	10.25487773	2117	1
U	238	2	165	0.056	ppb	17.51332919	1177	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	980170	0.54	962768	101.81	60	120	
Sc (IS)	45	1	HMI H2	37453369	0.84	35850229	104.47	60	120	
Sc (IS)	45	2	HMI He	1341664	1.04	1169942	114.68	60	120	
Sc (IS)	45	3	No Gas	70102577	0.92	64035761	109.47	60	120	
Ge Internal Standard	72	1	HMI H2	14442655	0.51	13887730	104.00	60	120	
Ge Internal Standard	72	2	HMI He	1455500	1.58	1316994	110.52	60	120	
In Internal Standard	115	2	HMI He	4190743	0.80	4006527	104.60	60	120	
Ho-165	165	2	HMI He	20116725	0.45	19709190	102.07	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-434052/2-A
Data File Name	024_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:40:44-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	434052 6020b
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	72.410	72.410	ppb	6.547	186992	400	18.1	80	120	>+/-20%
Li	7	2	45	38.089	38.089	ppb	64.724	9447	400	9.5	80	120	>+/-20%
Li	7	3	45	66.463	66.463	ppb	4.047	6777358	400	16.6	80	120	>+/-20%
Be	9	1	6	37.348	37.348	ppb	1.446	18162	40	93.4	80	120	
Na	23	2	45	5.464	5.464	ppb	74.416	21560	40	13.7	80	120	>+/-20%
Mg	24	2	45	3.064	3.064	ppb	27.844	773	40	7.7	80	120	>+/-20%
Al	27	2	45	398.318	398.318	ppb	2.783	15632	40	995.8	80	120	>+/-20%
K	39	2	45	-10.731	-10.731	ppb	-64.910	19560	40	-26.8	80	120	>+/-20%
Ca	44	2	45	243.717	243.717	ppb	0.400	1077	40	609.3	80	120	>+/-20%
V	51	2	72	39.735	39.735	ppb	2.657	56718	40	99.3	80	120	
Cr	52	2	72	39.217	39.217	ppb	2.471	71265	40	98.0	80	120	
Mn	55	2	72	40.721	40.721	ppb	4.413	27681	40	101.8	80	120	
Fe	57	2	72	403.687	403.687	ppb	2.498	13774	40	1009.2	80	120	>+/-20%
Co	59	2	72	39.654	39.654	ppb	2.188	124157	40	99.1	80	120	
Ni	60	2	72	40.033	40.033	ppb	2.450	36274	40	100.1	80	120	
Cu	63	2	72	38.970	38.970	ppb	2.467	99494	40	97.4	80	120	
Zn	66	2	72	38.239	38.239	ppb	3.982	13540	40	95.6	80	120	
As	75	2	72	36.849	36.849	ppb	2.859	8109	40	92.1	80	120	
Se	78	1	72	37.375	37.375	ppb	2.576	13091	40	93.4	80	120	
Nb	93	2	72	0.989	0.989	ppb	11.353	4731	40	2.5	80	120	>+/-20%
Mo	95	2	115	35.978	35.978	ppb	2.061	41121	40	89.9	80	120	
Pd	105	2	115	0.007	0.007	ppb	46.565	23	40	0.0	80	120	>+/-20%
Ag	107	2	115	41.179	41.179	ppb	1.379	156380	40	102.9	80	120	
Cd	111	2	115	39.418	39.418	ppb	3.841	19217	40	98.5	80	120	
Sn	120	2	115	39.235	39.235	ppb	1.323	50104	40	98.1	80	120	
Sb	121	2	115	38.073	38.073	ppb	2.506	42570	40	95.2	80	120	
Ba	137	2	115	40.081	40.081	ppb	2.771	14889	40	100.2	80	120	
W	182	2	165	9.299	9.299	ppb	1.340	49101	40	23.2	80	120	>+/-20%
Pt	195	2	165	0.005	0.005	ppb	113.546	83	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.239	39.239	ppb	0.716	367784	40	98.1	80	120	
Pb	208	2	165	39.508	39.508	ppb	0.392	489254	40	98.8	80	120	
Th	232	2	165	37.806	37.806	ppb	0.810	556469	40	94.5	80	120	
U	238	2	165	36.635	36.635	ppb	0.905	608532	40	91.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1005588	1.31	962768	104.45	60	120	
Sc (IS)	45	1	HMI H2	37680092	0.27	35850229	105.10	60	120	
Sc (IS)	45	2	HMI He	1357535	0.83	1169942	116.03	60	120	
Sc (IS)	45	3	No Gas	69712169	0.45	64035761	108.86	60	120	
Ge Internal Standard	72	1	HMI H2	14530802	0.44	13887730	104.63	60	120	
Ge Internal Standard	72	2	HMI He	1437271	2.26	1316994	109.13	60	120	
In Internal Standard	115	2	HMI He	4239243	1.36	4006527	105.81	60	120	
Ho-165	165	2	HMI He	20232142	0.38	19709190	102.65	60	120	

Sample Report

Sample Table

Sample Name	280-115648-A-1-B
Data File Name	025SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:44:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.235	ppb	-1.235	-524.50	153516	500000	
Li	7	2	45	-40.113	ppb	-40.113	-17.33	7539	500000	
Li	7	3	45	-3.849	ppb	-3.849	-153.72	5600222	50000	
Be	9	1	6	-0.035	ppb	-0.035	-71.29	17	2000	
B	11	1	6	23.631	ppb	23.631	2.70	10901	2000	
Na	23	1	45	23394.963	ppb	23394.963	0.80	100471155	2000	>LDR
Na	23	2	45	21934.676	ppb	21934.676	1.30	6943351	400000	
Mg	24	2	45	12875.561	ppb	12875.561	1.37	1917937	400000	
Al	27	2	45	8.127	ppb	8.127	52.27	733	400000	
K	39	1	45	5549.747	ppb	5549.747	0.77	34985078	400000	
K	39	2	45	6412.261	ppb	6412.261	0.96	480022	400000	
Ca	40	1	45	55777.575	ppb	55777.575	1.30	358715781	400000	
Ca	44	2	45	51570.357	ppb	51570.357	2.72	202603	400000	
Ti	47	2	45	0.396	ppb	0.396	86.61	13	4000	
V	51	2	72	16.872	ppb	16.872	2.26	24365	2000	
Cr	52	2	72	10.227	ppb	10.227	3.99	18035	5000	
Mn	55	2	72	0.419	ppb	0.419	9.57	443	10000	
Fe	57	2	72	19.866	ppb	19.866	22.09	900	400000	
Co	59	2	72	0.140	ppb	0.140	6.39	437	2000	
Ni	60	2	72	0.371	ppb	0.371	60.07	620	5000	
Cu	63	2	72	0.105	ppb	0.105	42.58	1900	5000	
Zn	66	2	72	1.601	ppb	1.601	8.02	983	5000	
As	75	2	72	3.388	ppb	3.388	5.31	744	2000	
Se	78	1	72	3.229	ppb	3.229	4.91	1141	2000	
Sr	88	2	72	238.430	ppb	238.430	1.61	159386	4000	
Zr	90	2	72	236.790	ppb	236.790	7.49	2274	1000	
Nb	93	2	72	0.760	ppb	0.760	8.29	3662	200	
Mo	95	2	115	8.036	ppb	8.036	3.00	9007	2000	
Pd	105	2	115	0.015	ppb	0.015	95.37	37	100	
Ag	107	2	115	0.000	ppb	0.000	2484.62	93	100	
Cd	111	2	115	0.014	ppb	0.014	153.17	10	2000	
Sn	120	2	115	0.333	ppb	0.333	36.46	617	2000	
Sb	121	2	115	0.711	ppb	0.711	9.82	837	1000	
Ba	137	2	115	49.485	ppb	49.485	0.89	17932	5000	
W	182	2	165	0.811	ppb	0.811	8.00	5485	100	
Pt	195	2	165	-0.001	ppb	-0.001	-808.58	57	100	
Tl	205	2	165	0.004	ppb	0.004	133.05	403	2000	
Pb	208	2	165	0.044	ppb	0.044	45.51	2424	5000	
Th	232	2	165	0.164	ppb	0.164	9.43	3041	2000	
U	238	2	165	6.146	ppb	6.146	0.84	98994	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	949728	0.54	962768	98.65	60	120	
Sc (IS)	45	1	HMI H2	36835876	0.66	35850229	102.75	60	120	
Sc (IS)	45	2	HMI He	1315762	1.84	1169942	112.46	60	120	
Sc (IS)	45	3	No Gas	68221866	1.01	64035761	106.54	60	120	
Ge Internal Standard	72	1	HMI H2	14221255	0.92	13887730	102.40	60	120	
Ge Internal Standard	72	2	HMI He	1381240	1.75	1316994	104.88	60	120	
In Internal Standard	115	2	HMI He	4137459	0.69	4006527	103.27	60	120	
Ho-165	165	2	HMI He	19576175	0.81	19709190	99.33	60	120	

Sample Report

Sample Table

Sample Name	280-115648-E-2-A
Data File Name	026SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:48:15-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-6.993	ppb	-6.993	-97.14	150855	500000	
Li	7	2	45	-43.183	ppb	-43.183	-26.72	7389	500000	
Li	7	3	45	-6.863	ppb	-6.863	-57.84	5611102	50000	
Be	9	1	6	0.009	ppb	0.009	153.87	37	2000	
B	11	1	6	22.662	ppb	22.662	3.70	10434	2000	
Na	23	1	45	23004.662	ppb	23004.662	0.31	98565555	2000	>LDR
Na	23	2	45	21837.386	ppb	21837.386	0.45	6830935	400000	
Mg	24	2	45	12748.381	ppb	12748.381	0.54	1876574	400000	
Al	27	2	45	2.751	ppb	2.751	16.01	527	400000	
K	39	1	45	5432.965	ppb	5432.965	0.92	34420574	400000	
K	39	2	45	6442.707	ppb	6442.707	0.62	476457	400000	
Ca	40	1	45	54864.015	ppb	54864.015	0.90	351999448	400000	
Ca	44	2	45	51262.882	ppb	51262.882	0.90	199045	400000	
Ti	47	2	45	0.100	ppb	0.100	173.21	3	4000	
V	51	2	72	16.526	ppb	16.526	1.35	23543	2000	
Cr	52	2	72	10.607	ppb	10.607	3.23	18416	5000	
Mn	55	2	72	0.247	ppb	0.247	42.33	327	10000	
Fe	57	2	72	18.508	ppb	18.508	4.49	843	400000	
Co	59	2	72	0.012	ppb	0.012	73.43	50	2000	
Ni	60	2	72	0.397	ppb	0.397	10.54	633	5000	
Cu	63	2	72	0.220	ppb	0.220	54.43	2144	5000	
Zn	66	2	72	1.451	ppb	1.451	13.79	920	5000	
As	75	2	72	3.424	ppb	3.424	9.65	740	2000	
Se	78	1	72	3.073	ppb	3.073	1.98	1076	2000	
Sr	88	2	72	230.832	ppb	230.832	1.83	151927	4000	
Zr	90	2	72	49.168	ppb	49.168	12.14	543	1000	
Nb	93	2	72	0.563	ppb	0.563	20.49	2854	200	
Mo	95	2	115	7.900	ppb	7.900	5.94	8603	2000	
Pd	105	2	115	0.008	ppb	0.008	114.56	23	100	
Ag	107	2	115	-0.002	ppb	-0.002	-216.76	83	100	
Cd	111	2	115	-0.007	ppb	-0.007	0.00	0	2000	
Sn	120	2	115	0.231	ppb	0.231	44.68	477	2000	
Sb	121	2	115	0.324	ppb	0.324	19.35	403	1000	
Ba	137	2	115	48.370	ppb	48.370	0.60	17031	5000	
W	182	2	165	0.899	ppb	0.899	7.83	5878	100	
Pt	195	2	165	-0.002	ppb	-0.002	-219.50	50	100	
Tl	205	2	165	-0.009	ppb	-0.009	-15.70	283	2000	
Pb	208	2	165	0.017	ppb	0.017	37.24	2090	5000	
Th	232	2	165	0.071	ppb	0.071	27.67	1714	2000	
U	238	2	165	5.898	ppb	5.898	0.31	94336	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	946253	0.78	962768	98.28	60	120	
Sc (IS)	45	1	HMI H2	36747571	0.65	35850229	102.50	60	120	
Sc (IS)	45	2	HMI He	1300039	0.89	1169942	111.12	60	120	
Sc (IS)	45	3	No Gas	68894172	0.84	64035761	107.59	60	120	
Ge Internal Standard	72	1	HMI H2	14058022	0.59	13887730	101.23	60	120	
Ge Internal Standard	72	2	HMI He	1359793	0.61	1316994	103.25	60	120	
In Internal Standard	115	2	HMI He	4019975	0.35	4006527	100.34	60	120	
Ho-165	165	2	HMI He	19440371	0.93	19709190	98.64	60	120	

Sample Report

Sample Table

Sample Name	280-115648-E-2-Asd@5
Data File Name	027SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:52:03-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.182	ppb	-0.182	-757.84	153906	500000	
Li	7	2	45	-33.705	ppb	-33.705	-50.03	7209	500000	
Li	7	3	45	0.759	ppb	0.759	403.95	5478247	50000	
Be	9	1	6	0.006	ppb	0.006	442.20	37	2000	
B	11	1	6	5.409	ppb	5.409	11.79	2960	2000	
Na	23	1	45	4688.351	ppb	4688.351	0.24	20327048	2000	
Na	23	2	45	4844.097	ppb	4844.097	3.28	1455237	400000	
Mg	24	2	45	2668.531	ppb	2668.531	0.76	373993	400000	
Al	27	2	45	9.864	ppb	9.864	29.88	747	400000	
K	39	1	45	1002.247	ppb	1002.247	1.13	16227950	400000	
K	39	2	45	1351.750	ppb	1351.750	0.75	109808	400000	
Ca	40	1	45	11140.184	ppb	11140.184	0.25	71681766	400000	
Ca	44	2	45	10704.090	ppb	10704.090	1.57	39611	400000	
Ti	47	2	45	0.209	ppb	0.209	173.21	7	4000	
V	51	2	72	4.305	ppb	4.305	2.89	7586	2000	
Cr	52	2	72	2.109	ppb	2.109	8.40	3807	5000	
Mn	55	2	72	-0.043	ppb	-0.043	-129.88	140	10000	
Fe	57	2	72	3.573	ppb	3.573	104.24	367	400000	
Co	59	2	72	0.017	ppb	0.017	60.93	63	2000	
Ni	60	2	72	0.107	ppb	0.107	41.14	383	5000	
Cu	63	2	72	0.068	ppb	0.068	30.80	1764	5000	
Zn	66	2	72	0.345	ppb	0.345	53.21	557	5000	
As	75	2	72	0.762	ppb	0.762	3.73	186	2000	
Se	78	1	72	0.783	ppb	0.783	6.37	304	2000	
Sr	88	2	72	46.508	ppb	46.508	0.80	30283	4000	
Zr	90	2	72	4.618	ppb	4.618	61.03	140	1000	
Nb	93	2	72	0.272	ppb	0.272	22.14	1724	200	
Mo	95	2	115	1.970	ppb	1.970	7.51	2167	2000	
Pd	105	2	115	0.016	ppb	0.016	58.21	37	100	
Ag	107	2	115	-0.009	ppb	-0.009	-70.07	57	100	
Cd	111	2	115	0.000	ppb	0.000	-73369.16	3	2000	
Sn	120	2	115	0.167	ppb	0.167	42.12	397	2000	
Sb	121	2	115	0.111	ppb	0.111	85.28	177	1000	
Ba	137	2	115	9.693	ppb	9.693	10.32	3397	5000	
W	182	2	165	0.143	ppb	0.143	55.49	2144	100	
Pt	195	2	165	-0.002	ppb	-0.002	-124.37	50	100	
Tl	205	2	165	-0.014	ppb	-0.014	-34.48	237	2000	
Pb	208	2	165	-0.003	ppb	-0.003	-939.78	1837	5000	
Th	232	2	165	-0.005	ppb	-0.005	-62.49	627	2000	
U	238	2	165	1.224	ppb	1.224	3.59	19643	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	982294	0.55	962768	102.03	60	120	
Sc (IS)	45	1	HMI H2	36828748	0.13	35850229	102.73	60	120	
Sc (IS)	45	2	HMI He	1237216	2.82	1169942	105.75	60	120	
Sc (IS)	45	3	No Gas	65936181	0.91	64035761	102.97	60	120	
Ge Internal Standard	72	1	HMI H2	14141851	0.19	13887730	101.83	60	120	
Ge Internal Standard	72	2	HMI He	1344558	0.89	1316994	102.09	60	120	
In Internal Standard	115	2	HMI He	3990753	0.97	4006527	99.61	60	120	
Ho-165	165	2	HMI He	19314631	1.39	19709190	98.00	60	120	

Sample Report

Sample Table

Sample Name	280-115648-E-2-B MS
Data File Name	028SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:55:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	77.936	ppb	77.936	6.51	182545	500000	
Li	7	2	45	33.445	ppb	33.445	13.46	8796	500000	
Li	7	3	45	74.618	ppb	74.618	4.85	6693586	50000	
Be	9	1	6	37.370	ppb	37.370	2.08	17097	2000	
B	11	1	6	57.972	ppb	57.972	2.65	25947	2000	
Na	23	1	45	22881.407	ppb	22881.407	1.02	96970685	2000	>LDR
Na	23	2	45	22019.022	ppb	22019.022	1.30	6766221	400000	
Mg	24	2	45	12988.329	ppb	12988.329	0.41	1878274	400000	
Al	27	2	45	392.757	ppb	392.757	2.30	14511	400000	
K	39	1	45	5369.672	ppb	5369.672	1.41	33789210	400000	
K	39	2	45	6393.636	ppb	6393.636	0.78	464668	400000	
Ca	40	1	45	54346.576	ppb	54346.576	0.29	344912022	400000	
Ca	44	2	45	51241.103	ppb	51241.103	0.97	195461	400000	
Ti	47	2	45	0.717	ppb	0.717	138.59	23	4000	
V	51	2	72	57.293	ppb	57.293	1.70	75570	2000	
Cr	52	2	72	50.480	ppb	50.480	0.09	85705	5000	
Mn	55	2	72	42.343	ppb	42.343	1.86	26906	10000	
Fe	57	2	72	413.161	ppb	413.161	5.92	13173	400000	
Co	59	2	72	39.648	ppb	39.648	2.06	116088	2000	
Ni	60	2	72	40.074	ppb	40.074	3.12	33948	5000	
Cu	63	2	72	39.883	ppb	39.883	1.55	95176	5000	
Zn	66	2	72	38.254	ppb	38.254	5.31	12656	5000	
As	75	2	72	40.841	ppb	40.841	1.40	8402	2000	
Se	78	1	72	40.867	ppb	40.867	0.54	13656	2000	
Sr	88	2	72	273.541	ppb	273.541	1.43	177898	4000	
Zr	90	2	72	7938.353	ppb	7938.353	1.64	70887	1000	>LDR
Nb	93	2	72	0.484	ppb	0.484	5.91	2520	200	
Mo	95	2	115	45.534	ppb	45.534	1.37	48765	2000	
Pd	105	2	115	0.000	ppb	0.000	11070.66	10	100	
Ag	107	2	115	39.332	ppb	39.332	0.72	139998	100	
Cd	111	2	115	38.900	ppb	38.900	5.01	17772	2000	
Sn	120	2	115	40.312	ppb	40.312	1.74	48248	2000	
Sb	121	2	115	41.530	ppb	41.530	2.26	43516	1000	
Ba	137	2	115	89.556	ppb	89.556	0.70	31153	5000	
W	182	2	165	10.382	ppb	10.382	2.66	51570	100	
Pt	195	2	165	-0.008	ppb	-0.008	-48.98	27	100	
Tl	205	2	165	39.295	ppb	39.295	0.80	347584	2000	
Pb	208	2	165	39.433	ppb	39.433	0.41	460857	5000	
Th	232	2	165	39.136	ppb	39.136	0.20	543619	2000	
U	238	2	165	44.132	ppb	44.132	1.16	691779	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	946029	0.64	962768	98.26	60	120	
Sc (IS)	45	1	HMI H2	36349849	1.06	35850229	101.39	60	120	
Sc (IS)	45	2	HMI He	1277236	1.52	1169942	109.17	60	120	
Sc (IS)	45	3	No Gas	67630309	0.52	64035761	105.61	60	120	
Ge Internal Standard	72	1	HMI H2	13866222	0.38	13887730	99.85	60	120	
Ge Internal Standard	72	2	HMI He	1343525	0.77	1316994	102.01	60	120	
In Internal Standard	115	2	HMI He	3972814	0.57	4006527	99.16	60	120	
Ho-165	165	2	HMI He	19093447	0.52	19709190	96.88	60	120	

Sample Report

Sample Table

Sample Name	280-115648-E-2-C MSD
Data File Name	029SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T11:59:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	84.943	ppb	84.943	2.66	184067	500000	
Li	7	2	45	55.683	ppb	55.683	20.69	9103	500000	
Li	7	3	45	86.272	ppb	86.272	2.85	6801860	50000	
Be	9	1	6	39.151	ppb	39.151	0.82	17998	2000	
B	11	1	6	59.520	ppb	59.520	2.32	26765	2000	
Na	23	1	45	23573.250	ppb	23573.250	0.56	99234372	2000	>LDR
Na	23	2	45	22870.530	ppb	22870.530	2.46	6918017	400000	
Mg	24	2	45	13382.150	ppb	13382.150	1.81	1905391	400000	
Al	27	2	45	402.806	ppb	402.806	3.99	14631	400000	
K	39	1	45	5597.443	ppb	5597.443	0.15	34486007	400000	
K	39	2	45	6641.083	ppb	6641.083	2.49	474406	400000	
Ca	40	1	45	56028.735	ppb	56028.735	0.53	353209155	400000	
Ca	44	2	45	53689.305	ppb	53689.305	2.71	201601	400000	
Ti	47	2	45	2.802	ppb	2.802	47.71	90	4000	
V	51	2	72	58.177	ppb	58.177	1.93	77120	2000	
Cr	52	2	72	51.084	ppb	51.084	0.65	87198	5000	
Mn	55	2	72	40.500	ppb	40.500	2.08	25887	10000	
Fe	57	2	72	435.614	ppb	435.614	1.10	13947	400000	
Co	59	2	72	39.932	ppb	39.932	0.75	117543	2000	
Ni	60	2	72	39.750	ppb	39.750	1.03	33864	5000	
Cu	63	2	72	39.356	ppb	39.356	0.45	94454	5000	
Zn	66	2	72	38.907	ppb	38.907	2.33	12936	5000	
As	75	2	72	41.608	ppb	41.608	1.94	8607	2000	
Se	78	1	72	41.170	ppb	41.170	2.11	13716	2000	
Sr	88	2	72	276.086	ppb	276.086	0.73	180527	4000	
Zr	90	2	72	7982.880	ppb	7982.880	2.04	71678	1000	>LDR
Nb	93	2	72	0.422	ppb	0.422	9.00	2300	200	
Mo	95	2	115	44.562	ppb	44.562	2.20	47484	2000	
Pd	105	2	115	0.012	ppb	0.012	148.90	30	100	
Ag	107	2	115	40.050	ppb	40.050	0.96	141863	100	
Cd	111	2	115	38.341	ppb	38.341	2.60	17435	2000	
Sn	120	2	115	40.033	ppb	40.033	1.76	47683	2000	
Sb	121	2	115	41.315	ppb	41.315	2.14	43071	1000	
Ba	137	2	115	92.396	ppb	92.396	1.41	31982	5000	
W	182	2	165	10.399	ppb	10.399	1.71	51745	100	
Pt	195	2	165	0.000	ppb	0.000	-2262.08	57	100	
Tl	205	2	165	39.471	ppb	39.471	0.04	349834	2000	
Pb	208	2	165	39.877	ppb	39.877	0.63	466928	5000	
Th	232	2	165	39.440	ppb	39.440	1.04	548887	2000	
U	238	2	165	43.967	ppb	43.967	1.42	690498	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	950705	0.95	962768	98.75	60	120	
Sc (IS)	45	1	HMI H2	36106591	0.38	35850229	100.72	60	120	
Sc (IS)	45	2	HMI He	1257994	3.57	1169942	107.53	60	120	
Sc (IS)	45	3	No Gas	67029657	1.40	64035761	104.68	60	120	
Ge Internal Standard	72	1	HMI H2	13826794	1.17	13887730	99.56	60	120	
Ge Internal Standard	72	2	HMI He	1350848	0.99	1316994	102.57	60	120	
In Internal Standard	115	2	HMI He	3954201	2.41	4006527	98.69	60	120	
Ho-165	165	2	HMI He	19131385	1.09	19709190	97.07	60	120	

Sample Report

Sample Table

Sample Name	280-115648-E-2-A pds
Data File Name	030SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:03:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	163.241	ppb	163.241	18.23	205089	500000	
Li	7	2	45	121.364	ppb	121.364	6.24	10194	500000	
Li	7	3	45	154.979	ppb	154.979	3.97	7691269	50000	
Be	9	1	6	219.532	ppb	219.532	11.40	98232	2000	
B	11	1	6	25.151	ppb	25.151	10.39	11298	2000	
Na	23	1	45	23735.912	ppb	23735.912	13.44	95075622	2000	>LDR
Na	23	2	45	21937.801	ppb	21937.801	2.69	6506406	400000	
Mg	24	2	45	12912.224	ppb	12912.224	3.97	1801709	400000	
Al	27	2	45	2202.260	ppb	2202.260	3.58	76639	400000	
K	39	1	45	5579.125	ppb	5579.125	16.99	32785125	400000	
K	39	2	45	6398.922	ppb	6398.922	2.46	448849	400000	
Ca	40	1	45	56311.303	ppb	56311.303	14.86	337519562	400000	
Ca	44	2	45	51917.242	ppb	51917.242	3.13	191116	400000	
Ti	47	2	45	7.647	ppb	7.647	4.41	243	4000	
V	51	2	72	237.225	ppb	237.225	0.38	301585	2000	
Cr	52	2	72	229.771	ppb	229.771	1.59	383101	5000	
Mn	55	2	72	221.139	ppb	221.139	1.02	137621	10000	
Fe	57	2	72	2188.046	ppb	2188.046	1.65	67564	400000	
Co	59	2	72	213.336	ppb	213.336	0.77	614654	2000	
Ni	60	2	72	212.917	ppb	212.917	0.82	176316	5000	
Cu	63	2	72	213.266	ppb	213.266	0.93	494051	5000	
Zn	66	2	72	213.423	ppb	213.423	0.88	67499	5000	
As	75	2	72	209.427	ppb	209.427	1.32	42281	2000	
Se	78	1	72	215.389	ppb	215.389	10.71	68704	2000	
Sr	88	2	72	372.130	ppb	372.130	1.06	238165	4000	
Zr	90	2	72	43463.532	ppb	43463.532	1.27	381576	1000	>LDR
Nb	93	2	72	8.118	ppb	8.118	6.82	30758	200	
Mo	95	2	115	220.007	ppb	220.007	0.35	231280	2000	
Pd	105	2	115	0.030	ppb	0.030	90.38	60	100	
Ag	107	2	115	42.488	ppb	42.488	1.94	148531	100	
Cd	111	2	115	213.229	ppb	213.229	2.29	95679	2000	
Sn	120	2	115	215.958	ppb	215.958	1.04	253049	2000	
Sb	121	2	115	214.031	ppb	214.031	0.54	220056	1000	
Ba	137	2	115	269.166	ppb	269.166	1.09	91953	5000	
W	182	2	165	218.398	ppb	218.398	0.49	1050652	100	
Pt	195	2	165	0.051	ppb	0.051	8.66	260	100	
Tl	205	2	165	217.718	ppb	217.718	0.90	1914356	2000	
Pb	208	2	165	211.012	ppb	211.012	0.56	2445423	5000	
Th	232	2	165	177.558	ppb	177.558	0.86	2451286	2000	
U	238	2	165	222.134	ppb	222.134	0.65	3463150	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	930293	5.06	962768	96.63	60	120	
Sc (IS)	45	1	HMI H2	34611099	8.23	35850229	96.54	60	120	
Sc (IS)	45	2	HMI He	1233350	3.46	1169942	105.42	60	120	
Sc (IS)	45	3	No Gas	66160206	1.04	64035761	103.32	60	120	
Ge Internal Standard	72	1	HMI H2	13335238	7.38	13887730	96.02	60	120	
Ge Internal Standard	72	2	HMI He	1322351	0.98	1316994	100.41	60	120	
In Internal Standard	115	2	HMI He	3902946	1.66	4006527	97.41	60	120	
Ho-165	165	2	HMI He	18995847	0.09	19709190	96.38	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	031_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:07:12-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	522.455	ppb	1.952	346295	500	104.5	90	110	
Li	7	2	45	517.957	ppb	8.642	17077	500	103.6	90	110	
Li	7	3	45	518.932	ppb	1.043	12418319	500	103.8	90	110	
Be	9	1	6	49.404	ppb	1.051	22585	50	98.8	90	110	
B	11	1	6	51.342	ppb	0.593	23029	50	102.7	90	110	
Na	23	1	45	5111.258	ppb	0.589	21196820	5000	102.2	90	110	
Na	23	2	45	5300.171	ppb	2.266	1515057	5000	106.0	90	110	
Mg	24	2	45	4804.063	ppb	1.649	640885	5000	96.1	90	110	
Al	27	2	45	4964.030	ppb	1.740	164612	5000	99.3	90	110	
K	39	1	45	4939.437	ppb	1.119	31081438	5000	98.8	90	110	
K	39	2	45	4950.604	ppb	1.593	335824	5000	99.0	90	110	
Ca	40	1	45	5006.784	ppb	0.800	30877158	5000	100.1	90	110	
Ca	44	2	45	4908.153	ppb	5.217	17331	5000	98.2	90	110	
Ti	47	2	45	50.332	ppb	7.270	1533	50	100.7	90	110	
V	51	2	72	52.519	ppb	0.383	66238	50	105.0	90	110	
Cr	52	2	72	51.672	ppb	0.566	83673	50	103.3	90	110	
Mn	55	2	72	52.574	ppb	1.738	31833	50	105.1	90	110	
Fe	57	2	72	4984.137	ppb	2.177	148825	5000	99.7	90	110	
Co	59	2	72	51.601	ppb	0.663	144092	50	103.2	90	110	
Ni	60	2	72	51.447	ppb	1.858	41494	50	102.9	90	110	
Cu	63	2	72	51.735	ppb	1.978	117299	50	103.5	90	110	
Zn	66	2	72	49.201	ppb	2.728	15406	50	98.4	90	110	
As	75	2	72	51.412	ppb	2.514	10079	50	102.8	90	110	
Se	78	1	72	49.775	ppb	5.014	16117	50	99.6	90	110	
Sr	88	2	72	50.340	ppb	0.366	31242	50	100.7	90	110	
Zr	90	2	72	71.677	ppb	8.112	703	50	143.4	90	110	>+\-10%
Nb	93	2	72	87.426	ppb	1.316	314336	100	87.4	90	110	>+\-10%
Mo	95	2	115	49.549	ppb	2.241	51003	50	99.1	90	110	
Pd	105	2	115	50.422	ppb	3.176	82056	50	100.8	90	110	
Ag	107	2	115	50.733	ppb	1.616	173558	50	101.5	90	110	
Cd	111	2	115	49.118	ppb	0.683	21571	50	98.2	90	110	
Sn	120	2	115	50.192	ppb	1.442	57707	50	100.4	90	110	
Sb	121	2	115	51.037	ppb	1.271	51393	50	102.1	90	110	
Ba	137	2	115	50.651	ppb	3.632	16948	50	101.3	90	110	
W	182	2	165	50.258	ppb	2.078	240134	50	100.5	90	110	
Pt	195	2	165	50.418	ppb	2.746	199766	50	100.8	90	110	
Tl	205	2	165	50.887	ppb	0.762	442703	50	101.8	90	110	
Pb	208	2	165	51.327	ppb	1.125	589524	50	102.7	90	110	
Th	232	2	165	50.303	ppb	1.365	687122	50	100.6	90	110	
U	238	2	165	48.355	ppb	1.608	745553	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	945754	1.00	962768	98.23	60	120	
Sc (IS)	45	1	HMI H2	35263115	0.70	35850229	98.36	60	120	
Sc (IS)	45	2	HMI He	1178234	2.62	1169942	100.71	60	120	
Sc (IS)	45	3	No Gas	63838382	1.35	64035761	99.69	60	120	
Ge Internal Standard	72	1	HMI H2	13447446	1.09	13887730	96.83	60	120	
Ge Internal Standard	72	2	HMI He	1281533	1.09	1316994	97.31	60	120	
In Internal Standard	115	2	HMI He	3819407	1.02	4006527	95.33	60	120	
Ho-165	165	2	HMI He	18783694	1.21	19709190	95.30	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	032_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:10:58-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	11.106	ppb	33.3	5516646	10	>RL
Be	9	1	6	-0.008	ppb	-825.7	30	0.5	
B	11	1	6	2.235	ppb	1.9	1507	0.5	>RL
Na	23	1	45	14.213	ppb	3.5	295055	25	
Na	23	2	45	11.952	ppb	30.5	20722	25	
Mg	24	2	45	1.674	ppb	4.1	490	25	
Al	27	2	45	5.357	ppb	28.9	570	15	
K	39	1	45	-45.277	ppb	-14.7	11484250	50	
K	39	2	45	3.202	ppb	194.4	18035	50	
Ca	40	1	45	18.312	ppb	1.0	171069	50	
Ca	44	2	45	20.082	ppb	57.4	150	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.652	ppb	10.5	5248	1	>RL
Cr	52	2	72	0.062	ppb	109.6	327	1	
Mn	55	2	72	-0.039	ppb	-226.7	137	0.5	
Fe	57	2	72	2.165	ppb	11.7	310	25	
Co	59	2	72	0.008	ppb	98.2	37	0.5	
Ni	60	2	72	0.164	ppb	8.6	413	1	
Cu	63	2	72	0.413	ppb	16.1	2470	1	
Zn	66	2	72	1.406	ppb	38.6	860	5	
As	75	2	72	0.036	ppb	224.8	35	1	
Se	78	1	72	0.002	ppb	3044.7	37	1	
Sr	88	2	72	0.097	ppb	16.3	80	0.5	
Zr	90	2	72	2.540	ppb	157.3	117	1	>RL
Nb	93	2	72	4.382	ppb	3.7	16517	2	>RL
Mo	95	2	115	0.167	ppb	43.3	223	0.5	
Pd	105	2	115	0.030	ppb	53.3	60	1	
Ag	107	2	115	-0.009	ppb	-124.8	57	1	
Cd	111	2	115	0.030	ppb	114.4	17	0.5	
Sn	120	2	115	0.235	ppb	55.1	467	1	
Sb	121	2	115	0.472	ppb	31.0	543	0.6	
Ba	137	2	115	0.138	ppb	92.9	60	0.5	
W	182	2	165	0.120	ppb	32.0	1984	1	
Pt	195	2	165	0.014	ppb	145.1	113	1	
Tl	205	2	165	-0.003	ppb	-297.6	330	0.1	
Pb	208	2	165	0.006	ppb	336.2	1897	0.5	
Th	232	2	165	0.019	ppb	41.0	940	1	
U	238	2	165	0.047	ppb	6.7	967	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	978476	1.16	962768	101.63	60	120	
Sc (IS)	45	1	HMI H2	35516564	0.38	35850229	99.07	60	120	
Sc (IS)	45	2	HMI He	1189424	3.48	1169942	101.67	60	120	
Sc (IS)	45	3	No Gas	64662604	0.59	64035761	100.98	60	120	
Ge Internal Standard	72	1	HMI H2	13635579	0.06	13887730	98.18	60	120	
Ge Internal Standard	72	2	HMI He	1291185	0.79	1316994	98.04	60	120	
In Internal Standard	115	2	HMI He	3903106	1.12	4006527	97.42	60	120	
Ho-165	165	2	HMI He	18850632	0.12	19709190	95.64	60	120	

Sample Report

Sample Table

Sample Name	280-116233-D-4-A@5
Data File Name	033SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:14:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435448 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	359.960	ppb	359.960	2.73	257308	500000	
Li	7	2	45	355.790	ppb	355.790	9.55	13096	500000	
Li	7	3	45	387.902	ppb	387.902	1.67	10441718	50000	
Be	9	1	6	-0.038	ppb	-0.038	-39.24	13	2000	
B	11	1	6	6217.020	ppb	6217.020	1.59	2339085	2000	
Na	23	1	45	771048.672	ppb	771048.672	0.54	2860777771	2000	>LDR
Na	23	2	45	785045.214	ppb	785045.214	0.66	206398704	400000	
Mg	24	2	45	1015975.631	ppb	1015975.631	0.18	126012765	400000	
Al	27	2	45	71.583	ppb	71.583	12.38	2560	400000	
K	39	1	45	89956.790	ppb	89956.790	0.95	331755422	400000	
K	39	2	45	89739.310	ppb	89739.310	0.07	5380434	400000	
Ca	40	1	45	87251.171	ppb	87251.171	0.56	485936206	400000	
Ca	44	2	45	90955.703	ppb	90955.703	0.35	297570	400000	
Ti	47	2	45	3.776	ppb	3.776	29.30	107	4000	
V	51	2	72	0.555	ppb	0.555	23.98	2397	2000	
Cr	52	2	72	0.455	ppb	0.455	20.47	870	5000	
Mn	55	2	72	78.023	ppb	78.023	2.51	42814	10000	
Fe	57	2	72	49.648	ppb	49.648	17.84	1563	400000	
Co	59	2	72	0.064	ppb	0.064	12.21	173	2000	
Ni	60	2	72	3.404	ppb	3.404	12.91	2727	5000	
Cu	63	2	72	1.530	ppb	1.530	14.65	4498	5000	
Zn	66	2	72	1.581	ppb	1.581	20.76	823	5000	
As	75	2	72	46.727	ppb	46.727	0.93	8319	2000	
Se	78	1	72	6.656	ppb	6.656	11.87	1928	2000	
Sr	88	2	72	1906.354	ppb	1906.354	0.52	1073264	4000	
Zr	90	2	72	42.881	ppb	42.881	13.13	417	1000	
Nb	93	2	72	8.738	ppb	8.738	3.54	29071	200	
Mo	95	2	115	1.252	ppb	1.252	6.06	1137	2000	
Pd	105	2	115	0.054	ppb	0.054	66.97	83	100	
Ag	107	2	115	0.025	ppb	0.025	63.60	147	100	
Cd	111	2	115	0.287	ppb	0.287	19.75	110	2000	
Sn	120	2	115	0.503	ppb	0.503	11.27	650	2000	
Sb	121	2	115	4.276	ppb	4.276	4.65	3711	1000	
Ba	137	2	115	12.199	ppb	12.199	1.42	3481	5000	
W	182	2	165	16.738	ppb	16.738	2.04	69464	100	
Pt	195	2	165	-0.008	ppb	-0.008	-35.31	20	100	
Tl	205	2	165	0.002	ppb	0.002	345.62	317	2000	
Pb	208	2	165	0.241	ppb	0.241	21.53	3934	5000	
Th	232	2	165	0.124	ppb	0.124	17.40	2037	2000	
U	238	2	165	0.311	ppb	0.311	4.06	4321	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	809847	0.09	962768	84.12	60	120	
Sc (IS)	45	1	HMI H2	31899713	1.02	35850229	88.98	60	120	
Sc (IS)	45	2	HMI He	1095565	1.02	1169942	93.64	60	120	
Sc (IS)	45	3	No Gas	62767332	0.70	64035761	98.02	60	120	
Ge Internal Standard	72	1	HMI H2	11862011	0.85	13887730	85.41	60	120	
Ge Internal Standard	72	2	HMI He	1163266	0.90	1316994	88.33	60	120	
In Internal Standard	115	2	HMI He	3250374	1.53	4006527	81.13	60	120	
Ho-165	165	2	HMI He	16126195	0.92	19709190	81.82	60	120	

Sample Report

Sample Table

Sample Name	280-116233-D-5-A@5
Data File Name	034SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:18:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435448 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	108.904	ppb	108.904	3.91	171491	500000	
Li	7	2	45	145.075	ppb	145.075	15.72	9000	500000	
Li	7	3	45	114.428	ppb	114.428	2.68	6846831	50000	
Be	9	1	6	-0.021	ppb	-0.021	-1.72	20	2000	
B	11	1	6	2300.821	ppb	2300.821	1.33	873249	2000	
Na	23	1	45	553580.045	ppb	553580.045	1.57	2061318476	2000	>LDR
Na	23	2	45	571817.758	ppb	571817.758	0.74	142992405	400000	
Mg	24	2	45	273020.272	ppb	273020.272	0.36	32209249	400000	
Al	27	2	45	177.702	ppb	177.702	2.75	5541	400000	
K	39	1	45	83435.142	ppb	83435.142	1.02	309583369	400000	
K	39	2	45	84951.031	ppb	84951.031	0.12	4845704	400000	
Ca	40	1	45	87353.402	ppb	87353.402	0.38	488266446	400000	
Ca	44	2	45	106600.485	ppb	106600.485	0.54	331722	400000	
Ti	47	2	45	4.956	ppb	4.956	15.86	133	4000	
V	51	2	72	11.811	ppb	11.811	3.12	14715	2000	
Cr	52	2	72	2.398	ppb	2.398	3.71	3674	5000	
Mn	55	2	72	14.696	ppb	14.696	1.86	8079	10000	
Fe	57	2	72	174.249	ppb	174.249	5.48	4874	400000	
Co	59	2	72	0.375	ppb	0.375	18.74	950	2000	
Ni	60	2	72	4.112	ppb	4.112	0.75	3204	5000	
Cu	63	2	72	0.896	ppb	0.896	6.46	3167	5000	
Zn	66	2	72	1.242	ppb	1.242	10.71	720	5000	
As	75	2	72	14.140	ppb	14.140	3.88	2503	2000	
Se	78	1	72	6.090	ppb	6.090	4.85	1796	2000	
Sr	88	2	72	4700.467	ppb	4700.467	0.52	2613552	4000	
Zr	90	2	72	48.484	ppb	48.484	24.14	453	1000	
Nb	93	2	72	0.991	ppb	0.991	10.11	3787	200	
Mo	95	2	115	204.150	ppb	204.150	0.85	180554	2000	
Pd	105	2	115	0.080	ppb	0.080	30.39	120	100	
Ag	107	2	115	0.040	ppb	0.040	3.46	190	100	
Cd	111	2	115	0.143	ppb	0.143	59.17	57	2000	
Sn	120	2	115	0.110	ppb	0.110	59.25	270	2000	
Sb	121	2	115	1.166	ppb	1.166	8.32	1057	1000	
Ba	137	2	115	18.529	ppb	18.529	3.21	5335	5000	
W	182	2	165	26.297	ppb	26.297	0.76	111429	100	
Pt	195	2	165	0.001	ppb	0.001	497.36	53	100	
Tl	205	2	165	-0.011	ppb	-0.011	-53.05	230	2000	
Pb	208	2	165	0.087	ppb	0.087	5.86	2487	5000	
Th	232	2	165	0.013	ppb	0.013	50.69	757	2000	
U	238	2	165	0.981	ppb	0.981	2.03	13555	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	816750	0.72	962768	84.83	60	120	
Sc (IS)	45	1	HMI H2	32015971	1.11	35850229	89.30	60	120	
Sc (IS)	45	2	HMI He	1042109	1.69	1169942	89.07	60	120	
Sc (IS)	45	3	No Gas	63671661	0.93	64035761	99.43	60	120	
Ge Internal Standard	72	1	HMI H2	12053319	1.30	13887730	86.79	60	120	
Ge Internal Standard	72	2	HMI He	1148832	1.30	1316994	87.23	60	120	
In Internal Standard	115	2	HMI He	3283848	2.12	4006527	81.96	60	120	
Ho-165	165	2	HMI He	16567564	0.23	19709190	84.06	60	120	

Sample Report

Sample Table

Sample Name	280-115648-A-5-B
Data File Name	035SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:22:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.649	ppb	12.649	25.04	143660	500000	
Li	7	2	45	24.557	ppb	24.557	31.76	7576	500000	
Li	7	3	45	9.670	ppb	9.670	11.99	5633561	50000	
Be	9	1	6	-0.049	ppb	-0.049	-48.34	10	2000	
B	11	1	6	87.240	ppb	87.240	2.66	38003	2000	
Na	23	1	45	535.766	ppb	535.766	6.66	2289565	2000	
Na	23	2	45	441.020	ppb	441.020	5.06	135186	400000	
Mg	24	2	45	39.665	ppb	39.665	11.73	5291	400000	
Al	27	2	45	18.135	ppb	18.135	21.08	940	400000	
K	39	1	45	-1269.423	ppb	-1269.423	-5.32	6189875	400000	
K	39	2	45	-0.518	ppb	-0.518	-827.01	16807	400000	
Ca	40	1	45	22.215	ppb	22.215	17.77	181990	400000	
Ca	44	2	45	12.868	ppb	12.868	107.66	117	400000	
Ti	47	2	45	0.230	ppb	0.230	173.21	7	4000	
V	51	2	72	-0.160	ppb	-0.160	-135.50	1717	2000	
Cr	52	2	72	0.428	ppb	0.428	20.75	890	5000	
Mn	55	2	72	0.016	ppb	0.016	685.18	163	10000	
Fe	57	2	72	5.073	ppb	5.073	40.40	383	400000	
Co	59	2	72	0.011	ppb	0.011	67.60	43	2000	
Ni	60	2	72	0.050	ppb	0.050	148.59	310	5000	
Cu	63	2	72	0.363	ppb	0.363	21.73	2274	5000	
Zn	66	2	72	3.767	ppb	3.767	17.65	1527	5000	
As	75	2	72	-0.006	ppb	-0.006	-702.56	26	2000	
Se	78	1	72	-0.011	ppb	-0.011	-619.71	32	2000	
Sr	88	2	72	0.301	ppb	0.301	48.15	200	4000	
Zr	90	2	72	5.067	ppb	5.067	71.99	133	1000	
Nb	93	2	72	0.582	ppb	0.582	16.77	2680	200	
Mo	95	2	115	0.432	ppb	0.432	5.49	473	2000	
Pd	105	2	115	0.018	ppb	0.018	105.48	37	100	
Ag	107	2	115	-0.001	ppb	-0.001	-977.24	80	100	
Cd	111	2	115	0.009	ppb	0.009	315.93	7	2000	
Sn	120	2	115	0.196	ppb	0.196	38.51	397	2000	
Sb	121	2	115	0.146	ppb	0.146	33.77	197	1000	
Ba	137	2	115	0.087	ppb	0.087	95.55	40	5000	
W	182	2	165	0.320	ppb	0.320	22.42	2907	100	
Pt	195	2	165	-0.005	ppb	-0.005	-113.54	37	100	
Tl	205	2	165	-0.020	ppb	-0.020	-3.59	177	2000	
Pb	208	2	165	0.068	ppb	0.068	41.51	2590	5000	
Th	232	2	165	0.007	ppb	0.007	46.29	777	2000	
U	238	2	165	0.005	ppb	0.005	118.68	313	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	926983	4.50	962768	96.28	60	120	
Sc (IS)	45	1	HMI H2	33285836	6.62	35850229	92.85	60	120	
Sc (IS)	45	2	HMI He	1122877	0.18	1169942	95.98	60	120	
Sc (IS)	45	3	No Gas	66273119	1.74	64035761	103.49	60	120	
Ge Internal Standard	72	1	HMI H2	12893307	6.02	13887730	92.84	60	120	
Ge Internal Standard	72	2	HMI He	1245422	1.12	1316994	94.57	60	120	
In Internal Standard	115	2	HMI He	3676766	2.17	4006527	91.77	60	120	
Ho-165	165	2	HMI He	18671660	1.14	19709190	94.74	60	120	

Sample Report

Sample Table

Sample Name	280-115648-A-6-B
Data File Name	036SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:26:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.442	ppb	12.442	16.18	147203	500000	
Li	7	2	45	26.770	ppb	26.770	84.02	7569	500000	
Li	7	3	45	16.592	ppb	16.592	46.73	5541166	50000	
Be	9	1	6	-0.057	ppb	-0.057	-22.39	7	2000	
B	11	1	6	34.723	ppb	34.723	2.92	15632	2000	
Na	23	1	45	258.463	ppb	258.463	0.62	1252448	2000	
Na	23	2	45	234.099	ppb	234.099	3.59	78973	400000	
Mg	24	2	45	21.172	ppb	21.172	2.88	2924	400000	
Al	27	2	45	2.231	ppb	2.231	132.18	437	400000	
K	39	1	45	-1328.858	ppb	-1328.858	-1.02	6127880	400000	
K	39	2	45	-12.276	ppb	-12.276	-93.00	15993	400000	
Ca	40	1	45	12.978	ppb	12.978	1.41	132544	400000	
Ca	44	2	45	8.895	ppb	8.895	214.12	103	400000	
Ti	47	2	45	0.115	ppb	0.115	173.21	3	4000	
V	51	2	72	-0.099	ppb	-0.099	-88.53	1794	2000	
Cr	52	2	72	0.533	ppb	0.533	16.94	1057	5000	
Mn	55	2	72	-0.054	ppb	-0.054	-162.52	123	10000	
Fe	57	2	72	6.088	ppb	6.088	65.20	413	400000	
Co	59	2	72	0.005	ppb	0.005	178.65	27	2000	
Ni	60	2	72	0.126	ppb	0.126	6.75	370	5000	
Cu	63	2	72	0.137	ppb	0.137	25.91	1787	5000	
Zn	66	2	72	1.885	ppb	1.885	10.52	973	5000	
As	75	2	72	0.025	ppb	0.025	103.59	32	2000	
Se	78	1	72	-0.052	ppb	-0.052	-73.67	19	2000	
Sr	88	2	72	0.035	ppb	0.035	48.98	40	4000	
Zr	90	2	72	1.427	ppb	1.427	320.89	103	1000	
Nb	93	2	72	0.398	ppb	0.398	2.15	2040	200	
Mo	95	2	115	0.058	ppb	0.058	38.14	107	2000	
Pd	105	2	115	0.007	ppb	0.007	188.78	20	100	
Ag	107	2	115	0.004	ppb	0.004	521.41	100	100	
Cd	111	2	115	0.008	ppb	0.008	327.51	7	2000	
Sn	120	2	115	0.056	ppb	0.056	43.15	250	2000	
Sb	121	2	115	0.124	ppb	0.124	14.95	180	1000	
Ba	137	2	115	0.053	ppb	0.053	115.46	30	5000	
W	182	2	165	0.242	ppb	0.242	12.71	2577	100	
Pt	195	2	165	0.001	ppb	0.001	378.44	60	100	
Tl	205	2	165	-0.009	ppb	-0.009	-32.24	273	2000	
Pb	208	2	165	0.024	ppb	0.024	98.09	2117	5000	
Th	232	2	165	0.010	ppb	0.010	33.81	820	2000	
U	238	2	165	0.008	ppb	0.008	70.09	363	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	940037	0.99	962768	97.64	60	120	
Sc (IS)	45	1	HMI H2	34112929	0.73	35850229	95.15	60	120	
Sc (IS)	45	2	HMI He	1116531	1.23	1169942	95.43	60	120	
Sc (IS)	45	3	No Gas	64057844	0.85	64035761	100.03	60	120	
Ge Internal Standard	72	1	HMI H2	13070901	0.47	13887730	94.12	60	120	
Ge Internal Standard	72	2	HMI He	1248038	0.98	1316994	94.76	60	120	
In Internal Standard	115	2	HMI He	3785417	1.08	4006527	94.48	60	120	
Ho-165	165	2	HMI He	18930551	1.31	19709190	96.05	60	120	

Sample Report

Sample Table

Sample Name	280-115648-A-7-B
Data File Name	037SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:30:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	14.458	ppb	14.458	18.36	143768	500000	
Li	7	2	45	16.957	ppb	16.957	44.59	7355	500000	
Li	7	3	45	12.075	ppb	12.075	46.35	5381258	50000	
Be	9	1	6	-0.026	ppb	-0.026	-230.21	20	2000	
B	11	1	6	44.245	ppb	44.245	2.52	19343	2000	
Na	23	1	45	23674.756	ppb	23674.756	0.37	91495242	2000	>LDR
Na	23	2	45	23634.916	ppb	23634.916	1.09	6311049	400000	
Mg	24	2	45	17495.753	ppb	17495.753	1.09	2198639	400000	
Al	27	2	45	1.917	ppb	1.917	91.31	423	400000	
K	39	1	45	6311.735	ppb	6311.735	0.54	34311979	400000	
K	39	2	45	7457.236	ppb	7457.236	0.60	468252	400000	
Ca	40	1	45	69874.598	ppb	69874.598	0.62	404400727	400000	
Ca	44	2	45	68239.867	ppb	68239.867	0.77	226220	400000	
Ti	47	2	45	0.115	ppb	0.115	173.21	3	4000	
V	51	2	72	12.385	ppb	12.385	3.55	16533	2000	
Cr	52	2	72	9.376	ppb	9.376	2.68	14832	5000	
Mn	55	2	72	1.164	ppb	1.164	17.73	830	10000	
Fe	57	2	72	32.667	ppb	32.667	15.07	1173	400000	
Co	59	2	72	0.552	ppb	0.552	9.11	1503	2000	
Ni	60	2	72	1.690	ppb	1.690	5.60	1577	5000	
Cu	63	2	72	0.400	ppb	0.400	39.45	2344	5000	
Zn	66	2	72	2.729	ppb	2.729	15.20	1213	5000	
As	75	2	72	2.696	ppb	2.696	1.61	536	2000	
Se	78	1	72	2.917	ppb	2.917	7.08	927	2000	
Sr	88	2	72	313.612	ppb	313.612	0.99	187826	4000	
Zr	90	2	72	4.013	ppb	4.013	183.04	123	1000	
Nb	93	2	72	0.343	ppb	0.343	18.02	1837	200	
Mo	95	2	115	6.342	ppb	6.342	6.03	6518	2000	
Pd	105	2	115	0.006	ppb	0.006	163.11	20	100	
Ag	107	2	115	0.014	ppb	0.014	174.76	133	100	
Cd	111	2	115	0.000	ppb	0.000	4854.88	3	2000	
Sn	120	2	115	0.138	ppb	0.138	49.15	343	2000	
Sb	121	2	115	0.761	ppb	0.761	10.37	817	1000	
Ba	137	2	115	64.632	ppb	64.632	1.78	21444	5000	
W	182	2	165	0.864	ppb	0.864	8.99	5578	100	
Pt	195	2	165	-0.009	ppb	-0.009	-94.31	23	100	
Tl	205	2	165	-0.010	ppb	-0.010	-56.60	273	2000	
Pb	208	2	165	0.017	ppb	0.017	84.77	2040	5000	
Th	232	2	165	0.002	ppb	0.002	194.96	717	2000	
U	238	2	165	6.206	ppb	6.206	0.94	97047	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	918751	1.13	962768	95.43	60	120	
Sc (IS)	45	1	HMI H2	33148668	0.25	35850229	92.46	60	120	
Sc (IS)	45	2	HMI He	1109986	1.03	1169942	94.88	60	120	
Sc (IS)	45	3	No Gas	62923969	0.45	64035761	98.26	60	120	
Ge Internal Standard	72	1	HMI H2	12728133	0.50	13887730	91.65	60	120	
Ge Internal Standard	72	2	HMI He	1237316	1.74	1316994	93.95	60	120	
In Internal Standard	115	2	HMI He	3789431	1.44	4006527	94.58	60	120	
Ho-165	165	2	HMI He	19006169	0.51	19709190	96.43	60	120	

Sample Report

Sample Table

Sample Name	280-115648-A-8-B
Data File Name	038SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:33:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434052 6020b
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	16.840	ppb	16.840	20.13	144264	500000	
Li	7	2	45	7.645	ppb	7.645	178.51	7292	500000	
Li	7	3	45	10.895	ppb	10.895	39.04	5232331	50000	
Be	9	1	6	-0.049	ppb	-0.049	-46.15	10	2000	
B	11	1	6	38.736	ppb	38.736	0.92	16773	2000	
Na	23	1	45	23303.211	ppb	23303.211	0.49	89840372	2000	>LDR
Na	23	2	45	23000.543	ppb	23000.543	0.38	6225490	400000	
Mg	24	2	45	17239.077	ppb	17239.077	0.33	2195896	400000	
Al	27	2	45	4.563	ppb	4.563	50.01	513	400000	
K	39	1	45	6192.026	ppb	6192.026	1.65	33783129	400000	
K	39	2	45	7347.431	ppb	7347.431	0.73	467845	400000	
Ca	40	1	45	69124.965	ppb	69124.965	0.83	399070607	400000	
Ca	44	2	45	67249.993	ppb	67249.993	0.21	225956	400000	
Ti	47	2	45	0.115	ppb	0.115	173.21	3	4000	
V	51	2	72	12.785	ppb	12.785	1.89	17111	2000	
Cr	52	2	72	24.628	ppb	24.628	2.49	38876	5000	
Mn	55	2	72	1.854	ppb	1.854	5.53	1240	10000	
Fe	57	2	72	82.935	ppb	82.935	13.64	2637	400000	
Co	59	2	72	0.607	ppb	0.607	10.96	1660	2000	
Ni	60	2	72	7.927	ppb	7.927	4.46	6445	5000	
Cu	63	2	72	0.562	ppb	0.562	4.37	2707	5000	
Zn	66	2	72	2.116	ppb	2.116	15.20	1040	5000	
As	75	2	72	2.405	ppb	2.405	7.28	484	2000	
Se	78	1	72	2.739	ppb	2.739	11.47	869	2000	
Sr	88	2	72	307.707	ppb	307.707	0.60	185493	4000	
Zr	90	2	72	2.658	ppb	2.658	131.56	113	1000	
Nb	93	2	72	0.314	ppb	0.314	17.21	1744	200	
Mo	95	2	115	5.932	ppb	5.932	9.48	6125	2000	
Pd	105	2	115	0.009	ppb	0.009	83.80	23	100	
Ag	107	2	115	0.018	ppb	0.018	22.51	147	100	
Cd	111	2	115	0.031	ppb	0.031	153.68	17	2000	
Sn	120	2	115	0.193	ppb	0.193	24.96	407	2000	
Sb	121	2	115	0.230	ppb	0.230	20.93	287	1000	
Ba	137	2	115	64.723	ppb	64.723	1.81	21571	5000	
W	182	2	165	0.930	ppb	0.930	2.37	5882	100	
Pt	195	2	165	-0.005	ppb	-0.005	-57.11	37	100	
Tl	205	2	165	-0.016	ppb	-0.016	-17.17	217	2000	
Pb	208	2	165	0.016	ppb	0.016	91.15	2027	5000	
Th	232	2	165	0.006	ppb	0.006	83.12	767	2000	
U	238	2	165	6.191	ppb	6.191	0.61	96583	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	907028	2.24	962768	94.21	60	120	
Sc (IS)	45	1	HMI H2	33067074	0.42	35850229	92.24	60	120	
Sc (IS)	45	2	HMI He	1125042	0.96	1169942	96.16	60	120	
Sc (IS)	45	3	No Gas	61361489	0.57	64035761	95.82	60	120	
Ge Internal Standard	72	1	HMI H2	12690697	0.41	13887730	91.38	60	120	
Ge Internal Standard	72	2	HMI He	1245418	1.05	1316994	94.57	60	120	
In Internal Standard	115	2	HMI He	3806365	1.10	4006527	95.00	60	120	
Ho-165	165	2	HMI He	18961323	0.76	19709190	96.21	60	120	

Sample Report

Sample Table

Sample Name	280-116023-A-4-A
Data File Name	039SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:37:41-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434928 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.713	ppb	15.713	36.39	138655	500000	
Li	7	2	45	-1.998	ppb	-1.998	-320.31	6925	500000	
Li	7	3	45	1.558	ppb	1.558	352.92	5017820	50000	
Be	9	1	6	-0.041	ppb	-0.041	-88.29	13	2000	
B	11	1	6	149.657	ppb	149.657	2.71	62166	2000	
Na	23	1	45	18425.966	ppb	18425.966	0.60	68514139	2000	>LDR
Na	23	2	45	18194.842	ppb	18194.842	1.46	4792736	400000	
Mg	24	2	45	29385.619	ppb	29385.619	0.36	3639906	400000	
Al	27	2	45	12.097	ppb	12.097	42.62	730	400000	
K	39	1	45	1823.473	ppb	1823.473	0.74	16974338	400000	
K	39	2	45	3029.478	ppb	3029.478	0.80	197235	400000	
Ca	40	1	45	163755.069	ppb	163755.069	0.16	911175186	400000	
Ca	44	2	45	157896.324	ppb	157896.324	0.56	515821	400000	
Ti	47	2	45	0.235	ppb	0.235	173.21	7	4000	
V	51	2	72	0.077	ppb	0.077	346.48	1947	2000	
Cr	52	2	72	0.314	ppb	0.314	25.83	693	5000	
Mn	55	2	72	4638.865	ppb	4638.865	0.75	2647950	10000	
Fe	57	2	72	41888.439	ppb	41888.439	0.29	1183629	400000	
Co	59	2	72	1.207	ppb	1.207	4.25	3207	2000	
Ni	60	2	72	1.347	ppb	1.347	9.08	1287	5000	
Cu	63	2	72	0.242	ppb	0.242	14.47	1960	5000	
Zn	66	2	72	4.292	ppb	4.292	20.04	1640	5000	
As	75	2	72	30.514	ppb	30.514	1.55	5680	2000	
Se	78	1	72	-0.002	ppb	-0.002	-1751.63	32	2000	
Sr	88	2	72	393.428	ppb	393.428	0.91	231222	4000	
Zr	90	2	72	44.063	ppb	44.063	41.98	443	1000	
Nb	93	2	72	0.282	ppb	0.282	10.32	1593	200	
Mo	95	2	115	0.408	ppb	0.408	34.44	450	2000	
Pd	105	2	115	0.011	ppb	0.011	142.80	27	100	
Ag	107	2	115	-0.017	ppb	-0.017	-10.55	27	100	
Cd	111	2	115	0.024	ppb	0.024	147.74	13	2000	
Sn	120	2	115	0.081	ppb	0.081	70.84	270	2000	
Sb	121	2	115	0.102	ppb	0.102	60.93	153	1000	
Ba	137	2	115	829.026	ppb	829.026	0.49	266255	5000	
W	182	2	165	0.257	ppb	0.257	5.77	2637	100	
Pt	195	2	165	0.007	ppb	0.007	44.90	83	100	
Tl	205	2	165	-0.017	ppb	-0.017	-79.62	203	2000	
Pb	208	2	165	0.057	ppb	0.057	30.76	2484	5000	
Th	232	2	165	0.018	ppb	0.018	89.92	927	2000	
U	238	2	165	1.528	ppb	1.528	4.15	23850	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	887990	1.03	962768	92.23	60	120	
Sc (IS)	45	1	HMI H2	31872430	0.85	35850229	88.90	60	120	
Sc (IS)	45	2	HMI He	1094054	0.50	1169942	93.51	60	120	
Sc (IS)	45	3	No Gas	60272484	1.03	64035761	94.12	60	120	
Ge Internal Standard	72	1	HMI H2	12169308	0.96	13887730	87.63	60	120	
Ge Internal Standard	72	2	HMI He	1214313	0.92	1316994	92.20	60	120	
In Internal Standard	115	2	HMI He	3669547	1.40	4006527	91.59	60	120	
Ho-165	165	2	HMI He	18830208	0.46	19709190	95.54	60	120	

Sample Report

Sample Table

Sample Name	280-116023-A-9-A
Data File Name	040SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:41:29-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434928 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	20.390	ppb	20.390	31.87	140083	500000	
Li	7	2	45	18.471	ppb	18.471	142.37	7319	500000	
Li	7	3	45	6.149	ppb	6.149	62.64	5021452	50000	
Be	9	1	6	-0.047	ppb	-0.047	-89.18	10	2000	
B	11	1	6	184.690	ppb	184.690	4.11	73460	2000	
Na	23	1	45	18499.746	ppb	18499.746	1.22	68694932	2000	>LDR
Na	23	2	45	18145.363	ppb	18145.363	0.89	4807845	400000	
Mg	24	2	45	43808.295	ppb	43808.295	0.40	5458600	400000	
Al	27	2	45	49.459	ppb	49.459	15.54	1890	400000	
K	39	1	45	4563.771	ppb	4563.771	1.10	26717377	400000	
K	39	2	45	5699.804	ppb	5699.804	1.15	358753	400000	
Ca	40	1	45	167289.369	ppb	167289.369	1.50	929564333	400000	
Ca	44	2	45	162954.492	ppb	162954.492	0.85	535510	400000	
Ti	47	2	45	1.760	ppb	1.760	69.43	50	4000	
V	51	2	72	-0.542	ppb	-0.542	-5.64	1233	2000	
Cr	52	2	72	0.317	ppb	0.317	23.00	700	5000	
Mn	55	2	72	1161.905	ppb	1161.905	0.16	664951	10000	
Fe	57	2	72	39032.724	ppb	39032.724	0.69	1105567	400000	
Co	59	2	72	0.264	ppb	0.264	2.67	713	2000	
Ni	60	2	72	0.243	ppb	0.243	22.95	450	5000	
Cu	63	2	72	0.263	ppb	0.263	50.58	2010	5000	
Zn	66	2	72	2.937	ppb	2.937	7.47	1253	5000	
As	75	2	72	80.227	ppb	80.227	0.81	14926	2000	
Se	78	1	72	0.105	ppb	0.105	73.31	63	2000	
Sr	88	2	72	955.830	ppb	955.830	0.89	563135	4000	
Zr	90	2	72	62.368	ppb	62.368	5.15	593	1000	
Nb	93	2	72	0.183	ppb	0.183	41.91	1260	200	
Mo	95	2	115	1.059	ppb	1.059	7.28	1090	2000	
Pd	105	2	115	0.005	ppb	0.005	76.14	17	100	
Ag	107	2	115	-0.012	ppb	-0.012	-104.38	43	100	
Cd	111	2	115	0.017	ppb	0.017	144.17	10	2000	
Sn	120	2	115	0.206	ppb	0.206	30.43	407	2000	
Sb	121	2	115	0.050	ppb	0.050	24.04	103	1000	
Ba	137	2	115	756.353	ppb	756.353	1.38	242344	5000	
W	182	2	165	0.414	ppb	0.414	7.85	3364	100	
Pt	195	2	165	-0.009	ppb	-0.009	-27.90	20	100	
Tl	205	2	165	-0.026	ppb	-0.026	-9.52	123	2000	
Pb	208	2	165	0.069	ppb	0.069	10.25	2607	5000	
Th	232	2	165	0.013	ppb	0.013	34.01	853	2000	
U	238	2	165	0.006	ppb	0.006	74.19	327	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	851943	2.76	962768	88.49	60	120	
Sc (IS)	45	1	HMI H2	31830841	0.82	35850229	88.79	60	120	
Sc (IS)	45	2	HMI He	1100561	0.42	1169942	94.07	60	120	
Sc (IS)	45	3	No Gas	59603961	0.44	64035761	93.08	60	120	
Ge Internal Standard	72	1	HMI H2	12056027	0.63	13887730	86.81	60	120	
Ge Internal Standard	72	2	HMI He	1217219	1.10	1316994	92.42	60	120	
In Internal Standard	115	2	HMI He	3660642	0.52	4006527	91.37	60	120	
Ho-165	165	2	HMI He	18731013	1.35	19709190	95.04	60	120	

Sample Report

Sample Table

Sample Name	280-116135-D-7-A
Data File Name	041SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:45:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435459 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	7.736	ppb	7.736	34.93	135347	500000	
Li	7	2	45	-14.047	ppb	-14.047	-107.09	6895	500000	
Li	7	3	45	-10.034	ppb	-10.034	-9.36	4711636	50000	
Be	9	1	6	-0.055	ppb	-0.055	-25.65	7	2000	
B	11	1	6	64.922	ppb	64.922	4.59	25930	2000	
Na	23	1	45	153211.200	ppb	153211.200	0.09	565761432	2000	>LDR
Na	23	2	45	146542.716	ppb	146542.716	0.18	39497026	400000	
Mg	24	2	45	22796.143	ppb	22796.143	1.14	2897666	400000	
Al	27	2	45	16.571	ppb	16.571	23.09	890	400000	
K	39	1	45	-42.064	ppb	-42.064	-21.47	10273887	400000	
K	39	2	45	1152.048	ppb	1152.048	1.77	87413	400000	
Ca	40	1	45	60979.926	ppb	60979.926	0.75	337902988	400000	
Ca	44	2	45	58342.250	ppb	58342.250	0.87	195641	400000	
Ti	47	2	45	1.261	ppb	1.261	67.99	37	4000	
V	51	2	72	1.934	ppb	1.934	15.65	4164	2000	
Cr	52	2	72	0.672	ppb	0.672	14.66	1257	5000	
Mn	55	2	72	355.438	ppb	355.438	1.01	206022	10000	
Fe	57	2	72	4087.847	ppb	4087.847	1.11	117425	400000	
Co	59	2	72	17.575	ppb	17.575	2.02	47191	2000	
Ni	60	2	72	37.476	ppb	37.476	1.08	29140	5000	
Cu	63	2	72	0.489	ppb	0.489	3.05	2520	5000	
Zn	66	2	72	1.885	ppb	1.885	14.80	960	5000	
As	75	2	72	53.184	ppb	53.184	3.43	10026	2000	
Se	78	1	72	0.064	ppb	0.064	49.88	51	2000	
Sr	88	2	72	132.188	ppb	132.188	2.50	78865	4000	
Zr	90	2	72	93.687	ppb	93.687	1.48	857	1000	
Nb	93	2	72	0.231	ppb	0.231	26.16	1440	200	
Mo	95	2	115	6.045	ppb	6.045	7.48	6135	2000	
Pd	105	2	115	0.005	ppb	0.005	207.31	17	100	
Ag	107	2	115	-0.010	ppb	-0.010	-87.68	50	100	
Cd	111	2	115	0.109	ppb	0.109	21.08	50	2000	
Sn	120	2	115	0.104	ppb	0.104	49.66	300	2000	
Sb	121	2	115	1.108	ppb	1.108	12.50	1147	1000	
Ba	137	2	115	141.044	ppb	141.044	1.32	46162	5000	
W	182	2	165	0.236	ppb	0.236	30.02	2534	100	
Pt	195	2	165	-0.004	ppb	-0.004	-114.53	40	100	
Tl	205	2	165	-0.011	ppb	-0.011	-109.96	260	2000	
Pb	208	2	165	0.105	ppb	0.105	23.40	3040	5000	
Th	232	2	165	0.006	ppb	0.006	225.86	760	2000	
U	238	2	165	5.535	ppb	5.535	1.41	85694	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	846005	0.92	962768	87.87	60	120	
Sc (IS)	45	1	HMI H2	31738191	0.85	35850229	88.53	60	120	
Sc (IS)	45	2	HMI He	1122785	1.06	1169942	95.97	60	120	
Sc (IS)	45	3	No Gas	58336767	0.49	64035761	91.10	60	120	
Ge Internal Standard	72	1	HMI H2	11976810	0.51	13887730	86.24	60	120	
Ge Internal Standard	72	2	HMI He	1232194	1.27	1316994	93.56	60	120	
In Internal Standard	115	2	HMI He	3738914	1.12	4006527	93.32	60	120	
Ho-165	165	2	HMI He	18813399	0.80	19709190	95.45	60	120	

Sample Report

Sample Table

Sample Name	280-116135-D-9-A
Data File Name	042SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:49:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435459 6020
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-16.363	ppb	-16.363	-27.75	106404	500000	
Li	7	2	45	-72.320	ppb	-72.320	-41.72	5231	500000	
Li	7	3	45	-63.568	ppb	-63.568	-9.54	3198873	50000	
Be	9	1	6	0.249	ppb	0.249	50.06	107	2000	
B	11	1	6	78.068	ppb	78.068	2.37	25316	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2357427.662	ppb	2357427.662	0.48	566258485	400000	>LDR
Mg	24	2	45	15770.670	ppb	15770.670	0.47	1787544	400000	
Al	27	2	45	70.360	ppb	70.360	3.03	2307	400000	
K	39	1	45	767.344	ppb	767.344	5.14	11009762	400000	
K	39	2	45	1663.990	ppb	1663.990	0.51	105889	400000	
Ca	40	1	45	10273.992	ppb	10273.992	0.41	47700441	400000	
Ca	44	2	45	10323.401	ppb	10323.401	1.58	30920	400000	
Ti	47	2	45	152.978	ppb	152.978	5.62	3954	4000	
V	51	2	72	147.850	ppb	147.850	0.28	155280	2000	
Cr	52	2	72	12.472	ppb	12.472	0.75	17291	5000	
Mn	55	2	72	92.261	ppb	92.261	1.79	47321	10000	
Fe	57	2	72	289.909	ppb	289.909	5.87	7542	400000	
Co	59	2	72	19.361	ppb	19.361	1.42	45904	2000	
Ni	60	2	72	163.712	ppb	163.712	0.85	111590	5000	
Cu	63	2	72	1.234	ppb	1.234	12.86	3641	5000	
Zn	66	2	72	6.096	ppb	6.096	4.77	1937	5000	
As	75	2	72	274.506	ppb	274.506	0.95	45592	2000	
Se	78	1	72	1.262	ppb	1.262	14.35	324	2000	
Sr	88	2	72	122.154	ppb	122.154	1.99	64340	4000	
Zr	90	2	72	8742.029	ppb	8742.029	0.87	63218	1000	>LDR
Nb	93	2	72	1.399	ppb	1.399	11.76	4831	200	
Mo	95	2	115	15.041	ppb	15.041	4.83	13404	2000	
Pd	105	2	115	0.030	ppb	0.030	47.11	50	100	
Ag	107	2	115	0.004	ppb	0.004	403.07	87	100	
Cd	111	2	115	0.213	ppb	0.213	36.22	83	2000	
Sn	120	2	115	0.217	ppb	0.217	18.07	377	2000	
Sb	121	2	115	0.924	ppb	0.924	14.05	853	1000	
Ba	137	2	115	210.009	ppb	210.009	1.88	60668	5000	
W	182	2	165	6.599	ppb	6.599	2.46	27903	100	
Pt	195	2	165	0.049	ppb	0.049	34.55	213	100	
Tl	205	2	165	0.000	ppb	0.000	2408.19	303	2000	
Pb	208	2	165	2.415	ppb	2.415	3.74	25111	5000	
Th	232	2	165	0.654	ppb	0.654	4.03	8180	2000	
U	238	2	165	2.725	ppb	2.725	0.65	35985	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	688583	0.24	962768	71.52	60	120	
Sc (IS)	45	1	HMI H2	26572165	0.41	35850229	74.12	60	120	
Sc (IS)	45	2	HMI He	1001052	1.47	1169942	85.56	60	120	
Sc (IS)	45	3	No Gas	46196254	0.90	64035761	72.14	60	120	
Ge Internal Standard	72	1	HMI H2	9819755	0.33	13887730	70.71	60	120	
Ge Internal Standard	72	2	HMI He	1088005	1.13	1316994	82.61	60	120	
In Internal Standard	115	2	HMI He	3300031	1.10	4006527	82.37	60	120	
Ho-165	165	2	HMI He	16000117	0.36	19709190	81.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	043_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:52:52-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	506.959	ppb	0.462	317269	500	101.4	90	110	
Li	7	2	45	525.585	ppb	10.544	16163	500	105.1	90	110	
Li	7	3	45	626.185	ppb	61.717	10365008	500	125.2	90	110	>+\-10%
Be	9	1	6	50.037	ppb	2.191	21042	50	100.1	90	110	
B	11	1	6	59.800	ppb	4.783	24598	50	119.6	90	110	>+\-10%
Na	23	1	45	7106.048	ppb	0.602	27380662	5000	142.1	90	110	>+\-10%
Na	23	2	45	7008.714	ppb	2.698	1874683	5000	140.2	90	110	>+\-10%
Mg	24	2	45	4862.156	ppb	0.692	608622	5000	97.2	90	110	
Al	27	2	45	5214.141	ppb	0.348	162231	5000	104.3	90	110	
K	39	1	45	5037.828	ppb	1.499	29330505	5000	100.8	90	110	
K	39	2	45	5068.566	ppb	1.226	322205	5000	101.4	90	110	
Ca	40	1	45	4937.601	ppb	1.385	28380489	5000	98.8	90	110	
Ca	44	2	45	5085.362	ppb	4.237	16850	5000	101.7	90	110	
Ti	47	2	45	49.882	ppb	6.569	1423	50	99.8	90	110	
V	51	2	72	48.975	ppb	1.582	59820	50	98.0	90	110	
Cr	52	2	72	49.273	ppb	1.334	77121	50	98.5	90	110	
Mn	55	2	72	51.560	ppb	3.719	30172	50	103.1	90	110	
Fe	57	2	72	4803.283	ppb	0.750	138639	5000	96.1	90	110	
Co	59	2	72	49.580	ppb	1.062	133808	50	99.2	90	110	
Ni	60	2	72	49.028	ppb	1.069	38232	50	98.1	90	110	
Cu	63	2	72	48.983	ppb	1.256	107420	50	98.0	90	110	
Zn	66	2	72	47.584	ppb	1.607	14414	50	95.2	90	110	
As	75	2	72	48.912	ppb	1.814	9270	50	97.8	90	110	
Se	78	1	72	48.093	ppb	0.565	14513	50	96.2	90	110	
Sr	88	2	72	52.241	ppb	2.773	31332	50	104.5	90	110	
Zr	90	2	72	71.268	ppb	7.050	677	50	142.5	90	110	>+\-10%
Nb	93	2	72	87.416	ppb	0.850	303771	100	87.4	90	110	>+\-10%
Mo	95	2	115	46.669	ppb	0.871	47561	50	93.3	90	110	
Pd	105	2	115	48.307	ppb	1.564	77835	50	96.6	90	110	
Ag	107	2	115	48.966	ppb	0.898	165833	50	97.9	90	110	
Cd	111	2	115	49.168	ppb	1.489	21374	50	98.3	90	110	
Sn	120	2	115	49.196	ppb	1.159	55990	50	98.4	90	110	
Sb	121	2	115	51.037	ppb	2.254	50871	50	102.1	90	110	
Ba	137	2	115	52.251	ppb	2.802	17302	50	104.5	90	110	
W	182	2	165	48.190	ppb	1.605	230203	50	96.4	90	110	
Pt	195	2	165	48.562	ppb	0.957	192347	50	97.1	90	110	
Tl	205	2	165	50.725	ppb	2.072	441020	50	101.4	90	110	
Pb	208	2	165	51.082	ppb	0.278	586464	50	102.2	90	110	
Th	232	2	165	50.388	ppb	1.018	687957	50	100.8	90	110	
U	238	2	165	48.370	ppb	0.862	745443	50	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	869985	1.31	962768	90.36	60	120	
Sc (IS)	45	1	HMI H2	32865703	0.58	35850229	91.68	60	120	
Sc (IS)	45	2	HMI He	1105285	0.91	1169942	94.47	60	120	
Sc (IS)	45	3	No Gas	51430792	29.08	64035761	80.32	60	120	
Ge Internal Standard	72	1	HMI H2	12527057	1.26	13887730	90.20	60	120	
Ge Internal Standard	72	2	HMI He	1238503	0.39	1316994	94.04	60	120	
In Internal Standard	115	2	HMI He	3780655	0.96	4006527	94.36	60	120	
Ho-165	165	2	HMI He	18773999	0.95	19709190	95.26	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	044_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T12:56:39-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-0.343	ppb	-628.6	4624749	10	
Be	9	1	6	-0.064	ppb	-20.9	3	0.5	
B	11	1	6	8.339	ppb	14.4	3941	0.5	>RL
Na	23	1	45	710.333	ppb	2.1	2884089	25	>RL
Na	23	2	45	590.801	ppb	3.5	174645	25	>RL
Mg	24	2	45	2.255	ppb	15.9	533	25	
Al	27	2	45	4.696	ppb	31.3	513	15	
K	39	1	45	113.550	ppb	11.7	11021522	50	>RL
K	39	2	45	7.137	ppb	113.0	17187	50	
Ca	40	1	45	19.297	ppb	1.0	161170	50	
Ca	44	2	45	1.965	ppb	751.8	80	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.830	ppb	17.3	2897	1	
Cr	52	2	72	0.057	ppb	18.5	307	1	
Mn	55	2	72	0.043	ppb	69.9	180	0.5	
Fe	57	2	72	2.654	ppb	120.8	313	25	
Co	59	2	72	0.008	ppb	147.2	33	0.5	
Ni	60	2	72	0.195	ppb	52.4	423	1	
Cu	63	2	72	0.701	ppb	34.4	3010	1	
Zn	66	2	72	1.260	ppb	24.2	787	5	
As	75	2	72	0.012	ppb	637.5	29	1	
Se	78	1	72	0.068	ppb	166.2	53	1	
Sr	88	2	72	0.112	ppb	37.1	87	0.5	
Zr	90	2	72	1.434	ppb	93.5	103	1	>RL
Nb	93	2	72	4.487	ppb	4.9	16310	2	>RL
Mo	95	2	115	0.132	ppb	41.5	187	0.5	
Pd	105	2	115	0.047	ppb	27.6	87	1	
Ag	107	2	115	0.006	ppb	193.6	107	1	
Cd	111	2	115	0.000	ppb	5575.8	3	0.5	
Sn	120	2	115	0.140	ppb	30.3	353	1	
Sb	121	2	115	0.400	ppb	18.0	467	0.6	
Ba	137	2	115	0.148	ppb	69.9	63	0.5	
W	182	2	165	0.107	ppb	8.3	1927	1	
Pt	195	2	165	0.010	ppb	118.0	97	1	
Tl	205	2	165	-0.011	ppb	-18.4	260	0.1	
Pb	208	2	165	-0.011	ppb	-209.0	1713	0.5	
Th	232	2	165	0.002	ppb	389.8	707	1	
U	238	2	165	0.037	ppb	24.5	817	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	901079	1.00	962768	93.59	60	120	
Sc (IS)	45	1	HMI H2	32308650	0.31	35850229	90.12	60	120	
Sc (IS)	45	2	HMI He	1117322	0.98	1169942	95.50	60	120	
Sc (IS)	45	3	No Gas	55822328	1.06	64035761	87.17	60	120	
Ge Internal Standard	72	1	HMI H2	12326758	0.21	13887730	88.76	60	120	
Ge Internal Standard	72	2	HMI He	1246377	0.46	1316994	94.64	60	120	
In Internal Standard	115	2	HMI He	3882954	0.65	4006527	96.92	60	120	
Ho-165	165	2	HMI He	18894959	0.28	19709190	95.87	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	045LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:00:26-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	15.864	ppb	38.644	4875067	50	31.7	70	130	>+/-30%
Be	9	1	6	0.988	ppb	18.657	460	1	98.8	70	130	
Na	23	2	45	458.020	ppb	2.127	139851	50	916.0	70	130	>+/-30%
Mg	24	2	45	51.828	ppb	2.814	6842	50	103.7	70	130	
Al	27	2	45	28.792	ppb	12.795	1277	30	96.0	70	130	
K	39	2	45	112.917	ppb	6.998	23770	100	112.9	70	130	
Ca	44	2	45	46.631	ppb	50.009	230	50	93.3	70	130	
V	51	2	72	5.527	ppb	0.821	8533	5	110.5	70	130	
Cr	52	2	72	2.192	ppb	11.514	3681	2	109.6	70	130	
Mn	55	2	72	0.987	ppb	21.689	737	1	98.7	70	130	
Fe	57	2	72	54.725	ppb	9.391	1834	50	109.4	70	130	
Co	59	2	72	0.952	ppb	5.753	2610	1	95.2	70	130	
Ni	60	2	72	2.551	ppb	14.283	2270	2	127.5	70	130	
Cu	63	2	72	2.254	ppb	3.109	6425	2	112.7	70	130	
Zn	66	2	72	9.883	ppb	9.802	3361	10	98.8	70	130	
As	75	2	72	4.787	ppb	0.934	943	5	95.7	70	130	
Se	78	1	72	4.596	ppb	1.347	1400	5	91.9	70	130	
Sr	88	2	72	1.070	ppb	23.766	667	1	107.0	70	130	
Zr	90	2	72	16.209	ppb	6.123	227	0.5	3241.7	70	130	>+/-30%
Nb	93	2	72	7.894	ppb	5.172	28356	2	394.7	70	130	>+/-30%
Mo	95	2	115	1.909	ppb	3.729	2037	2	95.5	70	130	
Pd	105	2	115	0.016	ppb	56.577	37	1	1.6	70	130	>+/-30%
Ag	107	2	115	4.731	ppb	3.524	16467	5	94.6	70	130	
Cd	111	2	115	1.094	ppb	3.867	490	1	109.4	70	130	
Sn	120	2	115	10.069	ppb	1.379	11876	10	100.7	70	130	
Sb	121	2	115	1.889	ppb	7.931	1980	2	94.4	70	130	
Ba	137	2	115	1.044	ppb	16.016	367	1	104.4	70	130	
W	182	2	165	4.894	ppb	2.089	24968	1	489.4	70	130	>+/-30%
Pt	195	2	165	0.033	ppb	27.202	190	1	3.3	70	130	>+/-30%
Tl	205	2	165	0.970	ppb	5.605	8897	1	97.0	70	130	
Pb	208	2	165	0.960	ppb	8.613	12977	1	96.0	70	130	
Th	232	2	165	1.994	ppb	1.374	28242	2	99.7	70	130	
U	238	2	165	0.997	ppb	2.665	15804	1	99.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	899508	0.02	962768	93.43	60	120	
Sc (IS)	45	1	HMI H2	32379562	0.39	35850229	90.32	60	120	
Sc (IS)	45	2	HMI He	1123510	0.11	1169942	96.03	60	120	
Sc (IS)	45	3	No Gas	56468922	0.73	64035761	88.18	60	120	
Ge Internal Standard	72	1	HMI H2	12375023	0.18	13887730	89.11	60	120	
Ge Internal Standard	72	2	HMI He	1253019	1.12	1316994	95.14	60	120	
In Internal Standard	115	2	HMI He	3867828	1.54	4006527	96.54	60	120	
Ho-165	165	2	HMI He	19022048	0.04	19709190	96.51	60	120	

Blank Report

Sample Table

Sample Name	MB 280-435539/1-A
Data File Name	046_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:04:13-07:00
Sample Type	Blank
Dilution	1
Comment	435539 6020a
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	20.368	ppb	16.18045319	142311	0.5
Li	7	2	45	-17.831	ppb	-114.8016355	7025	0.5
Li	7	3	45	-5.812	ppb	-94.56542704	4742825	10
Be	9	1	6	-0.040	ppb	-35.56882852	13	0.5
B	11	1	6	6.646	ppb	17.28998518	3097	0.5
Na	23	1	45	333.309	ppb	1.001744253	1468778	25
Na	23	2	45	296.004	ppb	2.682626229	98834	25
Mg	24	2	45	1.472	ppb	50.08193056	450	25
Al	27	2	45	0.362	ppb	398.6616131	390	15
K	39	1	45	-1187.943	ppb	-1.65714898	6319249	50
K	39	2	45	-1.318	ppb	-924.9599938	17241	50
Ca	40	1	45	5.493	ppb	4.243982383	83390	50
Ca	44	2	45	-5.506	ppb	-236.0399947	57	25
Ti	47	2	45	0.222	ppb	173.2050808	7	0.5
V	51	2	72	0.174	ppb	32.13308611	2170	1
Cr	52	2	72	0.215	ppb	29.23005608	570	1
Mn	55	2	72	0.036	ppb	91.91990914	180	0.5
Fe	57	2	72	0.601	ppb	499.4364207	260	25
Co	59	2	72	0.000	ppb	1597.061194	13	0.5
Ni	60	2	72	0.027	ppb	326.461065	300	1
Cu	63	2	72	0.121	ppb	25.40685365	1794	1
Zn	66	2	72	0.962	ppb	20.56418617	717	5
As	75	2	72	0.041	ppb	81.5828333	36	1
Se	78	1	72	-0.035	ppb	-44.62092378	23	1
Sr	88	2	72	0.033	ppb	47.80120298	40	0.5
Zr	90	2	72	4.636	ppb	128.3552697	133	1
Nb	93	2	72	1.000	ppb	12.0979235	4248	2
Mo	95	2	115	0.010	ppb	423.1353432	60	0.5
Pd	105	2	115	0.012	ppb	50.42609763	30	1
Ag	107	2	115	-0.003	ppb	-100.1173584	80	1
Cd	111	2	115	0.015	ppb	149.5662421	10	0.5
Sn	120	2	115	0.118	ppb	29.66039712	337	1
Sb	121	2	115	0.074	ppb	19.10607079	137	0.6
Ba	137	2	115	0.048	ppb	118.7229088	30	0.5
W	182	2	165	0.230	ppb	24.83654062	2560	1
Pt	195	2	165	0.000	ppb	-2417.889024	57	1
Tl	205	2	165	-0.016	ppb	-30.92008763	217	0.1
Pb	208	2	165	-0.014	ppb	-61.23238552	1703	0.5
Th	232	2	165	0.007	ppb	127.4866806	797	1
U	238	2	165	0.006	ppb	105.4817638	340	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	863798	1.05	962768	89.72	60	120	
Sc (IS)	45	1	HMI H2	32337583	0.26	35850229	90.20	60	120	
Sc (IS)	45	2	HMI He	1154811	1.35	1169942	98.71	60	120	
Sc (IS)	45	3	No Gas	58073267	0.79	64035761	90.69	60	120	
Ge Internal Standard	72	1	HMI H2	12337746	0.67	13887730	88.84	60	120	
Ge Internal Standard	72	2	HMI He	1278553	0.69	1316994	97.08	60	120	
In Internal Standard	115	2	HMI He	3981464	0.48	4006527	99.37	60	120	
Ho-165	165	2	HMI He	19233117	0.16	19709190	97.58	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-435539/2-A
Data File Name	047_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:08:00-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	435539 6020a
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	96.330	96.330	ppb	7.305	172341	400	24.1	80	120	>+/-20%
Li	7	2	45	49.854	49.854	ppb	42.520	8359	400	12.5	80	120	>+/-20%
Li	7	3	45	74.620	74.620	ppb	5.000	5830988	400	18.7	80	120	>+/-20%
Be	9	1	6	37.508	37.508	ppb	4.123	16033	40	93.8	80	120	
Na	23	2	45	184.430	184.430	ppb	3.329	68840	40	461.1	80	120	>+/-20%
Mg	24	2	45	5.432	5.432	ppb	17.939	980	40	13.6	80	120	>+/-20%
Al	27	2	45	444.609	444.609	ppb	4.258	14998	40	1111.5	80	120	>+/-20%
K	39	2	45	2.016	2.016	ppb	65.319	17678	40	5.0	80	120	>+/-20%
Ca	44	2	45	270.788	270.788	ppb	18.485	1023	40	677.0	80	120	>+/-20%
V	51	2	72	39.885	39.885	ppb	0.656	51020	40	99.7	80	120	
Cr	52	2	72	39.305	39.305	ppb	0.682	64014	40	98.3	80	120	
Mn	55	2	72	41.224	41.224	ppb	2.902	25112	40	103.1	80	120	
Fe	57	2	72	420.959	420.959	ppb	7.434	12856	40	1052.4	80	120	>+/-20%
Co	59	2	72	39.661	39.661	ppb	0.393	111298	40	99.2	80	120	
Ni	60	2	72	39.264	39.264	ppb	1.524	31893	40	98.2	80	120	
Cu	63	2	72	39.067	39.067	ppb	1.798	89392	40	97.7	80	120	
Zn	66	2	72	37.502	37.502	ppb	5.507	11902	40	93.8	80	120	
As	75	2	72	36.121	36.121	ppb	3.187	7126	40	90.3	80	120	
Se	78	1	72	36.150	36.150	ppb	1.796	10880	40	90.4	80	120	
Nb	93	2	72	0.794	0.794	ppb	4.914	3534	40	2.0	80	120	>+/-20%
Mo	95	2	115	34.161	34.161	ppb	1.008	36559	40	85.4	80	120	
Pd	105	2	115	0.022	0.022	ppb	94.325	47	40	0.1	80	120	>+/-20%
Ag	107	2	115	40.006	40.006	ppb	1.704	142216	40	100.0	80	120	
Cd	111	2	115	37.730	37.730	ppb	1.530	17215	40	94.3	80	120	
Sn	120	2	115	38.581	38.581	ppb	1.196	46134	40	96.5	80	120	
Sb	121	2	115	39.022	39.022	ppb	1.052	40844	40	97.6	80	120	
Ba	137	2	115	40.834	40.834	ppb	4.201	14188	40	102.1	80	120	
W	182	2	165	11.460	11.460	ppb	1.757	57488	40	28.6	80	120	>+/-20%
Pt	195	2	165	-0.005	-0.005	ppb	-139.221	37	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.501	39.501	ppb	0.555	353819	40	98.8	80	120	
Pb	208	2	165	39.905	39.905	ppb	0.734	472230	40	99.8	80	120	
Th	232	2	165	38.944	38.944	ppb	0.609	547784	40	97.4	80	120	
U	238	2	165	37.439	37.439	ppb	0.692	594299	40	93.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	884063	0.85	962768	91.83	60	120	
Sc (IS)	45	1	HMI H2	33012813	0.76	35850229	92.09	60	120	
Sc (IS)	45	2	HMI He	1170262	0.68	1169942	100.03	60	120	
Sc (IS)	45	3	No Gas	58914527	0.80	64035761	92.00	60	120	
Ge Internal Standard	72	1	HMI H2	12485631	0.68	13887730	89.90	60	120	
Ge Internal Standard	72	2	HMI He	1287772	0.67	1316994	97.78	60	120	
In Internal Standard	115	2	HMI He	3968210	1.70	4006527	99.04	60	120	
Ho-165	165	2	HMI He	19334827	0.28	19709190	98.10	60	120	

Sample Report

Sample Table

Sample Name	280-116091-E-4-B
Data File Name	048SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:11:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	42.947	ppb	42.947	4.39	148145	500000	
Li	7	2	45	23.656	ppb	23.656	72.05	7606	500000	
Li	7	3	45	18.309	ppb	18.309	36.42	5052596	50000	
Be	9	1	6	-0.031	ppb	-0.031	-121.31	17	2000	
B	11	1	6	141.642	ppb	141.642	2.55	55791	2000	
Na	23	1	45	80421.091	ppb	80421.091	1.10	298554696	2000	>LDR
Na	23	2	45	76894.770	ppb	76894.770	0.74	20866318	400000	
Mg	24	2	45	51152.432	ppb	51152.432	0.17	6544103	400000	
Al	27	2	45	29.460	ppb	29.460	20.61	1307	400000	
K	39	1	45	5730.708	ppb	5730.708	0.59	30940837	400000	
K	39	2	45	6801.320	ppb	6801.320	0.82	436284	400000	
Ca	40	1	45	170267.827	ppb	170267.827	0.74	948135213	400000	
Ca	44	2	45	174657.299	ppb	174657.299	0.46	589324	400000	
Ti	47	2	45	0.344	ppb	0.344	100.73	10	4000	
V	51	2	72	9.138	ppb	9.138	2.19	12883	2000	
Cr	52	2	72	0.453	ppb	0.453	11.70	937	5000	
Mn	55	2	72	30.696	ppb	30.696	3.44	18272	10000	
Fe	57	2	72	80.736	ppb	80.736	2.91	2597	400000	
Co	59	2	72	0.249	ppb	0.249	19.95	693	2000	
Ni	60	2	72	1.554	ppb	1.554	9.96	1493	5000	
Cu	63	2	72	0.862	ppb	0.862	7.68	3387	5000	
Zn	66	2	72	3.222	ppb	3.222	19.39	1377	5000	
As	75	2	72	3.200	ppb	3.200	2.49	641	2000	
Se	78	1	72	0.736	ppb	0.736	12.51	245	2000	
Sr	88	2	72	2218.151	ppb	2218.151	0.97	1348271	4000	
Zr	90	2	72	225.794	ppb	225.794	5.51	1974	1000	
Nb	93	2	72	0.584	ppb	0.584	8.23	2710	200	
Mo	95	2	115	3.996	ppb	3.996	5.32	4204	2000	
Pd	105	2	115	0.030	ppb	0.030	89.81	60	100	
Ag	107	2	115	-0.004	ppb	-0.004	-247.76	73	100	
Cd	111	2	115	0.015	ppb	0.015	147.17	10	2000	
Sn	120	2	115	0.245	ppb	0.245	23.09	473	2000	
Sb	121	2	115	0.461	ppb	0.461	3.38	527	1000	
Ba	137	2	115	83.177	ppb	83.177	1.65	28123	5000	
W	182	2	165	1.720	ppb	1.720	4.88	9594	100	
Pt	195	2	165	0.001	ppb	0.001	584.68	60	100	
Tl	205	2	165	-0.009	ppb	-0.009	-147.16	270	2000	
Pb	208	2	165	-0.004	ppb	-0.004	-305.64	1787	5000	
Th	232	2	165	0.100	ppb	0.100	1.18	2044	2000	
U	238	2	165	30.544	ppb	30.544	0.89	471552	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	841636	0.58	962768	87.42	60	120	
Sc (IS)	45	1	HMI H2	31896587	0.10	35850229	88.97	60	120	
Sc (IS)	45	2	HMI He	1130000	1.11	1169942	96.59	60	120	
Sc (IS)	45	3	No Gas	58167792	0.24	64035761	90.84	60	120	
Ge Internal Standard	72	1	HMI H2	12049595	0.84	13887730	86.76	60	120	
Ge Internal Standard	72	2	HMI He	1255870	1.19	1316994	95.36	60	120	
In Internal Standard	115	2	HMI He	3860998	1.19	4006527	96.37	60	120	
Ho-165	165	2	HMI He	18803541	1.12	19709190	95.40	60	120	

Sample Report

Sample Table

Sample Name	280-116091-E-6-B
Data File Name	049SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:15:35-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	36.227	ppb	36.227	7.21	146021	500000	
Li	7	2	45	27.831	ppb	27.831	103.03	7636	500000	
Li	7	3	45	9.843	ppb	9.843	18.88	4918778	50000	
Be	9	1	6	-0.046	ppb	-0.046	-98.69	10	2000	
B	11	1	6	158.257	ppb	158.257	2.55	60486	2000	
Na	23	1	45	62233.648	ppb	62233.648	0.70	231386823	2000	>LDR
Na	23	2	45	60307.182	ppb	60307.182	1.30	16265079	400000	
Mg	24	2	45	109818.536	ppb	109818.536	1.84	13960068	400000	
Al	27	2	45	10.760	ppb	10.760	54.93	707	400000	
K	39	1	45	9770.579	ppb	9770.579	0.96	45427263	400000	
K	39	2	45	10672.149	ppb	10672.149	1.72	670620	400000	
Ca	40	1	45	286412.393	ppb	286412.393	0.39	1596880136	400000	
Ca	44	2	45	293192.128	ppb	293192.128	2.34	982899	400000	
Ti	47	2	45	0.461	ppb	0.461	86.61	13	4000	
V	51	2	72	7.218	ppb	7.218	6.81	10464	2000	
Cr	52	2	72	33.154	ppb	33.154	1.56	52128	5000	
Mn	55	2	72	0.061	ppb	0.061	70.15	190	10000	
Fe	57	2	72	25.752	ppb	25.752	14.54	980	400000	
Co	59	2	72	0.106	ppb	0.106	43.27	300	2000	
Ni	60	2	72	3.677	ppb	3.677	10.25	3127	5000	
Cu	63	2	72	0.598	ppb	0.598	9.46	2777	5000	
Zn	66	2	72	1.236	ppb	1.236	22.83	777	5000	
As	75	2	72	2.677	ppb	2.677	2.89	535	2000	
Se	78	1	72	51.610	ppb	51.610	0.61	14988	2000	
Sr	88	2	72	3429.648	ppb	3429.648	3.11	2062049	4000	
Zr	90	2	72	102.016	ppb	102.016	28.82	933	1000	
Nb	93	2	72	0.492	ppb	0.492	29.35	2357	200	
Mo	95	2	115	15.880	ppb	15.880	4.49	16110	2000	
Pd	105	2	115	0.038	ppb	0.038	33.77	70	100	
Ag	107	2	115	-0.003	ppb	-0.003	-415.32	73	100	
Cd	111	2	115	0.024	ppb	0.024	225.95	13	2000	
Sn	120	2	115	0.150	ppb	0.150	32.54	353	2000	
Sb	121	2	115	0.203	ppb	0.203	20.97	257	1000	
Ba	137	2	115	44.081	ppb	44.081	2.50	14505	5000	
W	182	2	165	0.408	ppb	0.408	6.27	3301	100	
Pt	195	2	165	-0.005	ppb	-0.005	-57.93	37	100	
Tl	205	2	165	-0.020	ppb	-0.020	-30.00	177	2000	
Pb	208	2	165	0.008	ppb	0.008	263.50	1893	5000	
Th	232	2	165	0.028	ppb	0.028	59.49	1043	2000	
U	238	2	165	112.832	ppb	112.832	2.68	1715784	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	817542	2.46	962768	84.92	60	120	
Sc (IS)	45	1	HMI H2	31937888	0.81	35850229	89.09	60	120	
Sc (IS)	45	2	HMI He	1122906	0.59	1169942	95.98	60	120	
Sc (IS)	45	3	No Gas	57841091	0.99	64035761	90.33	60	120	
Ge Internal Standard	72	1	HMI H2	12057379	0.37	13887730	86.82	60	120	
Ge Internal Standard	72	2	HMI He	1242514	0.85	1316994	94.34	60	120	
In Internal Standard	115	2	HMI He	3756874	0.70	4006527	93.77	60	120	
Ho-165	165	2	HMI He	18532184	1.66	19709190	94.03	60	120	

Sample Report

Sample Table

Sample Name	280-116103-F-1-B
Data File Name	050SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:19:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	110.556	ppb	110.556	8.83	158593	500000	
Li	7	2	45	72.592	ppb	72.592	9.76	8133	500000	
Li	7	3	45	67.112	ppb	67.112	7.59	4816630	50000	
Be	9	1	6	-0.054	ppb	-0.054	-28.79	7	2000	
B	11	1	6	1432.332	ppb	1432.332	1.20	512817	2000	
Na	23	1	45	574185.553	ppb	574185.553	0.61	1970818904	2000	>LDR
Na	23	2	45	531012.429	ppb	531012.429	1.15	138124118	400000	
Mg	24	2	45	85454.809	ppb	85454.809	1.06	10486367	400000	
Al	27	2	45	202.496	ppb	202.496	7.26	6518	400000	
K	39	1	45	93004.310	ppb	93004.310	0.10	316965575	400000	
K	39	2	45	89740.552	ppb	89740.552	0.17	5323643	400000	
Ca	40	1	45	257013.756	ppb	257013.756	0.97	1324007100	400000	
Ca	44	2	45	251056.503	ppb	251056.503	0.34	812573	400000	
Ti	47	2	45	10.732	ppb	10.732	24.19	300	4000	
V	51	2	72	7.991	ppb	7.991	0.68	10881	2000	
Cr	52	2	72	6.714	ppb	6.714	3.99	10254	5000	
Mn	55	2	72	2761.397	ppb	2761.397	0.51	1541769	10000	
Fe	57	2	72	23920.297	ppb	23920.297	0.87	661180	400000	
Co	59	2	72	18.131	ppb	18.131	1.94	46934	2000	
Ni	60	2	72	121.623	ppb	121.623	1.03	90560	5000	
Cu	63	2	72	19.287	ppb	19.287	1.26	41424	5000	
Zn	66	2	72	46.488	ppb	46.488	4.41	13510	5000	
As	75	2	72	27.709	ppb	27.709	1.57	5047	2000	
Se	78	1	72	1.782	ppb	1.782	15.13	504	2000	
Sr	88	2	72	1590.566	ppb	1590.566	0.73	914314	4000	
Zr	90	2	72	2071.858	ppb	2071.858	3.21	16417	1000	
Nb	93	2	72	1.318	ppb	1.318	7.78	5001	200	
Mo	95	2	115	21.056	ppb	21.056	0.80	20516	2000	
Pd	105	2	115	0.057	ppb	0.057	66.92	97	100	
Ag	107	2	115	0.031	ppb	0.031	89.04	180	100	
Cd	111	2	115	0.379	ppb	0.379	7.73	160	2000	
Sn	120	2	115	0.904	ppb	0.904	5.17	1157	2000	
Sb	121	2	115	3.353	ppb	3.353	7.42	3241	1000	
Ba	137	2	115	285.671	ppb	285.671	2.52	90255	5000	
W	182	2	165	0.916	ppb	0.916	1.53	5488	100	
Pt	195	2	165	0.010	ppb	0.010	39.89	93	100	
Tl	205	2	165	0.007	ppb	0.007	119.07	390	2000	
Pb	208	2	165	1.061	ppb	1.061	3.89	13320	5000	
Th	232	2	165	0.124	ppb	0.124	11.19	2264	2000	
U	238	2	165	20.329	ppb	20.329	1.28	298874	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	770214	0.30	962768	80.00	60	120	
Sc (IS)	45	1	HMI H2	29509156	0.25	35850229	82.31	60	120	
Sc (IS)	45	2	HMI He	1084004	1.34	1169942	92.65	60	120	
Sc (IS)	45	3	No Gas	49474886	0.66	64035761	77.26	60	120	
Ge Internal Standard	72	1	HMI H2	11070337	0.22	13887730	79.71	60	120	
Ge Internal Standard	72	2	HMI He	1187660	1.08	1316994	90.18	60	120	
In Internal Standard	115	2	HMI He	3610088	1.41	4006527	90.11	60	120	
Ho-165	165	2	HMI He	17902398	1.16	19709190	90.83	60	120	

Sample Report

Sample Table

Sample Name	280-116141-B-1-D
Data File Name	051SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:23:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	34.409	ppb	34.409	18.81	141365	500000	
Li	7	2	45	-2.196	ppb	-2.196	-960.06	7199	500000	
Li	7	3	45	-1.852	ppb	-1.852	-253.12	4498758	50000	
Be	9	1	6	-0.039	ppb	-0.039	-98.65	13	2000	
B	11	1	6	177.268	ppb	177.268	1.90	68905	2000	
Na	23	1	45	62334.542	ppb	62334.542	0.59	225340077	2000	>LDR
Na	23	2	45	57804.919	ppb	57804.919	0.61	15800034	400000	
Mg	24	2	45	105758.768	ppb	105758.768	1.14	13624607	400000	
Al	27	2	45	18.688	ppb	18.688	26.08	970	400000	
K	39	1	45	9911.161	ppb	9911.161	0.86	44657411	400000	
K	39	2	45	10469.937	ppb	10469.937	0.90	667070	400000	
Ca	40	1	45	287368.556	ppb	287368.556	0.67	1557869310	400000	
Ca	44	2	45	290827.678	ppb	290827.678	1.17	988092	400000	
Ti	47	2	45	0.114	ppb	0.114	173.21	3	4000	
V	51	2	72	6.545	ppb	6.545	9.40	9844	2000	
Cr	52	2	72	32.556	ppb	32.556	0.63	52128	5000	
Mn	55	2	72	0.504	ppb	0.504	6.34	457	10000	
Fe	57	2	72	102.661	ppb	102.661	9.39	3261	400000	
Co	59	2	72	0.096	ppb	0.096	17.77	277	2000	
Ni	60	2	72	3.661	ppb	3.661	16.27	3171	5000	
Cu	63	2	72	0.758	ppb	0.758	14.92	3181	5000	
Zn	66	2	72	2.809	ppb	2.809	14.00	1263	5000	
As	75	2	72	2.369	ppb	2.369	5.56	485	2000	
Se	78	1	72	51.132	ppb	51.132	2.44	14466	2000	
Sr	88	2	72	3374.014	ppb	3374.014	0.84	2065797	4000	
Zr	90	2	72	40.907	ppb	40.907	22.72	437	1000	
Nb	93	2	72	0.228	ppb	0.228	29.75	1467	200	
Mo	95	2	115	16.385	ppb	16.385	1.83	17078	2000	
Pd	105	2	115	0.049	ppb	0.049	49.66	90	100	
Ag	107	2	115	-0.013	ppb	-0.013	-80.76	43	100	
Cd	111	2	115	0.038	ppb	0.038	0.16	20	2000	
Sn	120	2	115	0.127	ppb	0.127	20.97	337	2000	
Sb	121	2	115	0.107	ppb	0.107	38.05	167	1000	
Ba	137	2	115	43.666	ppb	43.666	1.61	14762	5000	
W	182	2	165	0.428	ppb	0.428	14.12	3454	100	
Pt	195	2	165	-0.008	ppb	-0.008	-19.28	27	100	
Tl	205	2	165	-0.016	ppb	-0.016	-57.98	213	2000	
Pb	208	2	165	0.014	ppb	0.014	70.96	1990	5000	
Th	232	2	165	0.013	ppb	0.013	49.08	857	2000	
U	238	2	165	109.563	ppb	109.563	1.27	1695081	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	831757	0.05	962768	86.39	60	120	
Sc (IS)	45	1	HMI H2	31053740	0.31	35850229	86.62	60	120	
Sc (IS)	45	2	HMI He	1137918	0.44	1169942	97.26	60	120	
Sc (IS)	45	3	No Gas	54514463	0.34	64035761	85.13	60	120	
Ge Internal Standard	72	1	HMI H2	11746214	0.05	13887730	84.58	60	120	
Ge Internal Standard	72	2	HMI He	1265099	0.86	1316994	96.06	60	120	
In Internal Standard	115	2	HMI He	3859342	0.13	4006527	96.33	60	120	
Ho-165	165	2	HMI He	18849569	0.47	19709190	95.64	60	120	

Sample Report

Sample Table

Sample Name	280-116141-B-1-Dsd@5
Data File Name	052SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:27:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.714	ppb	2.714	355.31	136419	500000	
Li	7	2	45	-24.308	ppb	-24.308	-93.92	6842	500000	
Li	7	3	45	-14.883	ppb	-14.883	-11.89	4338150	50000	
Be	9	1	6	-0.055	ppb	-0.055	-51.25	7	2000	
B	11	1	6	43.177	ppb	43.177	2.21	17374	2000	
Na	23	1	45	12107.911	ppb	12107.911	0.30	45848714	2000	>LDR
Na	23	2	45	11597.562	ppb	11597.562	0.79	3200340	400000	
Mg	24	2	45	21262.306	ppb	21262.306	0.93	2754024	400000	
Al	27	2	45	-2.538	ppb	-2.538	-30.58	293	400000	
K	39	1	45	1991.194	ppb	1991.194	2.07	17866298	400000	
K	39	2	45	2035.827	ppb	2035.827	0.81	144223	400000	
Ca	40	1	45	54918.325	ppb	54918.325	1.12	310709735	400000	
Ca	44	2	45	55184.865	ppb	55184.865	1.19	188567	400000	
Ti	47	2	45	0.114	ppb	0.114	173.21	3	4000	
V	51	2	72	1.589	ppb	1.589	5.27	3911	2000	
Cr	52	2	72	6.174	ppb	6.174	6.46	10204	5000	
Mn	55	2	72	0.029	ppb	0.029	146.68	177	10000	
Fe	57	2	72	20.444	ppb	20.444	5.59	853	400000	
Co	59	2	72	0.023	ppb	0.023	46.09	77	2000	
Ni	60	2	72	0.844	ppb	0.844	9.15	957	5000	
Cu	63	2	72	0.261	ppb	0.261	29.88	2114	5000	
Zn	66	2	72	0.081	ppb	0.081	394.25	450	5000	
As	75	2	72	0.358	ppb	0.358	9.99	98	2000	
Se	78	1	72	9.141	ppb	9.141	4.98	2786	2000	
Sr	88	2	72	617.451	ppb	617.451	1.25	383334	4000	
Zr	90	2	72	2.256	ppb	2.256	26.26	113	1000	
Nb	93	2	72	0.039	ppb	0.039	82.78	810	200	
Mo	95	2	115	3.046	ppb	3.046	9.00	3294	2000	
Pd	105	2	115	0.002	ppb	0.002	441.78	13	100	
Ag	107	2	115	-0.004	ppb	-0.004	-40.91	77	100	
Cd	111	2	115	0.007	ppb	0.007	346.08	7	2000	
Sn	120	2	115	0.038	ppb	0.038	40.37	240	2000	
Sb	121	2	115	0.010	ppb	0.010	162.72	70	1000	
Ba	137	2	115	8.665	ppb	8.665	5.39	3014	5000	
W	182	2	165	0.027	ppb	0.027	82.39	1577	100	
Pt	195	2	165	-0.004	ppb	-0.004	-37.75	43	100	
Tl	205	2	165	-0.021	ppb	-0.021	-2.70	177	2000	
Pb	208	2	165	0.006	ppb	0.006	103.48	1943	5000	
Th	232	2	165	-0.018	ppb	-0.018	-32.57	447	2000	
U	238	2	165	19.381	ppb	19.381	0.96	307045	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	845096	1.23	962768	87.78	60	120	
Sc (IS)	45	1	HMI H2	32405427	0.68	35850229	90.39	60	120	
Sc (IS)	45	2	HMI He	1144031	0.60	1169942	97.79	60	120	
Sc (IS)	45	3	No Gas	54414094	1.36	64035761	84.97	60	120	
Ge Internal Standard	72	1	HMI H2	12527062	0.31	13887730	90.20	60	120	
Ge Internal Standard	72	2	HMI He	1282773	0.69	1316994	97.40	60	120	
In Internal Standard	115	2	HMI He	3957371	0.97	4006527	98.77	60	120	
Ho-165	165	2	HMI He	19289223	0.47	19709190	97.87	60	120	

Sample Report

Sample Table

Sample Name	280-116141-B-1-E MS
Data File Name	053SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:31:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	102.075	ppb	102.075	4.28	161325	500000	
Li	7	2	45	67.048	ppb	67.048	52.71	8276	500000	
Li	7	3	45	58.564	ppb	58.564	10.93	5134117	50000	
Be	9	1	6	38.708	ppb	38.708	1.53	15098	2000	
B	11	1	6	185.835	ppb	185.835	2.24	70028	2000	
Na	23	1	45	60681.312	ppb	60681.312	0.91	215715857	2000	>LDR
Na	23	2	45	57884.363	ppb	57884.363	1.23	15523245	400000	
Mg	24	2	45	105124.372	ppb	105124.372	0.96	13287551	400000	
Al	27	2	45	407.517	ppb	407.517	4.57	13146	400000	
K	39	1	45	9777.740	ppb	9777.740	0.48	43459778	400000	
K	39	2	45	10527.171	ppb	10527.171	0.98	658038	400000	
Ca	40	1	45	282055.536	ppb	282055.536	0.60	1503676138	400000	
Ca	44	2	45	291266.542	ppb	291266.542	1.08	970956	400000	
Ti	47	2	45	0.579	ppb	0.579	125.38	17	4000	
V	51	2	72	46.878	ppb	46.878	2.84	57598	2000	
Cr	52	2	72	70.565	ppb	70.565	1.18	110839	5000	
Mn	55	2	72	39.784	ppb	39.784	2.73	23420	10000	
Fe	57	2	72	415.172	ppb	415.172	2.43	12253	400000	
Co	59	2	72	37.179	ppb	37.179	1.06	100772	2000	
Ni	60	2	72	38.159	ppb	38.159	0.74	29945	5000	
Cu	63	2	72	35.816	ppb	35.816	0.96	79284	5000	
Zn	66	2	72	35.343	ppb	35.343	6.22	10858	5000	
As	75	2	72	39.790	ppb	39.790	0.15	7579	2000	
Se	78	1	72	88.388	ppb	88.388	2.67	24376	2000	
Sr	88	2	72	3457.183	ppb	3457.183	0.37	2081293	4000	
Zr	90	2	72	7803.400	ppb	7803.400	1.88	64524	1000	>LDR
Nb	93	2	72	0.174	ppb	0.174	46.74	1253	200	
Mo	95	2	115	50.557	ppb	50.557	0.30	52020	2000	
Pd	105	2	115	0.055	ppb	0.055	27.85	100	100	
Ag	107	2	115	36.669	ppb	36.669	0.76	125409	100	
Cd	111	2	115	37.000	ppb	37.000	3.84	16237	2000	
Sn	120	2	115	40.266	ppb	40.266	0.86	46302	2000	
Sb	121	2	115	40.847	ppb	40.847	3.21	41129	1000	
Ba	137	2	115	87.034	ppb	87.034	3.88	29085	5000	
W	182	2	165	11.545	ppb	11.545	0.63	56266	100	
Pt	195	2	165	-0.003	ppb	-0.003	-39.13	43	100	
Tl	205	2	165	37.999	ppb	37.999	0.53	330767	2000	
Pb	208	2	165	38.113	ppb	38.113	0.87	438345	5000	
Th	232	2	165	39.035	ppb	39.035	0.69	533519	2000	
U	238	2	165	148.222	ppb	148.222	0.69	2285584	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	806557	0.81	962768	83.77	60	120	
Sc (IS)	45	1	HMI H2	30538790	1.23	35850229	85.18	60	120	
Sc (IS)	45	2	HMI He	1116502	0.75	1169942	95.43	60	120	
Sc (IS)	45	3	No Gas	53748601	0.77	64035761	83.94	60	120	
Ge Internal Standard	72	1	HMI H2	11458465	0.94	13887730	82.51	60	120	
Ge Internal Standard	72	2	HMI He	1243894	0.81	1316994	94.45	60	120	
In Internal Standard	115	2	HMI He	3817378	1.21	4006527	95.28	60	120	
Ho-165	165	2	HMI He	18788379	1.00	19709190	95.33	60	120	

Sample Report

Sample Table

Sample Name	280-116141-B-1-F MSD
Data File Name	054SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:35:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	104.536	ppb	104.536	4.67	161583	500000	
Li	7	2	45	76.428	ppb	76.428	33.22	8389	500000	
Li	7	3	45	58.177	ppb	58.177	12.59	5032893	50000	
Be	9	1	6	39.410	ppb	39.410	3.79	15118	2000	
B	11	1	6	191.437	ppb	191.437	2.16	70945	2000	
Na	23	1	45	62206.755	ppb	62206.755	0.84	220386983	2000	>LDR
Na	23	2	45	58234.136	ppb	58234.136	0.49	15516531	400000	
Mg	24	2	45	106971.480	ppb	106971.480	0.57	13434430	400000	
Al	27	2	45	425.817	ppb	425.817	4.00	13634	400000	
K	39	1	45	10037.705	ppb	10037.705	0.94	44197804	400000	
K	39	2	45	10639.741	ppb	10639.741	0.47	660583	400000	
Ca	40	1	45	290129.848	ppb	290129.848	0.89	1541429044	400000	
Ca	44	2	45	293945.258	ppb	293945.258	0.82	973606	400000	
Ti	47	2	45	2.210	ppb	2.210	17.92	63	4000	
V	51	2	72	47.057	ppb	47.057	2.13	57629	2000	
Cr	52	2	72	70.646	ppb	70.646	2.57	110630	5000	
Mn	55	2	72	39.991	ppb	39.991	2.84	23470	10000	
Fe	57	2	72	409.539	ppb	409.539	5.69	12052	400000	
Co	59	2	72	36.843	ppb	36.843	1.20	99571	2000	
Ni	60	2	72	39.009	ppb	39.009	1.60	30517	5000	
Cu	63	2	72	36.243	ppb	36.243	1.39	79974	5000	
Zn	66	2	72	37.160	ppb	37.160	1.53	11362	5000	
As	75	2	72	40.162	ppb	40.162	1.44	7627	2000	
Se	78	1	72	89.959	ppb	89.959	1.65	24762	2000	
Sr	88	2	72	3530.326	ppb	3530.326	0.53	2118954	4000	
Zr	90	2	72	8051.637	ppb	8051.637	0.48	66372	1000	>LDR
Nb	93	2	72	0.201	ppb	0.201	43.74	1343	200	
Mo	95	2	115	51.888	ppb	51.888	1.42	53375	2000	
Pd	105	2	115	0.060	ppb	0.060	76.03	107	100	
Ag	107	2	115	36.193	ppb	36.193	2.10	123750	100	
Cd	111	2	115	36.381	ppb	36.381	0.82	15967	2000	
Sn	120	2	115	39.987	ppb	39.987	0.36	45974	2000	
Sb	121	2	115	42.381	ppb	42.381	1.61	42660	1000	
Ba	137	2	115	86.138	ppb	86.138	4.19	28788	5000	
W	182	2	165	11.993	ppb	11.993	1.00	58405	100	
Pt	195	2	165	-0.003	ppb	-0.003	-149.42	47	100	
Tl	205	2	165	38.533	ppb	38.533	1.71	335430	2000	
Pb	208	2	165	38.676	ppb	38.676	1.13	444837	5000	
Th	232	2	165	39.752	ppb	39.752	0.49	543419	2000	
U	238	2	165	150.290	ppb	150.290	1.01	2317995	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	793330	0.16	962768	82.40	60	120	
Sc (IS)	45	1	HMI H2	30434863	0.89	35850229	84.89	60	120	
Sc (IS)	45	2	HMI He	1109293	0.82	1169942	94.82	60	120	
Sc (IS)	45	3	No Gas	52738919	0.79	64035761	82.36	60	120	
Ge Internal Standard	72	1	HMI H2	11439871	1.08	13887730	82.37	60	120	
Ge Internal Standard	72	2	HMI He	1240158	0.74	1316994	94.17	60	120	
In Internal Standard	115	2	HMI He	3816498	0.63	4006527	95.26	60	120	
Ho-165	165	2	HMI He	18790633	1.02	19709190	95.34	60	120	

Sample Report

Sample Table

Sample Name	280-116141-B-1-D pds
Data File Name	055SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:44:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435539 6020a
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	227.568	ppb	227.568	5.01	196880	500000	
Li	7	2	45	146.944	ppb	146.944	27.50	9984	500000	
Li	7	3	45	181.746	ppb	181.746	11.89	6222727	50000	
Be	9	1	6	191.444	ppb	191.444	0.24	72589	2000	
B	11	1	6	140.858	ppb	140.858	0.86	51774	2000	
Na	23	1	45	60183.083	ppb	60183.083	1.23	207825810	2000	>LDR
Na	23	2	45	54445.835	ppb	54445.835	1.05	15065208	400000	
Mg	24	2	45	100538.308	ppb	100538.308	0.41	13111169	400000	
Al	27	2	45	2103.427	ppb	2103.427	0.63	68432	400000	
K	39	1	45	9785.082	ppb	9785.082	0.25	42241686	400000	
K	39	2	45	10197.480	ppb	10197.480	0.64	658148	400000	
Ca	40	1	45	281661.183	ppb	281661.183	0.53	1458629632	400000	
Ca	44	2	45	283055.534	ppb	283055.534	0.53	973552	400000	
Ti	47	2	45	7.512	ppb	7.512	41.01	223	4000	
V	51	2	72	205.306	ppb	205.306	0.82	251375	2000	
Cr	52	2	72	223.064	ppb	223.064	0.28	357850	5000	
Mn	55	2	72	204.379	ppb	204.379	0.74	122374	10000	
Fe	57	2	72	2039.564	ppb	2039.564	0.62	60611	400000	
Co	59	2	72	183.858	ppb	183.858	0.97	509644	2000	
Ni	60	2	72	183.778	ppb	183.778	0.85	146458	5000	
Cu	63	2	72	179.234	ppb	179.234	0.65	399717	5000	
Zn	66	2	72	182.922	ppb	182.922	2.03	55722	5000	
As	75	2	72	190.032	ppb	190.032	0.87	36914	2000	
Se	78	1	72	244.621	ppb	244.621	0.52	65424	2000	
Sr	88	2	72	3556.481	ppb	3556.481	0.50	2189727	4000	
Zr	90	2	72	40491.073	ppb	40491.073	0.34	342022	1000	>LDR
Nb	93	2	72	4.470	ppb	4.470	6.66	16594	200	
Mo	95	2	115	199.024	ppb	199.024	0.91	212091	2000	
Pd	105	2	115	0.083	ppb	0.083	31.01	150	100	
Ag	107	2	115	34.915	ppb	34.915	0.70	123765	100	
Cd	111	2	115	184.682	ppb	184.682	0.29	84005	2000	
Sn	120	2	115	198.889	ppb	198.889	0.70	236274	2000	
Sb	121	2	115	198.183	ppb	198.183	1.29	206562	1000	
Ba	137	2	115	253.505	ppb	253.505	1.66	87789	5000	
W	182	2	165	196.106	ppb	196.106	0.88	944823	100	
Pt	195	2	165	0.038	ppb	0.038	25.89	210	100	
Tl	205	2	165	197.543	ppb	197.543	1.54	1739291	2000	
Pb	208	2	165	191.865	ppb	191.865	1.12	2226746	5000	
Th	232	2	165	236.205	ppb	236.205	2.20	3265465	2000	
U	238	2	165	300.996	ppb	300.996	1.22	4698958	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	785244	0.67	962768	81.56	60	120	
Sc (IS)	45	1	HMI H2	29665091	0.94	35850229	82.75	60	120	
Sc (IS)	45	2	HMI He	1151926	0.91	1169942	98.46	60	120	
Sc (IS)	45	3	No Gas	51048204	3.71	64035761	79.72	60	120	
Ge Internal Standard	72	1	HMI H2	11123547	1.27	13887730	80.10	60	120	
Ge Internal Standard	72	2	HMI He	1272206	1.08	1316994	96.60	60	120	
In Internal Standard	115	2	HMI He	3956263	0.16	4006527	98.75	60	120	
Ho-165	165	2	HMI He	19021871	0.58	19709190	96.51	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	056_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:48:28-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	497.240	ppb	1.561	299152	500	99.4	90	110	
Li	7	2	45	419.722	ppb	1.845	14815	500	83.9	90	110	>+\-10%
Li	7	3	45	448.796	ppb	2.160	9394519	500	89.8	90	110	>+\-10%
Be	9	1	6	50.915	ppb	1.424	20198	50	101.8	90	110	
B	11	1	6	59.825	ppb	1.108	23222	50	119.6	90	110	>+\-10%
Na	23	1	45	5245.365	ppb	0.662	19321499	5000	104.9	90	110	
Na	23	2	45	5018.627	ppb	2.993	1393744	5000	100.4	90	110	
Mg	24	2	45	4704.286	ppb	0.614	609276	5000	94.1	90	110	
Al	27	2	45	5203.395	ppb	1.853	167502	5000	104.1	90	110	
K	39	1	45	5464.401	ppb	0.847	29456779	5000	109.3	90	110	
K	39	2	45	5018.054	ppb	0.584	330223	5000	100.4	90	110	
Ca	40	1	45	5154.332	ppb	1.539	28240075	5000	103.1	90	110	
Ca	44	2	45	4910.732	ppb	0.423	16840	5000	98.2	90	110	
Ti	47	2	45	50.238	ppb	9.771	1483	50	100.5	90	110	
V	51	2	72	50.476	ppb	0.681	63248	50	101.0	90	110	
Cr	52	2	72	49.121	ppb	0.858	78944	50	98.2	90	110	
Mn	55	2	72	52.090	ppb	2.756	31298	50	104.2	90	110	
Fe	57	2	72	4803.540	ppb	0.597	142361	5000	96.1	90	110	
Co	59	2	72	48.862	ppb	1.613	135403	50	97.7	90	110	
Ni	60	2	72	47.137	ppb	3.306	37757	50	94.3	90	110	
Cu	63	2	72	47.775	ppb	0.541	107617	50	95.5	90	110	
Zn	66	2	72	46.057	ppb	3.252	14341	50	92.1	90	110	
As	75	2	72	49.204	ppb	1.194	9575	50	98.4	90	110	
Se	78	1	72	50.412	ppb	3.729	14448	50	100.8	90	110	
Sr	88	2	72	53.215	ppb	3.471	32769	50	106.4	90	110	
Zr	90	2	72	74.618	ppb	12.998	723	50	149.2	90	110	>+\-10%
Nb	93	2	72	86.370	ppb	1.074	308186	100	86.4	90	110	>+\-10%
Mo	95	2	115	46.596	ppb	1.687	49869	50	93.2	90	110	
Pd	105	2	115	46.791	ppb	0.832	79162	50	93.6	90	110	
Ag	107	2	115	46.677	ppb	0.217	166005	50	93.4	90	110	
Cd	111	2	115	48.002	ppb	0.892	21911	50	96.0	90	110	
Sn	120	2	115	50.203	ppb	0.701	59990	50	100.4	90	110	
Sb	121	2	115	50.772	ppb	2.066	53139	50	101.5	90	110	
Ba	137	2	115	51.461	ppb	3.966	17889	50	102.9	90	110	
W	182	2	165	48.119	ppb	0.729	235990	50	96.2	90	110	
Pt	195	2	165	46.828	ppb	0.476	190417	50	93.7	90	110	
Tl	205	2	165	50.379	ppb	0.076	449714	50	100.8	90	110	
Pb	208	2	165	50.671	ppb	0.350	597223	50	101.3	90	110	
Th	232	2	165	50.191	ppb	0.313	703533	50	100.4	90	110	
U	238	2	165	48.313	ppb	0.488	764395	50	96.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	820886	2.74	962768	85.26	60	120	
Sc (IS)	45	1	HMI H2	31330260	0.54	35850229	87.39	60	120	
Sc (IS)	45	2	HMI He	1143536	0.31	1169942	97.74	60	120	
Sc (IS)	45	3	No Gas	52354964	1.07	64035761	81.76	60	120	
Ge Internal Standard	72	1	HMI H2	11898365	0.51	13887730	85.68	60	120	
Ge Internal Standard	72	2	HMI He	1271694	0.47	1316994	96.56	60	120	
In Internal Standard	115	2	HMI He	3969975	1.12	4006527	99.09	60	120	
Ho-165	165	2	HMI He	19272879	0.41	19709190	97.79	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	057_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:52:20-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-19.305	ppb	-3.1	4167222	10	
Be	9	1	6	-0.047	ppb	-0.6	10	0.5	
B	11	1	6	7.520	ppb	2.6	3304	0.5	>RL
Na	23	1	45	33.791	ppb	7.7	333469	25	>RL
Na	23	2	45	23.923	ppb	11.4	23289	25	
Mg	24	2	45	2.327	ppb	22.0	557	25	
Al	27	2	45	3.639	ppb	102.7	493	15	
K	39	1	45	198.162	ppb	15.4	11046514	50	>RL
K	39	2	45	-3.860	ppb	-190.1	16951	50	
Ca	40	1	45	24.019	ppb	7.4	183120	50	
Ca	44	2	45	5.314	ppb	30.9	93	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.895	ppb	6.0	4281	1	>RL
Cr	52	2	72	0.051	ppb	117.1	307	1	
Mn	55	2	72	-0.015	ppb	-224.4	150	0.5	
Fe	57	2	72	0.121	ppb	1879.9	247	25	
Co	59	2	72	0.003	ppb	285.2	20	0.5	
Ni	60	2	72	0.210	ppb	74.9	447	1	
Cu	63	2	72	0.338	ppb	2.0	2284	1	
Zn	66	2	72	1.144	ppb	31.0	773	5	
As	75	2	72	0.054	ppb	47.0	39	1	
Se	78	1	72	0.035	ppb	125.8	43	1	
Sr	88	2	72	0.092	ppb	20.4	77	0.5	
Zr	90	2	72	-3.993	ppb	-106.3	60	1	
Nb	93	2	72	4.062	ppb	4.6	15239	2	>RL
Mo	95	2	115	0.201	ppb	28.9	270	0.5	
Pd	105	2	115	0.033	ppb	81.1	67	1	
Ag	107	2	115	-0.014	ppb	-19.4	40	1	
Cd	111	2	115	0.014	ppb	261.6	10	0.5	
Sn	120	2	115	0.241	ppb	40.2	493	1	
Sb	121	2	115	0.364	ppb	11.4	450	0.6	
Ba	137	2	115	0.046	ppb	209.9	30	0.5	
W	182	2	165	0.078	ppb	74.6	1827	1	
Pt	195	2	165	0.013	ppb	51.1	110	1	
Tl	205	2	165	-0.015	ppb	-87.8	230	0.1	
Pb	208	2	165	-0.029	ppb	-41.7	1540	0.5	
Th	232	2	165	0.022	ppb	40.5	1013	1	
U	238	2	165	0.058	ppb	14.2	1157	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	826983	1.13	962768	85.90	60	120	
Sc (IS)	45	1	HMI H2	31508061	0.74	35850229	87.89	60	120	
Sc (IS)	45	2	HMI He	1146524	0.50	1169942	98.00	60	120	
Sc (IS)	45	3	No Gas	52902254	0.80	64035761	82.61	60	120	
Ge Internal Standard	72	1	HMI H2	12066210	0.28	13887730	86.88	60	120	
Ge Internal Standard	72	2	HMI He	1281142	0.17	1316994	97.28	60	120	
In Internal Standard	115	2	HMI He	4063811	0.58	4006527	101.43	60	120	
Ho-165	165	2	HMI He	19289451	0.57	19709190	97.87	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	058LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T13:57:09-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-8.182	ppb	-35.762	4280661	50	-16.4	70	130	>+/-30%
Be	9	1	6	0.871	ppb	31.188	380	1	87.1	70	130	
Na	23	2	45	50.239	ppb	7.930	31471	50	100.5	70	130	
Mg	24	2	45	44.346	ppb	7.141	6212	50	88.7	70	130	
Al	27	2	45	23.542	ppb	9.896	1170	30	78.5	70	130	
K	39	2	45	91.926	ppb	23.310	23633	100	91.9	70	130	
Ca	44	2	45	39.262	ppb	32.764	217	50	78.5	70	130	
V	51	2	72	6.322	ppb	3.611	9787	5	126.4	70	130	
Cr	52	2	72	1.855	ppb	6.535	3247	2	92.7	70	130	
Mn	55	2	72	1.050	ppb	30.320	797	1	105.0	70	130	
Fe	57	2	72	50.032	ppb	9.664	1750	50	100.1	70	130	
Co	59	2	72	0.800	ppb	5.928	2267	1	80.0	70	130	
Ni	60	2	72	2.544	ppb	9.778	2337	2	127.2	70	130	
Cu	63	2	72	1.829	ppb	2.609	5671	2	91.4	70	130	
Zn	66	2	72	9.606	ppb	5.303	3381	10	96.1	70	130	
As	75	2	72	4.569	ppb	3.709	929	5	91.4	70	130	
Se	78	1	72	4.622	ppb	7.967	1379	5	92.4	70	130	
Sr	88	2	72	1.030	ppb	21.437	663	1	103.0	70	130	
Zr	90	2	72	19.261	ppb	56.348	260	0.5	3852.1	70	130	>+/-30%
Nb	93	2	72	6.813	ppb	6.058	25330	2	340.6	70	130	>+/-30%
Mo	95	2	115	1.799	ppb	6.726	2027	2	89.9	70	130	
Pd	105	2	115	0.006	ppb	268.479	20	1	0.6	70	130	>+/-30%
Ag	107	2	115	4.531	ppb	2.262	16644	5	90.6	70	130	
Cd	111	2	115	0.860	ppb	10.995	407	1	86.0	70	130	
Sn	120	2	115	9.427	ppb	10.125	11736	10	94.3	70	130	
Sb	121	2	115	2.158	ppb	16.531	2377	2	107.9	70	130	
Ba	137	2	115	1.008	ppb	7.612	373	1	100.8	70	130	
W	182	2	165	4.735	ppb	1.718	24644	1	473.5	70	130	>+/-30%
Pt	195	2	165	0.020	ppb	25.349	140	1	2.0	70	130	>+/-30%
Tl	205	2	165	0.919	ppb	1.348	8603	1	91.9	70	130	
Pb	208	2	165	0.922	ppb	1.202	12776	1	92.2	70	130	
Th	232	2	165	1.979	ppb	0.474	28553	2	99.0	70	130	
U	238	2	165	0.955	ppb	4.004	15417	1	95.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	836799	1.40	962768	86.92	60	120	
Sc (IS)	45	1	HMI H2	31715141	0.72	35850229	88.47	60	120	
Sc (IS)	45	2	HMI He	1182679	3.92	1169942	101.09	60	120	
Sc (IS)	45	3	No Gas	52739678	0.24	64035761	82.36	60	120	
Ge Internal Standard	72	1	HMI H2	12122399	0.95	13887730	87.29	60	120	
Ge Internal Standard	72	2	HMI He	1293263	1.49	1316994	98.20	60	120	
In Internal Standard	115	2	HMI He	4080395	1.36	4006527	101.84	60	120	
Ho-165	165	2	HMI He	19368054	1.04	19709190	98.27	60	120	

Blank Report

Sample Table

Sample Name	MB 280-435538/1-A
Data File Name	059_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:00:56-07:00
Sample Type	Blank
Dilution	1
Comment	435538 6020a dod5
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	1.264	ppb	588.6758212	131230	0.5
Li	7	2	45	-45.630	ppb	-66.28105686	6498	0.5
Li	7	3	45	-25.350	ppb	-33.47305966	4129207	10
Be	9	1	6	-0.072	ppb	-1.29705E-06	0	0.5
B	11	1	6	5.124	ppb	5.493120511	2357	0.5
Na	23	1	45	7.136	ppb	15.10090331	234162	25
Na	23	2	45	0.301	ppb	414.7641865	16864	25
Mg	24	2	45	1.974	ppb	29.72456532	513	25
Al	27	2	45	-2.806	ppb	-99.76775102	287	15
K	39	1	45	-1147.554	ppb	-3.104940561	6255179	50
K	39	2	45	1.385	ppb	724.7265604	17354	50
Ca	40	1	45	9.775	ppb	11.23301448	104030	50
Ca	44	2	45	-4.511	ppb	-222.3711023	60	25
Ti	47	2	45	0.447	ppb	86.60258932	13	0.5
V	51	2	72	0.572	ppb	3.611061256	2657	1
Cr	52	2	72	0.120	ppb	40.19087302	417	1
Mn	55	2	72	0.058	ppb	231.1157885	193	0.5
Fe	57	2	72	3.612	ppb	24.24840904	350	25
Co	59	2	72	0.003	ppb	246.6777935	20	0.5
Ni	60	2	72	0.023	ppb	456.930612	297	1
Cu	63	2	72	-0.040	ppb	-128.5037879	1433	1
Zn	66	2	72	0.896	ppb	38.34617053	697	5
As	75	2	72	-0.023	ppb	-76.20047192	24	1
Se	78	1	72	-0.041	ppb	-147.481786	20	1
Sr	88	2	72	0.082	ppb	71.34992843	70	0.5
Zr	90	2	72	0.313	ppb	2482.206661	97	1
Nb	93	2	72	0.931	ppb	2.537428117	4001	2
Mo	95	2	115	-0.016	ppb	-64.26994737	33	0.5
Pd	105	2	115	0.009	ppb	185.4440536	27	1
Ag	107	2	115	-0.011	ppb	-40.29555967	50	1
Cd	111	2	115	0.000	ppb	-6714.160579	3	0.5
Sn	120	2	115	0.128	ppb	20.25561737	353	1
Sb	121	2	115	0.125	ppb	16.83912314	193	0.6
Ba	137	2	115	0.039	ppb	217.9625565	27	0.5
W	182	2	165	0.129	ppb	15.21232508	2077	1
Pt	195	2	165	0.003	ppb	151.7088663	70	1
Tl	205	2	165	-0.019	ppb	-26.49731387	190	0.1
Pb	208	2	165	-0.029	ppb	-42.17836909	1537	0.5
Th	232	2	165	0.021	ppb	39.80783529	997	1
U	238	2	165	0.016	ppb	12.39271414	503	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	817850	3.95	962768	84.95	60	120	
Sc (IS)	45	1	HMI H2	31290650	1.24	35850229	87.28	60	120	
Sc (IS)	45	2	HMI He	1151361	0.53	1169942	98.41	60	120	
Sc (IS)	45	3	No Gas	53309773	1.29	64035761	83.25	60	120	
Ge Internal Standard	72	1	HMI H2	11796036	0.54	13887730	84.94	60	120	
Ge Internal Standard	72	2	HMI He	1278639	0.48	1316994	97.09	60	120	
In Internal Standard	115	2	HMI He	4038497	1.92	4006527	100.80	60	120	
Ho-165	165	2	HMI He	19307946	0.13	19709190	97.96	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-435538/2-A
Data File Name	060_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:04:45-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	435538 6020a dod5
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	78.866	78.866	ppb	3.413	157612	400	19.7	80	120	>+/-20%
Li	7	2	45	33.449	33.449	ppb	25.532	7859	400	8.4	80	120	>+/-20%
Li	7	3	45	48.520	48.520	ppb	1.243	4954944	400	12.1	80	120	>+/-20%
Be	9	1	6	36.084	36.084	ppb	6.050	14835	40	90.2	80	120	
Na	23	2	45	19.253	19.253	ppb	9.718	21904	40	48.1	80	120	>+/-20%
Mg	24	2	45	68.220	68.220	ppb	4.615	9066	40	170.6	80	120	>+/-20%
Al	27	2	45	417.351	417.351	ppb	3.672	13754	40	1043.4	80	120	>+/-20%
K	39	2	45	-0.939	-0.939	ppb	-1048.566	17054	40	-2.3	80	120	>+/-20%
Ca	44	2	45	360.839	360.839	ppb	17.033	1303	40	902.1	80	120	>+/-20%
V	51	2	72	37.982	37.982	ppb	1.816	48492	40	95.0	80	120	
Cr	52	2	72	37.807	37.807	ppb	1.548	61340	40	94.5	80	120	
Mn	55	2	72	40.355	40.355	ppb	2.487	24492	40	100.9	80	120	
Fe	57	2	72	374.667	374.667	ppb	5.973	11425	40	936.7	80	120	>+/-20%
Co	59	2	72	37.842	37.842	ppb	1.221	105777	40	94.6	80	120	
Ni	60	2	72	37.988	37.988	ppb	1.373	30744	40	95.0	80	120	
Cu	63	2	72	37.036	37.036	ppb	0.710	84494	40	92.6	80	120	
Zn	66	2	72	36.098	36.098	ppb	0.863	11428	40	90.2	80	120	
As	75	2	72	36.124	36.124	ppb	4.270	7098	40	90.3	80	120	
Se	78	1	72	34.659	34.659	ppb	3.029	9941	40	86.6	80	120	
Nb	93	2	72	0.659	0.659	ppb	5.873	3034	40	1.6	80	120	>+/-20%
Mo	95	2	115	35.178	35.178	ppb	0.841	37909	40	87.9	80	120	
Pd	105	2	115	-0.002	-0.002	ppb	-172.658	7	40	0.0	80	120	>+/-20%
Ag	107	2	115	37.945	37.945	ppb	0.711	135862	40	94.9	80	120	
Cd	111	2	115	36.683	36.683	ppb	0.880	16858	40	91.7	80	120	
Sn	120	2	115	37.941	37.941	ppb	2.307	45686	40	94.9	80	120	
Sb	121	2	115	37.843	37.843	ppb	1.902	39892	40	94.6	80	120	
Ba	137	2	115	38.967	38.967	ppb	5.366	13644	40	97.4	80	120	
W	182	2	165	35.928	35.928	ppb	1.298	175883	40	89.8	80	120	
Pt	195	2	165	-0.009	-0.009	ppb	-72.823	23	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.206	39.206	ppb	0.964	348727	40	98.0	80	120	
Pb	208	2	165	39.804	39.804	ppb	0.898	467724	40	99.5	80	120	
Th	232	2	165	38.587	38.587	ppb	1.643	538925	40	96.5	80	120	
U	238	2	165	37.135	37.135	ppb	1.025	585330	40	92.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	850778	2.34	962768	88.37	60	120	
Sc (IS)	45	1	HMI H2	31320621	0.41	35850229	87.37	60	120	
Sc (IS)	45	2	HMI He	1141280	0.60	1169942	97.55	60	120	
Sc (IS)	45	3	No Gas	53073519	0.62	64035761	82.88	60	120	
Ge Internal Standard	72	1	HMI H2	11894847	0.50	13887730	85.65	60	120	
Ge Internal Standard	72	2	HMI He	1282723	0.23	1316994	97.40	60	120	
In Internal Standard	115	2	HMI He	3996346	0.37	4006527	99.75	60	120	
Ho-165	165	2	HMI He	19199281	0.70	19709190	97.41	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-435538/3-A
Data File Name	061SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:08:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	72.400	ppb	72.400	4.59	157428	500000	
Li	7	2	45	21.698	ppb	21.698	136.75	7676	500000	
Li	7	3	45	47.322	ppb	47.322	16.46	5009288	50000	
Be	9	1	6	36.746	ppb	36.746	0.39	14638	2000	
B	11	1	6	37.791	ppb	37.791	5.46	14868	2000	
Na	23	1	45	1.621	ppb	1.621	8.10	217085	2000	
Na	23	2	45	-4.731	ppb	-4.731	-33.27	15389	400000	
Mg	24	2	45	1.226	ppb	1.226	19.31	413	400000	
Al	27	2	45	419.078	ppb	419.078	3.97	13854	400000	
K	39	1	45	-1233.199	ppb	-1233.199	-1.35	6038513	400000	
K	39	2	45	-2.742	ppb	-2.742	-656.36	17001	400000	
Ca	40	1	45	8.901	ppb	8.901	3.01	100681	400000	
Ca	44	2	45	209.100	ppb	209.100	6.75	790	400000	
Ti	47	2	45	1.911	ppb	1.911	96.77	57	4000	
V	51	2	72	38.618	ppb	38.618	1.12	48960	2000	
Cr	52	2	72	37.724	ppb	37.724	1.26	60821	5000	
Mn	55	2	72	39.991	ppb	39.991	2.18	24121	10000	
Fe	57	2	72	388.672	ppb	388.672	1.62	11769	400000	
Co	59	2	72	38.505	ppb	38.505	0.51	106952	2000	
Ni	60	2	72	38.061	ppb	38.061	1.97	30610	5000	
Cu	63	2	72	36.625	ppb	36.625	0.68	83048	5000	
Zn	66	2	72	34.893	ppb	34.893	1.14	10991	5000	
As	75	2	72	35.951	ppb	35.951	2.60	7020	2000	
Se	78	1	72	34.940	ppb	34.940	4.80	10132	2000	
Sr	88	2	72	40.549	ppb	40.549	1.23	25033	4000	
Zr	90	2	72	7595.697	ppb	7595.697	1.29	64356	1000	>LDR
Nb	93	2	72	0.394	ppb	0.394	7.20	2070	200	
Mo	95	2	115	34.622	ppb	34.622	2.93	37615	2000	
Pd	105	2	115	0.000	ppb	0.000	164901.46	10	100	
Ag	107	2	115	37.787	ppb	37.787	2.36	136403	100	
Cd	111	2	115	35.973	ppb	35.973	8.46	16664	2000	
Sn	120	2	115	37.666	ppb	37.666	1.86	45733	2000	
Sb	121	2	115	37.146	ppb	37.146	1.02	39481	1000	
Ba	137	2	115	41.330	ppb	41.330	1.09	14589	5000	
W	182	2	165	35.285	ppb	35.285	0.99	173841	100	
Pt	195	2	165	-0.004	ppb	-0.004	-167.46	43	100	
Tl	205	2	165	38.887	ppb	38.887	1.05	348022	2000	
Pb	208	2	165	39.719	ppb	39.719	0.40	469650	5000	
Th	232	2	165	38.647	ppb	38.647	0.90	543134	2000	
U	238	2	165	36.739	ppb	36.739	0.86	582700	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	823658	0.73	962768	85.55	60	120	
Sc (IS)	45	1	HMI H2	31723395	0.09	35850229	88.49	60	120	
Sc (IS)	45	2	HMI He	1145128	0.46	1169942	97.88	60	120	
Sc (IS)	45	3	No Gas	53806498	0.71	64035761	84.03	60	120	
Ge Internal Standard	72	1	HMI H2	12028302	0.41	13887730	86.61	60	120	
Ge Internal Standard	72	2	HMI He	1274644	0.50	1316994	96.78	60	120	
In Internal Standard	115	2	HMI He	4029600	0.88	4006527	100.58	60	120	
Ho-165	165	2	HMI He	19318477	0.55	19709190	98.02	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-1-H
Data File Name	062SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:12:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.837	ppb	6.837	37.12	133604	500000	
Li	7	2	45	-35.824	ppb	-35.824	-23.36	6615	500000	
Li	7	3	45	7.395	ppb	7.395	238.93	3905294	50000	
Be	9	1	6	-0.072	ppb	-0.072	0.00	0	2000	
B	11	1	6	33.616	ppb	33.616	0.09	13753	2000	
Na	23	1	45	5468.643	ppb	5468.643	0.89	20181468	2000	
Na	23	2	45	5307.312	ppb	5307.312	1.10	1469747	400000	
Mg	24	2	45	19277.646	ppb	19277.646	0.82	2490584	400000	
Al	27	2	45	1.323	ppb	1.323	127.05	417	400000	
K	39	1	45	-186.811	ppb	-186.811	-9.64	9656053	400000	
K	39	2	45	993.771	ppb	993.771	0.67	78976	400000	
Ca	40	1	45	69455.994	ppb	69455.994	0.36	380792768	400000	
Ca	44	2	45	67121.278	ppb	67121.278	0.93	228722	400000	
Ti	47	2	45	0.229	ppb	0.229	173.21	7	4000	
V	51	2	72	0.265	ppb	0.265	87.19	2277	2000	
Cr	52	2	72	0.176	ppb	0.176	13.17	507	5000	
Mn	55	2	72	257.342	ppb	257.342	1.16	154565	10000	
Fe	57	2	72	1028.318	ppb	1028.318	4.49	30784	400000	
Co	59	2	72	0.526	ppb	0.526	7.70	1477	2000	
Ni	60	2	72	1.799	ppb	1.799	8.27	1714	5000	
Cu	63	2	72	-0.063	ppb	-0.063	-132.42	1380	5000	
Zn	66	2	72	0.757	ppb	0.757	43.16	653	5000	
As	75	2	72	2.968	ppb	2.968	6.45	606	2000	
Se	78	1	72	-0.037	ppb	-0.037	-211.11	21	2000	
Sr	88	2	72	90.196	ppb	90.196	2.85	55730	4000	
Zr	90	2	72	210.367	ppb	210.367	18.71	1877	1000	
Nb	93	2	72	0.253	ppb	0.253	18.20	1570	200	
Mo	95	2	115	0.116	ppb	0.116	27.48	173	2000	
Pd	105	2	115	0.002	ppb	0.002	449.79	13	100	
Ag	107	2	115	-0.005	ppb	-0.005	-132.25	70	100	
Cd	111	2	115	0.007	ppb	0.007	345.74	7	2000	
Sn	120	2	115	0.167	ppb	0.167	45.29	393	2000	
Sb	121	2	115	0.338	ppb	0.338	18.91	413	1000	
Ba	137	2	115	8.693	ppb	8.693	1.22	3034	5000	
W	182	2	165	0.186	ppb	0.186	19.76	2320	100	
Pt	195	2	165	-0.009	ppb	-0.009	-26.70	20	100	
Tl	205	2	165	-0.007	ppb	-0.007	-32.74	297	2000	
Pb	208	2	165	0.001	ppb	0.001	869.85	1867	5000	
Th	232	2	165	0.069	ppb	0.069	22.23	1650	2000	
U	238	2	165	0.517	ppb	0.517	3.29	8310	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	853355	1.20	962768	88.64	60	120	
Sc (IS)	45	1	HMI H2	31401525	0.17	35850229	87.59	60	120	
Sc (IS)	45	2	HMI He	1141052	0.98	1169942	97.53	60	120	
Sc (IS)	45	3	No Gas	46455497	17.99	64035761	72.55	60	120	
Ge Internal Standard	72	1	HMI H2	11861701	0.48	13887730	85.41	60	120	
Ge Internal Standard	72	2	HMI He	1276384	0.60	1316994	96.92	60	120	
In Internal Standard	115	2	HMI He	3970057	1.09	4006527	99.09	60	120	
Ho-165	165	2	HMI He	19029634	0.32	19709190	96.55	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-C
Data File Name	063SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:16:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.391	ppb	11.391	40.13	133743	500000	
Li	7	2	45	-32.615	ppb	-32.615	-71.70	6682	500000	
Li	7	3	45	-15.797	ppb	-15.797	-22.33	4205203	50000	
Be	9	1	6	-0.046	ppb	-0.046	-56.93	10	2000	
B	11	1	6	35.962	ppb	35.962	4.38	14114	2000	
Na	23	1	45	11623.850	ppb	11623.850	1.45	42215479	2000	>LDR
Na	23	2	45	11016.992	ppb	11016.992	0.38	3036380	400000	
Mg	24	2	45	24612.871	ppb	24612.871	1.01	3183195	400000	
Al	27	2	45	-1.486	ppb	-1.486	-135.87	327	400000	
K	39	1	45	557.965	ppb	557.965	6.22	12146710	400000	
K	39	2	45	1692.642	ppb	1692.642	2.01	122621	400000	
Ca	40	1	45	65488.286	ppb	65488.286	1.95	355284235	400000	
Ca	44	2	45	63393.270	ppb	63393.270	1.59	216273	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.092	ppb	-0.092	-284.64	1840	2000	
Cr	52	2	72	0.161	ppb	0.161	10.19	480	5000	
Mn	55	2	72	310.380	ppb	310.380	0.86	186001	10000	
Fe	57	2	72	403.109	ppb	403.109	5.23	12186	400000	
Co	59	2	72	0.404	ppb	0.404	13.69	1133	2000	
Ni	60	2	72	1.166	ppb	1.166	9.11	1207	5000	
Cu	63	2	72	0.100	ppb	0.100	85.83	1740	5000	
Zn	66	2	72	1.036	ppb	1.036	33.49	737	5000	
As	75	2	72	3.254	ppb	3.254	8.79	660	2000	
Se	78	1	72	-0.027	ppb	-0.027	-132.63	24	2000	
Sr	88	2	72	134.135	ppb	134.135	0.50	82703	4000	
Zr	90	2	72	70.489	ppb	70.489	16.92	690	1000	
Nb	93	2	72	0.222	ppb	0.222	9.13	1453	200	
Mo	95	2	115	0.175	ppb	0.175	61.88	237	2000	
Pd	105	2	115	0.000	ppb	0.000	8505.75	10	100	
Ag	107	2	115	-0.007	ppb	-0.007	-58.14	63	100	
Cd	111	2	115	0.015	ppb	0.015	149.77	10	2000	
Sn	120	2	115	0.200	ppb	0.200	45.88	433	2000	
Sb	121	2	115	0.202	ppb	0.202	9.09	270	1000	
Ba	137	2	115	122.594	ppb	122.594	1.91	42577	5000	
W	182	2	165	0.196	ppb	0.196	23.38	2374	100	
Pt	195	2	165	-0.001	ppb	-0.001	-518.20	53	100	
Tl	205	2	165	-0.018	ppb	-0.018	-45.46	203	2000	
Pb	208	2	165	-0.041	ppb	-0.041	-21.17	1377	5000	
Th	232	2	165	0.032	ppb	0.032	38.93	1130	2000	
U	238	2	165	0.031	ppb	0.031	39.76	723	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	821004	3.52	962768	85.28	60	120	
Sc (IS)	45	1	HMI H2	31075631	0.74	35850229	86.68	60	120	
Sc (IS)	45	2	HMI He	1142292	0.39	1169942	97.64	60	120	
Sc (IS)	45	3	No Gas	52877696	0.41	64035761	82.58	60	120	
Ge Internal Standard	72	1	HMI H2	11798609	1.04	13887730	84.96	60	120	
Ge Internal Standard	72	2	HMI He	1273709	1.10	1316994	96.71	60	120	
In Internal Standard	115	2	HMI He	3966687	0.66	4006527	99.01	60	120	
Ho-165	165	2	HMI He	19074137	0.64	19709190	96.78	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-Csd@5
Data File Name	064SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:20:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.931	ppb	0.931	317.77	132514	500000	
Li	7	2	45	-39.262	ppb	-39.262	-20.40	6525	500000	
Li	7	3	45	-14.716	ppb	-14.716	-53.98	4197210	50000	
Be	9	1	6	-0.055	ppb	-0.055	-26.23	7	2000	
B	11	1	6	10.383	ppb	10.383	11.26	4388	2000	
Na	23	1	45	2347.929	ppb	2347.929	0.67	8844310	2000	
Na	23	2	45	2186.454	ppb	2186.454	1.15	612535	400000	
Mg	24	2	45	4959.536	ppb	4959.536	0.97	638061	400000	
Al	27	2	45	-5.826	ppb	-5.826	-29.03	187	400000	
K	39	1	45	211.452	ppb	211.452	14.70	11131572	400000	
K	39	2	45	336.736	ppb	336.736	3.12	37907	400000	
Ca	40	1	45	13153.160	ppb	13153.160	1.00	72644677	400000	
Ca	44	2	45	12399.278	ppb	12399.278	0.99	42128	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	1.003	ppb	1.003	17.78	3177	2000	
Cr	52	2	72	0.073	ppb	0.073	53.42	340	5000	
Mn	55	2	72	61.459	ppb	61.459	4.54	37018	10000	
Fe	57	2	72	78.579	ppb	78.579	12.56	2574	400000	
Co	59	2	72	0.079	ppb	0.079	17.77	233	2000	
Ni	60	2	72	0.421	ppb	0.421	26.12	613	5000	
Cu	63	2	72	0.117	ppb	0.117	91.56	1780	5000	
Zn	66	2	72	0.329	ppb	0.329	52.55	523	5000	
As	75	2	72	0.616	ppb	0.616	9.54	148	2000	
Se	78	1	72	-0.015	ppb	-0.015	-182.15	28	2000	
Sr	88	2	72	27.694	ppb	27.694	0.83	17121	4000	
Zr	90	2	72	8.647	ppb	8.647	57.97	167	1000	
Nb	93	2	72	0.065	ppb	0.065	23.80	897	200	
Mo	95	2	115	-0.006	ppb	-0.006	-401.57	43	2000	
Pd	105	2	115	0.000	ppb	0.000	-13130.94	10	100	
Ag	107	2	115	-0.017	ppb	-0.017	-60.32	30	100	
Cd	111	2	115	-0.007	ppb	-0.007	0.00	0	2000	
Sn	120	2	115	0.061	ppb	0.061	24.41	270	2000	
Sb	121	2	115	0.076	ppb	0.076	33.81	140	1000	
Ba	137	2	115	23.921	ppb	23.921	1.55	8390	5000	
W	182	2	165	-0.015	ppb	-0.015	-107.15	1360	100	
Pt	195	2	165	0.006	ppb	0.006	137.69	83	100	
Tl	205	2	165	-0.023	ppb	-0.023	-13.29	160	2000	
Pb	208	2	165	-0.047	ppb	-0.047	-23.67	1310	5000	
Th	232	2	165	-0.022	ppb	-0.022	-14.87	383	2000	
U	238	2	165	0.007	ppb	0.007	107.06	350	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	824176	0.77	962768	85.60	60	120	
Sc (IS)	45	1	HMI H2	31617331	0.97	35850229	88.19	60	120	
Sc (IS)	45	2	HMI He	1136014	0.76	1169942	97.10	60	120	
Sc (IS)	45	3	No Gas	52634798	1.54	64035761	82.20	60	120	
Ge Internal Standard	72	1	HMI H2	12110031	1.10	13887730	87.20	60	120	
Ge Internal Standard	72	2	HMI He	1275948	0.72	1316994	96.88	60	120	
In Internal Standard	115	2	HMI He	4000869	1.15	4006527	99.86	60	120	
Ho-165	165	2	HMI He	19104324	0.29	19709190	96.93	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-D MS
Data File Name	065SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:23:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	85.196	ppb	85.196	3.74	156606	500000	
Li	7	2	45	39.128	ppb	39.128	11.14	7879	500000	
Li	7	3	45	56.567	ppb	56.567	5.81	5005998	50000	
Be	9	1	6	36.755	ppb	36.755	1.50	14801	2000	
B	11	1	6	63.143	ppb	63.143	2.35	24838	2000	
Na	23	1	45	11292.003	ppb	11292.003	0.91	40526766	2000	>LDR
Na	23	2	45	10817.319	ppb	10817.319	0.48	2947962	400000	
Mg	24	2	45	23911.557	ppb	23911.557	1.61	3057339	400000	
Al	27	2	45	410.824	ppb	410.824	5.51	13397	400000	
K	39	1	45	546.013	ppb	546.013	8.58	11960015	400000	
K	39	2	45	1652.173	ppb	1652.173	1.40	118736	400000	
Ca	40	1	45	64251.376	ppb	64251.376	1.30	344415435	400000	
Ca	44	2	45	61968.056	ppb	61968.056	0.94	209008	400000	
Ti	47	2	45	1.605	ppb	1.605	54.79	47	4000	
V	51	2	72	38.579	ppb	38.579	1.12	48241	2000	
Cr	52	2	72	38.153	ppb	38.153	1.55	60667	5000	
Mn	55	2	72	338.647	ppb	338.647	0.54	200264	10000	
Fe	57	2	72	788.421	ppb	788.421	2.75	23296	400000	
Co	59	2	72	36.499	ppb	36.499	0.83	99986	2000	
Ni	60	2	72	37.948	ppb	37.948	2.82	30102	5000	
Cu	63	2	72	35.090	ppb	35.090	0.97	78537	5000	
Zn	66	2	72	34.854	ppb	34.854	2.40	10828	5000	
As	75	2	72	38.405	ppb	38.405	1.32	7393	2000	
Se	78	1	72	36.415	ppb	36.415	0.08	10181	2000	
Sr	88	2	72	170.440	ppb	170.440	0.82	103716	4000	
Zr	90	2	72	7599.169	ppb	7599.169	0.98	63503	1000	>LDR
Nb	93	2	72	0.181	ppb	0.181	24.14	1293	200	
Mo	95	2	115	35.454	ppb	35.454	3.52	37621	2000	
Pd	105	2	115	0.006	ppb	0.006	99.52	20	100	
Ag	107	2	115	37.653	ppb	37.653	2.43	132765	100	
Cd	111	2	115	35.345	ppb	35.345	1.30	15996	2000	
Sn	120	2	115	38.157	ppb	38.157	3.58	45245	2000	
Sb	121	2	115	37.118	ppb	37.118	4.42	38545	1000	
Ba	137	2	115	155.388	ppb	155.388	0.94	53545	5000	
W	182	2	165	36.124	ppb	36.124	0.77	174350	100	
Pt	195	2	165	-0.003	ppb	-0.003	-197.35	47	100	
Tl	205	2	165	38.802	ppb	38.802	0.61	340255	2000	
Pb	208	2	165	38.624	ppb	38.624	0.76	447515	5000	
Th	232	2	165	38.407	ppb	38.407	1.66	528844	2000	
U	238	2	165	37.157	ppb	37.157	0.69	577419	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	832652	0.40	962768	86.49	60	120	
Sc (IS)	45	1	HMI H2	30704227	0.82	35850229	85.65	60	120	
Sc (IS)	45	2	HMI He	1129417	1.26	1169942	96.54	60	120	
Sc (IS)	45	3	No Gas	52645209	0.32	64035761	82.21	60	120	
Ge Internal Standard	72	1	HMI H2	11597692	0.67	13887730	83.51	60	120	
Ge Internal Standard	72	2	HMI He	1257103	0.81	1316994	95.45	60	120	
In Internal Standard	115	2	HMI He	3936035	0.95	4006527	98.24	60	120	
Ho-165	165	2	HMI He	18928204	0.61	19709190	96.04	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-E MSD
Data File Name	066SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:27:34-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	81.960	ppb	81.960	3.09	157124	500000	
Li	7	2	45	50.096	ppb	50.096	8.89	8143	500000	
Li	7	3	45	57.158	ppb	57.158	3.98	4977883	50000	
Be	9	1	6	36.874	ppb	36.874	4.26	14985	2000	
B	11	1	6	64.840	ppb	64.840	2.22	25730	2000	
Na	23	1	45	11236.866	ppb	11236.866	1.52	40740350	2000	>LDR
Na	23	2	45	10619.754	ppb	10619.754	2.14	2919186	400000	
Mg	24	2	45	23648.372	ppb	23648.372	1.18	3050007	400000	
Al	27	2	45	399.707	ppb	399.707	5.62	13163	400000	
K	39	1	45	496.849	ppb	496.849	0.85	11911984	400000	
K	39	2	45	1643.150	ppb	1643.150	0.69	119203	400000	
Ca	40	1	45	63765.090	ppb	63765.090	0.48	345307675	400000	
Ca	44	2	45	61562.613	ppb	61562.613	0.62	209441	400000	
Ti	47	2	45	1.131	ppb	1.131	45.35	33	4000	
V	51	2	72	38.290	ppb	38.290	0.55	48398	2000	
Cr	52	2	72	36.863	ppb	36.863	0.81	59238	5000	
Mn	55	2	72	337.941	ppb	337.941	1.32	201966	10000	
Fe	57	2	72	761.101	ppb	761.101	2.95	22739	400000	
Co	59	2	72	36.980	ppb	36.980	1.34	102380	2000	
Ni	60	2	72	37.156	ppb	37.156	0.34	29788	5000	
Cu	63	2	72	35.150	ppb	35.150	1.60	79495	5000	
Zn	66	2	72	36.105	ppb	36.105	2.55	11322	5000	
As	75	2	72	38.349	ppb	38.349	2.23	7461	2000	
Se	78	1	72	35.537	ppb	35.537	1.65	10080	2000	
Sr	88	2	72	168.221	ppb	168.221	0.32	103447	4000	
Zr	90	2	72	7823.261	ppb	7823.261	0.64	66065	1000	>LDR
Nb	93	2	72	0.115	ppb	0.115	61.03	1070	200	
Mo	95	2	115	36.216	ppb	36.216	1.72	38620	2000	
Pd	105	2	115	0.002	ppb	0.002	337.73	13	100	
Ag	107	2	115	37.104	ppb	37.104	1.29	131472	100	
Cd	111	2	115	37.140	ppb	37.140	0.85	16891	2000	
Sn	120	2	115	38.260	ppb	38.260	0.85	45596	2000	
Sb	121	2	115	39.012	ppb	39.012	1.79	40694	1000	
Ba	137	2	115	155.218	ppb	155.218	0.60	53742	5000	
W	182	2	165	35.704	ppb	35.704	0.23	174219	100	
Pt	195	2	165	-0.009	ppb	-0.009	-26.10	20	100	
Tl	205	2	165	38.612	ppb	38.612	1.27	342277	2000	
Pb	208	2	165	38.400	ppb	38.400	0.15	449795	5000	
Th	232	2	165	38.495	ppb	38.495	0.53	535889	2000	
U	238	2	165	36.780	ppb	36.780	0.58	577811	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	840314	0.79	962768	87.28	60	120	
Sc (IS)	45	1	HMI H2	31017010	0.61	35850229	86.52	60	120	
Sc (IS)	45	2	HMI He	1139102	0.47	1169942	97.36	60	120	
Sc (IS)	45	3	No Gas	52278938	0.35	64035761	81.64	60	120	
Ge Internal Standard	72	1	HMI H2	11764995	0.07	13887730	84.72	60	120	
Ge Internal Standard	72	2	HMI He	1270404	0.46	1316994	96.46	60	120	
In Internal Standard	115	2	HMI He	3955243	1.29	4006527	98.72	60	120	
Ho-165	165	2	HMI He	19134925	0.53	19709190	97.09	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-C pds
Data File Name	067SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:31:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	219.240	ppb	219.240	0.94	200195	500000	
Li	7	2	45	170.287	ppb	170.287	4.51	10111	500000	
Li	7	3	45	179.007	ppb	179.007	2.34	6249432	50000	
Be	9	1	6	199.480	ppb	199.480	2.19	78566	2000	
B	11	1	6	34.045	ppb	34.045	6.90	13303	2000	
Na	23	1	45	11402.647	ppb	11402.647	0.56	40751100	2000	>LDR
Na	23	2	45	10757.225	ppb	10757.225	0.66	2904405	400000	
Mg	24	2	45	23788.864	ppb	23788.864	0.25	3013526	400000	
Al	27	2	45	2169.324	ppb	2169.324	3.33	68546	400000	
K	39	1	45	546.879	ppb	546.879	5.02	11913373	400000	
K	39	2	45	1672.280	ppb	1672.280	3.02	118864	400000	
Ca	40	1	45	64209.102	ppb	64209.102	0.89	342756075	400000	
Ca	44	2	45	63210.683	ppb	63210.683	1.77	211220	400000	
Ti	47	2	45	5.077	ppb	5.077	27.55	147	4000	
V	51	2	72	200.224	ppb	200.224	0.97	241327	2000	
Cr	52	2	72	197.737	ppb	197.737	0.46	312211	5000	
Mn	55	2	72	509.063	ppb	509.063	0.89	299752	10000	
Fe	57	2	72	2411.608	ppb	2411.608	1.34	70481	400000	
Co	59	2	72	192.891	ppb	192.891	0.74	526193	2000	
Ni	60	2	72	189.590	ppb	189.590	0.50	148671	5000	
Cu	63	2	72	186.767	ppb	186.767	0.18	409857	5000	
Zn	66	2	72	195.278	ppb	195.278	1.88	58509	5000	
As	75	2	72	192.342	ppb	192.342	0.82	36771	2000	
Se	78	1	72	191.409	ppb	191.409	0.18	53764	2000	
Sr	88	2	72	351.215	ppb	351.215	0.07	212834	4000	
Zr	90	2	72	41489.912	ppb	41489.912	0.67	344894	1000	>LDR
Nb	93	2	72	4.249	ppb	4.249	3.98	15553	200	
Mo	95	2	115	189.150	ppb	189.150	0.53	198327	2000	
Pd	105	2	115	0.030	ppb	0.030	52.80	60	100	
Ag	107	2	115	39.683	ppb	39.683	1.60	138391	100	
Cd	111	2	115	190.338	ppb	190.338	1.15	85186	2000	
Sn	120	2	115	204.362	ppb	204.362	1.21	238864	2000	
Sb	121	2	115	201.018	ppb	201.018	0.39	206145	1000	
Ba	137	2	115	330.210	ppb	330.210	1.36	112509	5000	
W	182	2	165	199.873	ppb	199.873	1.08	957525	100	
Pt	195	2	165	0.044	ppb	0.044	27.25	233	100	
Tl	205	2	165	206.691	ppb	206.691	2.68	1809402	2000	
Pb	208	2	165	202.826	ppb	202.826	0.83	2340526	5000	
Th	232	2	165	241.302	ppb	241.302	1.28	3316657	2000	
U	238	2	165	209.709	ppb	209.709	1.04	3255359	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	815969	2.64	962768	84.75	60	120	
Sc (IS)	45	1	HMI H2	30574978	0.34	35850229	85.29	60	120	
Sc (IS)	45	2	HMI He	1118867	0.51	1169942	95.63	60	120	
Sc (IS)	45	3	No Gas	51468971	0.55	64035761	80.38	60	120	
Ge Internal Standard	72	1	HMI H2	11680525	0.83	13887730	84.11	60	120	
Ge Internal Standard	72	2	HMI He	1252016	1.00	1316994	95.07	60	120	
In Internal Standard	115	2	HMI He	3892617	0.22	4006527	97.16	60	120	
Ho-165	165	2	HMI He	18915087	0.93	19709190	95.97	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	068_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:35:06-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	496.166	ppb	1.577	294288	500	99.2	90	110	
Li	7	2	45	409.563	ppb	8.228	14394	500	81.9	90	110	>+\-10%
Li	7	3	45	465.456	ppb	1.185	9388226	500	93.1	90	110	
Be	9	1	6	50.475	ppb	0.817	19310	50	101.0	90	110	
B	11	1	6	56.433	ppb	1.863	21142	50	112.9	90	110	>+\-10%
Na	23	1	45	5237.012	ppb	0.289	19000130	5000	104.7	90	110	
Na	23	2	45	5055.769	ppb	0.962	1381074	5000	101.1	90	110	
Mg	24	2	45	4763.286	ppb	0.955	606865	5000	95.3	90	110	
Al	27	2	45	5227.477	ppb	2.025	165550	5000	104.5	90	110	
K	39	1	45	5471.925	ppb	0.802	29038393	5000	109.4	90	110	
K	39	2	45	5009.822	ppb	0.898	324342	5000	100.2	90	110	
Ca	40	1	45	5149.256	ppb	0.717	27787610	5000	103.0	90	110	
Ca	44	2	45	5111.691	ppb	1.365	17241	5000	102.2	90	110	
Ti	47	2	45	54.354	ppb	14.527	1580	50	108.7	90	110	
V	51	2	72	50.596	ppb	0.765	62059	50	101.2	90	110	
Cr	52	2	72	48.295	ppb	0.624	75992	50	96.6	90	110	
Mn	55	2	72	51.600	ppb	0.351	30353	50	103.2	90	110	
Fe	57	2	72	4802.221	ppb	0.099	139336	5000	96.0	90	110	
Co	59	2	72	48.956	ppb	0.853	132812	50	97.9	90	110	
Ni	60	2	72	48.739	ppb	0.526	38209	50	97.5	90	110	
Cu	63	2	72	48.226	ppb	0.311	106339	50	96.5	90	110	
Zn	66	2	72	47.413	ppb	2.291	14441	50	94.8	90	110	
As	75	2	72	48.568	ppb	0.185	9253	50	97.1	90	110	
Se	78	1	72	50.127	ppb	2.412	14111	50	100.3	90	110	
Sr	88	2	72	52.958	ppb	1.652	31927	50	105.9	90	110	
Zr	90	2	72	86.988	ppb	10.001	810	50	174.0	90	110	>+\-10%
Nb	93	2	72	85.682	ppb	0.882	299315	100	85.7	90	110	>+\-10%
Mo	95	2	115	45.902	ppb	1.007	48350	50	91.8	90	110	
Pd	105	2	115	46.030	ppb	2.498	76639	50	92.1	90	110	
Ag	107	2	115	46.916	ppb	1.475	164211	50	93.8	90	110	
Cd	111	2	115	49.320	ppb	1.439	22158	50	98.6	90	110	
Sn	120	2	115	50.693	ppb	2.560	59612	50	101.4	90	110	
Sb	121	2	115	51.077	ppb	2.856	52614	50	102.2	90	110	
Ba	137	2	115	52.879	ppb	5.484	18093	50	105.8	90	110	
W	182	2	165	48.076	ppb	0.847	230759	50	96.2	90	110	
Pt	195	2	165	47.285	ppb	1.556	188183	50	94.6	90	110	
Tl	205	2	165	51.016	ppb	0.113	445704	50	102.0	90	110	
Pb	208	2	165	51.111	ppb	0.310	589557	50	102.2	90	110	
Th	232	2	165	50.250	ppb	0.675	689360	50	100.5	90	110	
U	238	2	165	48.755	ppb	0.168	754958	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	791433	0.38	962768	82.20	60	120	
Sc (IS)	45	1	HMI H2	30857048	0.22	35850229	86.07	60	120	
Sc (IS)	45	2	HMI He	1124952	0.70	1169942	96.15	60	120	
Sc (IS)	45	3	No Gas	51293651	0.58	64035761	80.10	60	120	
Ge Internal Standard	72	1	HMI H2	11686929	0.19	13887730	84.15	60	120	
Ge Internal Standard	72	2	HMI He	1244998	0.70	1316994	94.53	60	120	
In Internal Standard	115	2	HMI He	3907593	1.34	4006527	97.53	60	120	
Ho-165	165	2	HMI He	18862530	0.12	19709190	95.70	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	069_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:38:52-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-18.044	ppb	-2.1	4169212	10	
Be	9	1	6	0.005	ppb	510.1	30	0.5	
B	11	1	6	5.009	ppb	15.2	2290	0.5	>RL
Na	23	1	45	3.553	ppb	17.2	219114	25	
Na	23	2	45	-3.210	ppb	-29.5	15412	25	
Mg	24	2	45	2.366	ppb	40.7	547	25	
Al	27	2	45	6.284	ppb	53.2	563	15	
K	39	1	45	202.327	ppb	7.8	10883865	50	>RL
K	39	2	45	17.660	ppb	49.3	17818	50	
Ca	40	1	45	20.830	ppb	0.5	162951	50	
Ca	44	2	45	6.044	ppb	152.0	93	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.143	ppb	8.5	4461	1	>RL
Cr	52	2	72	0.023	ppb	162.9	253	1	
Mn	55	2	72	0.174	ppb	14.7	257	0.5	
Fe	57	2	72	0.927	ppb	191.9	263	25	
Co	59	2	72	0.013	ppb	118.9	47	0.5	
Ni	60	2	72	0.067	ppb	78.9	323	1	
Cu	63	2	72	0.313	ppb	29.6	2167	1	
Zn	66	2	72	1.259	ppb	26.0	787	5	
As	75	2	72	0.049	ppb	201.2	37	1	
Se	78	1	72	-0.069	ppb	-41.2	12	1	
Sr	88	2	72	0.101	ppb	59.1	80	0.5	
Zr	90	2	72	3.850	ppb	90.5	123	1	>RL
Nb	93	2	72	4.188	ppb	7.1	15269	2	>RL
Mo	95	2	115	0.146	ppb	14.1	203	0.5	
Pd	105	2	115	0.056	ppb	26.8	103	1	
Ag	107	2	115	0.000	ppb	-1440.0	87	1	
Cd	111	2	115	0.022	ppb	152.5	13	0.5	
Sn	120	2	115	0.266	ppb	22.3	507	1	
Sb	121	2	115	0.525	ppb	13.5	603	0.6	
Ba	137	2	115	0.136	ppb	97.0	60	0.5	
W	182	2	165	0.119	ppb	46.3	1997	1	
Pt	195	2	165	0.018	ppb	71.8	130	1	
Tl	205	2	165	-0.009	ppb	-67.7	280	0.1	
Pb	208	2	165	-0.038	ppb	-9.7	1403	0.5	
Th	232	2	165	0.018	ppb	11.4	943	1	
U	238	2	165	0.057	ppb	4.7	1133	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	809022	1.16	962768	84.03	60	120	
Sc (IS)	45	1	HMI H2	31001987	0.24	35850229	86.48	60	120	
Sc (IS)	45	2	HMI He	1116571	0.69	1169942	95.44	60	120	
Sc (IS)	45	3	No Gas	52745428	0.22	64035761	82.37	60	120	
Ge Internal Standard	72	1	HMI H2	11789398	0.73	13887730	84.89	60	120	
Ge Internal Standard	72	2	HMI He	1246762	0.21	1316994	94.67	60	120	
In Internal Standard	115	2	HMI He	3932195	1.21	4006527	98.14	60	120	
Ho-165	165	2	HMI He	19015518	0.24	19709190	96.48	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	070LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:42:40-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-7.250	ppb	-62.752	4312621	50	-14.5	70	130	>+/-30%
Be	9	1	6	0.879	ppb	19.493	380	1	87.9	70	130	
Na	23	2	45	30.968	ppb	5.268	24808	50	61.9	70	130	>+/-30%
Mg	24	2	45	51.156	ppb	13.509	6782	50	102.3	70	130	
Al	27	2	45	31.910	ppb	12.517	1380	30	106.4	70	130	
K	39	2	45	103.270	ppb	10.126	23256	100	103.3	70	130	
Ca	44	2	45	60.179	ppb	32.021	277	50	120.4	70	130	
V	51	2	72	6.639	ppb	5.681	9767	5	132.8	70	130	>+/-30%
Cr	52	2	72	1.984	ppb	1.953	3321	2	99.2	70	130	
Mn	55	2	72	0.947	ppb	5.428	707	1	94.7	70	130	
Fe	57	2	72	51.594	ppb	14.000	1724	50	103.2	70	130	
Co	59	2	72	0.953	ppb	10.738	2587	1	95.3	70	130	
Ni	60	2	72	2.654	ppb	3.007	2330	2	132.7	70	130	>+/-30%
Cu	63	2	72	1.928	ppb	1.427	5658	2	96.4	70	130	
Zn	66	2	72	10.192	ppb	6.163	3417	10	101.9	70	130	
As	75	2	72	4.699	ppb	5.844	918	5	94.0	70	130	
Se	78	1	72	4.304	ppb	4.864	1265	5	86.1	70	130	
Sr	88	2	72	1.238	ppb	12.500	763	1	123.8	70	130	
Zr	90	2	72	18.548	ppb	54.932	243	0.5	3709.6	70	130	>+/-30%
Nb	93	2	72	8.065	ppb	7.120	28660	2	403.3	70	130	>+/-30%
Mo	95	2	115	1.788	ppb	4.187	1924	2	89.4	70	130	
Pd	105	2	115	0.012	ppb	85.668	30	1	1.2	70	130	>+/-30%
Ag	107	2	115	4.607	ppb	4.605	16147	5	92.1	70	130	
Cd	111	2	115	0.894	ppb	7.715	403	1	89.4	70	130	
Sn	120	2	115	9.992	ppb	2.419	11862	10	99.9	70	130	
Sb	121	2	115	2.128	ppb	6.780	2240	2	106.4	70	130	
Ba	137	2	115	1.059	ppb	32.276	373	1	105.9	70	130	
W	182	2	165	4.767	ppb	2.262	24140	1	476.7	70	130	>+/-30%
Pt	195	2	165	0.026	ppb	33.015	160	1	2.6	70	130	>+/-30%
Tl	205	2	165	0.947	ppb	2.114	8617	1	94.7	70	130	
Pb	208	2	165	0.976	ppb	6.337	13043	1	97.6	70	130	
Th	232	2	165	2.024	ppb	1.730	28409	2	101.2	70	130	
U	238	2	165	0.970	ppb	3.457	15243	1	97.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	827937	1.20	962768	86.00	60	120	
Sc (IS)	45	1	HMI H2	31685906	2.67	35850229	88.38	60	120	
Sc (IS)	45	2	HMI He	1127304	0.64	1169942	96.36	60	120	
Sc (IS)	45	3	No Gas	53004738	0.52	64035761	82.77	60	120	
Ge Internal Standard	72	1	HMI H2	11928555	1.62	13887730	85.89	60	120	
Ge Internal Standard	72	2	HMI He	1241385	1.50	1316994	94.26	60	120	
In Internal Standard	115	2	HMI He	3893361	0.65	4006527	97.18	60	120	
Ho-165	165	2	HMI He	18850175	0.43	19709190	95.64	60	120	

Sample Report

Sample Table

Sample Name	280-116186-E-5-B
Data File Name	071SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:46:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.067	ppb	4.067	15.30	128403	500000	
Li	7	2	45	-33.918	ppb	-33.918	-23.30	6398	500000	
Li	7	3	45	-20.027	ppb	-20.027	-17.23	4014201	50000	
Be	9	1	6	-0.055	ppb	-0.055	-51.54	7	2000	
B	11	1	6	33.082	ppb	33.082	4.80	13320	2000	
Na	23	1	45	3909.118	ppb	3909.118	0.76	14019904	2000	
Na	23	2	45	3641.455	ppb	3641.455	0.70	975209	400000	
Mg	24	2	45	6363.707	ppb	6363.707	0.86	791122	400000	
Al	27	2	45	3.142	ppb	3.142	117.45	457	400000	
K	39	1	45	415.089	ppb	415.089	7.08	11393687	400000	
K	39	2	45	1513.673	ppb	1513.673	1.33	107121	400000	
Ca	40	1	45	17917.964	ppb	17917.964	0.24	95114932	400000	
Ca	44	2	45	17318.092	ppb	17318.092	2.14	56831	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.994	ppb	0.994	6.02	3064	2000	
Cr	52	2	72	0.470	ppb	0.470	13.19	947	5000	
Mn	55	2	72	548.256	ppb	548.256	0.73	318445	10000	
Fe	57	2	72	4267.675	ppb	4267.675	0.63	122862	400000	
Co	59	2	72	3.046	ppb	3.046	0.80	8209	2000	
Ni	60	2	72	10.188	ppb	10.188	1.86	8136	5000	
Cu	63	2	72	0.045	ppb	0.045	222.69	1570	5000	
Zn	66	2	72	20.850	ppb	20.850	4.65	6528	5000	
As	75	2	72	1.518	ppb	1.518	8.62	313	2000	
Se	78	1	72	0.093	ppb	0.093	68.90	57	2000	
Sr	88	2	72	55.296	ppb	55.296	1.58	33070	4000	
Zr	90	2	72	1.557	ppb	1.557	198.72	103	1000	
Nb	93	2	72	1.126	ppb	1.126	5.84	4538	200	
Mo	95	2	115	0.141	ppb	0.141	39.37	193	2000	
Pd	105	2	115	0.002	ppb	0.002	405.02	13	100	
Ag	107	2	115	-0.018	ppb	-0.018	-25.06	23	100	
Cd	111	2	115	0.038	ppb	0.038	120.28	20	2000	
Sn	120	2	115	0.165	ppb	0.165	44.15	380	2000	
Sb	121	2	115	0.462	ppb	0.462	26.83	523	1000	
Ba	137	2	115	17.369	ppb	17.369	12.78	5845	5000	
W	182	2	165	0.256	ppb	0.256	8.02	2620	100	
Pt	195	2	165	-0.002	ppb	-0.002	-145.63	50	100	
Tl	205	2	165	-0.015	ppb	-0.015	-33.36	220	2000	
Pb	208	2	165	-0.014	ppb	-0.014	-116.07	1667	5000	
Th	232	2	165	0.019	ppb	0.019	30.22	933	2000	
U	238	2	165	0.019	ppb	0.019	10.45	537	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	839339	0.15	962768	87.18	60	120	
Sc (IS)	45	1	HMI H2	30392415	0.37	35850229	84.78	60	120	
Sc (IS)	45	2	HMI He	1097781	0.28	1169942	93.83	60	120	
Sc (IS)	45	3	No Gas	51059048	0.30	64035761	79.74	60	120	
Ge Internal Standard	72	1	HMI H2	11647748	0.21	13887730	83.87	60	120	
Ge Internal Standard	72	2	HMI He	1235047	0.22	1316994	93.78	60	120	
In Internal Standard	115	2	HMI He	3842091	1.73	4006527	95.90	60	120	
Ho-165	165	2	HMI He	18767520	0.32	19709190	95.22	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-9-B
Data File Name	072SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:50:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	74.197	ppb	74.197	2.54	147485	500000	
Li	7	2	45	17.828	ppb	17.828	107.78	7339	500000	
Li	7	3	45	33.267	ppb	33.267	6.75	4694550	50000	
Be	9	1	6	-0.072	ppb	-0.072	0.00	0	2000	
B	11	1	6	43.871	ppb	43.871	2.53	16383	2000	
Na	23	1	45	39862.037	ppb	39862.037	0.32	137447555	2000	>LDR
Na	23	2	45	36905.646	ppb	36905.646	0.52	9798768	400000	
Mg	24	2	45	211030.167	ppb	211030.167	0.44	26393170	400000	
Al	27	2	45	34.487	ppb	34.487	17.12	1433	400000	
K	39	1	45	2137.050	ppb	2137.050	0.93	16805686	400000	
K	39	2	45	3122.460	ppb	3122.460	1.40	204744	400000	
Ca	40	1	45	265729.450	ppb	265729.450	0.43	1373365526	400000	
Ca	44	2	45	258035.605	ppb	258035.605	0.19	851111	400000	
Ti	47	2	45	0.939	ppb	0.939	94.10	27	4000	
V	51	2	72	-0.261	ppb	-0.261	-24.32	1567	2000	
Cr	52	2	72	0.405	ppb	0.405	10.62	837	5000	
Mn	55	2	72	546.757	ppb	546.757	0.85	314096	10000	
Fe	57	2	72	233.478	ppb	233.478	4.69	6865	400000	
Co	59	2	72	0.727	ppb	0.727	6.82	1947	2000	
Ni	60	2	72	1.494	ppb	1.494	12.43	1407	5000	
Cu	63	2	72	0.197	ppb	0.197	14.16	1877	5000	
Zn	66	2	72	1.405	ppb	1.405	14.80	813	5000	
As	75	2	72	0.786	ppb	0.786	22.40	173	2000	
Se	78	1	72	0.109	ppb	0.109	111.99	59	2000	
Sr	88	2	72	1099.889	ppb	1099.889	1.19	650199	4000	
Zr	90	2	72	20.120	ppb	20.120	37.39	253	1000	
Nb	93	2	72	0.848	ppb	0.848	0.98	3537	200	
Mo	95	2	115	1.059	ppb	1.059	4.64	1133	2000	
Pd	105	2	115	0.015	ppb	0.015	21.71	33	100	
Ag	107	2	115	-0.013	ppb	-0.013	-116.94	40	100	
Cd	111	2	115	0.039	ppb	0.039	119.04	20	2000	
Sn	120	2	115	0.098	ppb	0.098	44.59	300	2000	
Sb	121	2	115	0.146	ppb	0.146	31.35	203	1000	
Ba	137	2	115	11.191	ppb	11.191	9.23	3741	5000	
W	182	2	165	0.117	ppb	0.117	19.87	1950	100	
Pt	195	2	165	0.002	ppb	0.002	225.32	63	100	
Tl	205	2	165	0.010	ppb	0.010	105.62	440	2000	
Pb	208	2	165	0.033	ppb	0.033	15.58	2194	5000	
Th	232	2	165	0.041	ppb	0.041	26.98	1233	2000	
U	238	2	165	10.449	ppb	10.449	0.20	160187	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	784652	0.36	962768	81.50	60	120	
Sc (IS)	45	1	HMI H2	29604339	0.65	35850229	82.58	60	120	
Sc (IS)	45	2	HMI He	1104706	1.06	1169942	94.42	60	120	
Sc (IS)	45	3	No Gas	52115854	0.14	64035761	81.39	60	120	
Ge Internal Standard	72	1	HMI H2	11096434	0.58	13887730	79.90	60	120	
Ge Internal Standard	72	2	HMI He	1221573	1.66	1316994	92.75	60	120	
In Internal Standard	115	2	HMI He	3806713	1.77	4006527	95.01	60	120	
Ho-165	165	2	HMI He	18652431	0.43	19709190	94.64	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-10-B
Data File Name	073SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:54:03-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.585	ppb	-3.585	-90.98	130279	500000	
Li	7	2	45	-68.740	ppb	-68.740	-21.15	6025	500000	
Li	7	3	45	-22.791	ppb	-22.791	-22.92	4066048	50000	
Be	9	1	6	-0.048	ppb	-0.048	-0.21	10	2000	
B	11	1	6	32.522	ppb	32.522	6.15	13427	2000	
Na	23	1	45	3068.407	ppb	3068.407	0.22	11433321	2000	
Na	23	2	45	2830.273	ppb	2830.273	0.29	791459	400000	
Mg	24	2	45	6476.524	ppb	6476.524	0.66	836775	400000	
Al	27	2	45	8.011	ppb	8.011	55.94	630	400000	
K	39	1	45	133.946	ppb	133.946	14.14	10800715	400000	
K	39	2	45	1296.841	ppb	1296.841	0.98	97831	400000	
Ca	40	1	45	21866.059	ppb	21866.059	0.38	120106008	400000	
Ca	44	2	45	21089.080	ppb	21089.080	1.71	71907	400000	
Ti	47	2	45	0.226	ppb	0.226	86.61	7	4000	
V	51	2	72	-0.161	ppb	-0.161	-71.90	1784	2000	
Cr	52	2	72	0.391	ppb	0.391	6.69	863	5000	
Mn	55	2	72	0.668	ppb	0.668	32.13	567	10000	
Fe	57	2	72	13.103	ppb	13.103	10.09	640	400000	
Co	59	2	72	0.030	ppb	0.030	68.02	97	2000	
Ni	60	2	72	1.531	ppb	1.531	14.97	1520	5000	
Cu	63	2	72	-0.060	ppb	-0.060	-9.80	1407	5000	
Zn	66	2	72	1.639	ppb	1.639	26.93	933	5000	
As	75	2	72	0.297	ppb	0.297	7.67	87	2000	
Se	78	1	72	0.268	ppb	0.268	51.72	111	2000	
Sr	88	2	72	62.097	ppb	62.097	2.35	38914	4000	
Zr	90	2	72	2.142	ppb	2.142	83.76	113	1000	
Nb	93	2	72	0.417	ppb	0.417	13.61	2187	200	
Mo	95	2	115	0.031	ppb	0.031	34.18	83	2000	
Pd	105	2	115	0.006	ppb	0.006	0.41	20	100	
Ag	107	2	115	-0.003	ppb	-0.003	-259.83	80	100	
Cd	111	2	115	0.000	ppb	0.000	-139488.17	3	2000	
Sn	120	2	115	0.117	ppb	0.117	64.72	337	2000	
Sb	121	2	115	0.436	ppb	0.436	17.29	520	1000	
Ba	137	2	115	15.708	ppb	15.708	1.98	5518	5000	
W	182	2	165	0.038	ppb	0.038	137.50	1637	100	
Pt	195	2	165	-0.005	ppb	-0.005	-93.83	37	100	
Tl	205	2	165	-0.011	ppb	-0.011	-78.08	267	2000	
Pb	208	2	165	0.010	ppb	0.010	133.19	1997	5000	
Th	232	2	165	-0.007	ppb	-0.007	-109.48	607	2000	
U	238	2	165	0.026	ppb	0.026	42.34	663	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	860079	0.41	962768	89.33	60	120	
Sc (IS)	45	1	HMI H2	31451208	0.44	35850229	87.73	60	120	
Sc (IS)	45	2	HMI He	1140922	0.77	1169942	97.52	60	120	
Sc (IS)	45	3	No Gas	52118026	0.97	64035761	81.39	60	120	
Ge Internal Standard	72	1	HMI H2	12122478	0.36	13887730	87.29	60	120	
Ge Internal Standard	72	2	HMI He	1294171	0.13	1316994	98.27	60	120	
In Internal Standard	115	2	HMI He	4003935	0.21	4006527	99.94	60	120	
Ho-165	165	2	HMI He	19356244	0.64	19709190	98.21	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-11-B
Data File Name	074SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T14:57:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.770	ppb	10.770	93.04	133554	500000	
Li	7	2	45	-23.555	ppb	-23.555	-77.95	6762	500000	
Li	7	3	45	-14.620	ppb	-14.620	-18.08	4110650	50000	
Be	9	1	6	-0.064	ppb	-0.064	-22.32	3	2000	
B	11	1	6	40.984	ppb	40.984	4.95	16480	2000	
Na	23	1	45	2992.789	ppb	2992.789	0.66	11024774	2000	
Na	23	2	45	2766.542	ppb	2766.542	0.29	765780	400000	
Mg	24	2	45	11057.560	ppb	11057.560	2.05	1413199	400000	
Al	27	2	45	-0.621	ppb	-0.621	-461.54	350	400000	
K	39	1	45	-480.375	ppb	-480.375	-2.00	8535450	400000	
K	39	2	45	744.731	ppb	744.731	3.81	62788	400000	
Ca	40	1	45	26852.465	ppb	26852.465	0.19	145737574	400000	
Ca	44	2	45	25852.662	ppb	25852.662	0.66	87196	400000	
Ti	47	2	45	0.230	ppb	0.230	173.21	7	4000	
V	51	2	72	0.131	ppb	0.131	24.24	2104	2000	
Cr	52	2	72	0.138	ppb	0.138	5.59	443	5000	
Mn	55	2	72	118.587	ppb	118.587	0.09	70964	10000	
Fe	57	2	72	16.654	ppb	16.654	14.45	733	400000	
Co	59	2	72	0.333	ppb	0.333	8.63	933	2000	
Ni	60	2	72	5.681	ppb	5.681	1.04	4788	5000	
Cu	63	2	72	0.043	ppb	0.043	101.43	1610	5000	
Zn	66	2	72	0.956	ppb	0.956	16.70	710	5000	
As	75	2	72	0.255	ppb	0.255	2.24	77	2000	
Se	78	1	72	0.066	ppb	0.066	67.22	51	2000	
Sr	88	2	72	74.822	ppb	74.822	0.17	46016	4000	
Zr	90	2	72	7.544	ppb	7.544	78.25	157	1000	
Nb	93	2	72	0.311	ppb	0.311	20.34	1767	200	
Mo	95	2	115	0.047	ppb	0.047	79.13	100	2000	
Pd	105	2	115	0.002	ppb	0.002	349.18	13	100	
Ag	107	2	115	-0.017	ppb	-0.017	-29.60	30	100	
Cd	111	2	115	0.022	ppb	0.022	152.02	13	2000	
Sn	120	2	115	0.059	ppb	0.059	72.43	267	2000	
Sb	121	2	115	0.048	ppb	0.048	36.44	110	1000	
Ba	137	2	115	2.712	ppb	2.712	10.85	960	5000	
W	182	2	165	0.122	ppb	0.122	40.16	2047	100	
Pt	195	2	165	-0.005	ppb	-0.005	-93.77	40	100	
Tl	205	2	165	-0.016	ppb	-0.016	-37.00	217	2000	
Pb	208	2	165	-0.029	ppb	-0.029	-12.37	1540	5000	
Th	232	2	165	-0.005	ppb	-0.005	-70.13	627	2000	
U	238	2	165	0.022	ppb	0.022	35.45	600	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	843491	0.26	962768	87.61	60	120	
Sc (IS)	45	1	HMI H2	31079125	0.10	35850229	86.69	60	120	
Sc (IS)	45	2	HMI He	1128785	0.57	1169942	96.48	60	120	
Sc (IS)	45	3	No Gas	51526389	0.81	64035761	80.47	60	120	
Ge Internal Standard	72	1	HMI H2	11833748	0.65	13887730	85.21	60	120	
Ge Internal Standard	72	2	HMI He	1270216	0.56	1316994	96.45	60	120	
In Internal Standard	115	2	HMI He	3990530	0.96	4006527	99.60	60	120	
Ho-165	165	2	HMI He	19338018	0.70	19709190	98.12	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-12-B
Data File Name	075SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:01:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	007CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.321	ppb	11.321	39.43	130219	500000	
Li	7	2	45	-6.013	ppb	-6.013	-71.42	6909	500000	
Li	7	3	45	-10.240	ppb	-10.240	-44.44	4110575	50000	
Be	9	1	6	-0.064	ppb	-0.064	-22.60	3	2000	
B	11	1	6	26.069	ppb	26.069	2.65	10454	2000	
Na	23	1	45	7137.396	ppb	7137.396	0.26	25322656	2000	
Na	23	2	45	6926.939	ppb	6926.939	0.62	1848432	400000	
Mg	24	2	45	13053.494	ppb	13053.494	2.18	1629171	400000	
Al	27	2	45	104.767	ppb	104.767	7.16	3604	400000	
K	39	1	45	-438.952	ppb	-438.952	-6.96	8451112	400000	
K	39	2	45	756.495	ppb	756.495	2.59	62032	400000	
Ca	40	1	45	30860.046	ppb	30860.046	0.81	163074244	400000	
Ca	44	2	45	29035.633	ppb	29035.633	0.55	95637	400000	
Ti	47	2	45	2.697	ppb	2.697	64.34	77	4000	
V	51	2	72	0.463	ppb	0.463	6.05	2450	2000	
Cr	52	2	72	0.560	ppb	0.560	15.45	1093	5000	
Mn	55	2	72	556.740	ppb	556.740	0.50	325139	10000	
Fe	57	2	72	2097.287	ppb	2097.287	3.53	60828	400000	
Co	59	2	72	3.282	ppb	3.282	2.91	8893	2000	
Ni	60	2	72	2.931	ppb	2.931	9.14	2547	5000	
Cu	63	2	72	0.004	ppb	0.004	734.48	1490	5000	
Zn	66	2	72	1.835	ppb	1.835	10.99	953	5000	
As	75	2	72	2.298	ppb	2.298	10.03	463	2000	
Se	78	1	72	-0.064	ppb	-0.064	-46.50	13	2000	
Sr	88	2	72	59.403	ppb	59.403	2.55	35719	4000	
Zr	90	2	72	25.372	ppb	25.372	35.26	300	1000	
Nb	93	2	72	0.229	ppb	0.229	28.80	1444	200	
Mo	95	2	115	0.052	ppb	0.052	44.59	103	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-189.62	7	100	
Ag	107	2	115	-0.014	ppb	-0.014	-111.66	40	100	
Cd	111	2	115	-0.007	ppb	-0.007	0.00	0	2000	
Sn	120	2	115	0.018	ppb	0.018	302.80	213	2000	
Sb	121	2	115	0.060	ppb	0.060	82.05	120	1000	
Ba	137	2	115	18.200	ppb	18.200	8.50	6228	5000	
W	182	2	165	1.050	ppb	1.050	3.81	6489	100	
Pt	195	2	165	0.001	ppb	0.001	457.88	60	100	
Tl	205	2	165	-0.015	ppb	-0.015	-75.15	230	2000	
Pb	208	2	165	0.054	ppb	0.054	16.83	2480	5000	
Th	232	2	165	0.031	ppb	0.031	36.66	1120	2000	
U	238	2	165	0.014	ppb	0.014	1.85	453	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	828915	0.49	962768	86.10	60	120	
Sc (IS)	45	1	HMI H2	30262579	0.96	35850229	84.41	60	120	
Sc (IS)	45	2	HMI He	1102451	1.33	1169942	94.23	60	120	
Sc (IS)	45	3	No Gas	50922308	0.10	64035761	79.52	60	120	
Ge Internal Standard	72	1	HMI H2	11607047	0.71	13887730	83.58	60	120	
Ge Internal Standard	72	2	HMI He	1241831	0.55	1316994	94.29	60	120	
In Internal Standard	115	2	HMI He	3902404	0.80	4006527	97.40	60	120	
Ho-165	165	2	HMI He	19051037	0.41	19709190	96.66	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	076_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:05:25-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	629.534	ppb	33.800	297903	500	125.9	90	110	>+\-10%
Li	7	2	45	453.936	ppb	11.963	14985	500	90.8	90	110	
Li	7	3	45	449.410	ppb	2.538	9278790	500	89.9	90	110	>+\-10%
Be	9	1	6	60.252	ppb	28.028	21029	50	120.5	90	110	>+\-10%
B	11	1	6	64.829	ppb	27.661	22121	50	129.7	90	110	>+\-10%
Na	23	1	45	6288.677	ppb	29.330	19835046	5000	125.8	90	110	>+\-10%
Na	23	2	45	5063.008	ppb	0.100	1365749	5000	101.3	90	110	
Mg	24	2	45	4793.737	ppb	0.702	603123	5000	95.9	90	110	
Al	27	2	45	5235.961	ppb	1.889	163739	5000	104.7	90	110	
K	39	1	45	6784.678	ppb	33.618	29438593	5000	135.7	90	110	>+\-10%
K	39	2	45	5048.961	ppb	0.358	322660	5000	101.0	90	110	
Ca	40	1	45	6400.708	ppb	31.613	29980890	5000	128.0	90	110	>+\-10%
Ca	44	2	45	5026.627	ppb	3.554	16744	5000	100.5	90	110	
Ti	47	2	45	52.058	ppb	9.500	1493	50	104.1	90	110	
V	51	2	72	51.702	ppb	2.429	63208	50	103.4	90	110	
Cr	52	2	72	48.419	ppb	0.704	75982	50	96.8	90	110	
Mn	55	2	72	51.568	ppb	1.797	30249	50	103.1	90	110	
Fe	57	2	72	4834.327	ppb	0.407	139883	5000	96.7	90	110	
Co	59	2	72	48.628	ppb	1.452	131568	50	97.3	90	110	
Ni	60	2	72	47.441	ppb	1.273	37095	50	94.9	90	110	
Cu	63	2	72	47.822	ppb	1.383	105174	50	95.6	90	110	
Zn	66	2	72	48.706	ppb	1.999	14782	50	97.4	90	110	
As	75	2	72	49.882	ppb	2.252	9478	50	99.8	90	110	
Se	78	1	72	59.695	ppb	24.949	15108	50	119.4	90	110	>+\-10%
Sr	88	2	72	52.330	ppb	1.980	31466	50	104.7	90	110	
Zr	90	2	72	53.644	ppb	16.694	533	50	107.3	90	110	
Nb	93	2	72	87.035	ppb	1.373	303208	100	87.0	90	110	>+\-10%
Mo	95	2	115	46.153	ppb	1.416	48568	50	92.3	90	110	
Pd	105	2	115	46.882	ppb	1.477	77989	50	93.8	90	110	
Ag	107	2	115	47.021	ppb	0.784	164430	50	94.0	90	110	
Cd	111	2	115	48.485	ppb	3.069	21761	50	97.0	90	110	
Sn	120	2	115	50.479	ppb	2.311	59307	50	101.0	90	110	
Sb	121	2	115	51.152	ppb	1.424	52647	50	102.3	90	110	
Ba	137	2	115	53.713	ppb	2.472	18363	50	107.4	90	110	
W	182	2	165	47.941	ppb	1.265	232196	50	95.9	90	110	
Pt	195	2	165	46.939	ppb	0.213	188502	50	93.9	90	110	
Tl	205	2	165	50.756	ppb	1.847	447428	50	101.5	90	110	
Pb	208	2	165	50.919	ppb	1.139	592664	50	101.8	90	110	
Th	232	2	165	50.834	ppb	0.666	703679	50	101.7	90	110	
U	238	2	165	48.581	ppb	1.345	759075	50	97.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	743105	15.35	962768	77.18	60	120	
Sc (IS)	45	1	HMI H2	27821175	17.56	35850229	77.60	60	120	
Sc (IS)	45	2	HMI He	1110851	0.55	1169942	94.95	60	120	
Sc (IS)	45	3	No Gas	51675874	1.47	64035761	80.70	60	120	
Ge Internal Standard	72	1	HMI H2	10772420	14.61	13887730	77.57	60	120	
Ge Internal Standard	72	2	HMI He	1241612	0.54	1316994	94.28	60	120	
In Internal Standard	115	2	HMI He	3903607	0.59	4006527	97.43	60	120	
Ho-165	165	2	HMI He	19033894	0.58	19709190	96.57	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	077_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:09:13-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-15.771	ppb	-39.4	4127785	10	
Be	9	1	6	-0.046	ppb	-0.9	10	0.5	
B	11	1	6	4.434	ppb	23.9	2074	0.5	>RL
Na	23	1	45	-9.141	ppb	-6.7	172863	25	
Na	23	2	45	-16.567	ppb	-10.3	11809	25	
Mg	24	2	45	3.241	ppb	29.1	657	25	
Al	27	2	45	-0.387	ppb	-802.6	353	15	
K	39	1	45	219.845	ppb	7.7	10913894	50	>RL
K	39	2	45	3.161	ppb	286.8	16900	50	
Ca	40	1	45	10.829	ppb	5.6	108518	50	
Ca	44	2	45	0.093	ppb	1872.9	73	25	
Ti	47	2	45	0.116	ppb	173.2	3	0.5	
V	51	2	72	2.149	ppb	11.3	4468	1	>RL
Cr	52	2	72	0.035	ppb	67.2	273	1	
Mn	55	2	72	0.003	ppb	3270.0	157	0.5	
Fe	57	2	72	0.813	ppb	260.4	260	25	
Co	59	2	72	0.015	ppb	79.3	53	0.5	
Ni	60	2	72	0.165	ppb	63.5	400	1	
Cu	63	2	72	0.041	ppb	198.5	1577	1	
Zn	66	2	72	0.111	ppb	221.9	447	5	
As	75	2	72	0.005	ppb	465.0	28	1	
Se	78	1	72	-0.032	ppb	-109.1	23	1	
Sr	88	2	72	0.051	ppb	64.1	50	0.5	
Zr	90	2	72	2.238	ppb	247.0	110	1	>RL
Nb	93	2	72	4.171	ppb	10.4	15212	2	>RL
Mo	95	2	115	0.110	ppb	55.9	167	0.5	
Pd	105	2	115	0.030	ppb	52.6	60	1	
Ag	107	2	115	-0.004	ppb	-119.3	77	1	
Cd	111	2	115	0.000	ppb	19261.7	3	0.5	
Sn	120	2	115	0.161	ppb	65.1	387	1	
Sb	121	2	115	0.317	ppb	18.7	390	0.6	
Ba	137	2	115	0.048	ppb	0.5	30	0.5	
W	182	2	165	0.043	ppb	55.7	1630	1	
Pt	195	2	165	0.004	ppb	130.5	73	1	
Tl	205	2	165	-0.012	ppb	-101.6	247	0.1	
Pb	208	2	165	-0.046	ppb	-23.3	1310	0.5	
Th	232	2	165	0.010	ppb	57.6	827	1	
U	238	2	165	0.023	ppb	7.7	603	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	810773	1.66	962768	84.21	60	120	
Sc (IS)	45	1	HMI H2	30915052	0.44	35850229	86.23	60	120	
Sc (IS)	45	2	HMI He	1114217	0.40	1169942	95.24	60	120	
Sc (IS)	45	3	No Gas	51902554	0.42	64035761	81.05	60	120	
Ge Internal Standard	72	1	HMI H2	11787209	0.93	13887730	84.87	60	120	
Ge Internal Standard	72	2	HMI He	1246827	0.21	1316994	94.67	60	120	
In Internal Standard	115	2	HMI He	3967046	0.28	4006527	99.01	60	120	
Ho-165	165	2	HMI He	18985461	0.65	19709190	96.33	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	078LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:13:00-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-2.525	ppb	-150.045	4271750	50	-5.0	70	130	>+/-30%
Be	9	1	6	0.842	ppb	25.179	363	1	84.2	70	130	
Na	23	2	45	23.634	ppb	7.966	22398	50	47.3	70	130	>+/-30%
Mg	24	2	45	53.542	ppb	5.142	6952	50	107.1	70	130	
Al	27	2	45	33.915	ppb	21.363	1417	30	113.0	70	130	
K	39	2	45	111.371	ppb	5.739	23313	100	111.4	70	130	
Ca	44	2	45	51.692	ppb	19.983	243	50	103.4	70	130	
V	51	2	72	6.419	ppb	5.439	9480	5	128.4	70	130	
Cr	52	2	72	2.076	ppb	0.434	3454	2	103.8	70	130	
Mn	55	2	72	1.174	ppb	10.343	837	1	117.4	70	130	
Fe	57	2	72	49.960	ppb	9.627	1674	50	99.9	70	130	
Co	59	2	72	0.884	ppb	0.390	2397	1	88.4	70	130	
Ni	60	2	72	2.362	ppb	6.626	2097	2	118.1	70	130	
Cu	63	2	72	1.812	ppb	4.498	5391	2	90.6	70	130	
Zn	66	2	72	9.262	ppb	3.464	3134	10	92.6	70	130	
As	75	2	72	4.403	ppb	5.777	858	5	88.1	70	130	
Se	78	1	72	4.669	ppb	9.003	1355	5	93.4	70	130	
Sr	88	2	72	1.032	ppb	27.707	637	1	103.2	70	130	
Zr	90	2	72	10.460	ppb	55.364	177	0.5	2092.1	70	130	>+/-30%
Nb	93	2	72	8.261	ppb	2.377	29268	2	413.0	70	130	>+/-30%
Mo	95	2	115	1.792	ppb	6.421	1937	2	89.6	70	130	
Pd	105	2	115	0.014	ppb	23.683	33	1	1.4	70	130	>+/-30%
Ag	107	2	115	4.751	ppb	2.520	16727	5	95.0	70	130	
Cd	111	2	115	0.979	ppb	6.671	443	1	97.9	70	130	
Sn	120	2	115	9.716	ppb	2.451	11599	10	97.2	70	130	
Sb	121	2	115	2.036	ppb	8.479	2157	2	101.8	70	130	
Ba	137	2	115	1.082	ppb	13.144	383	1	108.2	70	130	
W	182	2	165	4.603	ppb	5.279	23692	1	460.3	70	130	>+/-30%
Pt	195	2	165	0.032	ppb	42.423	187	1	3.2	70	130	>+/-30%
Tl	205	2	165	0.971	ppb	3.033	8957	1	97.1	70	130	
Pb	208	2	165	0.943	ppb	0.904	12856	1	94.3	70	130	
Th	232	2	165	1.994	ppb	1.920	28402	2	99.7	70	130	
U	238	2	165	0.961	ppb	3.946	15330	1	96.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	828968	4.26	962768	86.10	60	120	
Sc (IS)	45	1	HMI H2	31162341	1.03	35850229	86.92	60	120	
Sc (IS)	45	2	HMI He	1106361	0.43	1169942	94.57	60	120	
Sc (IS)	45	3	No Gas	51855404	0.73	64035761	80.98	60	120	
Ge Internal Standard	72	1	HMI H2	11792434	0.53	13887730	84.91	60	120	
Ge Internal Standard	72	2	HMI He	1237488	0.58	1316994	93.96	60	120	
In Internal Standard	115	2	HMI He	3912429	0.96	4006527	97.65	60	120	
Ho-165	165	2	HMI He	19122892	0.45	19709190	97.03	60	120	

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Sample Table

Sample Name	rinse-5417588
Data File Name	079WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:16:46-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.055	ppb	-53.52131258	7	0.5
Na	23	2	45	-26.108	ppb	-4.046290188	9187	25
Mg	24	2	45	4.482	ppb	19.56577161	807	25
Al	27	2	45	-1.472	ppb	-56.10360924	317	15
K	39	2	45	5.445	ppb	44.86583242	16907	50
Ca	44	2	45	8.330	ppb	130.0814257	100	25
V	51	2	72	1.705	ppb	18.40003255	3897	1
Cr	52	2	72	-0.003	ppb	-919.3423232	210	1
Mn	55	2	72	-0.068	ppb	-156.6272449	113	0.5
Fe	57	2	72	1.516	ppb	219.6673285	277	25
Co	59	2	72	0.003	ppb	347.9459927	20	0.5
Ni	60	2	72	0.023	ppb	261.3634133	287	1
Cu	63	2	72	-0.047	ppb	-139.5232409	1370	1
Zn	66	2	72	0.036	ppb	351.2262944	420	5
As	75	2	72	0.020	ppb	159.9748085	31	1
Se	78	1	72	-0.060	ppb	-13.98103441	15	1
Nb	93	2	72	0.635	ppb	3.686404864	2834	2
Mo	95	2	115	0.026	ppb	105.9548682	77	0.5
Pd	105	2	115	0.008	ppb	186.2764043	23	1
Ag	107	2	115	-0.005	ppb	-181.8913212	70	1
Cd	111	2	115	0.007	ppb	171.7952117	7	0.5
Sn	120	2	115	0.092	ppb	82.00169641	303	1
Sb	121	2	115	0.058	ppb	90.34663465	120	0.6
Ba	137	2	115	-0.028	ppb	-58.32364471	3	0.5
W	182	2	165	-0.026	ppb	-90.78546188	1303	1
Pt	195	2	165	0.007	ppb	173.8739468	87	1
Tl	205	2	165	-0.017	ppb	-10.16686454	207	0.1
Pb	208	2	165	-0.048	ppb	-10.04078864	1293	0.5
Th	232	2	165	-0.012	ppb	-80.81620174	523	1
U	238	2	165	0.001	ppb	189.1157489	260	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	831560	3.88	962768	86.37	60	120	
Sc (IS)	45	1	HMI H2	30757764	0.33	35850229	85.80	60	120	
Sc (IS)	45	2	HMI He	1105551	0.33	1169942	94.50	60	120	
Sc (IS)	45	3	No Gas	51475333	1.01	64035761	80.39	60	120	
Ge Internal Standard	72	1	HMI H2	11774392	0.46	13887730	84.78	60	120	
Ge Internal Standard	72	2	HMI He	1232646	1.41	1316994	93.60	60	120	
In Internal Standard	115	2	HMI He	3945734	0.85	4006527	98.48	60	120	
Ho-165	165	2	HMI He	19033199	0.15	19709190	96.57	60	120	

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Sample Table

Sample Name	rinse-5417588
Data File Name	080WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:20:33-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.031	ppb	-163.8327536	17	0.5
Na	23	2	45	-26.805	ppb	-3.881463394	9050	25
Mg	24	2	45	5.216	ppb	13.8080108	903	25
Al	27	2	45	-3.774	ppb	-68.37115034	247	15
K	39	2	45	-6.122	ppb	-123.4421157	16296	50
Ca	44	2	45	-10.902	ppb	-57.61929069	37	25
V	51	2	72	1.558	ppb	13.72783347	3731	1
Cr	52	2	72	0.037	ppb	95.10955062	273	1
Mn	55	2	72	-0.046	ppb	-74.95409202	127	0.5
Fe	57	2	72	2.053	ppb	43.79823871	293	25
Co	59	2	72	0.008	ppb	99.63802549	33	0.5
Ni	60	2	72	0.041	ppb	340.7080338	300	1
Cu	63	2	72	-0.009	ppb	-1433.56488	1453	1
Zn	66	2	72	0.273	ppb	28.54877235	490	5
As	75	2	72	0.003	ppb	1438.404747	27	1
Se	78	1	72	-0.093	ppb	-35.36668115	5	1
Nb	93	2	72	0.444	ppb	28.50323583	2180	2
Mo	95	2	115	0.026	ppb	83.50450716	77	0.5
Pd	105	2	115	0.008	ppb	186.3703706	23	1
Ag	107	2	115	-0.005	ppb	-248.8114013	70	1
Cd	111	2	115	0.000	ppb	5986.799526	3	0.5
Sn	120	2	115	0.027	ppb	125.0720122	223	1
Sb	121	2	115	0.008	ppb	140.7857741	67	0.6
Ba	137	2	115	0.001	ppb	1636.605951	13	0.5
W	182	2	165	-0.046	ppb	-43.32424308	1203	1
Pt	195	2	165	-0.006	ppb	-62.37207111	33	1
Tl	205	2	165	-0.025	ppb	-21.82363673	133	0.1
Pb	208	2	165	-0.056	ppb	-44.38113249	1193	0.5
Th	232	2	165	-0.012	ppb	-21.67440835	520	1
U	238	2	165	-0.001	ppb	-849.8126648	230	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	828868	2.22	962768	86.09	60	120	
Sc (IS)	45	1	HMI H2	30880966	0.28	35850229	86.14	60	120	
Sc (IS)	45	2	HMI He	1111452	0.32	1169942	95.00	60	120	
Sc (IS)	45	3	No Gas	52282681	1.32	64035761	81.65	60	120	
Ge Internal Standard	72	1	HMI H2	11756682	0.33	13887730	84.66	60	120	
Ge Internal Standard	72	2	HMI He	1235554	0.63	1316994	93.82	60	120	
In Internal Standard	115	2	HMI He	3916095	0.93	4006527	97.74	60	120	
Ho-165	165	2	HMI He	18975677	0.36	19709190	96.28	60	120	

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Sample Table

Sample Name	rinse-5417588
Data File Name	081WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:24:21-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.038	ppb	-77.66526727	13	0.5
Na	23	2	45	-25.754	ppb	-8.637703244	9227	25
Mg	24	2	45	4.785	ppb	15.35454452	840	25
Al	27	2	45	-3.254	ppb	-59.41620503	260	15
K	39	2	45	5.951	ppb	210.9807639	16840	50
Ca	44	2	45	-4.701	ppb	-197.259652	57	25
V	51	2	72	1.834	ppb	12.57343941	4047	1
Cr	52	2	72	0.038	ppb	84.74386893	273	1
Mn	55	2	72	-0.028	ppb	-238.4657864	137	0.5
Fe	57	2	72	-1.643	ppb	-134.5305819	187	25
Co	59	2	72	-0.001	ppb	-411.9448078	10	0.5
Ni	60	2	72	0.101	ppb	59.86903667	347	1
Cu	63	2	72	-0.079	ppb	-37.85081736	1300	1
Zn	66	2	72	0.357	ppb	3.133733025	513	5
As	75	2	72	0.024	ppb	50.51324907	31	1
Se	78	1	72	-0.074	ppb	-21.74506012	11	1
Nb	93	2	72	0.394	ppb	17.95872706	2000	2
Mo	95	2	115	0.011	ppb	230.2369784	60	0.5
Pd	105	2	115	0.016	ppb	107.537317	37	1
Ag	107	2	115	-0.017	ppb	-30.07439442	30	1
Cd	111	2	115	0.008	ppb	334.1681356	7	0.5
Sn	120	2	115	0.060	ppb	152.429715	260	1
Sb	121	2	115	0.025	ppb	84.82683473	83	0.6
Ba	137	2	115	0.011	ppb	151.205927	17	0.5
W	182	2	165	-0.050	ppb	-49.85465247	1170	1
Pt	195	2	165	-0.004	ppb	-119.7526431	40	1
Tl	205	2	165	-0.022	ppb	-3.754512767	163	0.1
Pb	208	2	165	-0.061	ppb	-27.7738192	1127	0.5
Th	232	2	165	-0.019	ppb	-14.47957857	417	1
U	238	2	165	-0.001	ppb	-837.8613421	230	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	820998	1.54	962768	85.27	60	120	
Sc (IS)	45	1	HMI H2	31009677	0.31	35850229	86.50	60	120	
Sc (IS)	45	2	HMI He	1099186	0.52	1169942	93.95	60	120	
Sc (IS)	45	3	No Gas	52372449	1.05	64035761	81.79	60	120	
Ge Internal Standard	72	1	HMI H2	11822212	0.25	13887730	85.13	60	120	
Ge Internal Standard	72	2	HMI He	1232232	0.96	1316994	93.56	60	120	
In Internal Standard	115	2	HMI He	3879921	1.21	4006527	96.84	60	120	
Ho-165	165	2	HMI He	18772081	1.02	19709190	95.25	60	120	

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Sample Table

Sample Name	rinse-5417588
Data File Name	082WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:28:08-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.072	ppb	-1.29705E-06	0	0.5
Na	23	2	45	-27.635	ppb	-3.575401496	8786	25
Mg	24	2	45	5.327	ppb	14.92045503	913	25
Al	27	2	45	-4.159	ppb	-35.39418032	233	15
K	39	2	45	-5.989	ppb	-162.7509473	16226	50
Ca	44	2	45	-11.849	ppb	-29.81172019	33	25
V	51	2	72	1.495	ppb	7.936467873	3661	1
Cr	52	2	72	0.052	ppb	50.24901544	297	1
Mn	55	2	72	0.006	ppb	1771.893455	157	0.5
Fe	57	2	72	0.070	ppb	4715.064476	237	25
Co	59	2	72	0.015	ppb	86.04043757	53	0.5
Ni	60	2	72	0.130	ppb	84.72770355	370	1
Cu	63	2	72	0.010	ppb	253.0912245	1497	1
Zn	66	2	72	0.373	ppb	33.190498	520	5
As	75	2	72	-0.029	ppb	-190.4854994	22	1
Se	78	1	72	-0.037	ppb	-95.14391713	21	1
Nb	93	2	72	0.289	ppb	22.11801132	1647	2
Mo	95	2	115	-0.005	ppb	-382.9530406	43	0.5
Pd	105	2	115	0.004	ppb	307.835839	17	1
Ag	107	2	115	-0.010	ppb	-32.32483324	53	1
Cd	111	2	115	0.000	ppb	7234.198524	3	0.5
Sn	120	2	115	0.051	ppb	75.66831615	253	1
Sb	121	2	115	0.024	ppb	105.781551	83	0.6
Ba	137	2	115	-0.018	ppb	-91.57341166	7	0.5
W	182	2	165	-0.051	ppb	-25.48771872	1177	1
Pt	195	2	165	0.002	ppb	354.0206985	67	1
Tl	205	2	165	-0.027	ppb	-2.248845758	123	0.1
Pb	208	2	165	-0.046	ppb	-38.70596271	1317	0.5
Th	232	2	165	-0.020	ppb	-40.99789832	407	1
U	238	2	165	-0.001	ppb	-966.9212345	230	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	827718	2.31	962768	85.97	60	120	
Sc (IS)	45	1	HMI H2	30996357	0.49	35850229	86.46	60	120	
Sc (IS)	45	2	HMI He	1106246	0.49	1169942	94.56	60	120	
Sc (IS)	45	3	No Gas	52046001	0.82	64035761	81.28	60	120	
Ge Internal Standard	72	1	HMI H2	11844740	0.71	13887730	85.29	60	120	
Ge Internal Standard	72	2	HMI He	1237120	0.06	1316994	93.94	60	120	
In Internal Standard	115	2	HMI He	3934151	1.29	4006527	98.19	60	120	
Ho-165	165	2	HMI He	18981046	0.49	19709190	96.31	60	120	

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Sample Table

Sample Name	rinse-5417588
Data File Name	083WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:31:56-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.072	ppb	-1.29705E-06	0	0.5
Na	23	2	45	-26.649	ppb	-6.874498903	9083	25
Mg	24	2	45	3.876	ppb	21.65213382	733	25
Al	27	2	45	-3.756	ppb	-58.72328116	247	15
K	39	2	45	1.456	ppb	753.5675832	16734	50
Ca	44	2	45	-9.895	ppb	-80.50369528	40	25
V	51	2	72	1.476	ppb	15.00338124	3644	1
Cr	52	2	72	0.039	ppb	93.88709504	277	1
Mn	55	2	72	-0.092	ppb	-18.31202236	100	0.5
Fe	57	2	72	0.985	ppb	275.2514057	263	25
Co	59	2	72	-0.005	ppb	0	0	0.5
Ni	60	2	72	-0.008	ppb	-1713.56102	263	1
Cu	63	2	72	-0.091	ppb	-30.78206922	1280	1
Zn	66	2	72	0.155	ppb	218.7851445	457	5
As	75	2	72	0.040	ppb	83.06108064	35	1
Se	78	1	72	-0.074	ppb	-39.27350556	11	1
Nb	93	2	72	0.170	ppb	11.36962475	1237	2
Mo	95	2	115	0.014	ppb	206.8834954	63	0.5
Pd	105	2	115	0.004	ppb	220.7130205	17	1
Ag	107	2	115	-0.018	ppb	-9.189364314	27	1
Cd	111	2	115	0.000	ppb	5686.069644	3	0.5
Sn	120	2	115	-0.041	ppb	-131.2181101	143	1
Sb	121	2	115	0.008	ppb	178.5358548	67	0.6
Ba	137	2	115	-0.028	ppb	-60.65949654	3	0.5
W	182	2	165	-0.042	ppb	-65.94628858	1213	1
Pt	195	2	165	-0.002	ppb	-261.4754347	50	1
Tl	205	2	165	-0.019	ppb	-19.81470003	190	0.1
Pb	208	2	165	-0.053	ppb	-32.0000418	1233	0.5
Th	232	2	165	-0.015	ppb	-70.76591109	483	1
U	238	2	165	-0.004	ppb	-140.4723986	177	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	819086	1.00	962768	85.08	60	120	
Sc (IS)	45	1	HMI H2	31147982	0.33	35850229	86.88	60	120	
Sc (IS)	45	2	HMI He	1110187	0.73	1169942	94.89	60	120	
Sc (IS)	45	3	No Gas	52926903	0.61	64035761	82.65	60	120	
Ge Internal Standard	72	1	HMI H2	11851761	0.33	13887730	85.34	60	120	
Ge Internal Standard	72	2	HMI He	1239006	0.18	1316994	94.08	60	120	
In Internal Standard	115	2	HMI He	3900053	0.91	4006527	97.34	60	120	
Ho-165	165	2	HMI He	18888270	1.10	19709190	95.83	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5424511
Data File Name	084CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:35:44-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	130757	0.00
Li	7	2	HMI He	6722	0.08
Li	7	3	No Gas	4242386	0.00
Be	9	1	HMI H2	3	5196.15
B	11	1	HMI H2	1053	0.05
Na	23	1	HMI H2	120349	0.00
Na	23	2	HMI He	8289	0.05
Mg	24	2	HMI He	883	1.07
Al	27	2	HMI He	323	4.52
K	39	2	HMI He	16053	0.02
Ca	44	2	HMI He	47	95.59
Ti	47	2	HMI He	17	549.91
V	51	2	HMI He	3691	0.10
Cr	52	2	HMI He	263	9.82
Mn	55	2	HMI He	143	7.43
Fe	57	2	HMI He	167	5.50
Co	59	2	HMI He	0	#VALUE!
Ni	60	2	HMI He	333	3.41
Cu	63	2	HMI He	1130	0.98
Zn	66	2	HMI He	317	6.79
As	75	2	HMI He	23	141.79
Se	78	1	HMI H2	7	1039.23
Sr	88	2	HMI He	20	500.00
Zr	90	2	HMI He	77	25.99
Nb	93	2	HMI He	1060	1.22
Mo	95	2	HMI He	17	549.91
Pd	105	2	HMI He	17	549.91
Ag	107	2	HMI He	43	61.49
Cd	111	2	HMI He	10	1000.00
Sn	120	2	HMI He	193	4.09
Sb	121	2	HMI He	73	10.74
Ba	137	2	HMI He	7	2598.08
W	182	2	HMI He	1160	1.23
Pt	195	2	HMI He	60	27.78
Tl	205	2	HMI He	140	0.00
Pb	208	2	HMI He	1277	1.08
Th	232	2	HMI He	400	5.73
U	238	2	HMI He	173	22.65

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	822129	1.74
Sc (IS)	45	1	HMI H2	31063320	0.77
Sc (IS)	45	2	HMI He	1110240	0.90
Sc (IS)	45	3	No Gas	52905316	0.43
Ge Internal Standard	72	1	HMI H2	11878391	0.28
Ge Internal Standard	72	2	HMI He	1238950	0.75
In Internal Standard	115	2	HMI He	3889250	0.99
Ho-165	165	2	HMI He	18939303	0.32

Calibration Standard Report

Sample Table

Sample Name	ic-5424512
Data File Name	085CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:39:32-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	462666	0.00
Li	7	2	HMI He	22952	0.01
Li	7	3	No Gas	14760729	0.00
Be	9	1	HMI H2	38186	0.01
B	11	1	HMI H2	37669	0.00
Na	23	1	HMI H2	36965671	0.00
Na	23	2	HMI He	2649759	0.00
Mg	24	2	HMI He	1245873	0.00
Al	27	2	HMI He	323405	0.00
K	39	1	HMI H2	46825958	0.00
K	39	2	HMI He	620099	0.00
Ca	40	1	HMI H2	54878853	0.00
Ca	44	2	HMI He	33857	0.00
Ti	47	2	HMI He	2854	0.19
V	51	2	HMI He	117046	0.00
Cr	52	2	HMI He	147706	0.00
Mn	55	2	HMI He	57796	0.00
Fe	57	2	HMI He	276341	0.00
Co	59	2	HMI He	255056	0.00
Ni	60	2	HMI He	72998	0.00
Cu	63	2	HMI He	200744	0.00
Zn	66	2	HMI He	29361	0.00
As	75	2	HMI He	17977	0.01
Se	78	1	HMI H2	27270	0.01
Sr	88	2	HMI He	62786	0.00
Zr	90	2	HMI He	623	3.49
Nb	93	2	HMI He	659987	0.00
Mo	95	2	HMI He	93468	0.00
Pd	105	2	HMI He	144177	0.00
Ag	107	2	HMI He	315822	0.00
Cd	111	2	HMI He	41369	0.01
Sn	120	2	HMI He	113519	0.00
Sb	121	2	HMI He	100709	0.00
Ba	137	2	HMI He	34561	0.01
Nd	146	2	HMI He	126288	0.00
Sm	147	2	HMI He	108405	0.00
Sm	150	2	HMI He	102873	0.00
Gd	156	1	HMI H2	553544	0.00
Gd	157	1	HMI H2	419496	0.00
W	182	2	HMI He	463426	0.00
Pt	195	2	HMI He	374258	0.00
Tl	205	2	HMI He	866374	0.00
Pb	208	2	HMI He	1141750	0.00
Th	232	2	HMI He	1361343	0.00
U	238	2	HMI He	1472665	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	809723	2.94	822129	98.49	60	120	
Sc (IS)	45	1	HMI H2	30605451	0.17	31063320	98.53	60	120	
Sc (IS)	45	2	HMI He	1090207	0.78	1110240	98.20	60	120	
Sc (IS)	45	3	No Gas	51510703	0.04	52905316	97.36	60	120	
Ge Internal Standard	72	1	HMI H2	11614761	0.33	11878391	97.78	60	120	
Ge Internal Standard	72	2	HMI He	1215494	0.50	1238950	98.11	60	120	
In Internal Standard	115	2	HMI He	3811790	0.76	3889250	98.01	60	120	
Ho-165	165	2	HMI He	18864468	0.24	18939303	99.60	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	086_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:43:22-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	501.061	ppb	1.922	297296	500	100.2	90	110	
Li	7	2	45	450.047	ppb	12.882	14091	500	90.0	90	110	
Li	7	3	45	499.707	ppb	2.747	9487445	500	99.9	90	110	
Be	9	1	6	50.996	ppb	3.344	19116	50	102.0	90	110	
B	11	1	6	58.036	ppb	3.068	21890	50	116.1	90	110	>+\-10%
Na	23	1	45	5036.075	ppb	0.513	18749814	5000	100.7	90	110	
Na	23	2	45	5017.117	ppb	0.876	1345795	5000	100.3	90	110	
Mg	24	2	45	4712.626	ppb	0.373	592996	5000	94.3	90	110	
Al	27	2	45	4912.371	ppb	0.948	160501	5000	98.2	90	110	
K	39	1	45	5000.816	ppb	0.360	28937167	5000	100.0	90	110	
K	39	2	45	4994.033	ppb	0.263	320500	5000	99.9	90	110	
Ca	40	1	45	4998.434	ppb	0.978	27570505	5000	100.0	90	110	
Ca	44	2	45	4890.915	ppb	3.182	16737	5000	97.8	90	110	
Ti	47	2	45	49.917	ppb	15.642	1447	50	99.8	90	110	
V	51	2	72	50.121	ppb	0.449	60640	50	100.2	90	110	
Cr	52	2	72	50.979	ppb	2.481	75626	50	102.0	90	110	
Mn	55	2	72	51.405	ppb	3.625	29858	50	102.8	90	110	
Fe	57	2	72	4964.379	ppb	0.477	137653	5000	99.3	90	110	
Co	59	2	72	51.167	ppb	0.487	130869	50	102.3	90	110	
Ni	60	2	72	50.407	ppb	1.799	37065	50	100.8	90	110	
Cu	63	2	72	51.157	ppb	0.655	103528	50	102.3	90	110	
Zn	66	2	72	48.542	ppb	4.598	14451	50	97.1	90	110	
As	75	2	72	50.521	ppb	1.916	9118	50	101.0	90	110	
Se	78	1	72	51.213	ppb	3.411	14014	50	102.4	90	110	
Sr	88	2	72	48.892	ppb	2.034	30791	50	97.8	90	110	
Zr	90	2	72	75.416	ppb	27.078	490	50	150.8	90	110	>+\-10%
Nb	93	2	72	105.538	ppb	0.275	349729	100	105.5	90	110	
Mo	95	2	115	50.812	ppb	1.735	48022	50	101.6	90	110	
Pd	105	2	115	52.754	ppb	1.341	76907	50	105.5	90	110	
Ag	107	2	115	50.606	ppb	3.131	161572	50	101.2	90	110	
Cd	111	2	115	51.108	ppb	4.137	21377	50	102.2	90	110	
Sn	120	2	115	49.615	ppb	4.017	57024	50	99.2	90	110	
Sb	121	2	115	51.028	ppb	1.120	51982	50	102.1	90	110	
Ba	137	2	115	50.463	ppb	1.258	17635	50	100.9	90	110	
W	182	2	165	49.879	ppb	1.006	231281	50	99.8	90	110	
Pt	195	2	165	50.285	ppb	1.111	187866	50	100.6	90	110	
Tl	205	2	165	51.504	ppb	1.107	445414	50	103.0	90	110	
Pb	208	2	165	51.311	ppb	1.246	585325	50	102.6	90	110	
Th	232	2	165	50.719	ppb	1.305	689306	50	101.4	90	110	
U	238	2	165	50.824	ppb	1.059	747105	50	101.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	794682	0.32	822129	96.66	60	120	
Sc (IS)	45	1	HMI H2	30728121	0.38	31063320	98.92	60	120	
Sc (IS)	45	2	HMI He	1100239	0.80	1110240	99.10	60	120	
Sc (IS)	45	3	No Gas	51756486	0.64	52905316	97.83	60	120	
Ge Internal Standard	72	1	HMI H2	11650284	0.64	11878391	98.08	60	120	
Ge Internal Standard	72	2	HMI He	1218868	0.68	1238950	98.38	60	120	
In Internal Standard	115	2	HMI He	3853644	1.04	3889250	99.08	60	120	
Ho-165	165	2	HMI He	18828291	0.43	18939303	99.41	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	087_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:48:46-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-6.798	ppb	-75.3	4201421	10	
Be	9	1	6	0.059	ppb	23.6	27	0.5	
B	11	1	6	0.828	ppb	65.8	1383	0.5	>RL
Na	23	1	45	7.535	ppb	6.5	150531	25	
Na	23	2	45	6.169	ppb	36.5	10311	25	
Mg	24	2	45	-1.489	ppb	-20.3	720	25	
Al	27	2	45	-0.061	ppb	-2861.4	333	15	
K	39	1	45	56.089	ppb	41.1	11328957	50	>RL
K	39	2	45	10.561	ppb	58.4	17318	50	
Ca	40	1	45	6.840	ppb	6.3	100775	50	
Ca	44	2	45	3.278	ppb	396.4	60	25	
Ti	47	2	45	-0.577	ppb	0.0	0	0.5	
V	51	2	72	0.421	ppb	87.4	4288	1	
Cr	52	2	72	-0.002	ppb	-1867.9	267	1	
Mn	55	2	72	-0.012	ppb	-902.3	140	0.5	
Fe	57	2	72	3.310	ppb	44.6	267	25	
Co	59	2	72	0.020	ppb	58.0	53	0.5	
Ni	60	2	72	-0.042	ppb	-281.2	310	1	
Cu	63	2	72	0.139	ppb	15.1	1450	1	
Zn	66	2	72	0.520	ppb	68.9	483	5	
As	75	2	72	0.094	ppb	29.7	41	1	
Se	78	1	72	0.066	ppb	65.9	25	1	
Sr	88	2	72	0.050	ppb	93.1	53	0.5	
Zr	90	2	72	-1.534	ppb	-560.4	70	1	
Nb	93	2	72	4.116	ppb	2.5	15286	2	>RL
Mo	95	2	115	0.094	ppb	47.0	110	0.5	
Pd	105	2	115	0.024	ppb	27.5	53	1	
Ag	107	2	115	-0.005	ppb	-35.7	27	1	
Cd	111	2	115	-0.001	ppb	-3686.0	10	0.5	
Sn	120	2	115	0.087	ppb	40.0	300	1	
Sb	121	2	115	0.289	ppb	32.3	380	0.6	
Ba	137	2	115	0.000	ppb	-8120.7	7	0.5	
W	182	2	165	0.077	ppb	39.5	1530	1	
Pt	195	2	165	0.002	ppb	267.4	70	1	
Tl	205	2	165	0.005	ppb	151.8	183	0.1	
Pb	208	2	165	-0.001	ppb	-2332.8	1277	0.5	
Th	232	2	165	0.026	ppb	51.3	760	1	
U	238	2	165	0.023	ppb	47.5	513	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	836712	1.64	822129	101.77	60	120	
Sc (IS)	45	1	HMI H2	31481397	0.25	31063320	101.35	60	120	
Sc (IS)	45	2	HMI He	1151460	1.87	1110240	103.71	60	120	
Sc (IS)	45	3	No Gas	53329484	0.68	52905316	100.80	60	120	
Ge Internal Standard	72	1	HMI H2	11987246	0.17	11878391	100.92	60	120	
Ge Internal Standard	72	2	HMI He	1272382	1.13	1238950	102.70	60	120	
In Internal Standard	115	2	HMI He	3982414	3.42	3889250	102.40	60	120	
Ho-165	165	2	HMI He	19063587	2.49	18939303	100.66	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	088LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:52:35-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	9.222	ppb	23.997	4402138	50	18.4	70	130	>+/-30%
Be	9	1	6	1.138	ppb	28.829	450	1	113.8	70	130	
Na	23	2	45	51.213	ppb	4.287	22464	50	102.4	70	130	
Mg	24	2	45	46.642	ppb	3.849	6922	50	93.3	70	130	
Al	27	2	45	26.779	ppb	17.022	1227	30	89.3	70	130	
K	39	2	45	104.739	ppb	7.464	22905	100	104.7	70	130	
Ca	44	2	45	56.826	ppb	27.833	247	50	113.7	70	130	
V	51	2	72	5.016	ppb	7.114	9650	5	100.3	70	130	
Cr	52	2	72	2.149	ppb	13.026	3551	2	107.4	70	130	
Mn	55	2	72	1.101	ppb	6.171	803	1	110.1	70	130	
Fe	57	2	72	59.525	ppb	11.570	1874	50	119.1	70	130	
Co	59	2	72	1.036	ppb	8.755	2740	1	103.6	70	130	
Ni	60	2	72	2.360	ppb	2.220	2117	2	118.0	70	130	
Cu	63	2	72	2.073	ppb	4.136	5438	2	103.6	70	130	
Zn	66	2	72	10.056	ppb	4.654	3351	10	100.6	70	130	
As	75	2	72	4.264	ppb	5.887	817	5	85.3	70	130	
Se	78	1	72	4.769	ppb	6.060	1343	5	95.4	70	130	
Sr	88	2	72	1.014	ppb	18.513	680	1	101.4	70	130	
Zr	90	2	72	13.843	ppb	35.892	157	0.5	2768.6	70	130	>+/-30%
Nb	93	2	72	10.513	ppb	4.144	36983	2	525.6	70	130	>+/-30%
Mo	95	2	115	2.168	ppb	6.910	2107	2	108.4	70	130	
Pd	105	2	115	0.016	ppb	41.125	40	1	1.6	70	130	>+/-30%
Ag	107	2	115	5.164	ppb	5.251	16861	5	103.3	70	130	
Cd	111	2	115	0.812	ppb	4.154	357	1	81.2	70	130	
Sn	120	2	115	9.867	ppb	4.459	11736	10	98.7	70	130	
Sb	121	2	115	2.093	ppb	9.148	2247	2	104.7	70	130	
Ba	137	2	115	0.881	ppb	32.265	320	1	88.1	70	130	
W	182	2	165	4.836	ppb	2.212	23795	1	483.6	70	130	>+/-30%
Pt	195	2	165	0.017	ppb	97.484	123	1	1.7	70	130	>+/-30%
Tl	205	2	165	1.010	ppb	2.800	8994	1	101.0	70	130	
Pb	208	2	165	1.006	ppb	5.450	12900	1	100.6	70	130	
Th	232	2	165	2.000	ppb	4.034	27954	2	100.0	70	130	
U	238	2	165	1.013	ppb	2.718	15273	1	101.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	829542	1.91	822129	100.90	60	120	
Sc (IS)	45	1	HMI H2	31486417	0.13	31063320	101.36	60	120	
Sc (IS)	45	2	HMI He	1130427	0.85	1110240	101.82	60	120	
Sc (IS)	45	3	No Gas	53624819	0.59	52905316	101.36	60	120	
Ge Internal Standard	72	1	HMI H2	11935866	0.53	11878391	100.48	60	120	
Ge Internal Standard	72	2	HMI He	1259910	0.36	1238950	101.69	60	120	
In Internal Standard	115	2	HMI He	3932407	1.20	3889250	101.11	60	120	
Ho-165	165	2	HMI He	19092317	0.34	18939303	100.81	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5415696
Data File Name	089ICSA.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T15:56:22-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	42.498	ppb	6.6	7618881	1	>RL or LOD
Be	9	1	6	-0.004	ppb	-194.3	3	1	
B	11	1	6	-0.919	ppb	-12.0	1247	1	
Na	23	1	45	292.487	ppb	118.3	1776634	100000	
K	39	1	45	-1313.461	ppb	-21.3	9634868	100000	
Ca	40	1	45	289.433	ppb	110.2	2449984	100000	
Ti	47	2	45	25.950	ppb	114.5	1170	1	>RL or LOD
V	51	2	72	-1.721	ppb	-7.3	2557	1	
Cr	52	2	72	-0.075	ppb	-29.9	227	1	
Mn	55	2	72	-0.101	ppb	-32.9	127	1	
Co	59	2	72	0.015	ppb	39.4	57	1	
Ni	60	2	72	-0.025	ppb	-40.9	473	1	
Cu	63	2	72	-0.060	ppb	-113.5	1510	1	
Zn	66	2	72	-0.249	ppb	-39.4	367	1	
As	75	2	72	-0.004	ppb	-412.8	33	1	
Se	78	1	72	0.005	ppb	273.0	12	1	
Sr	88	2	72	0.010	ppb	91.7	40	1	
Zr	90	2	72	17.966	ppb	94.3	263	1	>RL or LOD
Nb	93	2	72	0.397	ppb	56.5	3594	1	
Mo	95	2	115	26.365	ppb	110.7	35832	2000	
Pd	105	2	115	0.008	ppb	66.4	40	1	
Ag	107	2	115	-0.006	ppb	-43.0	33	1	
Cd	111	2	115	-0.007	ppb	-427.9	10	1	
Sn	120	2	115	-0.051	ppb	-53.6	193	1	
Sb	121	2	115	-0.024	ppb	-110.1	70	1	
Ba	137	2	115	-0.013	ppb	-87.2	3	1	
W	182	2	165	-0.037	ppb	-14.5	1470	1	
Pt	195	2	165	-0.005	ppb	-109.5	63	1	
Tl	205	2	165	0.000	ppb	-785.1	203	1	
Pb	208	2	165	-0.030	ppb	-14.4	1380	1	
Th	232	2	165	0.012	ppb	88.9	823	1	
U	238	2	165	0.003	ppb	158.4	327	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1444224	7.34	822129	175.67	60	120	IS Failed
Sc (IS)	45	1	HMI H2	48964561	12.65	31063320	157.63	60	120	IS Failed
Sc (IS)	45	2	HMI He	1733523	4.46	1110240	156.14	60	120	IS Failed
Sc (IS)	45	3	No Gas	85650184	2.24	52905316	161.89	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	18440732	13.38	11878391	155.25	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1862869	3.15	1238950	150.36	60	120	IS Failed
In Internal Standard	115	2	HMI He	5610311	3.54	3889250	144.25	60	120	IS Failed
Ho-165	165	2	HMI He	28119475	3.71	18939303	148.47	60	120	IS Failed

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5415696
Data File Name	090ICSA.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:01:20-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-26.155	ppb	-8.8	3472293	1	
Be	9	1	6	0.009	ppb	166.0	7	1	
B	11	1	6	0.325	ppb	239.3	1123	1	
Na	23	1	45	97364.267	ppb	0.4	334815342	100000	
K	39	1	45	97810.128	ppb	0.7	338720222	100000	
Ca	40	1	45	97074.520	ppb	0.3	496526913	100000	
Ti	47	2	45	1896.251	ppb	1.2	50409	1	>RL or LOD
V	51	2	72	-0.724	ppb	-10.2	2604	1	
Cr	52	2	72	0.202	ppb	20.0	517	1	
Mn	55	2	72	0.832	ppb	8.1	577	1	
Co	59	2	72	0.011	ppb	114.5	27	1	
Ni	60	2	72	0.210	ppb	54.2	447	1	
Cu	63	2	72	0.687	ppb	9.8	2307	1	
Zn	66	2	72	0.709	ppb	62.9	480	1	
As	75	2	72	0.082	ppb	87.0	35	1	
Se	78	1	72	0.219	ppb	18.2	61	1	
Sr	88	2	72	0.889	ppb	23.5	537	1	
Zr	90	2	72	17.698	ppb	41.3	160	1	>RL or LOD
Nb	93	2	72	1.687	ppb	15.5	6142	1	>RL or LOD
Mo	95	2	115	2005.030	ppb	1.9	1750172	2000	>RL or LOD
Pd	105	2	115	0.008	ppb	98.2	27	1	
Ag	107	2	115	0.016	ppb	66.5	87	1	
Cd	111	2	115	0.321	ppb	39.0	133	1	
Sn	120	2	115	0.025	ppb	125.2	203	1	
Sb	121	2	115	0.059	ppb	59.8	123	1	
Ba	137	2	115	0.073	ppb	125.6	30	1	
W	182	2	165	0.195	ppb	39.0	1977	1	
Pt	195	2	165	0.002	ppb	392.0	63	1	
Tl	205	2	165	0.003	ppb	216.2	160	1	
Pb	208	2	165	0.055	ppb	31.6	1830	1	
Th	232	2	165	0.002	ppb	213.3	403	1	
U	238	2	165	0.005	ppb	28.5	230	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	787203	0.62	822129	95.75	60	120	
Sc (IS)	45	1	HMI H2	28553375	0.29	31063320	91.92	60	120	
Sc (IS)	45	2	HMI He	1020692	1.21	1110240	91.93	60	120	
Sc (IS)	45	3	No Gas	46425696	0.25	52905316	87.75	60	120	
Ge Internal Standard	72	1	HMI H2	10739002	0.56	11878391	90.41	60	120	
Ge Internal Standard	72	2	HMI He	1130565	0.98	1238950	91.25	60	120	
In Internal Standard	115	2	HMI He	3560510	1.68	3889250	91.55	60	120	
Ho-165	165	2	HMI He	18133054	0.50	18939303	95.74	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5415697
Data File Name	091ICSB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:05:05-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	920.555	ppb	0.827	394257	100	920.6	80	120	
Li	7	2	45	850.841	ppb	1.007	19373	100	850.8	80	120	
Li	7	3	45	830.662	ppb	0.405	11350029	100	830.7	80	120	
Be	9	1	6	101.070	ppb	2.792	34130	100	101.1	80	120	
B	11	1	6	88.618	ppb	2.115	29634	100	88.6	80	120	
Na	23	1	45	106014.945	ppb	0.487	353235488	100	106014.9	80	120	
K	39	1	45	107584.385	ppb	0.469	360021728	100	107584.4	80	120	
Ca	40	1	45	105728.728	ppb	0.756	523973939	100	105728.7	80	120	
V	51	2	72	96.777	ppb	1.099	106502	100	96.8	80	120	
Cr	52	2	72	95.794	ppb	1.434	132914	100	95.8	80	120	
Mn	55	2	72	99.475	ppb	1.666	54004	100	99.5	80	120	
Co	59	2	72	96.827	ppb	1.299	231966	100	96.8	80	120	
Ni	60	2	72	94.084	ppb	0.795	64528	100	94.1	80	120	
Cu	63	2	72	93.271	ppb	0.578	175931	100	93.3	80	120	
Zn	66	2	72	89.239	ppb	1.970	24642	100	89.2	80	120	
As	75	2	72	96.253	ppb	1.184	16253	100	96.3	80	120	
Se	78	1	72	97.953	ppb	1.651	23930	100	98.0	80	120	
Sr	88	2	72	98.251	ppb	2.343	57946	100	98.3	80	120	
Zr	90	2	72	28.356	ppb	23.968	217	100	28.4	80	120	>+\-20%
Nb	93	2	72	138.757	ppb	0.479	430359	100	138.8	80	120	>+\-20%
Mo	95	2	115	2059.141	ppb	0.804	1832374	100	2059.1	80	120	>+\-20%
Pd	105	2	115	97.156	ppb	1.196	133369	100	97.2	80	120	
Ag	107	2	115	93.712	ppb	0.371	281791	100	93.7	80	120	
Cd	111	2	115	97.434	ppb	2.430	38381	100	97.4	80	120	
Sn	120	2	115	95.251	ppb	0.842	102960	100	95.3	80	120	
Sb	121	2	115	101.616	ppb	1.150	97424	100	101.6	80	120	
Ba	137	2	115	99.612	ppb	2.588	32774	100	99.6	80	120	
W	182	2	165	95.004	ppb	0.570	426677	100	95.0	80	120	
Pt	195	2	165	92.275	ppb	0.305	334636	100	92.3	80	120	
Tl	205	2	165	95.217	ppb	0.871	799370	100	95.2	80	120	
Pb	208	2	165	95.334	ppb	0.605	1054785	100	95.3	80	120	
Th	232	2	165	97.526	ppb	0.956	1286529	100	97.5	80	120	
U	238	2	165	97.384	ppb	1.043	1389685	100	97.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	715982	0.51	822129	87.09	60	120	
Sc (IS)	45	1	HMI H2	27666801	0.71	31063320	89.07	60	120	
Sc (IS)	45	2	HMI He	1029731	0.88	1110240	92.75	60	120	
Sc (IS)	45	3	No Gas	45109596	0.10	52905316	85.26	60	120	
Ge Internal Standard	72	1	HMI H2	10405407	0.57	11878391	87.60	60	120	
Ge Internal Standard	72	2	HMI He	1141620	0.71	1238950	92.14	60	120	
In Internal Standard	115	2	HMI He	3629379	1.29	3889250	93.32	60	120	
Ho-165	165	2	HMI He	18279311	0.49	18939303	96.52	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	092SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:08:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-9.770	ppb	-9.770	-52.55	121279	500000	
Li	7	2	45	-31.301	ppb	-31.301	-104.72	6182	500000	
Li	7	3	45	-25.591	ppb	-25.591	-23.37	3683121	50000	
Be	9	1	6	0.018	ppb	0.018	147.82	10	2000	
B	11	1	6	0.641	ppb	0.641	59.12	1250	2000	
Na	23	1	45	72.503	ppb	72.503	6.33	372500	2000	
Na	23	2	45	54.079	ppb	54.079	4.71	22765	400000	
Mg	24	2	45	6.642	ppb	6.642	32.53	1720	400000	
Al	27	2	45	5.116	ppb	5.116	35.77	490	400000	
K	39	1	45	156.586	ppb	156.586	25.77	10986234	400000	
K	39	2	45	32.513	ppb	32.513	22.51	17998	400000	
Ca	40	1	45	15.657	ppb	15.657	15.95	141276	400000	
Ca	44	2	45	7.823	ppb	7.823	86.84	73	400000	
Ti	47	2	45	0.228	ppb	0.228	379.67	23	4000	
V	51	2	72	-0.415	ppb	-0.415	-8.16	3241	2000	
Cr	52	2	72	0.034	ppb	0.034	25.78	317	5000	
Mn	55	2	72	-0.058	ppb	-0.058	-76.95	110	10000	
Fe	57	2	72	17.909	ppb	17.909	16.71	677	400000	
Co	59	2	72	0.018	ppb	0.018	88.96	47	2000	
Ni	60	2	72	-0.076	ppb	-0.076	-67.00	280	5000	
Cu	63	2	72	0.176	ppb	0.176	29.41	1500	5000	
Zn	66	2	72	0.794	ppb	0.794	37.53	557	5000	
As	75	2	72	0.020	ppb	0.020	78.48	27	2000	
Se	78	1	72	0.090	ppb	0.090	9.05	31	2000	
Sr	88	2	72	0.005	ppb	0.005	182.05	23	4000	
Zr	90	2	72	-0.691	ppb	-0.691	-404.68	73	1000	
Nb	93	2	72	3.832	ppb	3.832	12.36	14064	200	
Mo	95	2	115	2.262	ppb	2.262	10.53	2250	2000	
Pd	105	2	115	0.059	ppb	0.059	31.38	107	100	
Ag	107	2	115	0.003	ppb	0.003	247.87	53	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.042	ppb	0.042	138.59	250	2000	
Sb	121	2	115	0.054	ppb	0.054	85.30	133	1000	
Ba	137	2	115	0.009	ppb	0.009	319.22	10	5000	
W	182	2	165	0.121	ppb	0.121	36.50	1754	100	
Pt	195	2	165	0.015	ppb	0.015	45.14	120	100	
Tl	205	2	165	0.053	ppb	0.053	54.39	613	2000	
Pb	208	2	165	-0.015	ppb	-0.015	-88.19	1123	5000	
Th	232	2	165	0.039	ppb	0.039	17.17	953	2000	
U	238	2	165	0.054	ppb	0.054	10.34	997	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	795274	0.42	822129	96.73	60	120	
Sc (IS)	45	1	HMI H2	29558573	0.35	31063320	95.16	60	120	
Sc (IS)	45	2	HMI He	1106786	0.93	1110240	99.69	60	120	
Sc (IS)	45	3	No Gas	49170586	0.56	52905316	92.94	60	120	
Ge Internal Standard	72	1	HMI H2	11447309	0.55	11878391	96.37	60	120	
Ge Internal Standard	72	2	HMI He	1250392	0.76	1238950	100.92	60	120	
In Internal Standard	115	2	HMI He	4026225	1.01	3889250	103.52	60	120	
Ho-165	165	2	HMI He	19299940	0.33	18939303	101.90	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	093_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:12:39-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	467.559	ppb	1.267	282770	500	93.5	90	110	
Li	7	2	45	427.628	ppb	7.596	13740	500	85.5	90	110	>+\-10%
Li	7	3	45	460.729	ppb	3.664	8498334	500	92.1	90	110	
Be	9	1	6	49.777	ppb	2.175	18739	50	99.6	90	110	
B	11	1	6	51.277	ppb	1.444	19544	50	102.6	90	110	
Na	23	1	45	4968.754	ppb	0.606	18287566	5000	99.4	90	110	
Na	23	2	45	4971.492	ppb	0.353	1336201	5000	99.4	90	110	
Mg	24	2	45	4626.478	ppb	0.582	583268	5000	92.5	90	110	
Al	27	2	45	4941.322	ppb	1.423	161752	5000	98.8	90	110	
K	39	1	45	5080.986	ppb	0.566	28890317	5000	101.6	90	110	
K	39	2	45	5035.534	ppb	0.357	323650	5000	100.7	90	110	
Ca	40	1	45	4988.128	ppb	0.243	27197683	5000	99.8	90	110	
Ca	44	2	45	4960.492	ppb	2.258	17004	5000	99.2	90	110	
Ti	47	2	45	47.760	ppb	7.920	1387	50	95.5	90	110	
V	51	2	72	49.573	ppb	2.615	60988	50	99.1	90	110	
Cr	52	2	72	50.924	ppb	0.300	76779	50	101.8	90	110	
Mn	55	2	72	50.819	ppb	2.698	30002	50	101.6	90	110	
Fe	57	2	72	4880.251	ppb	1.043	137518	5000	97.6	90	110	
Co	59	2	72	50.425	ppb	1.523	131063	50	100.9	90	110	
Ni	60	2	72	50.463	ppb	2.825	37703	50	100.9	90	110	
Cu	63	2	72	50.166	ppb	1.928	103188	50	100.3	90	110	
Zn	66	2	72	47.635	ppb	0.794	14418	50	95.3	90	110	
As	75	2	72	50.481	ppb	0.564	9259	50	101.0	90	110	
Se	78	1	72	50.032	ppb	2.152	13621	50	100.1	90	110	
Sr	88	2	72	50.120	ppb	2.277	32077	50	100.2	90	110	
Zr	90	2	72	69.807	ppb	29.826	467	50	139.6	90	110	>+\-10%
Nb	93	2	72	96.854	ppb	0.559	326242	100	96.9	90	110	
Mo	95	2	115	50.331	ppb	1.291	48879	50	100.7	90	110	
Pd	105	2	115	51.803	ppb	1.026	77592	50	103.6	90	110	
Ag	107	2	115	50.022	ppb	1.156	164120	50	100.0	90	110	
Cd	111	2	115	51.148	ppb	1.090	21988	50	102.3	90	110	
Sn	120	2	115	50.360	ppb	2.466	59485	50	100.7	90	110	
Sb	121	2	115	49.871	ppb	2.208	52206	50	99.7	90	110	
Ba	137	2	115	50.309	ppb	1.800	18063	50	100.6	90	110	
W	182	2	165	49.045	ppb	0.180	230901	50	98.1	90	110	
Pt	195	2	165	48.769	ppb	1.121	184964	50	97.5	90	110	
Tl	205	2	165	50.746	ppb	0.292	445555	50	101.5	90	110	
Pb	208	2	165	51.237	ppb	0.795	593373	50	102.5	90	110	
Th	232	2	165	51.002	ppb	0.892	703699	50	102.0	90	110	
U	238	2	165	50.516	ppb	1.156	753854	50	101.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	798136	0.56	822129	97.08	60	120	
Sc (IS)	45	1	HMI H2	30374322	0.54	31063320	97.78	60	120	
Sc (IS)	45	2	HMI He	1102338	0.68	1110240	99.29	60	120	
Sc (IS)	45	3	No Gas	48494214	1.14	52905316	91.66	60	120	
Ge Internal Standard	72	1	HMI H2	11592795	0.81	11878391	97.60	60	120	
Ge Internal Standard	72	2	HMI He	1238633	0.19	1238950	99.97	60	120	
In Internal Standard	115	2	HMI He	3959496	0.24	3889250	101.81	60	120	
Ho-165	165	2	HMI He	19114943	0.59	18939303	100.93	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	094_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:16:25-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-13.911	ppb	-18.0	3834977	10	
Be	9	1	6	0.060	ppb	50.2	27	0.5	
B	11	1	6	1.282	ppb	66.4	1543	0.5	>RL
Na	23	1	45	26.355	ppb	2.4	213455	25	>RL
Na	23	2	45	23.672	ppb	14.1	14605	25	
Mg	24	2	45	2.903	ppb	128.3	1244	25	
Al	27	2	45	5.373	ppb	104.8	497	15	
K	39	1	45	126.652	ppb	2.3	11151296	50	>RL
K	39	2	45	24.151	ppb	18.4	17491	50	
Ca	40	1	45	9.343	ppb	3.3	110534	50	
Ca	44	2	45	10.908	ppb	141.8	83	25	
Ti	47	2	45	8.284	ppb	185.3	251	0.5	>RL
V	51	2	72	0.093	ppb	322.5	3771	1	
Cr	52	2	72	0.024	ppb	136.8	297	1	
Mn	55	2	72	-0.072	ppb	-65.2	100	0.5	
Fe	57	2	72	9.900	ppb	57.4	440	25	
Co	59	2	72	0.012	ppb	91.1	30	0.5	
Ni	60	2	72	-0.028	ppb	-237.1	310	1	
Cu	63	2	72	0.222	ppb	27.9	1570	1	
Zn	66	2	72	0.613	ppb	47.6	497	5	
As	75	2	72	0.019	ppb	178.2	26	1	
Se	78	1	72	0.049	ppb	78.1	20	1	
Sr	88	2	72	0.006	ppb	654.1	23	0.5	
Zr	90	2	72	11.585	ppb	112.5	140	1	>RL
Nb	93	2	72	5.237	ppb	10.8	18503	2	>RL
Mo	95	2	115	0.405	ppb	25.6	407	0.5	
Pd	105	2	115	0.030	ppb	132.2	60	1	
Ag	107	2	115	0.010	ppb	74.4	77	1	
Cd	111	2	115	-0.024	ppb	0.0	0	0.5	
Sn	120	2	115	0.140	ppb	44.7	360	1	
Sb	121	2	115	0.374	ppb	25.8	467	0.6	
Ba	137	2	115	0.000	ppb	55043.3	7	0.5	
W	182	2	165	0.141	ppb	24.6	1827	1	
Pt	195	2	165	0.016	ppb	66.1	120	1	
Tl	205	2	165	0.015	ppb	33.0	270	0.1	
Pb	208	2	165	0.002	ppb	659.5	1297	0.5	
Th	232	2	165	0.044	ppb	45.1	1003	1	
U	238	2	165	0.039	ppb	25.9	747	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	828491	0.54	822129	100.77	60	120	
Sc (IS)	45	1	HMI H2	30288981	0.25	31063320	97.51	60	120	
Sc (IS)	45	2	HMI He	1107094	1.90	1110240	99.72	60	120	
Sc (IS)	45	3	No Gas	49599526	0.59	52905316	93.75	60	120	
Ge Internal Standard	72	1	HMI H2	11649026	0.38	11878391	98.07	60	120	
Ge Internal Standard	72	2	HMI He	1231740	3.02	1238950	99.42	60	120	
In Internal Standard	115	2	HMI He	3947973	3.98	3889250	101.51	60	120	
Ho-165	165	2	HMI He	19012014	4.31	18939303	100.38	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	095LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:20:13-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	1.759	ppb	348.657	4032560	50	3.5	70	130	>+/-30%
Be	9	1	6	0.930	ppb	38.613	370	1	93.0	70	130	
Na	23	2	45	62.368	ppb	1.100	25149	50	124.7	70	130	
Mg	24	2	45	47.699	ppb	7.806	6955	50	95.4	70	130	
Al	27	2	45	21.881	ppb	8.354	1047	30	72.9	70	130	
K	39	2	45	129.282	ppb	4.875	24087	100	129.3	70	130	
Ca	44	2	45	55.846	ppb	44.508	240	50	111.7	70	130	
V	51	2	72	4.529	ppb	7.918	8983	5	90.6	70	130	
Cr	52	2	72	1.981	ppb	11.424	3261	2	99.1	70	130	
Mn	55	2	72	0.918	ppb	13.705	687	1	91.8	70	130	
Fe	57	2	72	56.915	ppb	7.771	1780	50	113.8	70	130	
Co	59	2	72	0.963	ppb	13.061	2520	1	96.3	70	130	
Ni	60	2	72	2.394	ppb	17.551	2120	2	119.7	70	130	
Cu	63	2	72	2.177	ppb	9.862	5595	2	108.8	70	130	
Zn	66	2	72	10.758	ppb	5.920	3524	10	107.6	70	130	
As	75	2	72	4.720	ppb	6.926	892	5	94.4	70	130	
Se	78	1	72	4.813	ppb	4.886	1324	5	96.3	70	130	
Sr	88	2	72	1.124	ppb	5.367	743	1	112.4	70	130	
Zr	90	2	72	20.654	ppb	49.374	193	0.5	4130.8	70	130	>+/-30%
Nb	93	2	72	10.527	ppb	5.235	36642	2	526.4	70	130	>+/-30%
Mo	95	2	115	1.941	ppb	8.009	1924	2	97.1	70	130	
Pd	105	2	115	0.020	ppb	52.893	47	1	2.0	70	130	>+/-30%
Ag	107	2	115	4.953	ppb	4.637	16477	5	99.1	70	130	
Cd	111	2	115	1.109	ppb	37.577	493	1	110.9	70	130	
Sn	120	2	115	9.816	ppb	4.012	11892	10	98.2	70	130	
Sb	121	2	115	2.024	ppb	15.256	2214	2	101.2	70	130	
Ba	137	2	115	0.834	ppb	10.611	310	1	83.4	70	130	
W	182	2	165	4.798	ppb	2.062	23608	1	479.8	70	130	>+/-30%
Pt	195	2	165	0.025	ppb	80.580	153	1	2.5	70	130	>+/-30%
Tl	205	2	165	0.972	ppb	8.540	8657	1	97.2	70	130	
Pb	208	2	165	1.037	ppb	4.058	13257	1	103.7	70	130	
Th	232	2	165	2.072	ppb	0.606	28940	2	103.6	70	130	
U	238	2	165	0.997	ppb	0.987	15026	1	99.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	837112	0.78	822129	101.82	60	120	
Sc (IS)	45	1	HMI H2	30671910	0.98	31063320	98.74	60	120	
Sc (IS)	45	2	HMI He	1113861	0.53	1110240	100.33	60	120	
Sc (IS)	45	3	No Gas	50065429	1.02	52905316	94.63	60	120	
Ge Internal Standard	72	1	HMI H2	11664214	0.37	11878391	98.20	60	120	
Ge Internal Standard	72	2	HMI He	1246650	0.28	1238950	100.62	60	120	
In Internal Standard	115	2	HMI He	4005847	1.03	3889250	103.00	60	120	
Ho-165	165	2	HMI He	19085897	0.50	18939303	100.77	60	120	

Sample Report

Sample Table

Sample Name	280-116186-E-5-B
Data File Name	096SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:24:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-13.215	ppb	-13.215	-16.88	121308	500000	
Li	7	2	45	-26.920	ppb	-26.920	-59.52	6158	500000	
Li	7	3	45	-20.022	ppb	-20.022	-8.32	3711165	50000	
Be	9	1	6	0.027	ppb	0.027	56.99	13	2000	
B	11	1	6	31.325	ppb	31.325	1.98	12369	2000	
Na	23	1	45	3777.846	ppb	3777.846	0.37	13687544	2000	
Na	23	2	45	3539.000	ppb	3539.000	0.10	943075	400000	
Mg	24	2	45	6176.697	ppb	6176.697	0.55	769870	400000	
Al	27	2	45	4.717	ppb	4.717	34.20	470	400000	
K	39	1	45	236.438	ppb	236.438	1.59	11371309	400000	
K	39	2	45	1470.907	ppb	1470.907	2.49	104657	400000	
Ca	40	1	45	17410.103	ppb	17410.103	0.22	93109979	400000	
Ca	44	2	45	16364.923	ppb	16364.923	1.57	55382	400000	
Ti	47	2	45	-0.459	ppb	-0.459	-44.49	3	4000	
V	51	2	72	-0.973	ppb	-0.973	-14.61	2537	2000	
Cr	52	2	72	0.483	ppb	0.483	23.14	977	5000	
Mn	55	2	72	540.375	ppb	540.375	0.53	314017	10000	
Fe	57	2	72	4362.056	ppb	4362.056	1.13	121531	400000	
Co	59	2	72	3.198	ppb	3.198	4.01	8216	2000	
Ni	60	2	72	10.462	ppb	10.462	1.29	7989	5000	
Cu	63	2	72	0.220	ppb	0.220	21.34	1560	5000	
Zn	66	2	72	20.111	ppb	20.111	5.61	6198	5000	
As	75	2	72	1.638	ppb	1.638	5.77	319	2000	
Se	78	1	72	0.125	ppb	0.125	72.61	40	2000	
Sr	88	2	72	51.749	ppb	51.749	1.61	32742	4000	
Zr	90	2	72	13.441	ppb	13.441	12.58	150	1000	
Nb	93	2	72	1.567	ppb	1.567	6.94	6248	200	
Mo	95	2	115	0.312	ppb	0.312	15.33	317	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-149.19	10	100	
Ag	107	2	115	0.007	ppb	0.007	95.45	67	100	
Cd	111	2	115	-0.008	ppb	-0.008	-161.76	7	2000	
Sn	120	2	115	0.170	ppb	0.170	26.14	393	2000	
Sb	121	2	115	0.324	ppb	0.324	19.00	410	1000	
Ba	137	2	115	16.226	ppb	16.226	4.08	5778	5000	
W	182	2	165	0.283	ppb	0.283	24.66	2504	100	
Pt	195	2	165	0.001	ppb	0.001	947.87	63	100	
Tl	205	2	165	0.015	ppb	0.015	89.79	270	2000	
Pb	208	2	165	0.028	ppb	0.028	39.10	1617	5000	
Th	232	2	165	0.050	ppb	0.050	14.08	1097	2000	
U	238	2	165	0.023	ppb	0.023	4.33	513	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	800196	1.02	822129	97.33	60	120	
Sc (IS)	45	1	HMI H2	29839515	0.18	31063320	96.06	60	120	
Sc (IS)	45	2	HMI He	1090236	0.46	1110240	98.20	60	120	
Sc (IS)	45	3	No Gas	48793951	0.26	52905316	92.23	60	120	
Ge Internal Standard	72	1	HMI H2	11464495	0.11	11878391	96.52	60	120	
Ge Internal Standard	72	2	HMI He	1224487	0.72	1238950	98.83	60	120	
In Internal Standard	115	2	HMI He	3925257	1.71	3889250	100.93	60	120	
Ho-165	165	2	HMI He	19159090	0.58	18939303	101.16	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-11-B
Data File Name	097SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:27:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	3.842	ppb	3.842	56.57	127542	500000	
Li	7	2	45	-18.179	ppb	-18.179	-153.61	6382	500000	
Li	7	3	45	-6.300	ppb	-6.300	-16.55	3910741	50000	
Be	9	1	6	0.009	ppb	0.009	170.06	7	2000	
B	11	1	6	38.472	ppb	38.472	3.86	15015	2000	
Na	23	1	45	2916.097	ppb	2916.097	0.99	10648452	2000	
Na	23	2	45	2731.567	ppb	2731.567	0.92	738943	400000	
Mg	24	2	45	10839.125	ppb	10839.125	1.30	1367328	400000	
Al	27	2	45	0.964	ppb	0.964	89.05	353	400000	
K	39	1	45	-570.536	ppb	-570.536	-3.23	8583639	400000	
K	39	2	45	757.896	ppb	757.896	3.07	62340	400000	
Ca	40	1	45	26388.298	ppb	26388.298	0.71	141858558	400000	
Ca	44	2	45	24852.237	ppb	24852.237	1.79	85134	400000	
Ti	47	2	45	-0.577	ppb	-0.577	0.00	0	4000	
V	51	2	72	-1.026	ppb	-1.026	-18.23	2520	2000	
Cr	52	2	72	0.195	ppb	0.195	32.44	560	5000	
Mn	55	2	72	117.525	ppb	117.525	1.63	69628	10000	
Fe	57	2	72	25.284	ppb	25.284	20.66	883	400000	
Co	59	2	72	0.403	ppb	0.403	13.27	1053	2000	
Ni	60	2	72	5.863	ppb	5.863	5.28	4704	5000	
Cu	63	2	72	0.270	ppb	0.270	22.95	1690	5000	
Zn	66	2	72	1.482	ppb	1.482	25.14	760	5000	
As	75	2	72	0.169	ppb	0.169	29.22	54	2000	
Se	78	1	72	0.094	ppb	0.094	41.42	32	2000	
Sr	88	2	72	69.429	ppb	69.429	1.70	44705	4000	
Zr	90	2	72	15.359	ppb	15.359	49.00	163	1000	
Nb	93	2	72	0.993	ppb	0.993	15.99	4421	200	
Mo	95	2	115	0.099	ppb	0.099	52.43	113	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-322.91	13	100	
Ag	107	2	115	0.002	ppb	0.002	798.92	50	100	
Cd	111	2	115	-0.008	ppb	-0.008	-323.31	7	2000	
Sn	120	2	115	0.082	ppb	0.082	74.29	293	2000	
Sb	121	2	115	0.046	ppb	0.046	85.97	123	1000	
Ba	137	2	115	2.206	ppb	2.206	11.81	800	5000	
W	182	2	165	0.187	ppb	0.187	27.52	2060	100	
Pt	195	2	165	-0.004	ppb	-0.004	-142.94	47	100	
Tl	205	2	165	0.015	ppb	0.015	41.15	277	2000	
Pb	208	2	165	0.020	ppb	0.020	18.73	1527	5000	
Th	232	2	165	0.028	ppb	0.028	25.83	800	2000	
U	238	2	165	0.029	ppb	0.029	35.34	607	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	803196	0.40	822129	97.70	60	120	
Sc (IS)	45	1	HMI H2	30001222	0.96	31063320	96.58	60	120	
Sc (IS)	45	2	HMI He	1103969	0.42	1110240	99.44	60	120	
Sc (IS)	45	3	No Gas	49571919	0.24	52905316	93.70	60	120	
Ge Internal Standard	72	1	HMI H2	11535105	0.70	11878391	97.11	60	120	
Ge Internal Standard	72	2	HMI He	1246345	0.40	1238950	100.60	60	120	
In Internal Standard	115	2	HMI He	3966133	0.24	3889250	101.98	60	120	
Ho-165	165	2	HMI He	19238983	0.51	18939303	101.58	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-12-B
Data File Name	098SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:31:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.449	ppb	5.449	65.41	125980	500000	
Li	7	2	45	-21.590	ppb	-21.590	-50.38	6205	500000	
Li	7	3	45	-5.135	ppb	-5.135	-59.15	3910990	50000	
Be	9	1	6	-0.009	ppb	-0.009	0.00	0	2000	
B	11	1	6	21.715	ppb	21.715	2.50	8823	2000	
Na	23	1	45	6864.945	ppb	6864.945	0.57	24504840	2000	
Na	23	2	45	6782.346	ppb	6782.346	1.03	1787618	400000	
Mg	24	2	45	12867.999	ppb	12867.999	1.57	1592201	400000	
Al	27	2	45	101.339	ppb	101.339	2.80	3567	400000	
K	39	1	45	-570.378	ppb	-570.378	-3.54	8444062	400000	
K	39	2	45	759.507	ppb	759.507	2.07	61249	400000	
Ca	40	1	45	29782.089	ppb	29782.089	0.07	157478214	400000	
Ca	44	2	45	28333.037	ppb	28333.037	2.40	95188	400000	
Ti	47	2	45	1.200	ppb	1.200	88.98	50	4000	
V	51	2	72	-1.047	ppb	-1.047	-5.51	2437	2000	
Cr	52	2	72	0.457	ppb	0.457	20.62	933	5000	
Mn	55	2	72	556.238	ppb	556.238	0.55	321332	10000	
Fe	57	2	72	2126.179	ppb	2126.179	1.43	58977	400000	
Co	59	2	72	3.445	ppb	3.445	1.08	8800	2000	
Ni	60	2	72	3.061	ppb	3.061	10.45	2554	5000	
Cu	63	2	72	0.255	ppb	0.255	56.14	1620	5000	
Zn	66	2	72	2.340	ppb	2.340	41.72	993	5000	
As	75	2	72	2.569	ppb	2.569	4.18	484	2000	
Se	78	1	72	0.076	ppb	0.076	100.88	27	2000	
Sr	88	2	72	56.475	ppb	56.475	1.85	35522	4000	
Zr	90	2	72	44.507	ppb	44.507	15.11	320	1000	
Nb	93	2	72	0.718	ppb	0.718	3.33	3411	200	
Mo	95	2	115	0.160	ppb	0.160	33.17	167	2000	
Pd	105	2	115	0.005	ppb	0.005	216.99	23	100	
Ag	107	2	115	0.005	ppb	0.005	153.81	60	100	
Cd	111	2	115	-0.008	ppb	-0.008	-180.26	7	2000	
Sn	120	2	115	0.091	ppb	0.091	33.14	293	2000	
Sb	121	2	115	0.014	ppb	0.014	328.67	87	1000	
Ba	137	2	115	19.562	ppb	19.562	3.08	6799	5000	
W	182	2	165	1.141	ppb	1.141	2.13	6485	100	
Pt	195	2	165	-0.007	ppb	-0.007	-78.19	33	100	
Tl	205	2	165	0.013	ppb	0.013	96.45	257	2000	
Pb	208	2	165	0.109	ppb	0.109	25.35	2534	5000	
Th	232	2	165	0.063	ppb	0.063	9.82	1263	2000	
U	238	2	165	0.020	ppb	0.020	23.33	467	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	794291	0.52	822129	96.61	60	120	
Sc (IS)	45	1	HMI H2	29510464	0.32	31063320	95.00	60	120	
Sc (IS)	45	2	HMI He	1082862	0.99	1110240	97.53	60	120	
Sc (IS)	45	3	No Gas	49423718	0.56	52905316	93.42	60	120	
Ge Internal Standard	72	1	HMI H2	11316235	0.49	11878391	95.27	60	120	
Ge Internal Standard	72	2	HMI He	1217291	1.04	1238950	98.25	60	120	
In Internal Standard	115	2	HMI He	3830462	0.69	3889250	98.49	60	120	
Ho-165	165	2	HMI He	19020524	1.15	18939303	100.43	60	120	

Sample Report

Sample Table

Sample Name	280-116270-E-1-B
Data File Name	099SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:35:25-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.511	ppb	4.511	60.74	125022	500000	
Li	7	2	45	-20.278	ppb	-20.278	-165.51	6185	500000	
Li	7	3	45	0.171	ppb	0.171	3333.12	3904654	50000	
Be	9	1	6	-0.009	ppb	-0.009	0.00	0	2000	
B	11	1	6	46.771	ppb	46.771	2.22	17718	2000	
Na	23	1	45	15350.920	ppb	15350.920	0.74	54370676	2000	>LDR
Na	23	2	45	14800.204	ppb	14800.204	0.82	3867834	400000	
Mg	24	2	45	24695.607	ppb	24695.607	1.14	3035970	400000	
Al	27	2	45	1.143	ppb	1.143	123.55	350	400000	
K	39	1	45	696.995	ppb	696.995	0.56	12778446	400000	
K	39	2	45	2046.135	ppb	2046.135	1.78	137632	400000	
Ca	40	1	45	85706.232	ppb	85706.232	1.07	450723233	400000	
Ca	44	2	45	81739.690	ppb	81739.690	0.90	272895	400000	
Ti	47	2	45	-0.459	ppb	-0.459	-44.56	3	4000	
V	51	2	72	-1.625	ppb	-1.625	-13.54	1767	2000	
Cr	52	2	72	0.164	ppb	0.164	69.95	497	5000	
Mn	55	2	72	165.882	ppb	165.882	1.55	95218	10000	
Fe	57	2	72	509.838	ppb	509.838	2.56	14161	400000	
Co	59	2	72	2.329	ppb	2.329	6.15	5905	2000	
Ni	60	2	72	3.209	ppb	3.209	7.24	2644	5000	
Cu	63	2	72	-0.003	ppb	-0.003	-2325.98	1097	5000	
Zn	66	2	72	1.422	ppb	1.422	37.56	720	5000	
As	75	2	72	22.936	ppb	22.936	2.32	4116	2000	
Se	78	1	72	0.016	ppb	0.016	104.67	11	2000	
Sr	88	2	72	322.022	ppb	322.022	1.85	200951	4000	
Zr	90	2	72	19.883	ppb	19.883	93.46	183	1000	
Nb	93	2	72	0.488	ppb	0.488	36.30	2630	200	
Mo	95	2	115	1.932	ppb	1.932	18.76	1837	2000	
Pd	105	2	115	0.000	ppb	0.000	5707.93	17	100	
Ag	107	2	115	-0.005	ppb	-0.005	-94.39	27	100	
Cd	111	2	115	-0.016	ppb	-0.016	-87.20	3	2000	
Sn	120	2	115	0.148	ppb	0.148	15.75	360	2000	
Sb	121	2	115	0.316	ppb	0.316	13.74	393	1000	
Ba	137	2	115	69.532	ppb	69.532	1.05	24212	5000	
W	182	2	165	0.198	ppb	0.198	23.06	2060	100	
Pt	195	2	165	-0.003	ppb	-0.003	-301.40	47	100	
Tl	205	2	165	0.018	ppb	0.018	25.76	293	2000	
Pb	208	2	165	0.011	ppb	0.011	150.03	1390	5000	
Th	232	2	165	0.020	ppb	0.020	12.85	663	2000	
U	238	2	165	0.172	ppb	0.172	4.47	2694	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	789212	0.61	822129	96.00	60	120	
Sc (IS)	45	1	HMI H2	29357030	0.11	31063320	94.51	60	120	
Sc (IS)	45	2	HMI He	1076237	0.67	1110240	96.94	60	120	
Sc (IS)	45	3	No Gas	48676594	1.15	52905316	92.01	60	120	
Ge Internal Standard	72	1	HMI H2	11227990	0.63	11878391	94.52	60	120	
Ge Internal Standard	72	2	HMI He	1208283	0.37	1238950	97.52	60	120	
In Internal Standard	115	2	HMI He	3840494	0.40	3889250	98.75	60	120	
Ho-165	165	2	HMI He	18759737	0.71	18939303	99.05	60	120	

Sample Report

Sample Table

Sample Name	280-116270-C-8-B
Data File Name	100SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:39:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.434	ppb	5.434	56.06	124064	500000	
Li	7	2	45	-10.719	ppb	-10.719	-229.33	6302	500000	
Li	7	3	45	-11.643	ppb	-11.643	-29.30	3816858	50000	
Be	9	1	6	0.028	ppb	0.028	227.01	13	2000	
B	11	1	6	60.307	ppb	60.307	2.69	22204	2000	
Na	23	1	45	10757.527	ppb	10757.527	0.95	37754414	2000	>LDR
Na	23	2	45	10463.207	ppb	10463.207	1.15	2719457	400000	
Mg	24	2	45	26140.931	ppb	26140.931	1.22	3193331	400000	
Al	27	2	45	44.542	ppb	44.542	4.93	1724	400000	
K	39	1	45	877.706	ppb	877.706	1.92	13268727	400000	
K	39	2	45	2164.987	ppb	2164.987	0.94	143809	400000	
Ca	40	1	45	100816.115	ppb	100816.115	0.38	524874259	400000	
Ca	44	2	45	96391.048	ppb	96391.048	0.99	319758	400000	
Ti	47	2	45	-0.337	ppb	-0.337	-123.78	7	4000	
V	51	2	72	-1.715	ppb	-1.715	-10.91	1657	2000	
Cr	52	2	72	0.163	ppb	0.163	22.90	493	5000	
Mn	55	2	72	201.447	ppb	201.447	1.01	114951	10000	
Fe	57	2	72	663.049	ppb	663.049	2.73	18262	400000	
Co	59	2	72	0.030	ppb	0.030	27.48	77	2000	
Ni	60	2	72	0.877	ppb	0.877	38.74	953	5000	
Cu	63	2	72	0.095	ppb	0.095	88.52	1283	5000	
Zn	66	2	72	1.426	ppb	1.426	6.96	717	5000	
As	75	2	72	4.003	ppb	4.003	5.08	733	2000	
Se	78	1	72	0.027	ppb	0.027	130.16	13	2000	
Sr	88	2	72	262.070	ppb	262.070	1.03	162632	4000	
Zr	90	2	72	43.509	ppb	43.509	26.09	310	1000	
Nb	93	2	72	0.421	ppb	0.421	10.81	2400	200	
Mo	95	2	115	0.579	ppb	0.579	8.76	567	2000	
Pd	105	2	115	0.016	ppb	0.016	73.94	40	100	
Ag	107	2	115	-0.004	ppb	-0.004	-201.89	30	100	
Cd	111	2	115	-0.008	ppb	-0.008	-348.44	7	2000	
Sn	120	2	115	0.273	ppb	0.273	27.14	507	2000	
Sb	121	2	115	-0.003	ppb	-0.003	-1126.77	70	1000	
Ba	137	2	115	49.393	ppb	49.393	2.74	17348	5000	
W	182	2	165	0.117	ppb	0.117	24.29	1670	100	
Pt	195	2	165	-0.001	ppb	-0.001	-1494.32	57	100	
Tl	205	2	165	0.010	ppb	0.010	52.66	220	2000	
Pb	208	2	165	0.029	ppb	0.029	14.95	1577	5000	
Th	232	2	165	0.016	ppb	0.016	73.98	603	2000	
U	238	2	165	0.062	ppb	0.062	5.33	1073	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	777062	0.20	822129	94.52	60	120	
Sc (IS)	45	1	HMI H2	29063653	0.21	31063320	93.56	60	120	
Sc (IS)	45	2	HMI He	1069458	0.55	1110240	96.33	60	120	
Sc (IS)	45	3	No Gas	49069249	0.44	52905316	92.75	60	120	
Ge Internal Standard	72	1	HMI H2	11102693	0.69	11878391	93.47	60	120	
Ge Internal Standard	72	2	HMI He	1201546	0.56	1238950	96.98	60	120	
In Internal Standard	115	2	HMI He	3873364	0.29	3889250	99.59	60	120	
Ho-165	165	2	HMI He	18573252	0.22	18939303	98.07	60	120	

Sample Report

Sample Table

Sample Name	280-116270-E-9-B
Data File Name	101SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:42:56-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	23.617	ppb	23.617	14.99	130050	500000	
Li	7	2	45	-13.124	ppb	-13.124	-258.97	6285	500000	
Li	7	3	45	5.198	ppb	5.198	106.63	3985704	50000	
Be	9	1	6	0.028	ppb	0.028	149.90	13	2000	
B	11	1	6	136.987	ppb	136.987	2.25	48931	2000	
Na	23	1	45	15213.683	ppb	15213.683	1.06	53434654	2000	>LDR
Na	23	2	45	14601.864	ppb	14601.864	1.08	3807292	400000	
Mg	24	2	45	30816.429	ppb	30816.429	0.52	3780053	400000	
Al	27	2	45	1.270	ppb	1.270	60.98	353	400000	
K	39	1	45	2920.154	ppb	2920.154	1.50	20287964	400000	
K	39	2	45	4171.489	ppb	4171.489	0.51	263841	400000	
Ca	40	1	45	98228.031	ppb	98228.031	1.09	512244859	400000	
Ca	44	2	45	94811.438	ppb	94811.438	0.60	315825	400000	
Ti	47	2	45	-0.336	ppb	-0.336	-123.86	7	4000	
V	51	2	72	-1.875	ppb	-1.875	-1.43	1473	2000	
Cr	52	2	72	0.187	ppb	0.187	21.58	527	5000	
Mn	55	2	72	72.372	ppb	72.372	2.03	41296	10000	
Fe	57	2	72	872.552	ppb	872.552	1.35	23931	400000	
Co	59	2	72	3.809	ppb	3.809	1.73	9584	2000	
Ni	60	2	72	2.299	ppb	2.299	6.87	1970	5000	
Cu	63	2	72	0.085	ppb	0.085	27.31	1260	5000	
Zn	66	2	72	1.895	ppb	1.895	15.70	850	5000	
As	75	2	72	27.087	ppb	27.087	0.92	4819	2000	
Se	78	1	72	0.033	ppb	0.033	119.28	15	2000	
Sr	88	2	72	505.140	ppb	505.140	0.59	312745	4000	
Zr	90	2	72	44.223	ppb	44.223	17.61	313	1000	
Nb	93	2	72	0.343	ppb	0.343	11.14	2140	200	
Mo	95	2	115	2.047	ppb	2.047	17.38	1920	2000	
Pd	105	2	115	0.000	ppb	0.000	5509.55	17	100	
Ag	107	2	115	0.011	ppb	0.011	84.13	77	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.155	ppb	0.155	29.27	363	2000	
Sb	121	2	115	0.098	ppb	0.098	52.91	170	1000	
Ba	137	2	115	80.542	ppb	80.542	1.71	27696	5000	
W	182	2	165	0.252	ppb	0.252	22.47	2314	100	
Pt	195	2	165	0.002	ppb	0.002	291.12	67	100	
Tl	205	2	165	0.016	ppb	0.016	12.86	273	2000	
Pb	208	2	165	0.034	ppb	0.034	40.75	1657	5000	
Th	232	2	165	0.016	ppb	0.016	44.59	617	2000	
U	238	2	165	0.186	ppb	0.186	3.08	2897	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	773243	0.82	822129	94.05	60	120	
Sc (IS)	45	1	HMI H2	29114550	1.50	31063320	93.73	60	120	
Sc (IS)	45	2	HMI He	1073854	1.14	1110240	96.72	60	120	
Sc (IS)	45	3	No Gas	49050341	0.74	52905316	92.71	60	120	
Ge Internal Standard	72	1	HMI H2	11080784	0.69	11878391	93.29	60	120	
Ge Internal Standard	72	2	HMI He	1198901	0.79	1238950	96.77	60	120	
In Internal Standard	115	2	HMI He	3792793	0.25	3889250	97.52	60	120	
Ho-165	165	2	HMI He	18800442	0.77	18939303	99.27	60	120	

Sample Report

Sample Table

Sample Name	280-116270-G-12-B
Data File Name	102SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:46:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.361	ppb	-14.361	-39.29	120329	500000	
Li	7	2	45	-47.703	ppb	-47.703	-28.25	5785	500000	
Li	7	3	45	-20.220	ppb	-20.220	-26.07	3730046	50000	
Be	9	1	6	0.000	ppb	0.000	6355.68	3	2000	
B	11	1	6	35.318	ppb	35.318	4.86	13784	2000	
Na	23	1	45	3084.492	ppb	3084.492	0.38	11140898	2000	
Na	23	2	45	2896.824	ppb	2896.824	0.36	768666	400000	
Mg	24	2	45	6762.244	ppb	6762.244	0.10	837616	400000	
Al	27	2	45	7.104	ppb	7.104	32.01	543	400000	
K	39	1	45	-3.174	ppb	-3.174	-545.02	10477425	400000	
K	39	2	45	1337.137	ppb	1337.137	1.25	95983	400000	
Ca	40	1	45	22385.353	ppb	22385.353	0.65	119106245	400000	
Ca	44	2	45	21461.294	ppb	21461.294	1.15	72162	400000	
Ti	47	2	45	-0.460	ppb	-0.460	-43.92	3	4000	
V	51	2	72	-1.517	ppb	-1.517	-10.69	1910	2000	
Cr	52	2	72	0.455	ppb	0.455	39.82	933	5000	
Mn	55	2	72	0.504	ppb	0.504	32.85	433	10000	
Fe	57	2	72	18.088	ppb	18.088	30.09	667	400000	
Co	59	2	72	0.030	ppb	0.030	27.48	77	2000	
Ni	60	2	72	3.584	ppb	3.584	7.97	2947	5000	
Cu	63	2	72	0.222	ppb	0.222	51.89	1560	5000	
Zn	66	2	72	3.004	ppb	3.004	15.33	1190	5000	
As	75	2	72	0.233	ppb	0.233	12.11	65	2000	
Se	78	1	72	0.315	ppb	0.315	31.34	91	2000	
Sr	88	2	72	58.706	ppb	58.706	2.62	37066	4000	
Zr	90	2	72	18.965	ppb	18.965	72.75	180	1000	
Nb	93	2	72	0.248	ppb	0.248	18.13	1867	200	
Mo	95	2	115	0.070	ppb	0.070	23.35	83	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-58.08	7	100	
Ag	107	2	115	-0.006	ppb	-0.006	-125.37	23	100	
Cd	111	2	115	-0.008	ppb	-0.008	-333.22	7	2000	
Sn	120	2	115	0.083	ppb	0.083	170.76	290	2000	
Sb	121	2	115	0.544	ppb	0.544	19.25	633	1000	
Ba	137	2	115	16.788	ppb	16.788	1.08	5935	5000	
W	182	2	165	0.067	ppb	0.067	46.24	1477	100	
Pt	195	2	165	-0.003	ppb	-0.003	-248.16	50	100	
Tl	205	2	165	0.006	ppb	0.006	15.83	190	2000	
Pb	208	2	165	0.028	ppb	0.028	22.28	1600	5000	
Th	232	2	165	0.011	ppb	0.011	13.39	557	2000	
U	238	2	165	0.011	ppb	0.011	43.50	343	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	798373	0.06	822129	97.11	60	120	
Sc (IS)	45	1	HMI H2	29690986	0.34	31063320	95.58	60	120	
Sc (IS)	45	2	HMI He	1083557	1.24	1110240	97.60	60	120	
Sc (IS)	45	3	No Gas	49074863	1.37	52905316	92.76	60	120	
Ge Internal Standard	72	1	HMI H2	11375431	0.56	11878391	95.77	60	120	
Ge Internal Standard	72	2	HMI He	1221965	0.34	1238950	98.63	60	120	
In Internal Standard	115	2	HMI He	3895753	0.59	3889250	100.17	60	120	
Ho-165	165	2	HMI He	18998048	1.14	18939303	100.31	60	120	

Sample Report

Sample Table

Sample Name	280-116270-G-13-B
Data File Name	103SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:50:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.290	ppb	10.290	82.62	122173	500000	
Li	7	2	45	-6.468	ppb	-6.468	-244.98	6225	500000	
Li	7	3	45	-3.778	ppb	-3.778	-47.23	3796545	50000	
Be	9	1	6	0.001	ppb	0.001	2069.22	3	2000	
B	11	1	6	93.865	ppb	93.865	0.88	32810	2000	
Na	23	1	45	11969.957	ppb	11969.957	0.73	40852591	2000	>LDR
Na	23	2	45	11613.745	ppb	11613.745	0.61	2948912	400000	
Mg	24	2	45	60559.211	ppb	60559.211	0.75	7228723	400000	
Al	27	2	45	34.710	ppb	34.710	9.45	1380	400000	
K	39	1	45	1495.536	ppb	1495.536	4.83	14961875	400000	
K	39	2	45	2833.977	ppb	2833.977	1.17	179302	400000	
Ca	40	1	45	166832.340	ppb	166832.340	1.16	844847427	400000	
Ca	44	2	45	160664.374	ppb	160664.374	0.42	520813	400000	
Ti	47	2	45	0.529	ppb	0.529	140.51	30	4000	
V	51	2	72	-1.894	ppb	-1.894	-3.59	1430	2000	
Cr	52	2	72	0.332	ppb	0.332	1.15	727	5000	
Mn	55	2	72	777.674	ppb	777.674	1.17	435710	10000	
Fe	57	2	72	63.273	ppb	63.273	3.99	1857	400000	
Co	59	2	72	0.024	ppb	0.024	43.72	60	2000	
Ni	60	2	72	0.111	ppb	0.111	92.10	397	5000	
Cu	63	2	72	7.554	ppb	7.554	3.89	15729	5000	
Zn	66	2	72	41.676	ppb	41.676	2.57	12062	5000	
As	75	2	72	0.040	ppb	0.040	189.50	29	2000	
Se	78	1	72	0.034	ppb	0.034	116.75	15	2000	
Sr	88	2	72	554.776	ppb	554.776	0.94	338298	4000	
Zr	90	2	72	77.697	ppb	77.697	18.91	487	1000	
Nb	93	2	72	0.224	ppb	0.224	54.32	1727	200	
Mo	95	2	115	0.025	ppb	0.025	39.67	40	2000	
Pd	105	2	115	0.000	ppb	0.000	2246.86	17	100	
Ag	107	2	115	0.000	ppb	0.000	2471.23	43	100	
Cd	111	2	115	-0.016	ppb	-0.016	-91.60	3	2000	
Sn	120	2	115	0.114	ppb	0.114	83.50	317	2000	
Sb	121	2	115	0.025	ppb	0.025	181.23	97	1000	
Ba	137	2	115	56.057	ppb	56.057	1.80	19251	5000	
W	182	2	165	0.090	ppb	0.090	24.53	1553	100	
Pt	195	2	165	-0.006	ppb	-0.006	-67.78	37	100	
Tl	205	2	165	-0.002	ppb	-0.002	-339.86	117	2000	
Pb	208	2	165	2.107	ppb	2.107	3.37	25007	5000	
Th	232	2	165	0.053	ppb	0.053	11.65	1113	2000	
U	238	2	165	0.022	ppb	0.022	32.49	487	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	749772	0.22	822129	91.20	60	120	
Sc (IS)	45	1	HMI H2	28272660	0.80	31063320	91.02	60	120	
Sc (IS)	45	2	HMI He	1045103	0.74	1110240	94.13	60	120	
Sc (IS)	45	3	No Gas	47809774	0.36	52905316	90.37	60	120	
Ge Internal Standard	72	1	HMI H2	10742366	0.19	11878391	90.44	60	120	
Ge Internal Standard	72	2	HMI He	1180802	0.73	1238950	95.31	60	120	
In Internal Standard	115	2	HMI He	3787248	1.53	3889250	97.38	60	120	
Ho-165	165	2	HMI He	18643268	0.24	18939303	98.44	60	120	

Sample Report

Sample Table

Sample Name	280-116270-E-14-B
Data File Name	104SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:54:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.510	ppb	8.510	40.21	122965	500000	
Li	7	2	45	-7.311	ppb	-7.311	-358.87	6255	500000	
Li	7	3	45	-6.040	ppb	-6.040	-116.63	3824844	50000	
Be	9	1	6	-0.009	ppb	-0.009	0.00	0	2000	
B	11	1	6	25.816	ppb	25.816	2.86	9904	2000	
Na	23	1	45	13419.705	ppb	13419.705	1.04	46287664	2000	>LDR
Na	23	2	45	12903.014	ppb	12903.014	2.76	3296968	400000	
Mg	24	2	45	37783.453	ppb	37783.453	3.76	4539266	400000	
Al	27	2	45	57.553	ppb	57.553	6.33	2100	400000	
K	39	1	45	-342.874	ppb	-342.874	-8.31	8943300	400000	
K	39	2	45	1007.515	ppb	1007.515	3.16	73966	400000	
Ca	40	1	45	124681.734	ppb	124681.734	1.46	638306924	400000	
Ca	44	2	45	118561.319	ppb	118561.319	4.21	386803	400000	
Ti	47	2	45	0.036	ppb	0.036	1201.23	17	4000	
V	51	2	72	-1.993	ppb	-1.993	-4.54	1317	2000	
Cr	52	2	72	0.504	ppb	0.504	21.28	970	5000	
Mn	55	2	72	141.266	ppb	141.266	2.58	78928	10000	
Fe	57	2	72	172.573	ppb	172.573	7.62	4768	400000	
Co	59	2	72	0.450	ppb	0.450	5.23	1110	2000	
Ni	60	2	72	2.115	ppb	2.115	1.79	1804	5000	
Cu	63	2	72	0.717	ppb	0.717	6.84	2457	5000	
Zn	66	2	72	3.508	ppb	3.508	1.51	1287	5000	
As	75	2	72	0.311	ppb	0.311	35.98	76	2000	
Se	78	1	72	0.080	ppb	0.080	67.89	27	2000	
Sr	88	2	72	250.341	ppb	250.341	2.48	152025	4000	
Zr	90	2	72	35.857	ppb	35.857	34.26	263	1000	
Nb	93	2	72	0.137	ppb	0.137	36.52	1443	200	
Mo	95	2	115	0.711	ppb	0.711	21.09	673	2000	
Pd	105	2	115	0.000	ppb	0.000	2576.15	17	100	
Ag	107	2	115	0.001	ppb	0.001	1012.08	43	100	
Cd	111	2	115	0.017	ppb	0.017	85.83	17	2000	
Sn	120	2	115	0.035	ppb	0.035	120.07	227	2000	
Sb	121	2	115	0.070	ppb	0.070	17.69	140	1000	
Ba	137	2	115	24.145	ppb	24.145	3.95	8236	5000	
W	182	2	165	0.061	ppb	0.061	58.45	1413	100	
Pt	195	2	165	-0.002	ppb	-0.002	-642.50	50	100	
Tl	205	2	165	0.069	ppb	0.069	24.59	720	2000	
Pb	208	2	165	0.136	ppb	0.136	14.42	2777	5000	
Th	232	2	165	0.028	ppb	0.028	67.57	770	2000	
U	238	2	165	1.228	ppb	1.228	6.30	17920	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	763857	0.36	822129	92.91	60	120	
Sc (IS)	45	1	HMI H2	28583260	1.24	31063320	92.02	60	120	
Sc (IS)	45	2	HMI He	1052346	1.96	1110240	94.79	60	120	
Sc (IS)	45	3	No Gas	48450366	0.19	52905316	91.58	60	120	
Ge Internal Standard	72	1	HMI H2	10936565	0.63	11878391	92.07	60	120	
Ge Internal Standard	72	2	HMI He	1176109	1.39	1238950	94.93	60	120	
In Internal Standard	115	2	HMI He	3759960	1.98	3889250	96.68	60	120	
Ho-165	165	2	HMI He	18543979	2.63	18939303	97.91	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	105_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T16:58:05-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	486.545	ppb	1.972	280419	500	97.3	90	110	
Li	7	2	45	452.444	ppb	5.578	13690	500	90.5	90	110	
Li	7	3	45	458.443	ppb	2.127	8590230	500	91.7	90	110	
Be	9	1	6	48.192	ppb	1.842	18232	50	96.4	90	110	
B	11	1	6	51.764	ppb	3.399	19817	50	103.5	90	110	
Na	23	1	45	5034.227	ppb	0.263	17973723	5000	100.7	90	110	
Na	23	2	45	5013.143	ppb	1.206	1303127	5000	100.3	90	110	
Mg	24	2	45	4655.870	ppb	0.560	567737	5000	93.1	90	110	
Al	27	2	45	4970.736	ppb	2.728	157356	5000	99.4	90	110	
K	39	1	45	5006.796	ppb	1.237	27770115	5000	100.1	90	110	
K	39	2	45	4999.925	ppb	0.943	310938	5000	100.0	90	110	
Ca	40	1	45	5045.121	ppb	0.290	26685763	5000	100.9	90	110	
Ca	44	2	45	5190.874	ppb	3.304	17208	5000	103.8	90	110	
Ti	47	2	45	51.871	ppb	11.367	1457	50	103.7	90	110	
V	51	2	72	50.143	ppb	4.288	59576	50	100.3	90	110	
Cr	52	2	72	49.786	ppb	0.590	72551	50	99.6	90	110	
Mn	55	2	72	51.071	ppb	1.918	29133	50	102.1	90	110	
Fe	57	2	72	4900.038	ppb	0.336	133434	5000	98.0	90	110	
Co	59	2	72	50.169	ppb	0.619	126013	50	100.3	90	110	
Ni	60	2	72	49.992	ppb	2.765	36106	50	100.0	90	110	
Cu	63	2	72	50.360	ppb	0.834	100098	50	100.7	90	110	
Zn	66	2	72	47.423	ppb	0.722	13874	50	94.8	90	110	
As	75	2	72	50.486	ppb	4.281	8947	50	101.0	90	110	
Se	78	1	72	51.105	ppb	1.739	13440	50	102.2	90	110	
Sr	88	2	72	49.742	ppb	1.220	30768	50	99.5	90	110	
Zr	90	2	72	73.906	ppb	27.615	473	50	147.8	90	110	>+\-10%
Nb	93	2	72	89.513	ppb	0.182	291465	100	89.5	90	110	>+\-10%
Mo	95	2	115	48.447	ppb	0.857	45347	50	96.9	90	110	
Pd	105	2	115	51.687	ppb	3.391	74611	50	103.4	90	110	
Ag	107	2	115	49.465	ppb	1.376	156418	50	98.9	90	110	
Cd	111	2	115	51.689	ppb	1.402	21417	50	103.4	90	110	
Sn	120	2	115	50.127	ppb	1.101	57068	50	100.3	90	110	
Sb	121	2	115	50.552	ppb	0.858	51002	50	101.1	90	110	
Ba	137	2	115	50.246	ppb	1.497	17389	50	100.5	90	110	
W	182	2	165	48.853	ppb	1.073	225313	50	97.7	90	110	
Pt	195	2	165	49.422	ppb	1.337	183635	50	98.8	90	110	
Tl	205	2	165	50.832	ppb	1.129	437217	50	101.7	90	110	
Pb	208	2	165	51.227	ppb	1.236	581185	50	102.5	90	110	
Th	232	2	165	50.776	ppb	0.599	686341	50	101.6	90	110	
U	238	2	165	50.651	ppb	0.495	740507	50	101.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	802039	0.24	822129	97.56	60	120	
Sc (IS)	45	1	HMI H2	29466699	0.00	31063320	94.86	60	120	
Sc (IS)	45	2	HMI He	1066227	0.85	1110240	96.04	60	120	
Sc (IS)	45	3	No Gas	49147809	1.01	52905316	92.90	60	120	
Ge Internal Standard	72	1	HMI H2	11199059	0.74	11878391	94.28	60	120	
Ge Internal Standard	72	2	HMI He	1197033	1.00	1238950	96.62	60	120	
In Internal Standard	115	2	HMI He	3816222	0.52	3889250	98.12	60	120	
Ho-165	165	2	HMI He	18725664	0.25	18939303	98.87	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	106_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:01:51-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-9.710	ppb	-35.5	3889981	10	
Be	9	1	6	0.051	ppb	160.4	23	0.5	
B	11	1	6	1.019	ppb	29.4	1433	0.5	>RL
Na	23	1	45	13.201	ppb	6.9	163362	25	
Na	23	2	45	10.873	ppb	8.7	10955	25	
Mg	24	2	45	-1.342	ppb	-34.1	697	25	
Al	27	2	45	2.194	ppb	113.6	387	15	
K	39	1	45	42.909	ppb	22.7	10713335	50	
K	39	2	45	25.283	ppb	22.2	17201	50	
Ca	40	1	45	9.971	ppb	6.4	112478	50	
Ca	44	2	45	16.167	ppb	31.2	100	25	
Ti	47	2	45	-0.577	ppb	0.0	0	0.5	
V	51	2	72	0.050	ppb	282.6	3681	1	
Cr	52	2	72	-0.008	ppb	-399.7	247	1	
Mn	55	2	72	-0.013	ppb	-693.1	133	0.5	
Fe	57	2	72	3.968	ppb	28.3	273	25	
Co	59	2	72	0.017	ppb	70.4	43	0.5	
Ni	60	2	72	0.040	ppb	170.0	357	1	
Cu	63	2	72	0.231	ppb	26.9	1570	1	
Zn	66	2	72	0.627	ppb	35.5	493	5	
As	75	2	72	0.002	ppb	1068.8	23	1	
Se	78	1	72	0.041	ppb	83.9	17	1	
Sr	88	2	72	0.038	ppb	87.6	43	0.5	
Zr	90	2	72	16.658	ppb	35.0	167	1	>RL
Nb	93	2	72	4.435	ppb	9.6	15663	2	>RL
Mo	95	2	115	0.114	ppb	14.8	127	0.5	
Pd	105	2	115	0.038	ppb	11.9	73	1	
Ag	107	2	115	-0.004	ppb	-75.6	30	1	
Cd	111	2	115	-0.024	ppb	0.0	0	0.5	
Sn	120	2	115	0.078	ppb	65.8	287	1	
Sb	121	2	115	0.240	ppb	28.9	323	0.6	
Ba	137	2	115	0.056	ppb	154.2	27	0.5	
W	182	2	165	0.102	ppb	47.6	1640	1	
Pt	195	2	165	0.003	ppb	116.1	73	1	
Tl	205	2	165	0.009	ppb	88.4	223	0.1	
Pb	208	2	165	-0.008	ppb	-41.6	1183	0.5	
Th	232	2	165	0.038	ppb	20.4	927	1	
U	238	2	165	0.028	ppb	6.2	593	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	822304	0.81	822129	100.02	60	120	
Sc (IS)	45	1	HMI H2	29899585	0.19	31063320	96.25	60	120	
Sc (IS)	45	2	HMI He	1084605	0.33	1110240	97.69	60	120	
Sc (IS)	45	3	No Gas	49754976	0.86	52905316	94.05	60	120	
Ge Internal Standard	72	1	HMI H2	11358493	0.53	11878391	95.62	60	120	
Ge Internal Standard	72	2	HMI He	1216346	0.16	1238950	98.18	60	120	
In Internal Standard	115	2	HMI He	3935481	1.37	3889250	101.19	60	120	
Ho-165	165	2	HMI He	18984461	0.77	18939303	100.24	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	107LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:05:38-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-2.919	ppb	-205.040	3994555	50	-5.8	70	130	>+/-30%
Be	9	1	6	0.989	ppb	16.374	390	1	98.9	70	130	
Na	23	2	45	52.430	ppb	5.502	21964	50	104.9	70	130	
Mg	24	2	45	48.765	ppb	4.403	6932	50	97.5	70	130	
Al	27	2	45	27.769	ppb	10.510	1213	30	92.6	70	130	
K	39	2	45	118.142	ppb	2.452	22879	100	118.1	70	130	
Ca	44	2	45	60.428	ppb	26.743	250	50	120.9	70	130	
V	51	2	72	4.168	ppb	12.311	8323	5	83.4	70	130	
Cr	52	2	72	1.964	ppb	7.741	3144	2	98.2	70	130	
Mn	55	2	72	1.142	ppb	6.202	797	1	114.2	70	130	
Fe	57	2	72	55.456	ppb	9.340	1690	50	110.9	70	130	
Co	59	2	72	0.977	ppb	7.234	2484	1	97.7	70	130	
Ni	60	2	72	2.375	ppb	2.466	2047	2	118.7	70	130	
Cu	63	2	72	2.068	ppb	6.793	5221	2	103.4	70	130	
Zn	66	2	72	10.026	ppb	6.991	3214	10	100.3	70	130	
As	75	2	72	4.471	ppb	4.071	823	5	89.4	70	130	
Se	78	1	72	4.639	ppb	4.272	1257	5	92.8	70	130	
Sr	88	2	72	0.986	ppb	10.106	637	1	98.6	70	130	
Zr	90	2	72	17.971	ppb	51.555	173	0.5	3594.1	70	130	>+/-30%
Nb	93	2	72	8.828	ppb	1.426	30040	2	441.4	70	130	>+/-30%
Mo	95	2	115	2.049	ppb	5.354	1980	2	102.4	70	130	
Pd	105	2	115	0.032	ppb	81.573	63	1	3.2	70	130	>+/-30%
Ag	107	2	115	5.053	ppb	2.028	16414	5	101.1	70	130	
Cd	111	2	115	1.030	ppb	22.549	447	1	103.0	70	130	
Sn	120	2	115	9.334	ppb	3.999	11045	10	93.3	70	130	
Sb	121	2	115	2.118	ppb	4.256	2260	2	105.9	70	130	
Ba	137	2	115	1.073	ppb	20.904	387	1	107.3	70	130	
W	182	2	165	4.799	ppb	1.945	23341	1	479.9	70	130	>+/-30%
Pt	195	2	165	0.032	ppb	58.853	180	1	3.2	70	130	>+/-30%
Tl	205	2	165	0.978	ppb	2.841	8617	1	97.8	70	130	
Pb	208	2	165	0.983	ppb	0.624	12486	1	98.3	70	130	
Th	232	2	165	2.039	ppb	3.252	28145	2	101.9	70	130	
U	238	2	165	1.032	ppb	2.094	15373	1	103.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	829236	0.25	822129	100.86	60	120	
Sc (IS)	45	1	HMI H2	30141736	0.83	31063320	97.03	60	120	
Sc (IS)	45	2	HMI He	1089048	0.55	1110240	98.09	60	120	
Sc (IS)	45	3	No Gas	50191083	0.45	52905316	94.87	60	120	
Ge Internal Standard	72	1	HMI H2	11487621	0.26	11878391	96.71	60	120	
Ge Internal Standard	72	2	HMI He	1211950	0.36	1238950	97.82	60	120	
In Internal Standard	115	2	HMI He	3911069	1.51	3889250	100.56	60	120	
Ho-165	165	2	HMI He	18867665	0.65	18939303	99.62	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-9-B
Data File Name	108SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:09:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	64.254	ppb	64.254	10.46	135599	500000	
Li	7	2	45	24.778	ppb	24.778	13.61	6628	500000	
Li	7	3	45	46.191	ppb	46.191	11.22	4305638	50000	
Be	9	1	6	0.021	ppb	0.021	140.99	10	2000	
B	11	1	6	40.839	ppb	40.839	2.21	14164	2000	
Na	23	1	45	38259.564	ppb	38259.564	0.71	127309625	2000	>LDR
Na	23	2	45	36322.122	ppb	36322.122	0.07	9088723	400000	
Mg	24	2	45	207422.614	ppb	207422.614	0.43	24439782	400000	
Al	27	2	45	33.437	ppb	33.437	6.36	1323	400000	
K	39	1	45	1879.701	ppb	1879.701	1.23	15863788	400000	
K	39	2	45	3098.812	ppb	3098.812	0.70	192162	400000	
Ca	40	1	45	258025.710	ppb	258025.710	0.29	1276381661	400000	
Ca	44	2	45	249023.809	ppb	249023.809	0.44	796915	400000	
Ti	47	2	45	-0.078	ppb	-0.078	-553.04	13	4000	
V	51	2	72	-1.935	ppb	-1.935	-2.84	1343	2000	
Cr	52	2	72	0.356	ppb	0.356	4.07	737	5000	
Mn	55	2	72	540.588	ppb	540.588	0.59	293643	10000	
Fe	57	2	72	249.968	ppb	249.968	0.66	6655	400000	
Co	59	2	72	0.798	ppb	0.798	3.73	1917	2000	
Ni	60	2	72	1.205	ppb	1.205	17.86	1133	5000	
Cu	63	2	72	0.386	ppb	0.386	3.67	1770	5000	
Zn	66	2	72	1.694	ppb	1.694	12.61	757	5000	
As	75	2	72	0.842	ppb	0.842	11.50	163	2000	
Se	78	1	72	0.079	ppb	0.079	64.54	25	2000	
Sr	88	2	72	1040.155	ppb	1040.155	0.58	614808	4000	
Zr	90	2	72	43.024	ppb	43.024	19.95	293	1000	
Nb	93	2	72	1.325	ppb	1.325	5.06	5091	200	
Mo	95	2	115	1.490	ppb	1.490	1.83	1367	2000	
Pd	105	2	115	0.029	ppb	0.029	99.25	57	100	
Ag	107	2	115	0.000	ppb	0.000	-1413.68	40	100	
Cd	111	2	115	0.001	ppb	0.001	7925.47	10	2000	
Sn	120	2	115	0.151	ppb	0.151	17.26	350	2000	
Sb	121	2	115	-0.010	ppb	-0.010	-87.38	60	1000	
Ba	137	2	115	10.557	ppb	10.557	2.65	3544	5000	
W	182	2	165	0.164	ppb	0.164	32.65	1840	100	
Pt	195	2	165	-0.007	ppb	-0.007	-24.35	33	100	
Tl	205	2	165	0.030	ppb	0.030	16.19	387	2000	
Pb	208	2	165	0.099	ppb	0.099	20.56	2310	5000	
Th	232	2	165	0.073	ppb	0.073	16.91	1337	2000	
U	238	2	165	11.067	ppb	11.067	1.51	156984	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	716750	0.80	822129	87.18	60	120	
Sc (IS)	45	1	HMI H2	27616285	0.76	31063320	88.90	60	120	
Sc (IS)	45	2	HMI He	1031763	0.94	1110240	92.93	60	120	
Sc (IS)	45	3	No Gas	47991714	0.93	52905316	90.71	60	120	
Ge Internal Standard	72	1	HMI H2	10442783	1.12	11878391	87.91	60	120	
Ge Internal Standard	72	2	HMI He	1144603	1.15	1238950	92.38	60	120	
In Internal Standard	115	2	HMI He	3697234	2.28	3889250	95.06	60	120	
Ho-165	165	2	HMI He	18153223	0.42	18939303	95.85	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-10-B
Data File Name	109SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:13:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.721	ppb	-11.721	-44.31	120996	500000	
Li	7	2	45	-27.744	ppb	-27.744	-46.71	6025	500000	
Li	7	3	45	-27.299	ppb	-27.299	-20.27	3726189	50000	
Be	9	1	6	0.009	ppb	0.009	334.01	7	2000	
B	11	1	6	30.534	ppb	30.534	3.08	11979	2000	
Na	23	1	45	2966.675	ppb	2966.675	0.38	10703424	2000	
Na	23	2	45	2798.226	ppb	2798.226	0.51	732672	400000	
Mg	24	2	45	6376.334	ppb	6376.334	0.37	779088	400000	
Al	27	2	45	7.931	ppb	7.931	43.18	563	400000	
K	39	1	45	-54.329	ppb	-54.329	-35.82	10282937	400000	
K	39	2	45	1307.758	ppb	1307.758	1.34	92935	400000	
Ca	40	1	45	21487.173	ppb	21487.173	0.90	114149355	400000	
Ca	44	2	45	20578.471	ppb	20578.471	1.00	68259	400000	
Ti	47	2	45	-0.340	ppb	-0.340	-121.00	7	4000	
V	51	2	72	-1.771	ppb	-1.771	-0.39	1594	2000	
Cr	52	2	72	0.427	ppb	0.427	28.11	877	5000	
Mn	55	2	72	0.716	ppb	0.716	21.30	547	10000	
Fe	57	2	72	14.234	ppb	14.234	24.11	550	400000	
Co	59	2	72	0.013	ppb	0.013	46.07	33	2000	
Ni	60	2	72	1.486	ppb	1.486	12.40	1390	5000	
Cu	63	2	72	0.213	ppb	0.213	18.83	1517	5000	
Zn	66	2	72	2.134	ppb	2.134	5.45	920	5000	
As	75	2	72	0.217	ppb	0.217	14.43	61	2000	
Se	78	1	72	0.254	ppb	0.254	34.67	75	2000	
Sr	88	2	72	57.360	ppb	57.360	2.38	35609	4000	
Zr	90	2	72	17.058	ppb	17.058	23.85	167	1000	
Nb	93	2	72	0.660	ppb	0.660	10.22	3177	200	
Mo	95	2	115	0.033	ppb	0.033	70.67	47	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-44.21	3	100	
Ag	107	2	115	0.002	ppb	0.002	239.40	50	100	
Cd	111	2	115	0.000	ppb	0.000	7670.99	10	2000	
Sn	120	2	115	0.059	ppb	0.059	15.30	257	2000	
Sb	121	2	115	0.421	ppb	0.421	14.62	497	1000	
Ba	137	2	115	15.680	ppb	15.680	5.88	5435	5000	
W	182	2	165	0.080	ppb	0.080	22.60	1507	100	
Pt	195	2	165	0.000	ppb	0.000	1995.11	60	100	
Tl	205	2	165	0.004	ppb	0.004	80.94	173	2000	
Pb	208	2	165	0.077	ppb	0.077	27.64	2124	5000	
Th	232	2	165	0.010	ppb	0.010	59.03	533	2000	
U	238	2	165	0.017	ppb	0.017	43.81	413	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	793205	0.71	822129	96.48	60	120	
Sc (IS)	45	1	HMI H2	29645729	0.76	31063320	95.44	60	120	
Sc (IS)	45	2	HMI He	1068789	0.87	1110240	96.27	60	120	
Sc (IS)	45	3	No Gas	49979779	0.31	52905316	94.47	60	120	
Ge Internal Standard	72	1	HMI H2	11418447	1.28	11878391	96.13	60	120	
Ge Internal Standard	72	2	HMI He	1201479	0.81	1238950	96.98	60	120	
In Internal Standard	115	2	HMI He	3820935	1.27	3889250	98.24	60	120	
Ho-165	165	2	HMI He	18617533	0.14	18939303	98.30	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-1-H
Data File Name	110SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:17:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.961	ppb	-1.961	-209.39	121258	500000	
Li	7	2	45	-18.153	ppb	-18.153	-180.21	6088	500000	
Li	7	3	45	-20.961	ppb	-20.961	-16.64	3719496	50000	
Be	9	1	6	-0.009	ppb	-0.009	0.00	0	2000	
B	11	1	6	30.420	ppb	30.420	2.07	11605	2000	
Na	23	1	45	5279.474	ppb	5279.474	1.37	18515218	2000	
Na	23	2	45	5263.948	ppb	5263.948	0.85	1351354	400000	
Mg	24	2	45	18936.120	ppb	18936.120	0.64	2278381	400000	
Al	27	2	45	1.592	ppb	1.592	154.06	357	400000	
K	39	1	45	-346.688	ppb	-346.688	-8.93	9046820	400000	
K	39	2	45	1002.037	ppb	1002.037	1.15	73732	400000	
Ca	40	1	45	68369.131	ppb	68369.131	0.73	354633795	400000	
Ca	44	2	45	63878.537	ppb	63878.537	0.72	208702	400000	
Ti	47	2	45	-0.333	ppb	-0.333	-126.70	7	4000	
V	51	2	72	-1.618	ppb	-1.618	-9.45	1747	2000	
Cr	52	2	72	0.121	ppb	0.121	8.09	427	5000	
Mn	55	2	72	250.748	ppb	250.748	1.91	141582	10000	
Fe	57	2	72	1052.141	ppb	1052.141	5.53	28586	400000	
Co	59	2	72	0.490	ppb	0.490	15.10	1223	2000	
Ni	60	2	72	1.514	ppb	1.514	22.48	1397	5000	
Cu	63	2	72	0.029	ppb	0.029	294.13	1140	5000	
Zn	66	2	72	0.947	ppb	0.947	6.83	573	5000	
As	75	2	72	2.960	ppb	2.960	8.20	542	2000	
Se	78	1	72	0.068	ppb	0.068	44.50	24	2000	
Sr	88	2	72	86.208	ppb	86.208	2.26	52956	4000	
Zr	90	2	72	30.417	ppb	30.417	16.21	237	1000	
Nb	93	2	72	0.391	ppb	0.391	25.97	2277	200	
Mo	95	2	115	0.119	ppb	0.119	28.36	127	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-44.40	3	100	
Ag	107	2	115	0.007	ppb	0.007	119.91	63	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.028	ppb	0.028	86.73	220	2000	
Sb	121	2	115	0.018	ppb	0.018	160.35	90	1000	
Ba	137	2	115	8.524	ppb	8.524	4.82	2940	5000	
W	182	2	165	0.081	ppb	0.081	54.62	1500	100	
Pt	195	2	165	-0.006	ppb	-0.006	-69.14	37	100	
Tl	205	2	165	0.002	ppb	0.002	207.70	157	2000	
Pb	208	2	165	0.046	ppb	0.046	28.78	1763	5000	
Th	232	2	165	0.020	ppb	0.020	26.67	657	2000	
U	238	2	165	0.515	ppb	0.515	2.81	7616	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	771140	0.45	822129	93.80	60	120	
Sc (IS)	45	1	HMI H2	28954205	0.50	31063320	93.21	60	120	
Sc (IS)	45	2	HMI He	1053229	0.83	1110240	94.86	60	120	
Sc (IS)	45	3	No Gas	49028771	0.20	52905316	92.67	60	120	
Ge Internal Standard	72	1	HMI H2	11107348	0.49	11878391	93.51	60	120	
Ge Internal Standard	72	2	HMI He	1189188	0.59	1238950	95.98	60	120	
In Internal Standard	115	2	HMI He	3797104	0.92	3889250	97.63	60	120	
Ho-165	165	2	HMI He	18523592	1.24	18939303	97.81	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-C
Data File Name	111SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:20:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.721	ppb	0.721	482.78	123119	500000	
Li	7	2	45	-22.391	ppb	-22.391	-135.94	6058	500000	
Li	7	3	45	-18.919	ppb	-18.919	-11.99	3959854	50000	
Be	9	1	6	0.001	ppb	0.001	2765.81	3	2000	
B	11	1	6	31.346	ppb	31.346	2.21	11935	2000	
Na	23	1	45	11130.976	ppb	11130.976	0.05	39234647	2000	>LDR
Na	23	2	45	10880.623	ppb	10880.623	1.31	2803382	400000	
Mg	24	2	45	24151.327	ppb	24151.327	0.90	2924710	400000	
Al	27	2	45	3.437	ppb	3.437	41.20	417	400000	
K	39	1	45	346.885	ppb	346.885	4.09	11504109	400000	
K	39	2	45	1680.217	ppb	1680.217	0.56	114073	400000	
Ca	40	1	45	64319.705	ppb	64319.705	0.48	336369702	400000	
Ca	44	2	45	61851.828	ppb	61851.828	1.15	203405	400000	
Ti	47	2	45	-0.096	ppb	-0.096	-436.28	13	4000	
V	51	2	72	-2.048	ppb	-2.048	-9.57	1280	2000	
Cr	52	2	72	0.228	ppb	0.228	10.25	587	5000	
Mn	55	2	72	303.348	ppb	303.348	0.90	172661	10000	
Fe	57	2	72	397.051	ppb	397.051	1.46	10978	400000	
Co	59	2	72	0.405	ppb	0.405	16.51	1020	2000	
Ni	60	2	72	1.019	ppb	1.019	15.97	1053	5000	
Cu	63	2	72	0.223	ppb	0.223	18.42	1533	5000	
Zn	66	2	72	1.058	ppb	1.058	28.34	610	5000	
As	75	2	72	3.193	ppb	3.193	2.54	588	2000	
Se	78	1	72	0.012	ppb	0.012	149.08	9	2000	
Sr	88	2	72	126.603	ppb	126.603	3.13	78403	4000	
Zr	90	2	72	10.948	ppb	10.948	76.08	133	1000	
Nb	93	2	72	0.345	ppb	0.345	19.53	2147	200	
Mo	95	2	115	0.122	ppb	0.122	23.24	130	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-808.40	13	100	
Ag	107	2	115	-0.004	ppb	-0.004	-161.43	30	100	
Cd	111	2	115	-0.016	ppb	-0.016	-88.76	3	2000	
Sn	120	2	115	0.095	ppb	0.095	63.18	297	2000	
Sb	121	2	115	0.058	ppb	0.058	85.96	130	1000	
Ba	137	2	115	117.086	ppb	117.086	1.57	40367	5000	
W	182	2	165	0.132	ppb	0.132	7.46	1744	100	
Pt	195	2	165	0.003	ppb	0.003	238.24	70	100	
Tl	205	2	165	-0.003	ppb	-0.003	-85.79	113	2000	
Pb	208	2	165	-0.005	ppb	-0.005	-185.28	1200	5000	
Th	232	2	165	0.009	ppb	0.009	44.86	513	2000	
U	238	2	165	0.026	ppb	0.026	12.52	547	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	771619	0.32	822129	93.86	60	120	
Sc (IS)	45	1	HMI H2	29192871	0.59	31063320	93.98	60	120	
Sc (IS)	45	2	HMI He	1060187	1.04	1110240	95.49	60	120	
Sc (IS)	45	3	No Gas	51909766	0.76	52905316	98.12	60	120	
Ge Internal Standard	72	1	HMI H2	11089067	0.33	11878391	93.35	60	120	
Ge Internal Standard	72	2	HMI He	1198953	0.59	1238950	96.77	60	120	
In Internal Standard	115	2	HMI He	3802907	0.10	3889250	97.78	60	120	
Ho-165	165	2	HMI He	18621421	0.94	18939303	98.32	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-Csd@5
Data File Name	112SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:24:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.258	ppb	-2.258	-150.59	123813	500000	
Li	7	2	45	-15.180	ppb	-15.180	-122.25	6218	500000	
Li	7	3	45	-29.782	ppb	-29.782	-8.94	4021293	50000	
Be	9	1	6	0.000	ppb	0.000	10785.73	3	2000	
B	11	1	6	6.202	ppb	6.202	5.91	3291	2000	
Na	23	1	45	2233.477	ppb	2233.477	0.72	8069875	2000	
Na	23	2	45	2095.134	ppb	2095.134	0.99	549688	400000	
Mg	24	2	45	4730.423	ppb	4730.423	0.35	577270	400000	
Al	27	2	45	-3.625	ppb	-3.625	-39.24	197	400000	
K	39	1	45	50.818	ppb	50.818	23.97	10628076	400000	
K	39	2	45	347.967	ppb	347.967	5.62	36012	400000	
Ca	40	1	45	12636.144	ppb	12636.144	0.88	67017357	400000	
Ca	44	2	45	12078.291	ppb	12078.291	1.09	40016	400000	
Ti	47	2	45	-0.577	ppb	-0.577	0.00	0	4000	
V	51	2	72	-1.154	ppb	-1.154	-15.93	2300	2000	
Cr	52	2	72	0.016	ppb	0.016	450.49	280	5000	
Mn	55	2	72	60.268	ppb	60.268	2.50	34719	10000	
Fe	57	2	72	74.905	ppb	74.905	7.37	2220	400000	
Co	59	2	72	0.079	ppb	0.079	16.48	200	2000	
Ni	60	2	72	0.178	ppb	0.178	73.93	453	5000	
Cu	63	2	72	0.326	ppb	0.326	37.36	1750	5000	
Zn	66	2	72	1.083	ppb	1.083	65.52	623	5000	
As	75	2	72	0.658	ppb	0.658	6.75	140	2000	
Se	78	1	72	0.041	ppb	0.041	56.77	17	2000	
Sr	88	2	72	25.271	ppb	25.271	1.32	15803	4000	
Zr	90	2	72	10.708	ppb	10.708	76.51	133	1000	
Nb	93	2	72	0.072	ppb	0.072	38.39	1270	200	
Mo	95	2	115	0.032	ppb	0.032	96.09	47	2000	
Pd	105	2	115	0.005	ppb	0.005	167.25	23	100	
Ag	107	2	115	0.000	ppb	0.000	7441.96	43	100	
Cd	111	2	115	-0.016	ppb	-0.016	-87.32	3	2000	
Sn	120	2	115	0.013	ppb	0.013	318.18	207	2000	
Sb	121	2	115	0.020	ppb	0.020	415.85	93	1000	
Ba	137	2	115	23.417	ppb	23.417	2.97	8196	5000	
W	182	2	165	0.021	ppb	0.021	222.06	1237	100	
Pt	195	2	165	0.002	ppb	0.002	375.12	67	100	
Tl	205	2	165	0.000	ppb	0.000	-7849.72	137	2000	
Pb	208	2	165	-0.005	ppb	-0.005	-67.28	1193	5000	
Th	232	2	165	0.005	ppb	0.005	52.14	460	2000	
U	238	2	165	0.011	ppb	0.011	36.93	327	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	804770	0.47	822129	97.89	60	120	
Sc (IS)	45	1	HMI H2	29585252	0.47	31063320	95.24	60	120	
Sc (IS)	45	2	HMI He	1067059	1.20	1110240	96.11	60	120	
Sc (IS)	45	3	No Gas	54316991	3.79	52905316	102.67	60	120	
Ge Internal Standard	72	1	HMI H2	11361740	0.65	11878391	95.65	60	120	
Ge Internal Standard	72	2	HMI He	1209428	0.92	1238950	97.62	60	120	
In Internal Standard	115	2	HMI He	3857936	0.46	3889250	99.19	60	120	
Ho-165	165	2	HMI He	18617259	0.75	18939303	98.30	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-D MS
Data File Name	113SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:28:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	67.250	ppb	67.250	9.91	142121	500000	
Li	7	2	45	61.127	ppb	61.127	64.34	7305	500000	
Li	7	3	45	58.678	ppb	58.678	12.81	4437685	50000	
Be	9	1	6	38.633	ppb	38.633	3.22	13777	2000	
B	11	1	6	63.026	ppb	63.026	1.90	22535	2000	
Na	23	1	45	10813.038	ppb	10813.038	0.44	37542989	2000	>LDR
Na	23	2	45	10576.926	ppb	10576.926	0.27	2693628	400000	
Mg	24	2	45	23495.524	ppb	23495.524	1.12	2812481	400000	
Al	27	2	45	395.623	ppb	395.623	3.55	12589	400000	
K	39	1	45	348.035	ppb	348.035	6.16	11335252	400000	
K	39	2	45	1642.283	ppb	1642.283	1.59	110551	400000	
Ca	40	1	45	62533.097	ppb	62533.097	0.47	322105502	400000	
Ca	44	2	45	60292.606	ppb	60292.606	0.41	195998	400000	
Ti	47	2	45	0.152	ppb	0.152	410.16	20	4000	
V	51	2	72	36.882	ppb	36.882	0.39	43988	2000	
Cr	52	2	72	38.472	ppb	38.472	1.93	55145	5000	
Mn	55	2	72	335.842	ppb	335.842	1.41	187515	10000	
Fe	57	2	72	786.550	ppb	786.550	4.99	21180	400000	
Co	59	2	72	37.675	ppb	37.675	2.92	92990	2000	
Ni	60	2	72	37.763	ppb	37.763	1.75	26873	5000	
Cu	63	2	72	36.486	ppb	36.486	2.15	71567	5000	
Zn	66	2	72	33.576	ppb	33.576	2.30	9740	5000	
As	75	2	72	39.729	ppb	39.729	1.35	6925	2000	
Se	78	1	72	36.935	ppb	36.935	1.80	9518	2000	
Sr	88	2	72	163.675	ppb	163.675	1.27	99439	4000	
Zr	90	2	72	10766.316	ppb	10766.316	1.47	57226	1000	>LDR
Nb	93	2	72	0.246	ppb	0.246	3.59	1790	200	
Mo	95	2	115	38.177	ppb	38.177	2.11	35061	2000	
Pd	105	2	115	0.005	ppb	0.005	207.21	23	100	
Ag	107	2	115	39.557	ppb	39.557	1.54	122728	100	
Cd	111	2	115	37.073	ppb	37.073	1.79	15072	2000	
Sn	120	2	115	38.529	ppb	38.529	1.83	43074	2000	
Sb	121	2	115	37.292	ppb	37.292	1.60	36934	1000	
Ba	137	2	115	149.350	ppb	149.350	1.24	50691	5000	
W	182	2	165	36.165	ppb	36.165	1.39	164239	100	
Pt	195	2	165	0.000	ppb	0.000	-374.01	57	100	
Tl	205	2	165	38.693	ppb	38.693	0.17	327132	2000	
Pb	208	2	165	38.726	ppb	38.726	0.66	432142	5000	
Th	232	2	165	38.512	ppb	38.512	1.32	511710	2000	
U	238	2	165	38.657	ppb	38.657	0.66	555498	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	756048	0.58	822129	91.96	60	120	
Sc (IS)	45	1	HMI H2	28753529	0.55	31063320	92.56	60	120	
Sc (IS)	45	2	HMI He	1047916	0.90	1110240	94.39	60	120	
Sc (IS)	45	3	No Gas	48081289	0.58	52905316	90.88	60	120	
Ge Internal Standard	72	1	HMI H2	10971760	0.90	11878391	92.37	60	120	
Ge Internal Standard	72	2	HMI He	1176271	0.88	1238950	94.94	60	120	
In Internal Standard	115	2	HMI He	3744202	0.89	3889250	96.27	60	120	
Ho-165	165	2	HMI He	18404543	0.61	18939303	97.18	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-E MSD
Data File Name	114SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:32:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	75.466	ppb	75.466	5.72	143864	500000	
Li	7	2	45	49.534	ppb	49.534	65.37	7129	500000	
Li	7	3	45	58.774	ppb	58.774	13.98	4452976	50000	
Be	9	1	6	38.617	ppb	38.617	4.45	13810	2000	
B	11	1	6	63.765	ppb	63.765	2.53	22848	2000	
Na	23	1	45	10848.705	ppb	10848.705	0.43	37447664	2000	>LDR
Na	23	2	45	10391.280	ppb	10391.280	0.41	2650184	400000	
Mg	24	2	45	23447.288	ppb	23447.288	1.07	2810543	400000	
Al	27	2	45	383.514	ppb	383.514	1.08	12232	400000	
K	39	1	45	308.320	ppb	308.320	5.10	11135471	400000	
K	39	2	45	1623.981	ppb	1623.981	2.76	109647	400000	
Ca	40	1	45	62583.822	ppb	62583.822	0.41	320494915	400000	
Ca	44	2	45	59897.696	ppb	59897.696	0.78	194981	400000	
Ti	47	2	45	0.397	ppb	0.397	104.47	27	4000	
V	51	2	72	36.839	ppb	36.839	3.79	43710	2000	
Cr	52	2	72	38.937	ppb	38.937	1.64	55520	5000	
Mn	55	2	72	332.412	ppb	332.412	0.65	184660	10000	
Fe	57	2	72	775.181	ppb	775.181	2.55	20769	400000	
Co	59	2	72	37.566	ppb	37.566	0.67	92249	2000	
Ni	60	2	72	38.679	ppb	38.679	0.78	27377	5000	
Cu	63	2	72	37.117	ppb	37.117	0.74	72411	5000	
Zn	66	2	72	34.855	ppb	34.855	1.90	10047	5000	
As	75	2	72	40.129	ppb	40.129	0.58	6959	2000	
Se	78	1	72	35.511	ppb	35.511	2.51	9047	2000	
Sr	88	2	72	161.103	ppb	161.103	0.91	97379	4000	
Zr	90	2	72	11507.332	ppb	11507.332	3.10	60845	1000	>LDR
Nb	93	2	72	0.165	ppb	0.165	39.09	1523	200	
Mo	95	2	115	38.649	ppb	38.649	1.71	35355	2000	
Pd	105	2	115	0.003	ppb	0.003	241.67	20	100	
Ag	107	2	115	39.598	ppb	39.598	1.50	122369	100	
Cd	111	2	115	36.471	ppb	36.471	1.89	14768	2000	
Sn	120	2	115	39.139	ppb	39.139	0.45	43586	2000	
Sb	121	2	115	38.116	ppb	38.116	2.16	37592	1000	
Ba	137	2	115	153.135	ppb	153.135	1.98	51779	5000	
W	182	2	165	36.585	ppb	36.585	1.64	165708	100	
Pt	195	2	165	0.000	ppb	0.000	1940.82	60	100	
Tl	205	2	165	38.666	ppb	38.666	0.74	326111	2000	
Pb	208	2	165	38.361	ppb	38.361	1.50	427008	5000	
Th	232	2	165	38.596	ppb	38.596	0.60	511612	2000	
U	238	2	165	39.013	ppb	39.013	2.01	559208	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	758102	0.09	822129	92.21	60	120	
Sc (IS)	45	1	HMI H2	28586158	0.19	31063320	92.03	60	120	
Sc (IS)	45	2	HMI He	1049389	0.90	1110240	94.52	60	120	
Sc (IS)	45	3	No Gas	48235918	0.51	52905316	91.17	60	120	
Ge Internal Standard	72	1	HMI H2	10845926	0.17	11878391	91.31	60	120	
Ge Internal Standard	72	2	HMI He	1170250	0.64	1238950	94.45	60	120	
In Internal Standard	115	2	HMI He	3729629	1.37	3889250	95.90	60	120	
Ho-165	165	2	HMI He	18360520	1.09	18939303	96.94	60	120	

Sample Report

Sample Table

Sample Name	280-116186-C-2-C pds
Data File Name	115SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:36:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435538 6020a dod5
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	202.641	ppb	202.641	2.51	180889	500000	
Li	7	2	45	192.070	ppb	192.070	23.18	9300	500000	
Li	7	3	45	182.067	ppb	182.067	2.61	5563904	50000	
Be	9	1	6	195.556	ppb	195.556	1.21	68761	2000	
B	11	1	6	31.355	ppb	31.355	0.74	11535	2000	
Na	23	1	45	10923.990	ppb	10923.990	1.13	37168123	2000	>LDR
Na	23	2	45	10461.170	ppb	10461.170	1.50	2647329	400000	
Mg	24	2	45	23448.140	ppb	23448.140	1.01	2788936	400000	
Al	27	2	45	2063.804	ppb	2063.804	1.46	63986	400000	
K	39	1	45	320.407	ppb	320.407	5.24	11016129	400000	
K	39	2	45	1641.550	ppb	1641.550	1.74	109811	400000	
Ca	40	1	45	62498.859	ppb	62498.859	0.67	315476675	400000	
Ca	44	2	45	59936.082	ppb	59936.082	0.16	193609	400000	
Ti	47	2	45	4.331	ppb	4.331	40.69	133	4000	
V	51	2	72	197.552	ppb	197.552	1.14	217893	2000	
Cr	52	2	72	201.395	ppb	201.395	0.58	284410	5000	
Mn	55	2	72	504.674	ppb	504.674	0.82	278574	10000	
Fe	57	2	72	2379.721	ppb	2379.721	0.99	63048	400000	
Co	59	2	72	193.336	ppb	193.336	0.71	471878	2000	
Ni	60	2	72	192.427	ppb	192.427	1.51	134132	5000	
Cu	63	2	72	193.737	ppb	193.737	0.45	371184	5000	
Zn	66	2	72	187.132	ppb	187.132	2.11	52313	5000	
As	75	2	72	195.552	ppb	195.552	1.31	33619	2000	
Se	78	1	72	193.313	ppb	193.313	0.37	48792	2000	
Sr	88	2	72	330.971	ppb	330.971	0.39	198818	4000	
Zr	90	2	72	60706.481	ppb	60706.481	0.16	318766	1000	>LDR
Nb	93	2	72	7.106	ppb	7.106	6.76	23407	200	
Mo	95	2	115	198.395	ppb	198.395	0.30	180092	2000	
Pd	105	2	115	0.053	ppb	0.053	71.39	90	100	
Ag	107	2	115	43.909	ppb	43.909	0.83	134696	100	
Cd	111	2	115	200.725	ppb	200.725	1.18	80646	2000	
Sn	120	2	115	203.534	ppb	203.534	1.43	224200	2000	
Sb	121	2	115	197.105	ppb	197.105	0.25	192694	1000	
Ba	137	2	115	319.714	ppb	319.714	1.78	107285	5000	
W	182	2	165	202.434	ppb	202.434	0.11	905187	100	
Pt	195	2	165	0.061	ppb	0.061	10.99	277	100	
Tl	205	2	165	209.005	ppb	209.005	1.20	1749282	2000	
Pb	208	2	165	202.369	ppb	202.369	0.47	2230988	5000	
Th	232	2	165	243.229	ppb	243.229	1.14	3198351	2000	
U	238	2	165	218.327	ppb	218.327	0.60	3106028	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	745547	0.64	822129	90.68	60	120	
Sc (IS)	45	1	HMI H2	28177080	0.36	31063320	90.71	60	120	
Sc (IS)	45	2	HMI He	1041309	1.25	1110240	93.79	60	120	
Sc (IS)	45	3	No Gas	47246663	0.10	52905316	89.30	60	120	
Ge Internal Standard	72	1	HMI H2	10751076	0.42	11878391	90.51	60	120	
Ge Internal Standard	72	2	HMI He	1163155	0.75	1238950	93.88	60	120	
In Internal Standard	115	2	HMI He	3701862	0.20	3889250	95.18	60	120	
Ho-165	165	2	HMI He	18225104	0.57	18939303	96.23	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	116_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:39:49-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	476.289	ppb	0.960	270647	500	95.3	90	110	
Li	7	2	45	414.065	ppb	4.190	12943	500	82.8	90	110	>+\-10%
Li	7	3	45	456.786	ppb	1.534	8442975	500	91.4	90	110	
Be	9	1	6	47.919	ppb	2.841	17681	50	95.8	90	110	
B	11	1	6	48.649	ppb	2.893	18225	50	97.3	90	110	
Na	23	1	45	5050.048	ppb	0.365	17608514	5000	101.0	90	110	
Na	23	2	45	5003.007	ppb	0.527	1287501	5000	100.1	90	110	
Mg	24	2	45	4665.616	ppb	0.442	563211	5000	93.3	90	110	
Al	27	2	45	4911.510	ppb	0.918	153953	5000	98.2	90	110	
K	39	1	45	5040.404	ppb	1.717	27234356	5000	100.8	90	110	
K	39	2	45	5064.164	ppb	1.414	311560	5000	101.3	90	110	
Ca	40	1	45	5055.462	ppb	0.997	26115010	5000	101.1	90	110	
Ca	44	2	45	4861.271	ppb	6.446	15953	5000	97.2	90	110	
Ti	47	2	45	51.345	ppb	4.061	1427	50	102.7	90	110	
V	51	2	72	48.355	ppb	1.688	56433	50	96.7	90	110	
Cr	52	2	72	49.656	ppb	0.944	70920	50	99.3	90	110	
Mn	55	2	72	51.357	ppb	0.285	28716	50	102.7	90	110	
Fe	57	2	72	4885.997	ppb	2.200	130407	5000	97.7	90	110	
Co	59	2	72	49.878	ppb	1.083	122795	50	99.8	90	110	
Ni	60	2	72	48.732	ppb	0.506	34499	50	97.5	90	110	
Cu	63	2	72	49.492	ppb	0.300	96437	50	99.0	90	110	
Zn	66	2	72	44.914	ppb	2.549	12893	50	89.8	90	110	>+\-10%
As	75	2	72	50.352	ppb	0.521	8748	50	100.7	90	110	
Se	78	1	72	50.526	ppb	1.057	13065	50	101.1	90	110	
Sr	88	2	72	48.914	ppb	1.622	29652	50	97.8	90	110	
Zr	90	2	72	134.229	ppb	11.238	783	50	268.5	90	110	>+\-10%
Nb	93	2	72	88.214	ppb	0.336	281534	100	88.2	90	110	>+\-10%
Mo	95	2	115	49.093	ppb	0.396	45876	50	98.2	90	110	
Pd	105	2	115	50.228	ppb	2.123	72387	50	100.5	90	110	
Ag	107	2	115	48.224	ppb	2.461	152219	50	96.4	90	110	
Cd	111	2	115	48.135	ppb	1.315	19912	50	96.3	90	110	
Sn	120	2	115	48.123	ppb	1.681	54695	50	96.2	90	110	
Sb	121	2	115	50.017	ppb	0.077	50379	50	100.0	90	110	
Ba	137	2	115	48.272	ppb	4.269	16671	50	96.5	90	110	
W	182	2	165	48.342	ppb	1.627	217896	50	96.7	90	110	
Pt	195	2	165	49.156	ppb	1.179	178483	50	98.3	90	110	
Tl	205	2	165	50.212	ppb	1.507	422044	50	100.4	90	110	
Pb	208	2	165	50.717	ppb	0.685	562329	50	101.4	90	110	
Th	232	2	165	50.756	ppb	1.038	670451	50	101.5	90	110	
U	238	2	165	50.422	ppb	0.709	720378	50	100.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	782195	0.55	822129	95.14	60	120	
Sc (IS)	45	1	HMI H2	28778427	0.48	31063320	92.64	60	120	
Sc (IS)	45	2	HMI He	1055516	0.84	1110240	95.07	60	120	
Sc (IS)	45	3	No Gas	48397203	0.42	52905316	91.48	60	120	
Ge Internal Standard	72	1	HMI H2	11010351	0.13	11878391	92.69	60	120	
Ge Internal Standard	72	2	HMI He	1173195	0.21	1238950	94.69	60	120	
In Internal Standard	115	2	HMI He	3809941	1.34	3889250	97.96	60	120	
Ho-165	165	2	HMI He	18299868	0.63	18939303	96.62	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	117_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:43:35-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.995	ppb	-67.2	3794988	10	
Be	9	1	6	0.035	ppb	113.8	17	0.5	
B	11	1	6	1.514	ppb	16.6	1577	0.5	>RL
Na	23	1	45	7.440	ppb	6.7	139329	25	
Na	23	2	45	5.677	ppb	33.2	9363	25	
Mg	24	2	45	-1.671	ppb	-64.7	640	25	
Al	27	2	45	0.066	ppb	3723.7	310	15	
K	39	1	45	8.042	ppb	315.7	10346203	50	
K	39	2	45	19.760	ppb	27.2	16483	50	
Ca	40	1	45	6.622	ppb	5.7	92356	50	
Ca	44	2	45	3.744	ppb	176.7	57	25	
Ti	47	2	45	-0.577	ppb	0.0	0	0.5	
V	51	2	72	-0.153	ppb	-115.9	3364	1	
Cr	52	2	72	0.033	ppb	243.6	300	1	
Mn	55	2	72	-0.048	ppb	-137.7	110	0.5	
Fe	57	2	72	4.345	ppb	50.3	277	25	
Co	59	2	72	0.016	ppb	65.8	40	0.5	
Ni	60	2	72	-0.069	ppb	-191.6	270	1	
Cu	63	2	72	0.110	ppb	94.0	1297	1	
Zn	66	2	72	0.716	ppb	13.6	507	5	
As	75	2	72	0.039	ppb	134.4	29	1	
Se	78	1	72	0.032	ppb	119.3	15	1	
Sr	88	2	72	0.056	ppb	93.5	53	0.5	
Zr	90	2	72	8.087	ppb	25.0	117	1	>RL
Nb	93	2	72	4.149	ppb	7.9	14361	2	>RL
Mo	95	2	115	0.163	ppb	40.7	170	0.5	
Pd	105	2	115	0.037	ppb	33.1	70	1	
Ag	107	2	115	0.009	ppb	292.1	70	1	
Cd	111	2	115	-0.008	ppb	-344.5	7	0.5	
Sn	120	2	115	0.133	ppb	25.6	343	1	
Sb	121	2	115	0.471	ppb	7.6	550	0.6	
Ba	137	2	115	0.058	ppb	76.5	27	0.5	
W	182	2	165	0.154	ppb	18.1	1830	1	
Pt	195	2	165	0.005	ppb	251.9	77	1	
Tl	205	2	165	0.023	ppb	7.5	330	0.1	
Pb	208	2	165	0.009	ppb	143.1	1340	0.5	
Th	232	2	165	0.041	ppb	27.5	937	1	
U	238	2	165	0.065	ppb	10.1	1107	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	801763	0.26	822129	97.52	60	120	
Sc (IS)	45	1	HMI H2	29211015	0.91	31063320	94.04	60	120	
Sc (IS)	45	2	HMI He	1059737	1.86	1110240	95.45	60	120	
Sc (IS)	45	3	No Gas	48969851	1.05	52905316	92.56	60	120	
Ge Internal Standard	72	1	HMI H2	11100752	0.19	11878391	93.45	60	120	
Ge Internal Standard	72	2	HMI He	1186229	0.94	1238950	95.74	60	120	
In Internal Standard	115	2	HMI He	3842122	0.81	3889250	98.79	60	120	
Ho-165	165	2	HMI He	18492550	1.92	18939303	97.64	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	118LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:47:23-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-4.840	ppb	-105.554	3887034	50	-9.7	70	130	>+/-30%
Be	9	1	6	1.008	ppb	6.496	383	1	100.8	70	130	
Na	23	2	45	48.907	ppb	5.470	20335	50	97.8	70	130	
Mg	24	2	45	47.103	ppb	5.857	6498	50	94.2	70	130	
Al	27	2	45	28.497	ppb	24.504	1197	30	95.0	70	130	
K	39	2	45	128.367	ppb	1.672	22708	100	128.4	70	130	
Ca	44	2	45	64.042	ppb	19.200	253	50	128.1	70	130	
V	51	2	72	4.121	ppb	11.512	8043	5	82.4	70	130	
Cr	52	2	72	1.958	ppb	3.790	3050	2	97.9	70	130	
Mn	55	2	72	0.930	ppb	23.357	657	1	93.0	70	130	
Fe	57	2	72	59.395	ppb	17.010	1750	50	118.8	70	130	
Co	59	2	72	1.065	ppb	7.139	2634	1	106.5	70	130	
Ni	60	2	72	2.492	ppb	2.079	2074	2	124.6	70	130	
Cu	63	2	72	1.864	ppb	11.749	4683	2	93.2	70	130	
Zn	66	2	72	9.545	ppb	6.350	2990	10	95.5	70	130	
As	75	2	72	4.496	ppb	4.649	805	5	89.9	70	130	
Se	78	1	72	4.942	ppb	7.783	1292	5	98.8	70	130	
Sr	88	2	72	1.152	ppb	13.534	720	1	115.2	70	130	
Zr	90	2	72	34.577	ppb	42.510	257	0.5	6915.4	70	130	>+/-30%
Nb	93	2	72	8.332	ppb	1.965	27631	2	416.6	70	130	>+/-30%
Mo	95	2	115	1.887	ppb	3.568	1794	2	94.3	70	130	
Pd	105	2	115	0.021	ppb	123.726	47	1	2.1	70	130	>+/-30%
Ag	107	2	115	5.051	ppb	4.296	16117	5	101.0	70	130	
Cd	111	2	115	1.208	ppb	5.208	513	1	120.8	70	130	
Sn	120	2	115	9.716	ppb	2.624	11292	10	97.2	70	130	
Sb	121	2	115	2.118	ppb	5.892	2220	2	105.9	70	130	
Ba	137	2	115	0.861	ppb	36.544	307	1	86.1	70	130	
W	182	2	165	4.811	ppb	1.301	22724	1	481.1	70	130	>+/-30%
Pt	195	2	165	0.039	ppb	21.134	200	1	3.9	70	130	>+/-30%
Tl	205	2	165	1.006	ppb	3.277	8597	1	100.6	70	130	
Pb	208	2	165	0.995	ppb	4.166	12256	1	99.5	70	130	
Th	232	2	165	2.041	ppb	2.123	27363	2	102.0	70	130	
U	238	2	165	1.040	ppb	6.898	15040	1	104.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	799414	0.39	822129	97.24	60	120	
Sc (IS)	45	1	HMI H2	29270741	0.37	31063320	94.23	60	120	
Sc (IS)	45	2	HMI He	1052546	0.77	1110240	94.80	60	120	
Sc (IS)	45	3	No Gas	49085484	0.51	52905316	92.78	60	120	
Ge Internal Standard	72	1	HMI H2	11080329	1.39	11878391	93.28	60	120	
Ge Internal Standard	72	2	HMI He	1178757	0.45	1238950	95.14	60	120	
In Internal Standard	115	2	HMI He	3842387	1.09	3889250	98.80	60	120	
Ho-165	165	2	HMI He	18323240	0.32	18939303	96.75	60	120	

Blank Report

Sample Table

Sample Name	MB 280-435473/1-A
Data File Name	119_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:51:10-07:00
Sample Type	Blank
Dilution	1
Comment	435473 6020a
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-10.585	ppb	-64.33844539	119662	0.5
Li	7	2	45	-48.897	ppb	-12.86929224	5631	0.5
Li	7	3	45	-18.933	ppb	-15.2327368	3679024	10
Be	9	1	6	0.045	ppb	0.511719517	20	0.5
B	11	1	6	-0.115	ppb	-283.8311185	963	0.5
Na	23	1	45	35.481	ppb	3.942686463	238080	25
Na	23	2	45	34.271	ppb	3.001813273	16693	25
Mg	24	2	45	-0.154	ppb	-680.2327243	823	25
Al	27	2	45	-1.334	ppb	-55.37168983	267	15
K	39	1	45	-1329.017	ppb	-1.027071305	5753900	50
K	39	2	45	19.789	ppb	12.19182886	16467	50
Ca	40	1	45	7.177	ppb	2.843220051	95322	50
Ca	44	2	45	-0.349	ppb	-1824.342251	43	25
Ti	47	2	45	-0.577	ppb	0	0	0.5
V	51	2	72	-1.276	ppb	-17.54858786	2120	1
Cr	52	2	72	0.082	ppb	46.32500363	370	1
Mn	55	2	72	0.136	ppb	67.380383	213	0.5
Fe	57	2	72	7.454	ppb	61.2965876	360	25
Co	59	2	72	0.012	ppb	66.22919095	30	0.5
Ni	60	2	72	0.059	ppb	344.7341421	360	1
Cu	63	2	72	-0.042	ppb	-62.4086974	1000	1
Zn	66	2	72	1.331	ppb	44.34848624	680	5
As	75	2	72	0.032	ppb	156.49659	27	1
Se	78	1	72	0.058	ppb	106.6474224	21	1
Sr	88	2	72	0.078	ppb	53.19684341	67	0.5
Zr	90	2	72	21.823	ppb	15.57820595	190	1
Nb	93	2	72	0.616	ppb	16.59572999	2994	2
Mo	95	2	115	0.054	ppb	49.60218433	67	0.5
Pd	105	2	115	-0.002	ppb	-203.2638118	13	1
Ag	107	2	115	-0.002	ppb	-414.7749758	37	1
Cd	111	2	115	-0.008	ppb	-372.146115	7	0.5
Sn	120	2	115	0.096	ppb	70.33943073	300	1
Sb	121	2	115	0.067	ppb	54.30576867	140	0.6
Ba	137	2	115	0.087	ppb	50.91683909	37	0.5
W	182	2	165	0.040	ppb	81.80546558	1313	1
Pt	195	2	165	-0.003	ppb	-51.34674788	47	1
Tl	205	2	165	0.004	ppb	152.8085459	170	0.1
Pb	208	2	165	0.010	ppb	203.8119049	1357	0.5
Th	232	2	165	0.011	ppb	57.05465466	540	1
U	238	2	165	0.012	ppb	52.44864535	337	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	783729	0.43	822129	95.33	60	120	
Sc (IS)	45	1	HMI H2	29227456	0.45	31063320	94.09	60	120	
Sc (IS)	45	2	HMI He	1058568	0.39	1110240	95.35	60	120	
Sc (IS)	45	3	No Gas	48229409	0.60	52905316	91.16	60	120	
Ge Internal Standard	72	1	HMI H2	11068102	0.26	11878391	93.18	60	120	
Ge Internal Standard	72	2	HMI He	1185560	0.58	1238950	95.69	60	120	
In Internal Standard	115	2	HMI He	3826392	1.07	3889250	98.38	60	120	
Ho-165	165	2	HMI He	18501521	0.92	18939303	97.69	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-435473/2-A
Data File Name	120_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:54:58-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	435473 6020a
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	67.310	67.310	ppb	6.875	143918	400	16.8	80	120	>+/-20%
Li	7	2	45	60.167	60.167	ppb	33.759	7402	400	15.0	80	120	>+/-20%
Li	7	3	45	48.789	48.789	ppb	16.325	4411193	400	12.2	80	120	>+/-20%
Be	9	1	6	38.503	38.503	ppb	4.761	14134	40	96.3	80	120	
Na	23	2	45	-4.536	-4.536	ppb	-49.018	6775	40	-11.3	80	120	>+/-20%
Mg	24	2	45	-1.538	-1.538	ppb	-75.485	660	40	-3.8	80	120	>+/-20%
Al	27	2	45	391.437	391.437	ppb	3.164	12656	40	978.6	80	120	>+/-20%
K	39	2	45	21.360	21.360	ppb	21.939	16647	40	53.4	80	120	>+/-20%
Ca	44	2	45	170.238	170.238	ppb	18.113	607	40	425.6	80	120	>+/-20%
V	51	2	72	36.873	36.873	ppb	4.115	44392	40	92.2	80	120	
Cr	52	2	72	39.174	39.174	ppb	0.564	56675	40	97.9	80	120	
Mn	55	2	72	38.795	38.795	ppb	4.736	21988	40	97.0	80	120	
Fe	57	2	72	401.869	401.869	ppb	1.847	11001	40	1004.7	80	120	>+/-20%
Co	59	2	72	38.819	38.819	ppb	0.259	96718	40	97.0	80	120	
Ni	60	2	72	38.412	38.412	ppb	2.738	27587	40	96.0	80	120	
Cu	63	2	72	38.713	38.713	ppb	1.925	76579	40	96.8	80	120	
Zn	66	2	72	35.478	35.478	ppb	3.227	10371	40	88.7	80	120	
As	75	2	72	37.683	37.683	ppb	3.008	6631	40	94.2	80	120	
Se	78	1	72	37.402	37.402	ppb	1.599	9714	40	93.5	80	120	
Nb	93	2	72	0.464	0.464	ppb	20.443	2510	40	1.2	80	120	>+/-20%
Mo	95	2	115	35.801	35.801	ppb	2.518	33728	40	89.5	80	120	
Pd	105	2	115	0.000	0.000	ppb	9298.250	17	40	0.0	80	120	>+/-20%
Ag	107	2	115	39.846	39.846	ppb	1.763	126810	40	99.6	80	120	
Cd	111	2	115	37.870	37.870	ppb	6.952	15793	40	94.7	80	120	
Sn	120	2	115	37.737	37.737	ppb	2.269	43285	40	94.3	80	120	
Sb	121	2	115	36.799	36.799	ppb	1.289	37382	40	92.0	80	120	
Ba	137	2	115	38.699	38.699	ppb	3.913	13481	40	96.7	80	120	
W	182	2	165	14.269	14.269	ppb	1.640	66181	40	35.7	80	120	>+/-20%
Pt	195	2	165	0.000	0.000	ppb	1952.127	60	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.237	39.237	ppb	0.302	335287	40	98.1	80	120	
Pb	208	2	165	39.361	39.361	ppb	0.864	443910	40	98.4	80	120	
Th	232	2	165	38.401	38.401	ppb	1.439	515737	40	96.0	80	120	
U	238	2	165	38.537	38.537	ppb	0.744	559712	40	96.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	778230	0.34	822129	94.66	60	120	
Sc (IS)	45	1	HMI H2	29112444	0.59	31063320	93.72	60	120	
Sc (IS)	45	2	HMI He	1064204	0.14	1110240	95.85	60	120	
Sc (IS)	45	3	No Gas	48872024	1.05	52905316	92.38	60	120	
Ge Internal Standard	72	1	HMI H2	11056983	1.11	11878391	93.08	60	120	
Ge Internal Standard	72	2	HMI He	1187312	0.10	1238950	95.83	60	120	
In Internal Standard	115	2	HMI He	3840576	0.62	3889250	98.75	60	120	
Ho-165	165	2	HMI He	18601972	0.31	18939303	98.22	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-D
Data File Name	121SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T17:58:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	58.446	ppb	58.446	5.31	106881	500000	
Li	7	2	45	20.649	ppb	20.649	133.00	5458	500000	
Li	7	3	45	13.855	ppb	13.855	18.46	2852123	50000	
Be	9	1	6	0.455	ppb	0.455	22.36	117	2000	
B	11	1	6	1167.706	ppb	1167.706	0.84	282778	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2561709.605	ppb	2561709.605	1.13	532861139	400000	>LDR
Mg	24	2	45	6527.200	ppb	6527.200	2.04	640472	400000	
Al	27	2	45	566.925	ppb	566.925	0.41	14675	400000	
K	39	1	45	250154.171	ppb	250154.171	0.71	656870724	400000	
K	39	2	45	243135.730	ppb	243135.730	1.72	11581412	400000	
Ca	40	1	45	15042.886	ppb	15042.886	0.59	59455954	400000	
Ca	44	2	45	15163.807	ppb	15163.807	1.36	40407	400000	
Ti	47	2	45	13.171	ppb	13.171	20.10	307	4000	
V	51	2	72	1062.647	ppb	1062.647	0.57	934157	2000	
Cr	52	2	72	34.001	ppb	34.001	0.58	38940	5000	
Mn	55	2	72	8.988	ppb	8.988	5.33	4114	10000	
Fe	57	2	72	1264.454	ppb	1264.454	3.06	27106	400000	
Co	59	2	72	22.348	ppb	22.348	1.35	44041	2000	
Ni	60	2	72	760.801	ppb	760.801	1.50	427452	5000	
Cu	63	2	72	244.952	ppb	244.952	0.85	378716	5000	
Zn	66	2	72	151.546	ppb	151.546	1.38	34258	5000	
As	75	2	72	20.762	ppb	20.762	5.99	2897	2000	
Se	78	1	72	14.617	ppb	14.617	4.71	2779	2000	
Sr	88	2	72	290.491	ppb	290.491	0.70	140911	4000	
Zr	90	2	72	2655.631	ppb	2655.631	3.87	11315	1000	
Nb	93	2	72	2.465	ppb	2.465	10.62	7082	200	
Mo	95	2	115	4517.796	ppb	4517.796	0.92	3339020	2000	
Pd	105	2	115	0.067	ppb	0.067	80.42	90	100	
Ag	107	2	115	0.368	ppb	0.368	5.86	953	100	
Cd	111	2	115	1.016	ppb	1.016	10.30	340	2000	
Sn	120	2	115	3.061	ppb	3.061	3.84	2894	2000	
Sb	121	2	115	7.206	ppb	7.206	6.08	5788	1000	
Ba	137	2	115	9.952	ppb	9.952	2.70	2724	5000	
W	182	2	165	260.430	ppb	260.430	1.23	941614	100	
Pt	195	2	165	0.312	ppb	0.312	13.55	960	100	
Tl	205	2	165	0.024	ppb	0.024	18.17	270	2000	
Pb	208	2	165	4.835	ppb	4.835	0.56	44091	5000	
Th	232	2	165	0.188	ppb	0.188	3.44	2310	2000	
U	238	2	165	1.182	ppb	1.182	6.44	13735	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	533827	0.72	822129	64.93	60	120	
Sc (IS)	45	1	HMI H2	22051157	0.81	31063320	70.99	60	120	
Sc (IS)	45	2	HMI He	858543	2.00	1110240	77.33	60	120	
Sc (IS)	45	3	No Gas	34342707	0.16	52905316	64.91	60	120	
Ge Internal Standard	72	1	HMI H2	8087135	0.48	11878391	68.08	60	120	
Ge Internal Standard	72	2	HMI He	939236	1.04	1238950	75.81	60	120	
In Internal Standard	115	2	HMI He	3014455	1.30	3889250	77.51	60	120	
Ho-165	165	2	HMI He	14742731	1.75	18939303	77.84	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-Dsd@5
Data File Name	122SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:02:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.897	ppb	-10.897	-33.34	97595	500000	
Li	7	2	45	-39.890	ppb	-39.890	-89.52	4848	500000	
Li	7	3	45	-34.375	ppb	-34.375	-11.73	2773142	50000	
Be	9	1	6	0.098	ppb	0.098	62.59	30	2000	
B	11	1	6	237.831	ppb	237.831	2.83	64871	2000	
Na	23	1	45	535242.627	ppb	535242.627	0.69	1537462484	2000	>LDR
Na	23	2	45	495129.312	ppb	495129.312	0.74	106660802	400000	
Mg	24	2	45	1267.046	ppb	1267.046	1.74	129328	400000	
Al	27	2	45	131.039	ppb	131.039	5.64	3711	400000	
K	39	1	45	47953.773	ppb	47953.773	0.96	143052425	400000	
K	39	2	45	47985.247	ppb	47985.247	0.68	2377482	400000	
Ca	40	1	45	2908.674	ppb	2908.674	0.42	12476505	400000	
Ca	44	2	45	2915.082	ppb	2915.082	5.17	8076	400000	
Ti	47	2	45	1.728	ppb	1.728	14.76	53	4000	
V	51	2	72	195.437	ppb	195.437	1.25	185851	2000	
Cr	52	2	72	6.591	ppb	6.591	3.86	8229	5000	
Mn	55	2	72	1.661	ppb	1.661	25.91	907	10000	
Fe	57	2	72	254.116	ppb	254.116	4.32	5925	400000	
Co	59	2	72	4.284	ppb	4.284	1.91	9013	2000	
Ni	60	2	72	149.680	ppb	149.680	1.29	90002	5000	
Cu	63	2	72	49.224	ppb	49.224	1.45	81976	5000	
Zn	66	2	72	30.888	ppb	30.888	2.08	7659	5000	
As	75	2	72	3.643	ppb	3.643	3.17	558	2000	
Se	78	1	72	2.656	ppb	2.656	13.04	569	2000	
Sr	88	2	72	54.054	ppb	54.054	0.78	28005	4000	
Zr	90	2	72	502.017	ppb	502.017	7.93	2334	1000	
Nb	93	2	72	0.261	ppb	0.261	14.93	1567	200	
Mo	95	2	115	854.024	ppb	854.024	0.75	679759	2000	
Pd	105	2	115	0.005	ppb	0.005	280.52	20	100	
Ag	107	2	115	0.084	ppb	0.084	31.81	263	100	
Cd	111	2	115	0.176	ppb	0.176	44.30	70	2000	
Sn	120	2	115	0.658	ppb	0.658	14.61	797	2000	
Sb	121	2	115	1.419	ppb	1.419	8.33	1277	1000	
Ba	137	2	115	1.758	ppb	1.758	13.60	523	5000	
W	182	2	165	49.939	ppb	49.939	1.13	199340	100	
Pt	195	2	165	0.074	ppb	0.074	37.32	290	100	
Tl	205	2	165	0.009	ppb	0.009	80.70	183	2000	
Pb	208	2	165	0.919	ppb	0.919	0.95	10099	5000	
Th	232	2	165	0.010	ppb	0.010	148.18	460	2000	
U	238	2	165	0.227	ppb	0.227	6.50	3024	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	595647	0.30	822129	72.45	60	120	
Sc (IS)	45	1	HMI H2	23857775	0.49	31063320	76.80	60	120	
Sc (IS)	45	2	HMI He	888969	0.54	1110240	80.07	60	120	
Sc (IS)	45	3	No Gas	37938333	0.14	52905316	71.71	60	120	
Ge Internal Standard	72	1	HMI H2	9049483	0.15	11878391	76.18	60	120	
Ge Internal Standard	72	2	HMI He	1002696	0.63	1238950	80.93	60	120	
In Internal Standard	115	2	HMI He	3246384	1.34	3889250	83.47	60	120	
Ho-165	165	2	HMI He	16208051	0.10	18939303	85.58	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-E MS
Data File Name	123SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:06:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	126.274	ppb	126.274	7.55	114838	500000	
Li	7	2	45	71.259	ppb	71.259	47.56	5838	500000	
Li	7	3	45	77.339	ppb	77.339	7.03	3205128	50000	
Be	9	1	6	42.715	ppb	42.715	2.21	9740	2000	
B	11	1	6	1271.395	ppb	1271.395	2.98	278668	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2596455.687	ppb	2596455.687	1.31	515642726	400000	>LDR
Mg	24	2	45	6651.472	ppb	6651.472	1.45	623166	400000	
Al	27	2	45	957.581	ppb	957.581	3.31	23500	400000	
K	39	1	45	257362.905	ppb	257362.905	1.66	629783204	400000	
K	39	2	45	246479.922	ppb	246479.922	0.30	11211531	400000	
Ca	40	1	45	15431.585	ppb	15431.585	2.41	56854377	400000	
Ca	44	2	45	15693.929	ppb	15693.929	0.70	39932	400000	
Ti	47	2	45	15.070	ppb	15.070	17.66	333	4000	
V	51	2	72	1123.043	ppb	1123.043	0.44	942630	2000	
Cr	52	2	72	72.215	ppb	72.215	0.59	78763	5000	
Mn	55	2	72	48.606	ppb	48.606	2.72	20779	10000	
Fe	57	2	72	1762.411	ppb	1762.411	1.98	36036	400000	
Co	59	2	72	60.775	ppb	60.775	0.42	114384	2000	
Ni	60	2	72	826.697	ppb	826.697	0.98	443537	5000	
Cu	63	2	72	346.379	ppb	346.379	0.42	511061	5000	
Zn	66	2	72	195.692	ppb	195.692	1.34	42173	5000	
As	75	2	72	60.720	ppb	60.720	0.78	8061	2000	
Se	78	1	72	50.644	ppb	50.644	1.45	9007	2000	
Sr	88	2	72	336.772	ppb	336.772	0.77	155997	4000	
Zr	90	2	72	13872.149	ppb	13872.149	1.25	56208	1000	>LDR
Nb	93	2	72	0.940	ppb	0.940	5.14	3054	200	
Mo	95	2	115	4980.253	ppb	4980.253	2.89	3445455	2000	
Pd	105	2	115	0.045	ppb	0.045	38.37	60	100	
Ag	107	2	115	36.151	ppb	36.151	0.98	84567	100	
Cd	111	2	115	38.047	ppb	38.047	5.94	11652	2000	
Sn	120	2	115	41.111	ppb	41.111	1.45	34644	2000	
Sb	121	2	115	48.761	ppb	48.761	1.87	36382	1000	
Ba	137	2	115	50.496	ppb	50.496	5.92	12913	5000	
W	182	2	165	275.333	ppb	275.333	0.37	953023	100	
Pt	195	2	165	0.343	ppb	0.343	12.14	1003	100	
Tl	205	2	165	36.752	ppb	36.752	0.84	238264	2000	
Pb	208	2	165	42.213	ppb	42.213	0.27	361102	5000	
Th	232	2	165	32.360	ppb	32.360	1.04	329729	2000	
U	238	2	165	39.102	ppb	39.102	0.77	430841	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	483361	1.40	822129	58.79	60	120	IS Failed
Sc (IS)	45	1	HMI H2	20558158	1.12	31063320	66.18	60	120	
Sc (IS)	45	2	HMI He	819696	1.91	1110240	73.83	60	120	
Sc (IS)	45	3	No Gas	33334404	0.38	52905316	63.01	60	120	
Ge Internal Standard	72	1	HMI H2	7572251	1.17	11878391	63.75	60	120	
Ge Internal Standard	72	2	HMI He	896888	1.01	1238950	72.39	60	120	
In Internal Standard	115	2	HMI He	2823337	3.29	3889250	72.59	60	120	
Ho-165	165	2	HMI He	14112411	1.17	18939303	74.51	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-F MSD
Data File Name	124SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:10:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	119.999	ppb	119.999	6.05	115592	500000	
Li	7	2	45	112.241	ppb	112.241	42.08	6192	500000	
Li	7	3	45	70.665	ppb	70.665	8.24	3059341	50000	
Be	9	1	6	41.588	ppb	41.588	2.21	9553	2000	
B	11	1	6	1285.331	ppb	1285.331	1.13	283881	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2616390.424	ppb	2616390.424	0.42	507706939	400000	>LDR
Mg	24	2	45	6655.499	ppb	6655.499	0.15	609296	400000	
Al	27	2	45	1020.653	ppb	1020.653	2.10	24454	400000	
K	39	1	45	255744.041	ppb	255744.041	0.38	637798844	400000	
K	39	2	45	248743.629	ppb	248743.629	1.15	11054784	400000	
Ca	40	1	45	15290.430	ppb	15290.430	0.32	57410782	400000	
Ca	44	2	45	15730.589	ppb	15730.589	1.35	39107	400000	
Ti	47	2	45	15.749	ppb	15.749	24.36	340	4000	
V	51	2	72	1127.755	ppb	1127.755	0.05	931733	2000	
Cr	52	2	72	72.604	ppb	72.604	1.32	77949	5000	
Mn	55	2	72	49.556	ppb	49.556	3.12	20852	10000	
Fe	57	2	72	1724.185	ppb	1724.185	2.46	34713	400000	
Co	59	2	72	62.138	ppb	62.138	0.22	115114	2000	
Ni	60	2	72	849.152	ppb	849.152	0.11	448455	5000	
Cu	63	2	72	347.868	ppb	347.868	0.12	505226	5000	
Zn	66	2	72	192.550	ppb	192.550	1.55	40856	5000	
As	75	2	72	61.085	ppb	61.085	1.32	7983	2000	
Se	78	1	72	52.155	ppb	52.155	2.34	9419	2000	
Sr	88	2	72	338.261	ppb	338.261	0.59	154230	4000	
Zr	90	2	72	14021.339	ppb	14021.339	0.23	55924	1000	>LDR
Nb	93	2	72	0.643	ppb	0.643	24.74	2297	200	
Mo	95	2	115	5169.623	ppb	5169.623	0.55	3581167	2000	
Pd	105	2	115	0.064	ppb	0.064	24.57	80	100	
Ag	107	2	115	34.515	ppb	34.515	0.19	80819	100	
Cd	111	2	115	37.480	ppb	37.480	1.19	11499	2000	
Sn	120	2	115	40.324	ppb	40.324	0.86	34013	2000	
Sb	121	2	115	48.205	ppb	48.205	2.05	36004	1000	
Ba	137	2	115	51.200	ppb	51.200	5.01	13120	5000	
W	182	2	165	278.526	ppb	278.526	0.41	949463	100	
Pt	195	2	165	0.319	ppb	0.319	22.23	923	100	
Tl	205	2	165	36.582	ppb	36.582	0.19	233573	2000	
Pb	208	2	165	42.180	ppb	42.180	0.97	355367	5000	
Th	232	2	165	31.589	ppb	31.589	0.90	317040	2000	
U	238	2	165	38.921	ppb	38.921	1.31	422351	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	486962	0.43	822129	59.23	60	120	IS Failed
Sc (IS)	45	1	HMI H2	20947699	0.49	31063320	67.44	60	120	
Sc (IS)	45	2	HMI He	800825	1.13	1110240	72.13	60	120	
Sc (IS)	45	3	No Gas	32281164	0.28	52905316	61.02	60	120	
Ge Internal Standard	72	1	HMI H2	7690236	1.03	11878391	64.74	60	120	
Ge Internal Standard	72	2	HMI He	882842	1.28	1238950	71.26	60	120	
In Internal Standard	115	2	HMI He	2825373	1.21	3889250	72.65	60	120	
Ho-165	165	2	HMI He	13898466	0.66	18939303	73.38	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-D pds
Data File Name	125SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:13:56-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	230.764	ppb	230.764	2.25	147502	500000	
Li	7	2	45	194.271	ppb	194.271	8.87	7669	500000	
Li	7	3	45	160.584	ppb	160.584	4.20	3941078	50000	
Be	9	1	6	218.346	ppb	218.346	0.81	52088	2000	
B	11	1	6	1199.111	ppb	1199.111	0.41	275127	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2457361.110	ppb	2457361.110	0.33	509294046	400000	>LDR
Mg	24	2	45	6314.809	ppb	6314.809	0.61	617459	400000	
Al	27	2	45	2597.112	ppb	2597.112	2.21	66084	400000	
K	39	1	45	243885.853	ppb	243885.853	0.29	637066391	400000	
K	39	2	45	237625.489	ppb	237625.489	0.96	11279165	400000	
Ca	40	1	45	14659.817	ppb	14659.817	0.21	57622971	400000	
Ca	44	2	45	16074.609	ppb	16074.609	2.42	42680	400000	
Ti	47	2	45	16.489	ppb	16.489	7.13	380	4000	
V	51	2	72	1233.709	ppb	1233.709	0.74	1085655	2000	
Cr	52	2	72	230.948	ppb	230.948	0.20	263718	5000	
Mn	55	2	72	210.400	ppb	210.400	0.03	93986	10000	
Fe	57	2	72	3193.111	ppb	3193.111	1.08	68368	400000	
Co	59	2	72	214.964	ppb	214.964	0.64	424290	2000	
Ni	60	2	72	927.711	ppb	927.711	0.77	521957	5000	
Cu	63	2	72	429.553	ppb	429.553	0.49	664476	5000	
Zn	66	2	72	335.523	ppb	335.523	0.80	75662	5000	
As	75	2	72	222.780	ppb	222.780	0.89	30969	2000	
Se	78	1	72	217.615	ppb	217.615	1.04	41067	2000	
Sr	88	2	72	496.844	ppb	496.844	2.01	241364	4000	
Zr	90	2	72	63578.470	ppb	63578.470	0.46	269974	1000	>LDR
Nb	93	2	72	4.185	ppb	4.185	7.01	11482	200	
Mo	95	2	115	4666.725	ppb	4666.725	1.60	3388628	2000	
Pd	105	2	115	0.084	ppb	0.084	58.81	107	100	
Ag	107	2	115	36.945	ppb	36.945	0.39	90699	100	
Cd	111	2	115	196.405	ppb	196.405	1.30	63134	2000	
Sn	120	2	115	203.470	ppb	203.470	2.35	179280	2000	
Sb	121	2	115	211.636	ppb	211.636	1.05	165532	1000	
Ba	137	2	115	219.602	ppb	219.602	3.23	58974	5000	
W	182	2	165	461.874	ppb	461.874	1.96	1635217	100	
Pt	195	2	165	0.315	ppb	0.315	1.19	947	100	
Tl	205	2	165	188.950	ppb	188.950	0.74	1253053	2000	
Pb	208	2	165	192.849	ppb	192.849	0.38	1684632	5000	
Th	232	2	165	237.965	ppb	237.965	1.25	2479371	2000	
U	238	2	165	212.008	ppb	212.008	1.46	2390002	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	505796	0.16	822129	61.52	60	120	
Sc (IS)	45	1	HMI H2	21928644	0.54	31063320	70.59	60	120	
Sc (IS)	45	2	HMI He	855297	0.52	1110240	77.04	60	120	
Sc (IS)	45	3	No Gas	34775694	0.18	52905316	65.73	60	120	
Ge Internal Standard	72	1	HMI H2	8038651	0.31	11878391	67.67	60	120	
Ge Internal Standard	72	2	HMI He	940619	1.41	1238950	75.92	60	120	
In Internal Standard	115	2	HMI He	2962279	2.69	3889250	76.17	60	120	
Ho-165	165	2	HMI He	14441037	0.56	18939303	76.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	126_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:17:43-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	450.626	ppb	3.288	251814	500	90.1	90	110	
Li	7	2	45	458.199	ppb	2.128	13036	500	91.6	90	110	
Li	7	3	45	404.472	ppb	0.174	7387965	500	80.9	90	110	>+\-10%
Be	9	1	6	51.533	ppb	1.245	17164	50	103.1	90	110	
B	11	1	6	77.992	ppb	1.324	25827	50	156.0	90	110	>+\-10%
Na	23	1	45	8231.632	ppb	0.631	27457559	5000	164.6	90	110	>+\-10%
Na	23	2	45	7792.763	ppb	4.750	1910401	5000	155.9	90	110	>+\-10%
Mg	24	2	45	4705.335	ppb	3.223	542427	5000	94.1	90	110	
Al	27	2	45	5175.348	ppb	3.126	154896	5000	103.5	90	110	
K	39	1	45	5205.073	ppb	1.150	26651759	5000	104.1	90	110	
K	39	2	45	5238.183	ppb	4.418	307215	5000	104.8	90	110	
Ca	40	1	45	5056.469	ppb	0.484	25048651	5000	101.1	90	110	
Ca	44	2	45	5038.654	ppb	6.662	15786	5000	100.8	90	110	
Ti	47	2	45	46.324	ppb	15.998	1230	50	92.6	90	110	
V	51	2	72	47.513	ppb	3.590	53787	50	95.0	90	110	
Cr	52	2	72	50.464	ppb	5.488	69806	50	100.9	90	110	
Mn	55	2	72	51.473	ppb	4.970	27878	50	102.9	90	110	
Fe	57	2	72	4882.920	ppb	3.836	126263	5000	97.7	90	110	
Co	59	2	72	50.393	ppb	4.494	120183	50	100.8	90	110	
Ni	60	2	72	49.411	ppb	4.966	33881	50	98.8	90	110	
Cu	63	2	72	50.457	ppb	2.514	95261	50	100.9	90	110	
Zn	66	2	72	47.962	ppb	5.065	13317	50	95.9	90	110	
As	75	2	72	50.693	ppb	2.317	8539	50	101.4	90	110	
Se	78	1	72	49.385	ppb	1.834	12229	50	98.8	90	110	
Sr	88	2	72	51.644	ppb	1.532	30347	50	103.3	90	110	
Zr	90	2	72	97.071	ppb	22.935	567	50	194.1	90	110	>+\-10%
Nb	93	2	72	89.631	ppb	3.466	277137	100	89.6	90	110	>+\-10%
Mo	95	2	115	55.004	ppb	6.191	49495	50	110.0	90	110	>+\-10%
Pd	105	2	115	50.753	ppb	5.177	70448	50	101.5	90	110	
Ag	107	2	115	49.106	ppb	4.207	149338	50	98.2	90	110	
Cd	111	2	115	49.309	ppb	7.090	19638	50	98.6	90	110	
Sn	120	2	115	49.955	ppb	4.963	54692	50	99.9	90	110	
Sb	121	2	115	50.901	ppb	6.255	49366	50	101.8	90	110	
Ba	137	2	115	51.473	ppb	10.340	17108	50	102.9	90	110	
W	182	2	165	48.202	ppb	3.037	207650	50	96.4	90	110	
Pt	195	2	165	47.737	ppb	4.762	165630	50	95.5	90	110	
Tl	205	2	165	49.723	ppb	3.509	399415	50	99.4	90	110	
Pb	208	2	165	50.517	ppb	2.600	535340	50	101.0	90	110	
Th	232	2	165	50.403	ppb	4.080	636231	50	100.8	90	110	
U	238	2	165	49.741	ppb	3.221	679169	50	99.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	706088	0.41	822129	85.89	60	120	
Sc (IS)	45	1	HMI H2	27597545	0.57	31063320	88.84	60	120	
Sc (IS)	45	2	HMI He	1008511	2.52	1110240	90.84	60	120	
Sc (IS)	45	3	No Gas	45142228	0.53	52905316	85.33	60	120	
Ge Internal Standard	72	1	HMI H2	10544457	1.09	11878391	88.77	60	120	
Ge Internal Standard	72	2	HMI He	1137350	2.56	1238950	91.80	60	120	
In Internal Standard	115	2	HMI He	3673226	3.10	3889250	94.45	60	120	
Ho-165	165	2	HMI He	17495521	1.84	18939303	92.38	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	127_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:21:30-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-35.773	ppb	-10.1	3294572	10	
Be	9	1	6	0.029	ppb	149.1	13	0.5	
B	11	1	6	11.361	ppb	8.7	4891	0.5	>RL
Na	23	1	45	1792.134	ppb	1.3	6321429	25	>RL
Na	23	2	45	1636.885	ppb	2.0	425480	25	>RL
Mg	24	2	45	-4.557	ppb	-12.8	290	25	
Al	27	2	45	1.593	ppb	83.2	357	15	
K	39	1	45	137.975	ppb	12.2	10634581	50	>RL
K	39	2	45	78.783	ppb	5.7	19824	50	>RL
Ca	40	1	45	5.390	ppb	3.4	84657	50	
Ca	44	2	45	-1.345	ppb	-381.0	40	25	
Ti	47	2	45	-0.577	ppb	0.0	0	0.5	
V	51	2	72	-2.283	ppb	-1.7	1007	1	
Cr	52	2	72	-0.008	ppb	-322.2	240	1	
Mn	55	2	72	-0.131	ppb	-32.3	63	0.5	
Fe	57	2	72	2.259	ppb	134.4	220	25	
Co	59	2	72	0.009	ppb	108.4	23	0.5	
Ni	60	2	72	-0.013	ppb	-804.1	310	1	
Cu	63	2	72	0.167	ppb	5.7	1407	1	
Zn	66	2	72	0.567	ppb	79.0	463	5	
As	75	2	72	0.106	ppb	52.8	41	1	
Se	78	1	72	0.692	ppb	13.3	185	1	
Sr	88	2	72	0.023	ppb	245.9	33	0.5	
Zr	90	2	72	11.790	ppb	100.1	137	1	>RL
Nb	93	2	72	4.398	ppb	2.9	15155	2	>RL
Mo	95	2	115	1.029	ppb	9.5	993	0.5	>RL
Pd	105	2	115	0.032	ppb	45.2	63	1	
Ag	107	2	115	0.021	ppb	97.3	110	1	
Cd	111	2	115	0.024	ppb	100.0	20	0.5	
Sn	120	2	115	0.122	ppb	67.6	333	1	
Sb	121	2	115	0.320	ppb	17.9	400	0.6	
Ba	137	2	115	0.029	ppb	207.8	17	0.5	
W	182	2	165	0.177	ppb	18.9	1884	1	
Pt	195	2	165	0.004	ppb	474.5	70	1	
Tl	205	2	165	0.017	ppb	55.7	273	0.1	
Pb	208	2	165	0.035	ppb	34.0	1590	0.5	
Th	232	2	165	0.046	ppb	22.6	983	1	
U	238	2	165	0.060	ppb	20.0	1013	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	761591	0.32	822129	92.64	60	120	
Sc (IS)	45	1	HMI H2	28781460	0.15	31063320	92.65	60	120	
Sc (IS)	45	2	HMI He	1053045	1.18	1110240	94.85	60	120	
Sc (IS)	45	3	No Gas	45251923	0.58	52905316	85.53	60	120	
Ge Internal Standard	72	1	HMI H2	11030900	0.43	11878391	92.87	60	120	
Ge Internal Standard	72	2	HMI He	1185968	0.99	1238950	95.72	60	120	
In Internal Standard	115	2	HMI He	3872114	0.79	3889250	99.56	60	120	
Ho-165	165	2	HMI He	17995162	0.92	18939303	95.01	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	128LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:25:19-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-25.405	ppb	-14.189	3330413	50	-50.8	70	130	>+/-30%
Be	9	1	6	0.916	ppb	6.728	333	1	91.6	70	130	
Na	23	2	45	1250.230	ppb	0.834	329450	50	2500.5	70	130	>+/-30%
Mg	24	2	45	46.004	ppb	7.678	6418	50	92.0	70	130	
Al	27	2	45	29.681	ppb	18.283	1243	30	98.9	70	130	
K	39	2	45	187.228	ppb	6.054	26358	100	187.2	70	130	>+/-30%
Ca	44	2	45	65.574	ppb	35.983	260	50	131.1	70	130	>+/-30%
V	51	2	72	2.926	ppb	8.219	6805	5	58.5	70	130	>+/-30%
Cr	52	2	72	2.080	ppb	5.508	3261	2	104.0	70	130	
Mn	55	2	72	0.988	ppb	9.519	697	1	98.8	70	130	
Fe	57	2	72	56.107	ppb	2.758	1680	50	112.2	70	130	
Co	59	2	72	0.993	ppb	11.797	2484	1	99.3	70	130	
Ni	60	2	72	2.099	ppb	10.885	1817	2	104.9	70	130	
Cu	63	2	72	2.032	ppb	7.012	5065	2	101.6	70	130	
Zn	66	2	72	9.195	ppb	4.647	2924	10	91.9	70	130	
As	75	2	72	4.807	ppb	5.490	869	5	96.1	70	130	
Se	78	1	72	5.312	ppb	3.347	1372	5	106.2	70	130	
Sr	88	2	72	1.138	ppb	11.780	720	1	113.8	70	130	
Zr	90	2	72	11.750	ppb	96.799	137	0.5	2350.0	70	130	>+/-30%
Nb	93	2	72	8.036	ppb	1.277	26983	2	401.8	70	130	>+/-30%
Mo	95	2	115	2.487	ppb	5.654	2390	2	124.4	70	130	
Pd	105	2	115	0.016	ppb	85.488	40	1	1.6	70	130	>+/-30%
Ag	107	2	115	4.648	ppb	2.144	15029	5	93.0	70	130	
Cd	111	2	115	0.996	ppb	29.624	430	1	99.6	70	130	
Sn	120	2	115	9.932	ppb	5.719	11686	10	99.3	70	130	
Sb	121	2	115	2.126	ppb	6.238	2257	2	106.3	70	130	
Ba	137	2	115	0.841	ppb	14.079	303	1	84.1	70	130	
W	182	2	165	4.768	ppb	0.563	22099	1	476.8	70	130	>+/-30%
Pt	195	2	165	0.021	ppb	21.321	133	1	2.1	70	130	>+/-30%
Tl	205	2	165	0.938	ppb	6.967	7869	1	93.8	70	130	
Pb	208	2	165	0.997	ppb	2.371	12046	1	99.7	70	130	
Th	232	2	165	1.972	ppb	1.382	25947	2	98.6	70	130	
U	238	2	165	0.989	ppb	2.809	14042	1	98.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	764388	0.74	822129	92.98	60	120	
Sc (IS)	45	1	HMI H2	28790370	1.44	31063320	92.68	60	120	
Sc (IS)	45	2	HMI He	1061357	0.87	1110240	95.60	60	120	
Sc (IS)	45	3	No Gas	44437906	0.92	52905316	84.00	60	120	
Ge Internal Standard	72	1	HMI H2	10955903	0.18	11878391	92.23	60	120	
Ge Internal Standard	72	2	HMI He	1191951	0.61	1238950	96.21	60	120	
In Internal Standard	115	2	HMI He	3891749	0.89	3889250	100.06	60	120	
Ho-165	165	2	HMI He	17974782	1.06	18939303	94.91	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-3-B
Data File Name	129SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:29:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	48.245	ppb	48.245	13.08	111840	500000	
Li	7	2	45	4.156	ppb	4.156	484.57	5595	500000	
Li	7	3	45	18.247	ppb	18.247	25.11	3310530	50000	
Be	9	1	6	0.452	ppb	0.452	46.39	120	2000	
B	11	1	6	1232.858	ppb	1232.858	1.78	308217	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2642638.489	ppb	2642638.489	1.05	586031858	400000	>LDR
Mg	24	2	45	6730.748	ppb	6730.748	1.06	704188	400000	
Al	27	2	45	594.354	ppb	594.354	3.22	16390	400000	
K	39	1	45	261285.074	ppb	261285.074	0.16	734461562	400000	
K	39	2	45	258093.100	ppb	258093.100	1.20	13108049	400000	
Ca	40	1	45	14793.279	ppb	14793.279	0.54	62622591	400000	
Ca	44	2	45	15189.624	ppb	15189.624	2.58	43155	400000	
Ti	47	2	45	17.035	ppb	17.035	27.06	420	4000	
V	51	2	72	1123.830	ppb	1123.830	0.63	1045680	2000	
Cr	52	2	72	34.743	ppb	34.743	2.35	42115	5000	
Mn	55	2	72	4.771	ppb	4.771	9.32	2367	10000	
Fe	57	2	72	857.844	ppb	857.844	2.19	19511	400000	
Co	59	2	72	25.411	ppb	25.411	0.86	53014	2000	
Ni	60	2	72	836.558	ppb	836.558	0.42	497593	5000	
Cu	63	2	72	181.008	ppb	181.008	0.55	296509	5000	
Zn	66	2	72	40.776	ppb	40.776	4.33	9947	5000	
As	75	2	72	24.021	ppb	24.021	3.16	3546	2000	
Se	78	1	72	22.056	ppb	22.056	2.54	4478	2000	
Sr	88	2	72	295.839	ppb	295.839	1.51	151923	4000	
Zr	90	2	72	2288.570	ppb	2288.570	2.63	10331	1000	
Nb	93	2	72	3.491	ppb	3.491	7.22	10261	200	
Mo	95	2	115	5435.207	ppb	5435.207	0.32	4187528	2000	
Pd	105	2	115	0.067	ppb	0.067	27.02	93	100	
Ag	107	2	115	0.531	ppb	0.531	9.77	1417	100	
Cd	111	2	115	1.353	ppb	1.353	11.89	470	2000	
Sn	120	2	115	3.281	ppb	3.281	10.16	3224	2000	
Sb	121	2	115	9.236	ppb	9.236	4.08	7722	1000	
Ba	137	2	115	9.635	ppb	9.635	5.84	2750	5000	
W	182	2	165	264.632	ppb	264.632	0.11	955467	100	
Pt	195	2	165	0.293	ppb	0.293	14.85	903	100	
Tl	205	2	165	0.029	ppb	0.029	42.83	307	2000	
Pb	208	2	165	5.138	ppb	5.138	2.82	46718	5000	
Th	232	2	165	0.054	ppb	0.054	24.62	890	2000	
U	238	2	165	1.182	ppb	1.182	1.06	13711	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	551211	0.87	822129	67.05	60	120	
Sc (IS)	45	1	HMI H2	23616620	0.18	31063320	76.03	60	120	
Sc (IS)	45	2	HMI He	915168	1.37	1110240	82.43	60	120	
Sc (IS)	45	3	No Gas	39432767	0.59	52905316	74.53	60	120	
Ge Internal Standard	72	1	HMI H2	8639539	0.47	11878391	72.73	60	120	
Ge Internal Standard	72	2	HMI He	994283	1.44	1238950	80.25	60	120	
In Internal Standard	115	2	HMI He	3142264	2.07	3889250	80.79	60	120	
Ho-165	165	2	HMI He	14720096	1.46	18939303	77.72	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-D
Data File Name	130SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:32:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	78.130	ppb	78.130	4.99	117442	500000	
Li	7	2	45	39.480	ppb	39.480	29.50	5921	500000	
Li	7	3	45	32.281	ppb	32.281	11.81	3438408	50000	
Be	9	1	6	0.330	ppb	0.330	65.25	87	2000	
B	11	1	6	1446.446	ppb	1446.446	0.22	356484	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3104489.159	ppb	3104489.159	0.95	670410110	400000	>LDR
Mg	24	2	45	8300.635	ppb	8300.635	0.29	845533	400000	
Al	27	2	45	418.778	ppb	418.778	2.04	11322	400000	
K	39	1	45	286900.195	ppb	286900.195	0.95	791438308	400000	
K	39	2	45	280779.882	ppb	280779.882	0.48	13884441	400000	
Ca	40	1	45	7892.543	ppb	7892.543	0.56	32843987	400000	
Ca	44	2	45	8280.400	ppb	8280.400	1.72	22929	400000	
Ti	47	2	45	8.622	ppb	8.622	11.15	213	4000	
V	51	2	72	1039.246	ppb	1039.246	0.43	933681	2000	
Cr	52	2	72	36.671	ppb	36.671	0.78	42898	5000	
Mn	55	2	72	6.492	ppb	6.492	4.37	3067	10000	
Fe	57	2	72	803.871	ppb	803.871	2.84	17661	400000	
Co	59	2	72	15.131	ppb	15.131	2.85	30470	2000	
Ni	60	2	72	688.497	ppb	688.497	0.99	395369	5000	
Cu	63	2	72	67.826	ppb	67.826	0.99	107799	5000	
Zn	66	2	72	26.151	ppb	26.151	3.40	6245	5000	
As	75	2	72	17.940	ppb	17.940	1.64	2561	2000	
Se	78	1	72	24.802	ppb	24.802	2.69	4898	2000	
Sr	88	2	72	211.414	ppb	211.414	2.21	104798	4000	
Zr	90	2	72	2934.513	ppb	2934.513	3.02	12773	1000	
Nb	93	2	72	1.288	ppb	1.288	15.38	4174	200	
Mo	95	2	115	2718.767	ppb	2718.767	1.66	1993829	2000	
Pd	105	2	115	0.033	ppb	0.033	54.33	50	100	
Ag	107	2	115	0.192	ppb	0.192	20.75	510	100	
Cd	111	2	115	0.574	ppb	0.574	31.04	193	2000	
Sn	120	2	115	1.121	ppb	1.121	6.24	1147	2000	
Sb	121	2	115	2.479	ppb	2.479	1.63	2014	1000	
Ba	137	2	115	5.372	ppb	5.372	7.31	1460	5000	
W	182	2	165	269.376	ppb	269.376	1.14	933618	100	
Pt	195	2	165	0.347	ppb	0.347	5.94	1017	100	
Tl	205	2	165	0.012	ppb	0.012	103.34	180	2000	
Pb	208	2	165	1.659	ppb	1.659	5.72	15124	5000	
Th	232	2	165	0.015	ppb	0.015	73.74	450	2000	
U	238	2	165	1.305	ppb	1.305	2.72	14522	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	543521	0.40	822129	66.11	60	120	
Sc (IS)	45	1	HMI H2	23201584	1.05	31063320	74.69	60	120	
Sc (IS)	45	2	HMI He	891251	1.53	1110240	80.28	60	120	
Sc (IS)	45	3	No Gas	39589475	0.12	52905316	74.83	60	120	
Ge Internal Standard	72	1	HMI H2	8406430	0.71	11878391	70.77	60	120	
Ge Internal Standard	72	2	HMI He	959785	0.72	1238950	77.47	60	120	
In Internal Standard	115	2	HMI He	2991080	2.11	3889250	76.91	60	120	
Ho-165	165	2	HMI He	14131062	0.69	18939303	74.61	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-E MS
Data File Name	131SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:36:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	143.709	ppb	143.709	4.43	133857	500000	
Li	7	2	45	112.451	ppb	112.451	11.55	6782	500000	
Li	7	3	45	90.699	ppb	90.699	3.79	3977288	50000	
Be	9	1	6	40.928	ppb	40.928	2.26	10487	2000	
B	11	1	6	1470.006	ppb	1470.006	0.66	362071	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3070701.038	ppb	3070701.038	0.25	652061230	400000	>LDR
Mg	24	2	45	8177.783	ppb	8177.783	0.52	819048	400000	
Al	27	2	45	823.220	ppb	823.220	0.80	21637	400000	
K	39	1	45	283030.572	ppb	283030.572	0.85	779892922	400000	
K	39	2	45	278121.739	ppb	278121.739	0.34	13523078	400000	
Ca	40	1	45	7827.382	ppb	7827.382	1.23	32530255	400000	
Ca	44	2	45	8347.125	ppb	8347.125	1.78	22722	400000	
Ti	47	2	45	16.787	ppb	16.787	25.72	397	4000	
V	51	2	72	1064.930	ppb	1064.930	1.00	945205	2000	
Cr	52	2	72	76.545	ppb	76.545	1.71	88248	5000	
Mn	55	2	72	46.120	ppb	46.120	1.06	20859	10000	
Fe	57	2	72	1233.832	ppb	1233.832	3.96	26709	400000	
Co	59	2	72	58.163	ppb	58.163	2.23	115719	2000	
Ni	60	2	72	844.962	ppb	844.962	0.96	479314	5000	
Cu	63	2	72	154.212	ppb	154.212	1.11	241049	5000	
Zn	66	2	72	64.038	ppb	64.038	3.95	14755	5000	
As	75	2	72	61.413	ppb	61.413	0.80	8621	2000	
Se	78	1	72	67.134	ppb	67.134	0.46	13222	2000	
Sr	88	2	72	248.888	ppb	248.888	2.64	121911	4000	
Zr	90	2	72	14275.432	ppb	14275.432	2.44	61146	1000	>LDR
Nb	93	2	72	0.821	ppb	0.821	12.23	2924	200	
Mo	95	2	115	4528.947	ppb	4528.947	1.36	3233230	2000	
Pd	105	2	115	0.071	ppb	0.071	35.39	90	100	
Ag	107	2	115	35.843	ppb	35.843	3.68	86469	100	
Cd	111	2	115	39.787	ppb	39.787	1.68	12580	2000	
Sn	120	2	115	40.315	ppb	40.315	2.71	35042	2000	
Sb	121	2	115	44.160	ppb	44.160	0.61	34003	1000	
Ba	137	2	115	47.018	ppb	47.018	1.24	12416	5000	
W	182	2	165	286.898	ppb	286.898	0.48	979927	100	
Pt	195	2	165	0.367	ppb	0.367	10.43	1057	100	
Tl	205	2	165	35.646	ppb	35.646	1.32	228044	2000	
Pb	208	2	165	38.139	ppb	38.139	0.16	322052	5000	
Th	232	2	165	30.941	ppb	30.941	1.20	311154	2000	
U	238	2	165	37.414	ppb	37.414	0.52	406849	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	543208	0.35	822129	66.07	60	120	
Sc (IS)	45	1	HMI H2	23172098	0.96	31063320	74.60	60	120	
Sc (IS)	45	2	HMI He	876330	1.44	1110240	78.93	60	120	
Sc (IS)	45	3	No Gas	40212543	0.56	52905316	76.01	60	120	
Ge Internal Standard	72	1	HMI H2	8387452	0.13	11878391	70.61	60	120	
Ge Internal Standard	72	2	HMI He	948364	1.69	1238950	76.55	60	120	
In Internal Standard	115	2	HMI He	2912068	1.75	3889250	74.87	60	120	
Ho-165	165	2	HMI He	13926527	0.62	18939303	73.53	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-F MSD
Data File Name	132SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:40:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	139.511	ppb	139.511	2.69	134611	500000	
Li	7	2	45	126.636	ppb	126.636	22.88	7082	500000	
Li	7	3	45	94.134	ppb	94.134	4.62	4223279	50000	
Be	9	1	6	41.453	ppb	41.453	2.89	10771	2000	
B	11	1	6	1512.182	ppb	1512.182	0.93	377613	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3180106.990	ppb	3180106.990	1.18	686588843	400000	>LDR
Mg	24	2	45	8476.718	ppb	8476.718	0.85	863251	400000	
Al	27	2	45	821.559	ppb	821.559	0.33	21957	400000	
K	39	1	45	291804.391	ppb	291804.391	0.16	814800335	400000	
K	39	2	45	289369.001	ppb	289369.001	0.60	14307619	400000	
Ca	40	1	45	8073.681	ppb	8073.681	0.21	34011959	400000	
Ca	44	2	45	8536.907	ppb	8536.907	1.63	23637	400000	
Ti	47	2	45	16.342	ppb	16.342	16.60	393	4000	
V	51	2	72	1109.218	ppb	1109.218	0.95	1003224	2000	
Cr	52	2	72	78.312	ppb	78.312	1.71	92003	5000	
Mn	55	2	72	45.180	ppb	45.180	1.26	20822	10000	
Fe	57	2	72	1318.930	ppb	1318.930	0.34	29097	400000	
Co	59	2	72	61.376	ppb	61.376	3.13	124437	2000	
Ni	60	2	72	921.439	ppb	921.439	1.51	532631	5000	
Cu	63	2	72	171.400	ppb	171.400	0.61	272952	5000	
Zn	66	2	72	65.545	ppb	65.545	1.47	15386	5000	
As	75	2	72	63.835	ppb	63.835	3.23	9134	2000	
Se	78	1	72	59.505	ppb	59.505	1.14	11898	2000	
Sr	88	2	72	254.865	ppb	254.865	0.81	127207	4000	
Zr	90	2	72	14313.751	ppb	14313.751	0.47	62498	1000	>LDR
Nb	93	2	72	0.782	ppb	0.782	9.74	2877	200	
Mo	95	2	115	5342.351	ppb	5342.351	1.12	3874254	2000	
Pd	105	2	115	0.069	ppb	0.069	27.99	90	100	
Ag	107	2	115	35.202	ppb	35.202	0.75	86281	100	
Cd	111	2	115	37.881	ppb	37.881	1.20	12169	2000	
Sn	120	2	115	39.410	ppb	39.410	1.77	34798	2000	
Sb	121	2	115	43.793	ppb	43.793	2.80	34260	1000	
Ba	137	2	115	45.463	ppb	45.463	3.47	12189	5000	
W	182	2	165	302.466	ppb	302.466	0.96	1040289	100	
Pt	195	2	165	0.363	ppb	0.363	7.67	1053	100	
Tl	205	2	165	35.235	ppb	35.235	1.78	227004	2000	
Pb	208	2	165	38.412	ppb	38.412	0.16	326632	5000	
Th	232	2	165	29.416	ppb	29.416	1.79	297876	2000	
U	238	2	165	36.757	ppb	36.757	1.50	402478	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	550767	0.51	822129	66.99	60	120	
Sc (IS)	45	1	HMI H2	23487570	0.63	31063320	75.61	60	120	
Sc (IS)	45	2	HMI He	891124	2.01	1110240	80.26	60	120	
Sc (IS)	45	3	No Gas	42397144	0.69	52905316	80.14	60	120	
Ge Internal Standard	72	1	HMI H2	8514565	0.75	11878391	71.68	60	120	
Ge Internal Standard	72	2	HMI He	966527	2.25	1238950	78.01	60	120	
In Internal Standard	115	2	HMI He	2957871	2.19	3889250	76.05	60	120	
Ho-165	165	2	HMI He	14024901	1.39	18939303	74.05	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-5-B
Data File Name	133SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:44:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	63.685	ppb	63.685	14.88	121503	500000	
Li	7	2	45	24.652	ppb	24.652	142.47	6018	500000	
Li	7	3	45	23.743	ppb	23.743	14.38	3907100	50000	
Be	9	1	6	0.247	ppb	0.247	25.69	70	2000	
B	11	1	6	1426.435	ppb	1426.435	1.33	376223	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3104761.789	ppb	3104761.789	0.98	705364763	400000	>LDR
Mg	24	2	45	8417.064	ppb	8417.064	1.15	901909	400000	
Al	27	2	45	413.679	ppb	413.679	2.91	11765	400000	
K	39	1	45	286901.967	ppb	286901.967	0.38	845194867	400000	
K	39	2	45	286083.500	ppb	286083.500	0.66	14882494	400000	
Ca	40	1	45	8246.937	ppb	8246.937	0.88	36645950	400000	
Ca	44	2	45	8654.549	ppb	8654.549	1.90	25203	400000	
Ti	47	2	45	19.356	ppb	19.356	17.69	487	4000	
V	51	2	72	1053.514	ppb	1053.514	1.00	1005107	2000	
Cr	52	2	72	40.198	ppb	40.198	2.40	49917	5000	
Mn	55	2	72	6.809	ppb	6.809	10.56	3407	10000	
Fe	57	2	72	1040.750	ppb	1040.750	3.09	24241	400000	
Co	59	2	72	25.797	ppb	25.797	0.78	55180	2000	
Ni	60	2	72	946.863	ppb	946.863	0.87	577315	5000	
Cu	63	2	72	176.163	ppb	176.163	1.20	295850	5000	
Zn	66	2	72	51.212	ppb	51.212	4.61	12740	5000	
As	75	2	72	27.295	ppb	27.295	2.03	4129	2000	
Se	78	1	72	17.253	ppb	17.253	2.92	3687	2000	
Sr	88	2	72	213.147	ppb	213.147	1.14	112230	4000	
Zr	90	2	72	2876.836	ppb	2876.836	4.59	13304	1000	
Nb	93	2	72	0.544	ppb	0.544	8.24	2374	200	
Mo	95	2	115	5924.197	ppb	5924.197	1.55	4506387	2000	
Pd	105	2	115	0.054	ppb	0.054	6.46	77	100	
Ag	107	2	115	0.404	ppb	0.404	8.07	1073	100	
Cd	111	2	115	0.977	ppb	0.977	11.45	337	2000	
Sn	120	2	115	2.322	ppb	2.322	7.42	2297	2000	
Sb	121	2	115	5.886	ppb	5.886	6.73	4878	1000	
Ba	137	2	115	6.211	ppb	6.211	20.76	1757	5000	
W	182	2	165	290.882	ppb	290.882	0.54	1021235	100	
Pt	195	2	165	0.378	ppb	0.378	10.17	1120	100	
Tl	205	2	165	0.022	ppb	0.022	58.25	250	2000	
Pb	208	2	165	3.560	ppb	3.560	3.31	31777	5000	
Th	232	2	165	0.077	ppb	0.077	21.71	1097	2000	
U	238	2	165	1.372	ppb	1.372	3.06	15463	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	581673	0.52	822129	70.75	60	120	
Sc (IS)	45	1	HMI H2	24775911	0.30	31063320	79.76	60	120	
Sc (IS)	45	2	HMI He	937635	1.47	1110240	84.45	60	120	
Sc (IS)	45	3	No Gas	45916673	0.71	52905316	86.79	60	120	
Ge Internal Standard	72	1	HMI H2	9091741	0.37	11878391	76.54	60	120	
Ge Internal Standard	72	2	HMI He	1019378	1.56	1238950	82.28	60	120	
In Internal Standard	115	2	HMI He	3103081	2.26	3889250	79.79	60	120	
Ho-165	165	2	HMI He	14315256	0.97	18939303	75.58	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	134_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:47:59-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	446.998	ppb	1.752	285265	500	89.4	90	110	>+\-10%
Li	7	2	45	448.895	ppb	4.134	13867	500	89.8	90	110	>+\-10%
Li	7	3	45	412.478	ppb	1.064	8627743	500	82.5	90	110	>+\-10%
Be	9	1	6	47.733	ppb	2.512	18335	50	95.5	90	110	
B	11	1	6	81.020	ppb	3.822	30896	50	162.0	90	110	>+\-10%
Na	23	1	45	10115.803	ppb	1.847	38361245	5000	202.3	90	110	>+\-10%
Na	23	2	45	9774.469	ppb	0.754	2577156	5000	195.5	90	110	>+\-10%
Mg	24	2	45	4650.390	ppb	1.043	576881	5000	93.0	90	110	
Al	27	2	45	4936.433	ppb	0.289	158999	5000	98.7	90	110	
K	39	1	45	5217.713	ppb	1.245	30370716	5000	104.4	90	110	
K	39	2	45	5394.515	ppb	1.200	340039	5000	107.9	90	110	
Ca	40	1	45	4995.730	ppb	0.087	28158645	5000	99.9	90	110	
Ca	44	2	45	5048.747	ppb	3.571	17027	5000	101.0	90	110	
Ti	47	2	45	50.402	ppb	9.081	1440	50	100.8	90	110	
V	51	2	72	46.536	ppb	0.914	56872	50	93.1	90	110	
Cr	52	2	72	49.542	ppb	0.792	73915	50	99.1	90	110	
Mn	55	2	72	50.300	ppb	1.915	29384	50	100.6	90	110	
Fe	57	2	72	4860.142	ppb	0.212	135506	5000	97.2	90	110	
Co	59	2	72	49.864	ppb	0.358	128237	50	99.7	90	110	
Ni	60	2	72	50.075	ppb	2.016	37022	50	100.2	90	110	
Cu	63	2	72	50.320	ppb	1.972	102407	50	100.6	90	110	
Zn	66	2	72	46.446	ppb	2.479	13917	50	92.9	90	110	
As	75	2	72	49.867	ppb	3.897	9050	50	99.7	90	110	
Se	78	1	72	59.922	ppb	1.104	16787	50	119.8	90	110	>+\-10%
Sr	88	2	72	50.342	ppb	2.306	31880	50	100.7	90	110	
Zr	90	2	72	82.749	ppb	22.196	533	50	165.5	90	110	>+\-10%
Nb	93	2	72	88.724	ppb	1.277	295786	100	88.7	90	110	>+\-10%
Mo	95	2	115	54.847	ppb	2.166	51866	50	109.7	90	110	
Pd	105	2	115	51.448	ppb	0.861	75030	50	102.9	90	110	
Ag	107	2	115	49.107	ppb	0.112	156878	50	98.2	90	110	
Cd	111	2	115	48.307	ppb	2.199	20219	50	96.6	90	110	
Sn	120	2	115	48.859	ppb	0.698	56198	50	97.7	90	110	
Sb	121	2	115	48.849	ppb	2.735	49784	50	97.7	90	110	
Ba	137	2	115	50.839	ppb	0.733	17772	50	101.7	90	110	
W	182	2	165	47.476	ppb	0.789	209533	50	95.0	90	110	
Pt	195	2	165	47.223	ppb	0.583	167880	50	94.4	90	110	
Tl	205	2	165	48.414	ppb	0.659	398433	50	96.8	90	110	
Pb	208	2	165	48.884	ppb	0.283	530698	50	97.8	90	110	
Th	232	2	165	48.005	ppb	1.184	620852	50	96.0	90	110	
U	238	2	165	47.301	ppb	0.272	661662	50	94.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	814305	0.62	822129	99.05	60	120	
Sc (IS)	45	1	HMI H2	31399867	0.42	31063320	101.08	60	120	
Sc (IS)	45	2	HMI He	1084680	0.75	1110240	97.70	60	120	
Sc (IS)	45	3	No Gas	52191288	0.42	52905316	98.65	60	120	
Ge Internal Standard	72	1	HMI H2	11930416	0.35	11878391	100.44	60	120	
Ge Internal Standard	72	2	HMI He	1225560	0.19	1238950	98.92	60	120	
In Internal Standard	115	2	HMI He	3855253	0.60	3889250	99.13	60	120	
Ho-165	165	2	HMI He	17916441	0.34	18939303	94.60	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	135_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:51:45-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-27.006	ppb	-8.2	3900192	10	
Be	9	1	6	0.025	ppb	150.7	13	0.5	
B	11	1	6	15.619	ppb	7.5	6902	0.5	>RL
Na	23	1	45	4278.392	ppb	1.7	16128002	25	>RL
Na	23	2	45	5121.960	ppb	6.9	1372222	25	>RL
Mg	24	2	45	-4.340	ppb	-11.1	330	25	
Al	27	2	45	-0.524	ppb	-232.2	303	15	
K	39	1	45	656.853	ppb	5.9	13380693	50	>RL
K	39	2	45	898.445	ppb	11.3	70631	50	>RL
Ca	40	1	45	5.005	ppb	3.3	89274	50	
Ca	44	2	45	10.927	ppb	94.8	83	25	
Ti	47	2	45	0.009	ppb	8413.1	17	0.5	
V	51	2	72	-2.891	ppb	-2.4	347	1	
Cr	52	2	72	-0.005	ppb	-286.8	253	1	
Mn	55	2	72	-0.033	ppb	-185.7	123	0.5	
Fe	57	2	72	2.532	ppb	31.6	237	25	
Co	59	2	72	0.018	ppb	25.1	47	0.5	
Ni	60	2	72	0.057	ppb	128.9	373	1	
Cu	63	2	72	0.388	ppb	30.2	1907	1	
Zn	66	2	72	0.595	ppb	38.0	490	5	
As	75	2	72	0.152	ppb	65.2	50	1	
Se	78	1	72	41.705	ppb	2.3	11698	1	>RL
Sr	88	2	72	0.048	ppb	66.8	50	0.5	
Zr	90	2	72	24.043	ppb	63.3	210	1	>RL
Nb	93	2	72	4.125	ppb	6.7	14825	2	>RL
Mo	95	2	115	1.399	ppb	6.6	1367	0.5	>RL
Pd	105	2	115	0.027	ppb	31.4	57	1	
Ag	107	2	115	0.030	ppb	40.0	143	1	
Cd	111	2	115	0.000	ppb	-15616.3	10	0.5	
Sn	120	2	115	0.075	ppb	4.7	283	1	
Sb	121	2	115	0.275	ppb	10.7	360	0.6	
Ba	137	2	115	0.074	ppb	55.8	33	0.5	
W	182	2	165	0.219	ppb	1.2	2104	1	
Pt	195	2	165	-0.002	ppb	-125.1	50	1	
Tl	205	2	165	0.015	ppb	55.3	263	0.1	
Pb	208	2	165	-0.005	ppb	-220.0	1183	0.5	
Th	232	2	165	0.028	ppb	19.0	753	1	
U	238	2	165	0.040	ppb	25.9	740	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	827091	3.10	822129	100.60	60	120	
Sc (IS)	45	1	HMI H2	31079257	0.64	31063320	100.05	60	120	
Sc (IS)	45	2	HMI He	1098678	0.66	1110240	98.96	60	120	
Sc (IS)	45	3	No Gas	52272324	1.58	52905316	98.80	60	120	
Ge Internal Standard	72	1	HMI H2	11942804	0.24	11878391	100.54	60	120	
Ge Internal Standard	72	2	HMI He	1231616	0.39	1238950	99.41	60	120	
In Internal Standard	115	2	HMI He	3936609	1.62	3889250	101.22	60	120	
Ho-165	165	2	HMI He	18318218	0.24	18939303	96.72	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	136LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:55:34-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-9.482	ppb	-16.979	4210941	50	-19.0	70	130	>+/-30%
Be	9	1	6	0.997	ppb	9.965	380	1	99.7	70	130	
Na	23	2	45	9339.313	ppb	6.611	2568457	50	18678.6	70	130	>+/-30%
Mg	24	2	45	43.621	ppb	12.013	6532	50	87.2	70	130	
Al	27	2	45	30.716	ppb	14.984	1360	30	102.4	70	130	
K	39	2	45	2412.044	ppb	3.590	167614	100	2412.0	70	130	>+/-30%
Ca	44	2	45	66.304	ppb	9.655	280	50	132.6	70	130	>+/-30%
V	51	2	72	2.464	ppb	5.193	6655	5	49.3	70	130	>+/-30%
Cr	52	2	72	1.996	ppb	6.228	3321	2	99.8	70	130	
Mn	55	2	72	1.015	ppb	27.843	753	1	101.5	70	130	
Fe	57	2	72	57.376	ppb	8.236	1814	50	114.8	70	130	
Co	59	2	72	0.950	ppb	6.477	2514	1	95.0	70	130	
Ni	60	2	72	2.420	ppb	7.824	2164	2	121.0	70	130	
Cu	63	2	72	2.339	ppb	5.969	5995	2	117.0	70	130	
Zn	66	2	72	9.815	ppb	5.916	3281	10	98.1	70	130	
As	75	2	72	4.827	ppb	6.363	922	5	96.5	70	130	
Se	78	1	72	164.585	ppb	1.026	46324	5	3291.7	70	130	>+/-30%
Sr	88	2	72	1.039	ppb	8.648	697	1	103.9	70	130	
Zr	90	2	72	29.069	ppb	38.525	243	0.5	5813.7	70	130	>+/-30%
Nb	93	2	72	8.383	ppb	2.216	29732	2	419.1	70	130	>+/-30%
Mo	95	2	115	2.707	ppb	12.653	2690	2	135.4	70	130	>+/-30%
Pd	105	2	115	0.011	ppb	70.770	33	1	1.1	70	130	>+/-30%
Ag	107	2	115	4.851	ppb	1.886	16220	5	97.0	70	130	
Cd	111	2	115	0.900	ppb	25.974	403	1	90.0	70	130	
Sn	120	2	115	9.886	ppb	1.819	12032	10	98.9	70	130	
Sb	121	2	115	2.084	ppb	5.545	2290	2	104.2	70	130	
Ba	137	2	115	1.123	ppb	9.483	417	1	112.3	70	130	
W	182	2	165	4.684	ppb	1.024	22437	1	468.4	70	130	>+/-30%
Pt	195	2	165	0.029	ppb	38.923	167	1	2.9	70	130	>+/-30%
Tl	205	2	165	0.972	ppb	3.509	8416	1	97.2	70	130	
Pb	208	2	165	0.965	ppb	5.366	12073	1	96.5	70	130	
Th	232	2	165	1.946	ppb	1.233	26441	2	97.3	70	130	
U	238	2	165	0.982	ppb	2.734	14395	1	98.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	801200	0.44	822129	97.45	60	120	
Sc (IS)	45	1	HMI H2	31315735	0.21	31063320	100.81	60	120	
Sc (IS)	45	2	HMI He	1131136	0.88	1110240	101.88	60	120	
Sc (IS)	45	3	No Gas	53824873	0.48	52905316	101.74	60	120	
Ge Internal Standard	72	1	HMI H2	11988495	0.58	11878391	100.93	60	120	
Ge Internal Standard	72	2	HMI He	1260971	0.24	1238950	101.78	60	120	
In Internal Standard	115	2	HMI He	4025157	0.52	3889250	103.49	60	120	
Ho-165	165	2	HMI He	18556421	0.72	18939303	97.98	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436988/1-A
Data File Name	137_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T18:59:23-07:00
Sample Type	Blank
Dilution	1
Comment	436988 6020
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-6.542	ppb	-65.08851653	137240	0.5
Li	7	2	45	-38.123	ppb	-72.25092879	7159	0.5
Li	7	3	45	-31.174	ppb	-4.632350836	4398086	10
Be	9	1	6	0.000	ppb	-3630.600331	3	0.5
B	11	1	6	8.622	ppb	2.497300592	4441	0.5
Na	23	1	45	31896.510	ppb	6.471725681	127501781	25
Na	23	2	45	47455.748	ppb	12.23559373	15095054	25
Mg	24	2	45	-4.161	ppb	-20.0279855	420	25
Al	27	2	45	1.839	ppb	41.3650484	453	15
K	39	1	45	3347.687	ppb	4.722659559	24782040	50
K	39	2	45	5331.491	ppb	9.695234891	405922	50
Ca	40	1	45	23.601	ppb	4.774180447	205744	50
Ca	44	2	45	11.907	ppb	84.20850231	103	25
Ti	47	2	45	-0.072	ppb	-887.0429857	17	0.5
V	51	2	72	-2.673	ppb	-1.636836445	673	1
Cr	52	2	72	0.224	ppb	36.40158904	673	1
Mn	55	2	72	0.451	ppb	87.37719122	467	0.5
Fe	57	2	72	11.746	ppb	17.83259726	557	25
Co	59	2	72	0.017	ppb	52.20646649	50	0.5
Ni	60	2	72	0.029	ppb	370.0779633	397	1
Cu	63	2	72	1.133	ppb	7.057905321	3864	1
Zn	66	2	72	4.285	ppb	21.99786784	1787	5
As	75	2	72	0.081	ppb	26.95311147	42	1
Se	78	1	72	346.717	ppb	1.7017355	102046	1
Sr	88	2	72	0.044	ppb	42.75576617	53	0.5
Zr	90	2	72	23.878	ppb	41.67913274	237	1
Nb	93	2	72	0.736	ppb	7.894195148	3971	2
Mo	95	2	115	0.596	ppb	35.59513226	643	0.5
Pd	105	2	115	0.005	ppb	243.3418945	27	1
Ag	107	2	115	0.028	ppb	56.64165137	147	1
Cd	111	2	115	-0.010	ppb	-251.4313942	7	0.5
Sn	120	2	115	0.054	ppb	29.12058853	280	1
Sb	121	2	115	0.038	ppb	16.06574371	123	0.6
Ba	137	2	115	0.102	ppb	13.39120502	47	0.5
W	182	2	165	0.142	ppb	18.64491432	1847	1
Pt	195	2	165	0.513	ppb	88.38190453	2027	1
Tl	205	2	165	0.070	ppb	69.38489903	760	0.1
Pb	208	2	165	0.165	ppb	96.16678967	3224	0.5
Th	232	2	165	0.016	ppb	61.23209223	623	1
U	238	2	165	0.005	ppb	32.22546777	247	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	856770	1.00	822129	104.21	60	120	
Sc (IS)	45	1	HMI H2	33165766	0.31	31063320	106.77	60	120	
Sc (IS)	45	2	HMI He	1308577	3.90	1110240	117.86	60	120	
Sc (IS)	45	3	No Gas	59630261	0.77	52905316	112.71	60	120	
Ge Internal Standard	72	1	HMI H2	12536970	0.60	11878391	105.54	60	120	
Ge Internal Standard	72	2	HMI He	1391631	4.70	1238950	112.32	60	120	
In Internal Standard	115	2	HMI He	4263636	1.95	3889250	109.63	60	120	
Ho-165	165	2	HMI He	19201251	1.37	18939303	101.38	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436988/2-A
Data File Name	138_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:03:11-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436988 6020
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	61.354	61.354	ppb	7.826	175128	400	15.3	80	120	>+/-20%
Li	7	2	45	9.474	9.474	ppb	232.177	8633	400	2.4	80	120	>+/-20%
Li	7	3	45	31.808	31.808	ppb	5.276	5355324	400	8.0	80	120	>+/-20%
Be	9	1	6	36.251	36.251	ppb	2.603	15779	40	90.6	80	120	
Na	23	2	45	18285.180	18285.180	ppb	8.356	6179771	40	45713.0	80	120	>+/-20%
Mg	24	2	45	62.736	62.736	ppb	3.015	11098	40	156.8	80	120	>+/-20%
Al	27	2	45	371.217	371.217	ppb	4.114	15756	40	928.0	80	120	>+/-20%
K	39	2	45	1433.004	1433.004	ppb	11.299	130704	40	3582.5	80	120	>+/-20%
Ca	44	2	45	223.061	223.061	ppb	12.468	1023	40	557.7	80	120	>+/-20%
V	51	2	72	34.856	34.856	ppb	1.484	52790	40	87.1	80	120	
Cr	52	2	72	37.532	37.532	ppb	1.213	68009	40	93.8	80	120	
Mn	55	2	72	38.212	38.212	ppb	2.476	27123	40	95.5	80	120	
Fe	57	2	72	376.599	376.599	ppb	7.176	12920	40	941.5	80	120	>+/-20%
Co	59	2	72	36.949	36.949	ppb	0.493	115272	40	92.4	80	120	
Ni	60	2	72	37.660	37.660	ppb	2.399	33874	40	94.2	80	120	
Cu	63	2	72	37.363	37.363	ppb	0.904	92589	40	93.4	80	120	
Zn	66	2	72	37.197	37.197	ppb	1.217	13597	40	93.0	80	120	
As	75	2	72	35.071	35.071	ppb	0.779	7730	40	87.7	80	120	
Se	78	1	72	111.256	111.256	ppb	2.409	35258	40	278.1	80	120	>+/-20%
Nb	93	2	72	0.498	0.498	ppb	21.198	3281	40	1.2	80	120	>+/-20%
Mo	95	2	115	36.794	36.794	ppb	1.804	40389	40	92.0	80	120	
Pd	105	2	115	-0.003	-0.003	ppb	-408.538	13	40	0.0	80	120	>+/-20%
Ag	107	2	115	38.642	38.642	ppb	2.256	143290	40	96.6	80	120	
Cd	111	2	115	35.477	35.477	ppb	2.358	17238	40	88.7	80	120	
Sn	120	2	115	36.033	36.033	ppb	1.184	48161	40	90.1	80	120	
Sb	121	2	115	35.265	35.265	ppb	2.227	41747	40	88.2	80	120	
Ba	137	2	115	37.173	37.173	ppb	3.179	15089	40	92.9	80	120	
W	182	2	165	34.310	34.310	ppb	0.796	167360	40	85.8	80	120	
Pt	195	2	165	0.651	0.651	ppb	11.435	2614	40	1.6	80	120	>+/-20%
Tl	205	2	165	36.030	36.030	ppb	1.055	327096	40	90.1	80	120	
Pb	208	2	165	36.525	36.525	ppb	0.188	437718	40	91.3	80	120	
Th	232	2	165	35.119	35.119	ppb	1.494	501105	40	87.8	80	120	
U	238	2	165	34.702	34.702	ppb	0.313	535476	40	86.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	922797	0.78	822129	112.24	60	120	
Sc (IS)	45	1	HMI H2	35897719	0.65	31063320	115.56	60	120	
Sc (IS)	45	2	HMI He	1394254	2.56	1110240	125.58	60	120	IS Failed
Sc (IS)	45	3	No Gas	61729136	0.62	52905316	116.68	60	120	
Ge Internal Standard	72	1	HMI H2	13497784	0.24	11878391	113.63	60	120	
Ge Internal Standard	72	2	HMI He	1486717	0.70	1238950	120.00	60	120	
In Internal Standard	115	2	HMI He	4474877	0.90	3889250	115.06	60	120	
Ho-165	165	2	HMI He	19762048	0.10	18939303	104.34	60	120	

Sample Report

Sample Table

Sample Name	280-116463-A-1-A
Data File Name	139SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:06:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	28.609	ppb	28.609	18.56	163920	500000	
Li	7	2	45	-25.277	ppb	-25.277	-51.30	7702	500000	
Li	7	3	45	-2.319	ppb	-2.319	-185.01	4893312	50000	
Be	9	1	6	0.031	ppb	0.031	44.32	17	2000	
B	11	1	6	368.839	ppb	368.839	0.89	148573	2000	
Na	23	1	45	59052.532	ppb	59052.532	0.85	257890856	2000	>LDR
Na	23	2	45	52605.430	ppb	52605.430	1.43	17318212	400000	
Mg	24	2	45	7982.680	ppb	7982.680	0.52	1239000	400000	
Al	27	2	45	3.084	ppb	3.084	48.69	520	400000	
K	39	1	45	672.481	ppb	672.481	4.64	15675845	400000	
K	39	2	45	1869.072	ppb	1869.072	1.30	160354	400000	
Ca	40	1	45	47942.185	ppb	47942.185	0.65	311385209	400000	
Ca	44	2	45	44782.676	ppb	44782.676	2.01	188633	400000	
Ti	47	2	45	-0.387	ppb	-0.387	-42.61	7	4000	
V	51	2	72	-1.884	ppb	-1.884	-6.73	1824	2000	
Cr	52	2	72	0.478	ppb	0.478	12.09	1183	5000	
Mn	55	2	72	15.999	ppb	15.999	3.12	11498	10000	
Fe	57	2	72	13.701	ppb	13.701	30.52	667	400000	
Co	59	2	72	0.112	ppb	0.112	22.05	350	2000	
Ni	60	2	72	0.779	ppb	0.779	12.69	1097	5000	
Cu	63	2	72	2.457	ppb	2.457	3.31	7389	5000	
Zn	66	2	72	4.657	ppb	4.657	16.85	2044	5000	
As	75	2	72	0.390	ppb	0.390	9.32	114	2000	
Se	78	1	72	26.480	ppb	26.480	14.69	8481	2000	
Sr	88	2	72	219.187	ppb	219.187	1.38	168970	4000	
Zr	90	2	72	368.982	ppb	368.982	6.94	2580	1000	
Nb	93	2	72	0.279	ppb	0.279	11.88	2404	200	
Mo	95	2	115	0.626	ppb	0.626	11.11	703	2000	
Pd	105	2	115	0.018	ppb	0.018	95.87	50	100	
Ag	107	2	115	0.020	ppb	0.020	65.66	123	100	
Cd	111	2	115	0.093	ppb	0.093	66.74	57	2000	
Sn	120	2	115	0.240	ppb	0.240	22.59	540	2000	
Sb	121	2	115	0.373	ppb	0.373	10.62	523	1000	
Ba	137	2	115	21.486	ppb	21.486	7.65	8687	5000	
W	182	2	165	0.521	ppb	0.521	2.22	3744	100	
Pt	195	2	165	0.132	ppb	0.132	23.33	583	100	
Tl	205	2	165	0.019	ppb	0.019	9.38	320	2000	
Pb	208	2	165	0.026	ppb	0.026	58.61	1647	5000	
Th	232	2	165	0.108	ppb	0.108	12.53	1957	2000	
U	238	2	165	0.572	ppb	0.572	4.16	9027	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	883296	0.28	822129	107.44	60	120	
Sc (IS)	45	1	HMI H2	36253641	0.24	31063320	116.71	60	120	
Sc (IS)	45	2	HMI He	1358009	1.74	1110240	122.32	60	120	IS Failed
Sc (IS)	45	3	No Gas	61390312	0.63	52905316	116.04	60	120	
Ge Internal Standard	72	1	HMI H2	13634400	0.47	11878391	114.78	60	120	
Ge Internal Standard	72	2	HMI He	1492873	1.71	1238950	120.49	60	120	IS Failed
In Internal Standard	115	2	HMI He	4457600	0.79	3889250	114.61	60	120	
Ho-165	165	2	HMI He	19829644	0.34	18939303	104.70	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-2-B
Data File Name	140SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:10:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-20.698	ppb	-20.698	-12.18	140035	500000	
Li	7	2	45	-78.317	ppb	-78.317	-8.61	6662	500000	
Li	7	3	45	-47.330	ppb	-47.330	-11.80	4182258	50000	
Be	9	1	6	0.008	ppb	0.008	352.49	7	2000	
B	11	1	6	44.071	ppb	44.071	4.34	17611	2000	
Na	23	1	45	76458.791	ppb	76458.791	1.13	323723255	2000	>LDR
Na	23	2	45	69077.833	ppb	69077.833	1.01	22867807	400000	
Mg	24	2	45	23356.604	ppb	23356.604	1.29	3643317	400000	
Al	27	2	45	-2.108	ppb	-2.108	-85.97	313	400000	
K	39	1	45	3905.103	ppb	3905.103	0.40	28571905	400000	
K	39	2	45	4808.343	ppb	4808.343	1.54	383721	400000	
Ca	40	1	45	201958.431	ppb	201958.431	0.98	1271614008	400000	
Ca	44	2	45	194782.764	ppb	194782.764	0.39	825055	400000	
Ti	47	2	45	-0.577	ppb	-0.577	0.00	0	4000	
V	51	2	72	-2.458	ppb	-2.458	-6.10	1003	2000	
Cr	52	2	72	0.248	ppb	0.248	29.41	750	5000	
Mn	55	2	72	123.229	ppb	123.229	1.88	85561	10000	
Fe	57	2	72	1151.448	ppb	1151.448	0.83	38422	400000	
Co	59	2	72	0.093	ppb	0.093	5.83	287	2000	
Ni	60	2	72	0.028	ppb	0.028	338.81	417	5000	
Cu	63	2	72	0.458	ppb	0.458	3.06	2430	5000	
Zn	66	2	72	1.806	ppb	1.806	19.52	1003	5000	
As	75	2	72	0.351	ppb	0.351	19.24	103	2000	
Se	78	1	72	23.079	ppb	23.079	16.42	7134	2000	
Sr	88	2	72	3283.478	ppb	3283.478	1.62	2477126	4000	
Zr	90	2	72	189.323	ppb	189.323	13.36	1340	1000	
Nb	93	2	72	0.236	ppb	0.236	20.27	2184	200	
Mo	95	2	115	1.214	ppb	1.214	3.75	1320	2000	
Pd	105	2	115	0.081	ppb	0.081	34.54	153	100	
Ag	107	2	115	0.017	ppb	0.017	69.18	110	100	
Cd	111	2	115	-0.017	ppb	-0.017	-72.84	3	2000	
Sn	120	2	115	0.210	ppb	0.210	9.02	490	2000	
Sb	121	2	115	0.061	ppb	0.061	61.75	153	1000	
Ba	137	2	115	24.437	ppb	24.437	3.18	9691	5000	
W	182	2	165	0.140	ppb	0.140	17.03	1874	100	
Pt	195	2	165	0.085	ppb	0.085	15.71	393	100	
Tl	205	2	165	0.008	ppb	0.008	98.12	213	2000	
Pb	208	2	165	0.009	ppb	0.009	186.72	1430	5000	
Th	232	2	165	0.047	ppb	0.047	10.66	1077	2000	
U	238	2	165	0.799	ppb	0.799	5.43	12423	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	829968	1.82	822129	100.95	60	120	
Sc (IS)	45	1	HMI H2	35153309	0.92	31063320	113.17	60	120	
Sc (IS)	45	2	HMI He	1365673	1.27	1110240	123.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	59389491	0.44	52905316	112.26	60	120	
Ge Internal Standard	72	1	HMI H2	13157041	0.15	11878391	110.76	60	120	
Ge Internal Standard	72	2	HMI He	1461084	1.45	1238950	117.93	60	120	
In Internal Standard	115	2	HMI He	4372417	1.12	3889250	112.42	60	120	
Ho-165	165	2	HMI He	19639464	1.03	18939303	103.70	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-3-B
Data File Name	141SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:14:34-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-24.515	ppb	-24.515	-17.66	135320	500000	
Li	7	2	45	-94.547	ppb	-94.547	-6.56	6215	500000	
Li	7	3	45	-52.762	ppb	-52.762	-2.31	4030006	50000	
Be	9	1	6	0.044	ppb	0.044	63.56	20	2000	
B	11	1	6	36.981	ppb	36.981	4.62	14835	2000	
Na	23	1	45	76419.914	ppb	76419.914	1.23	315951629	2000	>LDR
Na	23	2	45	64687.367	ppb	64687.367	0.72	21029885	400000	
Mg	24	2	45	22410.734	ppb	22410.734	0.61	3432972	400000	
Al	27	2	45	-1.701	ppb	-1.701	-50.85	323	400000	
K	39	1	45	3788.256	ppb	3788.256	3.33	27427665	400000	
K	39	2	45	4480.647	ppb	4480.647	0.74	352463	400000	
Ca	40	1	45	197362.343	ppb	197362.343	1.24	1213498729	400000	
Ca	44	2	45	189144.314	ppb	189144.314	0.93	786722	400000	
Ti	47	2	45	-0.482	ppb	-0.482	-34.33	3	4000	
V	51	2	72	-2.565	ppb	-2.565	-2.20	843	2000	
Cr	52	2	72	0.197	ppb	0.197	44.69	650	5000	
Mn	55	2	72	118.010	ppb	118.010	2.62	80895	10000	
Fe	57	2	72	1121.821	ppb	1121.821	4.79	36931	400000	
Co	59	2	72	0.080	ppb	0.080	15.75	243	2000	
Ni	60	2	72	0.091	ppb	0.091	161.22	467	5000	
Cu	63	2	72	0.376	ppb	0.376	5.60	2207	5000	
Zn	66	2	72	1.627	ppb	1.627	11.30	930	5000	
As	75	2	72	0.281	ppb	0.281	22.11	86	2000	
Se	78	1	72	29.842	ppb	29.842	11.77	9145	2000	
Sr	88	2	72	3206.694	ppb	3206.694	2.77	2387530	4000	
Zr	90	2	72	52.348	ppb	52.348	31.19	430	1000	
Nb	93	2	72	0.141	ppb	0.141	61.27	1790	200	
Mo	95	2	115	0.828	ppb	0.828	7.02	897	2000	
Pd	105	2	115	0.081	ppb	0.081	70.45	150	100	
Ag	107	2	115	0.017	ppb	0.017	98.86	110	100	
Cd	111	2	115	-0.010	ppb	-0.010	-245.79	7	2000	
Sn	120	2	115	0.221	ppb	0.221	23.94	500	2000	
Sb	121	2	115	0.005	ppb	0.005	572.05	87	1000	
Ba	137	2	115	23.745	ppb	23.745	3.01	9324	5000	
W	182	2	165	0.142	ppb	0.142	35.77	1864	100	
Pt	195	2	165	0.031	ppb	0.031	43.11	180	100	
Tl	205	2	165	0.006	ppb	0.006	50.51	200	2000	
Pb	208	2	165	-0.002	ppb	-0.002	-917.83	1280	5000	
Th	232	2	165	0.023	ppb	0.023	34.09	730	2000	
U	238	2	165	0.759	ppb	0.759	1.53	11679	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	824270	3.90	822129	100.26	60	120	
Sc (IS)	45	1	HMI H2	34326591	0.24	31063320	110.51	60	120	
Sc (IS)	45	2	HMI He	1341006	0.56	1110240	120.79	60	120	IS Failed
Sc (IS)	45	3	No Gas	58151056	0.91	52905316	109.92	60	120	
Ge Internal Standard	72	1	HMI H2	13046231	0.23	11878391	109.83	60	120	
Ge Internal Standard	72	2	HMI He	1442528	2.87	1238950	116.43	60	120	
In Internal Standard	115	2	HMI He	4327306	1.42	3889250	111.26	60	120	
Ho-165	165	2	HMI He	19404536	0.84	18939303	102.46	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-4-B
Data File Name	142SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:18:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-30.298	ppb	-30.298	-21.66	126823	500000	
Li	7	2	45	-84.509	ppb	-84.509	-14.87	6315	500000	
Li	7	3	45	-57.186	ppb	-57.186	-4.10	3805252	50000	
Be	9	1	6	0.018	ppb	0.018	148.24	10	2000	
B	11	1	6	51.673	ppb	51.673	3.48	19857	2000	
Na	23	1	45	176889.014	ppb	176889.014	0.22	696466256	2000	>LDR
Na	23	2	45	152227.358	ppb	152227.358	1.35	48705099	400000	
Mg	24	2	45	12544.781	ppb	12544.781	2.23	1891995	400000	
Al	27	2	45	-2.747	ppb	-2.747	-51.86	277	400000	
K	39	1	45	6244.770	ppb	6244.770	1.31	35576996	400000	
K	39	2	45	6771.838	ppb	6771.838	2.01	514604	400000	
Ca	40	1	45	210124.603	ppb	210124.603	1.30	1230624648	400000	
Ca	44	2	45	206768.683	ppb	206768.683	1.23	846644	400000	
Ti	47	2	45	-0.478	ppb	-0.478	-35.77	3	4000	
V	51	2	72	-2.630	ppb	-2.630	-1.40	723	2000	
Cr	52	2	72	0.132	ppb	0.132	22.19	513	5000	
Mn	55	2	72	343.455	ppb	343.455	2.66	224580	10000	
Fe	57	2	72	519.471	ppb	519.471	2.40	16443	400000	
Co	59	2	72	0.040	ppb	0.040	61.07	117	2000	
Ni	60	2	72	0.156	ppb	0.156	51.69	500	5000	
Cu	63	2	72	1.176	ppb	1.176	9.18	3917	5000	
Zn	66	2	72	2.907	ppb	2.907	9.68	1310	5000	
As	75	2	72	0.116	ppb	0.116	83.07	49	2000	
Se	78	1	72	15.888	ppb	15.888	4.97	4594	2000	
Sr	88	2	72	4383.086	ppb	4383.086	1.56	3118284	4000	
Zr	90	2	72	32.598	ppb	32.598	77.08	287	1000	
Nb	93	2	72	0.054	ppb	0.054	98.00	1377	200	
Mo	95	2	115	1.000	ppb	1.000	10.42	1047	2000	
Pd	105	2	115	0.101	ppb	0.101	21.42	177	100	
Ag	107	2	115	0.002	ppb	0.002	314.05	53	100	
Cd	111	2	115	-0.002	ppb	-0.002	-1018.31	10	2000	
Sn	120	2	115	0.281	ppb	0.281	40.08	560	2000	
Sb	121	2	115	-0.006	ppb	-0.006	-864.13	73	1000	
Ba	137	2	115	13.970	ppb	13.970	2.99	5315	5000	
W	182	2	165	0.205	ppb	0.205	11.27	2174	100	
Pt	195	2	165	0.087	ppb	0.087	86.36	400	100	
Tl	205	2	165	-0.001	ppb	-0.001	-192.21	137	2000	
Pb	208	2	165	0.062	ppb	0.062	9.25	2040	5000	
Th	232	2	165	0.012	ppb	0.012	20.78	583	2000	
U	238	2	165	0.054	ppb	0.054	3.58	1000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	805045	0.93	822129	97.92	60	120	
Sc (IS)	45	1	HMI H2	32697887	1.02	31063320	105.26	60	120	
Sc (IS)	45	2	HMI He	1320372	2.16	1110240	118.93	60	120	
Sc (IS)	45	3	No Gas	55641673	0.65	52905316	105.17	60	120	
Ge Internal Standard	72	1	HMI H2	12303529	1.06	11878391	103.58	60	120	
Ge Internal Standard	72	2	HMI He	1377842	2.06	1238950	111.21	60	120	
In Internal Standard	115	2	HMI He	4189578	2.11	3889250	107.72	60	120	
Ho-165	165	2	HMI He	19487856	1.02	18939303	102.90	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-5-B
Data File Name	143SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:22:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-22.255	ppb	-22.255	-11.81	124773	500000	
Li	7	2	45	-58.353	ppb	-58.353	-57.27	6132	500000	
Li	7	3	45	-50.360	ppb	-50.360	-6.65	3733840	50000	
Be	9	1	6	0.010	ppb	0.010	163.52	7	2000	
B	11	1	6	39.634	ppb	39.634	1.86	14795	2000	
Na	23	1	45	212968.656	ppb	212968.656	0.96	806606388	2000	>LDR
Na	23	2	45	197373.650	ppb	197373.650	1.95	56714392	400000	
Mg	24	2	45	20997.318	ppb	20997.318	1.97	2843930	400000	
Al	27	2	45	-3.076	ppb	-3.076	-82.41	237	400000	
K	39	1	45	12861.447	ppb	12861.447	1.01	58714329	400000	
K	39	2	45	13689.274	ppb	13689.274	1.89	916952	400000	
Ca	40	1	45	291921.986	ppb	291921.986	0.62	1644693255	400000	
Ca	44	2	45	309955.341	ppb	309955.341	1.92	1139841	400000	
Ti	47	2	45	-0.253	ppb	-0.253	-3.04	10	4000	
V	51	2	72	-2.638	ppb	-2.638	-1.74	673	2000	
Cr	52	2	72	0.163	ppb	0.163	29.09	533	5000	
Mn	55	2	72	465.829	ppb	465.829	0.47	287720	10000	
Fe	57	2	72	71.522	ppb	71.522	4.08	2290	400000	
Co	59	2	72	0.221	ppb	0.221	17.98	603	2000	
Ni	60	2	72	0.300	ppb	0.300	25.50	583	5000	
Cu	63	2	72	0.365	ppb	0.365	38.68	1967	5000	
Zn	66	2	72	2.242	ppb	2.242	18.08	1030	5000	
As	75	2	72	0.167	ppb	0.167	22.53	56	2000	
Se	78	1	72	17.607	ppb	17.607	9.93	4882	2000	
Sr	88	2	72	6357.787	ppb	6357.787	1.13	4272827	4000	
Zr	90	2	72	41.906	ppb	41.906	19.75	327	1000	
Nb	93	2	72	0.104	ppb	0.104	76.70	1480	200	
Mo	95	2	115	24.769	ppb	24.769	5.11	24776	2000	
Pd	105	2	115	0.153	ppb	0.153	17.84	253	100	
Ag	107	2	115	-0.001	ppb	-0.001	-1919.14	43	100	
Cd	111	2	115	0.014	ppb	0.014	94.47	17	2000	
Sn	120	2	115	0.077	ppb	0.077	56.80	297	2000	
Sb	121	2	115	0.018	ppb	0.018	129.32	97	1000	
Ba	137	2	115	40.323	ppb	40.323	0.93	14912	5000	
W	182	2	165	0.702	ppb	0.702	8.10	4424	100	
Pt	195	2	165	0.005	ppb	0.005	182.38	80	100	
Tl	205	2	165	0.001	ppb	0.001	220.60	153	2000	
Pb	208	2	165	-0.010	ppb	-0.010	-89.18	1163	5000	
Th	232	2	165	0.015	ppb	0.015	24.10	610	2000	
U	238	2	165	0.107	ppb	0.107	9.53	1754	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	769874	0.54	822129	93.64	60	120	
Sc (IS)	45	1	HMI H2	31454863	0.80	31063320	101.26	60	120	
Sc (IS)	45	2	HMI He	1186001	2.39	1110240	106.82	60	120	
Sc (IS)	45	3	No Gas	53496873	0.58	52905316	101.12	60	120	
Ge Internal Standard	72	1	HMI H2	11796710	1.21	11878391	99.31	60	120	
Ge Internal Standard	72	2	HMI He	1301426	0.33	1238950	105.04	60	120	
In Internal Standard	115	2	HMI He	4077609	1.41	3889250	104.84	60	120	
Ho-165	165	2	HMI He	18950445	1.29	18939303	100.06	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-6-B
Data File Name	144SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:26:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.757	ppb	-31.757	-12.40	121377	500000	
Li	7	2	45	-82.794	ppb	-82.794	-19.84	5595	500000	
Li	7	3	45	-59.126	ppb	-59.126	-3.77	3542700	50000	
Be	9	1	6	0.029	ppb	0.029	149.05	13	2000	
B	11	1	6	35.569	ppb	35.569	2.30	13153	2000	
Na	23	1	45	196847.042	ppb	196847.042	0.78	744705962	2000	>LDR
Na	23	2	45	184088.270	ppb	184088.270	10.27	51737259	400000	
Mg	24	2	45	9399.854	ppb	9399.854	12.69	1244184	400000	
Al	27	2	45	22.249	ppb	22.249	21.22	1100	400000	
K	39	1	45	7341.278	ppb	7341.278	0.07	38240884	400000	
K	39	2	45	8274.596	ppb	8274.596	9.47	548985	400000	
Ca	40	1	45	206853.672	ppb	206853.672	0.57	1164131343	400000	
Ca	44	2	45	221423.098	ppb	221423.098	11.71	795813	400000	
Ti	47	2	45	-0.222	ppb	-0.222	-275.97	10	4000	
V	51	2	72	-0.937	ppb	-0.937	-33.42	2707	2000	
Cr	52	2	72	0.152	ppb	0.152	57.08	507	5000	
Mn	55	2	72	46.726	ppb	46.726	9.61	28693	10000	
Fe	57	2	72	19.934	ppb	19.934	14.60	757	400000	
Co	59	2	72	0.057	ppb	0.057	25.80	153	2000	
Ni	60	2	72	0.016	ppb	0.016	222.31	360	5000	
Cu	63	2	72	0.889	ppb	0.889	12.30	3064	5000	
Zn	66	2	72	2.208	ppb	2.208	22.03	1007	5000	
As	75	2	72	0.201	ppb	0.201	30.67	62	2000	
Se	78	1	72	22.476	ppb	22.476	4.27	6231	2000	
Sr	88	2	72	5429.455	ppb	5429.455	9.08	3611543	4000	
Zr	90	2	72	35.527	ppb	35.527	49.71	283	1000	
Nb	93	2	72	-0.005	ppb	-0.005	-319.91	1090	200	
Mo	95	2	115	1.404	ppb	1.404	11.70	1407	2000	
Pd	105	2	115	0.087	ppb	0.087	26.71	150	100	
Ag	107	2	115	-0.001	ppb	-0.001	-1003.24	43	100	
Cd	111	2	115	-0.016	ppb	-0.016	-81.28	3	2000	
Sn	120	2	115	0.081	ppb	0.081	69.13	297	2000	
Sb	121	2	115	-0.006	ppb	-0.006	-257.83	70	1000	
Ba	137	2	115	13.834	ppb	13.834	14.18	5051	5000	
W	182	2	165	0.283	ppb	0.283	21.72	2430	100	
Pt	195	2	165	0.027	ppb	0.027	76.16	160	100	
Tl	205	2	165	0.008	ppb	0.008	89.83	207	2000	
Pb	208	2	165	-0.022	ppb	-0.022	-75.08	1003	5000	
Th	232	2	165	0.011	ppb	0.011	38.24	540	2000	
U	238	2	165	0.031	ppb	0.031	21.83	617	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	756858	0.29	822129	92.06	60	120	
Sc (IS)	45	1	HMI H2	31418979	0.66	31063320	101.14	60	120	
Sc (IS)	45	2	HMI He	1165659	7.64	1110240	104.99	60	120	
Sc (IS)	45	3	No Gas	52108636	0.54	52905316	98.49	60	120	
Ge Internal Standard	72	1	HMI H2	11796616	0.39	11878391	99.31	60	120	
Ge Internal Standard	72	2	HMI He	1292826	6.14	1238950	104.35	60	120	
In Internal Standard	115	2	HMI He	4038324	4.12	3889250	103.83	60	120	
Ho-165	165	2	HMI He	18618804	4.16	18939303	98.31	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	145_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:29:50-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	428.284	ppb	1.224	282905	500	85.7	90	110	>+\-10%
Li	7	2	45	385.485	ppb	5.540	13744	500	77.1	90	110	>+\-10%
Li	7	3	45	384.494	ppb	1.188	8680881	500	76.9	90	110	>+\-10%
Be	9	1	6	46.711	ppb	1.588	17918	50	93.4	90	110	
B	11	1	6	54.342	ppb	2.232	21042	50	108.7	90	110	
Na	23	1	45	7953.099	ppb	1.534	30623151	5000	159.1	90	110	>+\-10%
Na	23	2	45	7734.356	ppb	0.085	2185305	5000	154.7	90	110	>+\-10%
Mg	24	2	45	4537.843	ppb	0.969	602731	5000	90.8	90	110	
Al	27	2	45	4917.917	ppb	1.205	169598	5000	98.4	90	110	
K	39	1	45	5386.989	ppb	0.787	31446280	5000	107.7	90	110	
K	39	2	45	5462.333	ppb	0.927	368481	5000	109.2	90	110	
Ca	40	1	45	5079.633	ppb	1.139	29045085	5000	101.6	90	110	
Ca	44	2	45	4949.016	ppb	2.034	17875	5000	99.0	90	110	
Ti	47	2	45	48.657	ppb	15.197	1487	50	97.3	90	110	
V	51	2	72	47.403	ppb	0.900	61892	50	94.8	90	110	
Cr	52	2	72	49.684	ppb	0.938	79289	50	99.4	90	110	
Mn	55	2	72	51.287	ppb	3.159	32043	50	102.6	90	110	
Fe	57	2	72	4885.718	ppb	0.532	145700	5000	97.7	90	110	
Co	59	2	72	49.198	ppb	1.010	135332	50	98.4	90	110	
Ni	60	2	72	49.195	ppb	1.072	38910	50	98.4	90	110	
Cu	63	2	72	50.313	ppb	1.475	109515	50	100.6	90	110	
Zn	66	2	72	46.961	ppb	3.720	15045	50	93.9	90	110	
As	75	2	72	49.394	ppb	1.198	9588	50	98.8	90	110	
Se	78	1	72	57.156	ppb	1.856	16261	50	114.3	90	110	>+\-10%
Sr	88	2	72	52.015	ppb	1.668	35228	50	104.0	90	110	
Zr	90	2	72	204.430	ppb	6.805	1290	50	408.9	90	110	>+\-10%
Nb	93	2	72	89.559	ppb	1.187	319334	100	89.6	90	110	>+\-10%
Mo	95	2	115	48.026	ppb	2.097	48263	50	96.1	90	110	
Pd	105	2	115	51.027	ppb	2.101	79096	50	102.1	90	110	
Ag	107	2	115	48.766	ppb	0.876	165569	50	97.5	90	110	
Cd	111	2	115	49.618	ppb	2.072	22072	50	99.2	90	110	
Sn	120	2	115	49.423	ppb	1.425	60415	50	98.8	90	110	
Sb	121	2	115	48.699	ppb	2.459	52755	50	97.4	90	110	
Ba	137	2	115	50.949	ppb	2.273	18930	50	101.9	90	110	
W	182	2	165	47.408	ppb	1.197	221523	50	94.8	90	110	
Pt	195	2	165	47.260	ppb	2.032	177878	50	94.5	90	110	
Tl	205	2	165	48.512	ppb	0.775	422693	50	97.0	90	110	
Pb	208	2	165	49.399	ppb	0.519	567779	50	98.8	90	110	
Th	232	2	165	48.380	ppb	0.668	662472	50	96.8	90	110	
U	238	2	165	47.684	ppb	1.258	706207	50	95.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	813232	0.50	822129	98.92	60	120	
Sc (IS)	45	1	HMI H2	31855922	0.86	31063320	102.55	60	120	
Sc (IS)	45	2	HMI He	1161402	1.25	1110240	104.61	60	120	
Sc (IS)	45	3	No Gas	54413354	0.56	52905316	102.85	60	120	
Ge Internal Standard	72	1	HMI H2	12115986	0.48	11878391	102.00	60	120	
Ge Internal Standard	72	2	HMI He	1310879	0.86	1238950	105.81	60	120	
In Internal Standard	115	2	HMI He	4097323	0.46	3889250	105.35	60	120	
Ho-165	165	2	HMI He	18968842	0.46	18939303	100.16	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	146_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:33:36-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-47.165	ppb	-6.3	3769822	10	
Be	9	1	6	0.069	ppb	37.8	30	0.5	
B	11	1	6	4.750	ppb	6.4	2824	0.5	>RL
Na	23	1	45	2917.360	ppb	4.6	11280610	25	>RL
Na	23	2	45	2549.324	ppb	4.7	742733	25	>RL
Mg	24	2	45	-3.848	ppb	-22.3	420	25	
Al	27	2	45	-1.321	ppb	-35.0	300	15	
K	39	1	45	363.846	ppb	12.6	12584287	50	>RL
K	39	2	45	361.683	ppb	8.4	40992	50	>RL
Ca	40	1	45	13.379	ppb	12.1	138879	50	
Ca	44	2	45	8.543	ppb	207.0	80	25	
Ti	47	2	45	-0.577	ppb	0.0	0	0.5	
V	51	2	72	-2.481	ppb	-1.6	867	1	
Cr	52	2	72	0.067	ppb	20.3	383	1	
Mn	55	2	72	0.294	ppb	10.5	333	0.5	
Fe	57	2	72	3.722	ppb	66.5	287	25	
Co	59	2	72	0.038	ppb	45.4	103	0.5	
Ni	60	2	72	-0.040	ppb	-151.1	320	1	
Cu	63	2	72	0.581	ppb	18.1	2437	1	
Zn	66	2	72	0.779	ppb	44.5	577	5	
As	75	2	72	-0.010	ppb	-386.2	22	1	
Se	78	1	72	7.242	ppb	1.3	2092	1	>RL
Sr	88	2	72	0.187	ppb	44.8	147	0.5	
Zr	90	2	72	11.767	ppb	30.0	150	1	>RL
Nb	93	2	72	3.980	ppb	14.1	15199	2	>RL
Mo	95	2	115	0.240	ppb	21.4	263	0.5	
Pd	105	2	115	0.039	ppb	85.1	80	1	
Ag	107	2	115	0.014	ppb	108.5	97	1	
Cd	111	2	115	-0.009	ppb	-142.9	7	0.5	
Sn	120	2	115	0.137	ppb	33.3	377	1	
Sb	121	2	115	0.220	ppb	32.9	320	0.6	
Ba	137	2	115	0.017	ppb	184.7	13	0.5	
W	182	2	165	0.140	ppb	35.5	1847	1	
Pt	195	2	165	0.008	ppb	99.6	93	1	
Tl	205	2	165	0.017	ppb	26.0	293	0.1	
Pb	208	2	165	-0.005	ppb	-196.5	1250	0.5	
Th	232	2	165	0.028	ppb	30.2	800	1	
U	238	2	165	0.029	ppb	26.1	620	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	823028	0.32	822129	100.11	60	120	
Sc (IS)	45	1	HMI H2	31774893	0.88	31063320	102.29	60	120	
Sc (IS)	45	2	HMI He	1189865	5.20	1110240	107.17	60	120	
Sc (IS)	45	3	No Gas	53507613	0.79	52905316	101.14	60	120	
Ge Internal Standard	72	1	HMI H2	12266842	0.42	11878391	103.27	60	120	
Ge Internal Standard	72	2	HMI He	1305942	0.96	1238950	105.41	60	120	
In Internal Standard	115	2	HMI He	4167353	0.97	3889250	107.15	60	120	
Ho-165	165	2	HMI He	19317968	1.73	18939303	102.00	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-B
Data File Name	147SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:37:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-41.880	ppb	-41.880	-10.22	110104	500000	
Li	7	2	45	-70.593	ppb	-70.593	-3.37	5598	500000	
Li	7	3	45	-60.469	ppb	-60.469	-0.54	3471300	50000	
Be	9	1	6	0.012	ppb	0.012	302.40	7	2000	
B	11	1	6	195.866	ppb	195.866	1.40	63023	2000	
Na	23	1	45	471557.251	ppb	471557.251	0.49	1665888882	2000	>LDR
Na	23	2	45	436031.596	ppb	436031.596	2.20	118407548	400000	
Mg	24	2	45	54505.762	ppb	54505.762	1.16	6977345	400000	
Al	27	2	45	2.807	ppb	2.807	51.44	420	400000	
K	39	1	45	23889.158	ppb	23889.158	0.90	92844289	400000	
K	39	2	45	25073.757	ppb	25073.757	3.14	1573571	400000	
Ca	40	1	45	25135.960	ppb	25135.960	0.60	132157595	400000	
Ca	44	2	45	25325.667	ppb	25325.667	3.26	88055	400000	
Ti	47	2	45	-0.577	ppb	-0.577	0.00	0	4000	
V	51	2	72	141.138	ppb	141.138	1.45	166527	2000	
Cr	52	2	72	3.780	ppb	3.780	5.70	5931	5000	
Mn	55	2	72	0.459	ppb	0.459	64.45	413	10000	
Fe	57	2	72	8.341	ppb	8.341	41.18	400	400000	
Co	59	2	72	0.031	ppb	0.031	42.02	80	2000	
Ni	60	2	72	0.181	ppb	0.181	41.79	467	5000	
Cu	63	2	72	1.008	ppb	1.008	5.02	3174	5000	
Zn	66	2	72	2.239	ppb	2.239	40.14	980	5000	
As	75	2	72	1.225	ppb	1.225	11.56	246	2000	
Se	78	1	72	9.003	ppb	9.003	8.79	2330	2000	
Sr	88	2	72	333.552	ppb	333.552	0.92	213019	4000	
Zr	90	2	72	12.527	ppb	12.527	82.67	147	1000	
Nb	93	2	72	3.414	ppb	3.414	10.27	12510	200	
Mo	95	2	115	6.146	ppb	6.146	4.17	5868	2000	
Pd	105	2	115	0.016	ppb	0.016	43.31	40	100	
Ag	107	2	115	-0.002	ppb	-0.002	-177.35	37	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.138	ppb	0.138	95.67	353	2000	
Sb	121	2	115	0.081	ppb	0.081	37.68	157	1000	
Ba	137	2	115	7.169	ppb	7.169	5.47	2530	5000	
W	182	2	165	1.615	ppb	1.615	2.99	8376	100	
Pt	195	2	165	0.011	ppb	0.011	17.75	97	100	
Tl	205	2	165	0.003	ppb	0.003	231.02	160	2000	
Pb	208	2	165	-0.003	ppb	-0.003	-289.21	1200	5000	
Th	232	2	165	0.047	ppb	0.047	5.21	1010	2000	
U	238	2	165	0.201	ppb	0.201	3.75	3037	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	700900	0.78	822129	85.25	60	120	
Sc (IS)	45	1	HMI H2	29341177	0.45	31063320	94.46	60	120	
Sc (IS)	45	2	HMI He	1121027	2.66	1110240	100.97	60	120	
Sc (IS)	45	3	No Gas	51266278	0.36	52905316	96.90	60	120	
Ge Internal Standard	72	1	HMI H2	10997394	0.70	11878391	92.58	60	120	
Ge Internal Standard	72	2	HMI He	1236548	1.23	1238950	99.81	60	120	
In Internal Standard	115	2	HMI He	3883811	1.14	3889250	99.86	60	120	
Ho-165	165	2	HMI He	18330479	1.24	18939303	96.79	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-Bsd@5
Data File Name	148SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:41:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-40.312	ppb	-40.312	-5.78	116327	500000	
Li	7	2	45	-70.740	ppb	-70.740	-42.71	5681	500000	
Li	7	3	45	-60.331	ppb	-60.331	-8.46	3594175	50000	
Be	9	1	6	-0.009	ppb	-0.009	0.00	0	2000	
B	11	1	6	45.288	ppb	45.288	4.46	16596	2000	
Na	23	1	45	97206.268	ppb	97206.268	0.89	361232875	2000	>LDR
Na	23	2	45	90561.715	ppb	90561.715	0.37	24982920	400000	
Mg	24	2	45	11610.264	ppb	11610.264	1.02	1509870	400000	
Al	27	2	45	1.736	ppb	1.736	199.03	390	400000	
K	39	1	45	4988.107	ppb	4988.107	1.49	29011580	400000	
K	39	2	45	5065.270	ppb	5065.270	0.72	336012	400000	
Ca	40	1	45	5037.508	ppb	5037.508	0.38	27902614	400000	
Ca	44	2	45	5035.627	ppb	5035.627	4.10	17822	400000	
Ti	47	2	45	-0.242	ppb	-0.242	-240.51	10	4000	
V	51	2	72	25.696	ppb	25.696	1.86	34538	2000	
Cr	52	2	72	0.749	ppb	0.749	14.43	1437	5000	
Mn	55	2	72	0.513	ppb	0.513	31.85	460	10000	
Fe	57	2	72	3.232	ppb	3.232	57.27	267	400000	
Co	59	2	72	0.024	ppb	0.024	18.72	63	2000	
Ni	60	2	72	0.002	ppb	0.002	1247.43	347	5000	
Cu	63	2	72	0.625	ppb	0.625	9.81	2484	5000	
Zn	66	2	72	1.042	ppb	1.042	11.20	647	5000	
As	75	2	72	0.292	ppb	0.292	25.97	79	2000	
Se	78	1	72	6.294	ppb	6.294	4.08	1752	2000	
Sr	88	2	72	65.542	ppb	65.542	2.07	43381	4000	
Zr	90	2	72	11.653	ppb	11.653	36.22	147	1000	
Nb	93	2	72	1.155	ppb	1.155	16.43	5108	200	
Mo	95	2	115	1.382	ppb	1.382	8.35	1390	2000	
Pd	105	2	115	0.013	ppb	0.013	280.55	37	100	
Ag	107	2	115	0.004	ppb	0.004	183.71	60	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.046	ppb	0.046	107.15	257	2000	
Sb	121	2	115	-0.016	ppb	-0.016	-400.81	60	1000	
Ba	137	2	115	1.450	ppb	1.450	7.56	540	5000	
W	182	2	165	0.362	ppb	0.362	12.35	2877	100	
Pt	195	2	165	0.008	ppb	0.008	177.42	90	100	
Tl	205	2	165	0.004	ppb	0.004	44.39	180	2000	
Pb	208	2	165	-0.004	ppb	-0.004	-350.98	1240	5000	
Th	232	2	165	-0.001	ppb	-0.001	-355.76	390	2000	
U	238	2	165	0.048	ppb	0.048	6.48	900	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	762167	0.26	822129	92.71	60	120	
Sc (IS)	45	1	HMI H2	30857145	0.64	31063320	99.34	60	120	
Sc (IS)	45	2	HMI He	1138058	0.54	1110240	102.51	60	120	
Sc (IS)	45	3	No Gas	53062946	0.81	52905316	100.30	60	120	
Ge Internal Standard	72	1	HMI H2	11814148	0.29	11878391	99.46	60	120	
Ge Internal Standard	72	2	HMI He	1281196	0.57	1238950	103.41	60	120	
In Internal Standard	115	2	HMI He	4054917	1.79	3889250	104.26	60	120	
Ho-165	165	2	HMI He	19177346	0.36	18939303	101.26	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-C MS
Data File Name	149SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:45:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	32.959	ppb	32.959	7.24	129963	500000	
Li	7	2	45	-16.955	ppb	-16.955	-70.80	6202	500000	
Li	7	3	45	5.382	ppb	5.382	60.32	4004009	50000	
Be	9	1	6	38.335	ppb	38.335	2.23	12256	2000	
B	11	1	6	239.508	ppb	239.508	1.11	74324	2000	
Na	23	1	45	486945.762	ppb	486945.762	0.46	1667669362	2000	>LDR
Na	23	2	45	452398.408	ppb	452398.408	0.39	117272635	400000	
Mg	24	2	45	56780.909	ppb	56780.909	0.34	6937024	400000	
Al	27	2	45	392.405	ppb	392.405	2.12	12753	400000	
K	39	1	45	24200.000	ppb	24200.000	0.70	91048105	400000	
K	39	2	45	25593.854	ppb	25593.854	0.97	1533072	400000	
Ca	40	1	45	25764.893	ppb	25764.893	0.99	131323721	400000	
Ca	44	2	45	25909.783	ppb	25909.783	1.79	85995	400000	
Ti	47	2	45	1.337	ppb	1.337	86.32	53	4000	
V	51	2	72	184.769	ppb	184.769	1.30	210089	2000	
Cr	52	2	72	41.888	ppb	41.888	2.94	61119	5000	
Mn	55	2	72	39.950	ppb	39.950	1.84	22836	10000	
Fe	57	2	72	376.796	ppb	376.796	3.29	10414	400000	
Co	59	2	72	37.348	ppb	37.348	2.49	93867	2000	
Ni	60	2	72	37.217	ppb	37.217	0.82	26976	5000	
Cu	63	2	72	38.075	ppb	38.075	1.71	75999	5000	
Zn	66	2	72	36.932	ppb	36.932	1.80	10878	5000	
As	75	2	72	38.389	ppb	38.389	1.16	6815	2000	
Se	78	1	72	43.152	ppb	43.152	3.15	10887	2000	
Sr	88	2	72	383.951	ppb	383.951	0.38	237511	4000	
Zr	90	2	72	11237.083	ppb	11237.083	2.60	60814	1000	>LDR
Nb	93	2	72	1.356	ppb	1.356	4.73	5428	200	
Mo	95	2	115	45.289	ppb	45.289	2.47	42124	2000	
Pd	105	2	115	0.012	ppb	0.012	34.65	33	100	
Ag	107	2	115	37.512	ppb	37.512	1.03	117875	100	
Cd	111	2	115	37.074	ppb	37.074	1.36	15266	2000	
Sn	120	2	115	38.239	ppb	38.239	1.85	43299	2000	
Sb	121	2	115	39.876	ppb	39.876	1.58	39989	1000	
Ba	137	2	115	46.516	ppb	46.516	2.73	15993	5000	
W	182	2	165	37.815	ppb	37.815	0.98	170717	100	
Pt	195	2	165	0.010	ppb	0.010	100.74	93	100	
Tl	205	2	165	35.819	ppb	35.819	0.52	301183	2000	
Pb	208	2	165	36.382	ppb	36.382	1.13	403793	5000	
Th	232	2	165	37.275	ppb	37.275	1.45	492537	2000	
U	238	2	165	37.306	ppb	37.306	1.72	533093	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	677688	0.23	822129	82.43	60	120	
Sc (IS)	45	1	HMI H2	28444454	0.26	31063320	91.57	60	120	
Sc (IS)	45	2	HMI He	1069707	1.00	1110240	96.35	60	120	
Sc (IS)	45	3	No Gas	49251088	0.64	52905316	93.09	60	120	
Ge Internal Standard	72	1	HMI H2	10741847	0.66	11878391	90.43	60	120	
Ge Internal Standard	72	2	HMI He	1197847	1.08	1238950	96.68	60	120	
In Internal Standard	115	2	HMI He	3791691	0.54	3889250	97.49	60	120	
Ho-165	165	2	HMI He	18304065	1.62	18939303	96.65	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-D MSD
Data File Name	150SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:48:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	20.735	ppb	20.735	41.36	126450	500000	
Li	7	2	45	6.026	ppb	6.026	159.16	6475	500000	
Li	7	3	45	2.363	ppb	2.363	151.91	3966517	50000	
Be	9	1	6	39.034	ppb	39.034	1.70	12292	2000	
B	11	1	6	244.290	ppb	244.290	1.87	74663	2000	
Na	23	1	45	472618.498	ppb	472618.498	0.68	1622348082	2000	>LDR
Na	23	2	45	442354.278	ppb	442354.278	0.42	112994332	400000	
Mg	24	2	45	55765.247	ppb	55765.247	0.33	6713591	400000	
Al	27	2	45	383.232	ppb	383.232	2.24	12279	400000	
K	39	1	45	23474.400	ppb	23474.400	0.59	88825275	400000	
K	39	2	45	25000.240	ppb	25000.240	0.93	1476121	400000	
Ca	40	1	45	25165.589	ppb	25165.589	0.65	128567685	400000	
Ca	44	2	45	25312.407	ppb	25312.407	0.64	82794	400000	
Ti	47	2	45	0.153	ppb	0.153	629.39	20	4000	
V	51	2	72	177.765	ppb	177.765	0.73	199805	2000	
Cr	52	2	72	41.583	ppb	41.583	1.39	59934	5000	
Mn	55	2	72	38.579	ppb	38.579	2.93	21787	10000	
Fe	57	2	72	385.908	ppb	385.908	1.98	10534	400000	
Co	59	2	72	37.696	ppb	37.696	0.94	93595	2000	
Ni	60	2	72	35.913	ppb	35.913	0.29	25724	5000	
Cu	63	2	72	37.352	ppb	37.352	0.61	73668	5000	
Zn	66	2	72	36.299	ppb	36.299	5.97	10564	5000	
As	75	2	72	37.575	ppb	37.575	2.83	6590	2000	
Se	78	1	72	44.353	ppb	44.353	1.36	11131	2000	
Sr	88	2	72	373.141	ppb	373.141	0.45	227998	4000	
Zr	90	2	72	11471.320	ppb	11471.320	2.96	61333	1000	>LDR
Nb	93	2	72	0.905	ppb	0.905	16.00	3917	200	
Mo	95	2	115	44.829	ppb	44.829	1.52	41221	2000	
Pd	105	2	115	0.005	ppb	0.005	431.49	23	100	
Ag	107	2	115	38.026	ppb	38.026	1.43	118115	100	
Cd	111	2	115	37.498	ppb	37.498	2.30	15266	2000	
Sn	120	2	115	37.987	ppb	37.987	0.67	42526	2000	
Sb	121	2	115	38.659	ppb	38.659	2.81	38334	1000	
Ba	137	2	115	44.692	ppb	44.692	1.64	15192	5000	
W	182	2	165	38.018	ppb	38.018	0.58	169081	100	
Pt	195	2	165	-0.006	ppb	-0.006	-75.51	37	100	
Tl	205	2	165	36.557	ppb	36.557	1.01	302796	2000	
Pb	208	2	165	36.922	ppb	36.922	0.17	403679	5000	
Th	232	2	165	37.865	ppb	37.865	0.24	492907	2000	
U	238	2	165	37.375	ppb	37.375	0.60	526177	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	667589	0.27	822129	81.20	60	120	
Sc (IS)	45	1	HMI H2	28510843	0.75	31063320	91.78	60	120	
Sc (IS)	45	2	HMI He	1054087	0.56	1110240	94.94	60	120	
Sc (IS)	45	3	No Gas	49168676	1.21	52905316	92.94	60	120	
Ge Internal Standard	72	1	HMI H2	10686383	0.82	11878391	89.96	60	120	
Ge Internal Standard	72	2	HMI He	1183178	0.67	1238950	95.50	60	120	
In Internal Standard	115	2	HMI He	3748540	0.94	3889250	96.38	60	120	
Ho-165	165	2	HMI He	18030063	0.51	18939303	95.20	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-Bpds
Data File Name	151SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:52:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	134.884	ppb	134.884	2.55	159567	500000	
Li	7	2	45	141.355	ppb	141.355	32.06	8466	500000	
Li	7	3	45	111.143	ppb	111.143	2.59	5008598	50000	
Be	9	1	6	203.979	ppb	203.979	3.25	63585	2000	
B	11	1	6	200.591	ppb	200.591	2.24	60845	2000	
Na	23	1	45	459561.120	ppb	459561.120	0.72	1554215337	2000	>LDR
Na	23	2	45	435529.244	ppb	435529.244	0.63	109313612	400000	
Mg	24	2	45	54843.593	ppb	54843.593	1.01	6488168	400000	
Al	27	2	45	1960.380	ppb	1960.380	1.21	60480	400000	
K	39	1	45	22815.235	ppb	22815.235	0.98	85332912	400000	
K	39	2	45	24781.635	ppb	24781.635	1.11	1437920	400000	
Ca	40	1	45	24472.594	ppb	24472.594	0.69	123181065	400000	
Ca	44	2	45	25905.374	ppb	25905.374	0.50	83263	400000	
Ti	47	2	45	4.481	ppb	4.481	36.21	137	4000	
V	51	2	72	339.779	ppb	339.779	1.03	371113	2000	
Cr	52	2	72	201.174	ppb	201.174	0.73	283221	5000	
Mn	55	2	72	201.739	ppb	201.739	2.26	111111	10000	
Fe	57	2	72	1974.056	ppb	1974.056	0.87	52168	400000	
Co	59	2	72	192.298	ppb	192.298	0.48	467913	2000	
Ni	60	2	72	189.701	ppb	189.701	0.82	131828	5000	
Cu	63	2	72	192.587	ppb	192.587	0.62	367863	5000	
Zn	66	2	72	189.188	ppb	189.188	2.35	52724	5000	
As	75	2	72	190.628	ppb	190.628	1.55	32674	2000	
Se	78	1	72	190.382	ppb	190.382	1.24	47185	2000	
Sr	88	2	72	527.942	ppb	527.942	0.75	316148	4000	
Zr	90	2	72	60044.059	ppb	60044.059	0.08	314330	1000	>LDR
Nb	93	2	72	8.092	ppb	8.092	3.94	26432	200	
Mo	95	2	115	206.182	ppb	206.182	0.63	184274	2000	
Pd	105	2	115	0.037	ppb	0.037	96.47	67	100	
Ag	107	2	115	40.179	ppb	40.179	0.64	121360	100	
Cd	111	2	115	195.959	ppb	195.959	0.79	77518	2000	
Sn	120	2	115	197.573	ppb	197.573	0.63	214293	2000	
Sb	121	2	115	196.129	ppb	196.129	1.87	188803	1000	
Ba	137	2	115	203.787	ppb	203.787	1.99	67331	5000	
W	182	2	165	195.193	ppb	195.193	1.38	850189	100	
Pt	195	2	165	0.052	ppb	0.052	3.79	240	100	
Tl	205	2	165	194.353	ppb	194.353	0.95	1584483	2000	
Pb	208	2	165	188.139	ppb	188.139	0.44	2020532	5000	
Th	232	2	165	237.009	ppb	237.009	0.53	3036155	2000	
U	238	2	165	209.305	ppb	209.305	0.57	2900838	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	660923	0.03	822129	80.39	60	120	
Sc (IS)	45	1	HMI H2	28089689	0.76	31063320	90.43	60	120	
Sc (IS)	45	2	HMI He	1035755	1.00	1110240	93.29	60	120	
Sc (IS)	45	3	No Gas	48568293	0.36	52905316	91.80	60	120	
Ge Internal Standard	72	1	HMI H2	10557082	0.10	11878391	88.88	60	120	
Ge Internal Standard	72	2	HMI He	1159607	1.11	1238950	93.60	60	120	
In Internal Standard	115	2	HMI He	3644841	0.68	3889250	93.72	60	120	
Ho-165	165	2	HMI He	17753793	1.27	18939303	93.74	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-2-B
Data File Name	152SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T19:56:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-38.838	ppb	-38.838	-10.26	104655	500000	
Li	7	2	45	-47.561	ppb	-47.561	-48.76	5475	500000	
Li	7	3	45	-57.573	ppb	-57.573	-6.25	3302604	50000	
Be	9	1	6	0.056	ppb	0.056	57.90	20	2000	
B	11	1	6	223.335	ppb	223.335	1.27	67248	2000	
Na	23	1	45	540705.639	ppb	540705.639	1.31	1799645680	2000	>LDR
Na	23	2	45	508528.461	ppb	508528.461	0.46	126328938	400000	
Mg	24	2	45	67060.358	ppb	67060.358	0.13	7851471	400000	
Al	27	2	45	3.561	ppb	3.561	91.29	407	400000	
K	39	1	45	27642.726	ppb	27642.726	0.95	99686322	400000	
K	39	2	45	28817.649	ppb	28817.649	0.78	1652422	400000	
Ca	40	1	45	32009.566	ppb	32009.566	0.38	158552488	400000	
Ca	44	2	45	32090.303	ppb	32090.303	0.96	102074	400000	
Ti	47	2	45	-0.326	ppb	-0.326	-133.27	7	4000	
V	51	2	72	140.632	ppb	140.632	1.23	152715	2000	
Cr	52	2	72	4.865	ppb	4.865	3.43	6959	5000	
Mn	55	2	72	0.584	ppb	0.584	13.24	447	10000	
Fe	57	2	72	16.117	ppb	16.117	16.20	570	400000	
Co	59	2	72	0.074	ppb	0.074	26.39	177	2000	
Ni	60	2	72	0.075	ppb	0.075	84.57	357	5000	
Cu	63	2	72	1.018	ppb	1.018	16.49	2940	5000	
Zn	66	2	72	2.821	ppb	2.821	34.87	1057	5000	
As	75	2	72	1.135	ppb	1.135	18.90	212	2000	
Se	78	1	72	8.452	ppb	8.452	2.11	2072	2000	
Sr	88	2	72	394.302	ppb	394.302	1.63	231704	4000	
Zr	90	2	72	66.874	ppb	66.874	47.72	413	1000	
Nb	93	2	72	-0.133	ppb	-0.133	-31.11	563	200	
Mo	95	2	115	9.373	ppb	9.373	4.15	8436	2000	
Pd	105	2	115	0.003	ppb	0.003	396.10	20	100	
Ag	107	2	115	0.005	ppb	0.005	192.78	57	100	
Cd	111	2	115	0.068	ppb	0.068	21.63	37	2000	
Sn	120	2	115	0.227	ppb	0.227	15.10	430	2000	
Sb	121	2	115	0.556	ppb	0.556	16.92	607	1000	
Ba	137	2	115	11.329	ppb	11.329	8.21	3771	5000	
W	182	2	165	1.491	ppb	1.491	3.38	7546	100	
Pt	195	2	165	-0.004	ppb	-0.004	-309.10	43	100	
Tl	205	2	165	0.014	ppb	0.014	20.30	247	2000	
Pb	208	2	165	-0.001	ppb	-0.001	-562.71	1177	5000	
Th	232	2	165	0.101	ppb	0.101	6.20	1660	2000	
U	238	2	165	0.397	ppb	0.397	3.63	5638	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	657020	0.36	822129	79.92	60	120	
Sc (IS)	45	1	HMI H2	27644992	0.65	31063320	89.00	60	120	
Sc (IS)	45	2	HMI He	1025139	0.55	1110240	92.33	60	120	
Sc (IS)	45	3	No Gas	48348074	0.11	52905316	91.39	60	120	
Ge Internal Standard	72	1	HMI H2	10415619	0.06	11878391	87.69	60	120	
Ge Internal Standard	72	2	HMI He	1137920	0.92	1238950	91.85	60	120	
In Internal Standard	115	2	HMI He	3664323	0.79	3889250	94.22	60	120	
Ho-165	165	2	HMI He	17685187	0.78	18939303	93.38	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-3-B
Data File Name	153SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:00:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-36.944	ppb	-36.944	-2.84	104151	500000	
Li	7	2	45	-36.094	ppb	-36.094	-46.23	5591	500000	
Li	7	3	45	-60.776	ppb	-60.776	-5.29	3241290	50000	
Be	9	1	6	0.035	ppb	0.035	142.27	13	2000	
B	11	1	6	247.310	ppb	247.310	0.90	72861	2000	
Na	23	1	45	594752.826	ppb	594752.826	0.12	1959331224	2000	>LDR
Na	23	2	45	557384.917	ppb	557384.917	0.51	137009171	400000	
Mg	24	2	45	72185.797	ppb	72185.797	0.14	8362657	400000	
Al	27	2	45	14.894	ppb	14.894	1.58	743	400000	
K	39	1	45	29971.874	ppb	29971.874	0.73	106166408	400000	
K	39	2	45	30919.278	ppb	30919.278	1.05	1753277	400000	
Ca	40	1	45	33973.809	ppb	33973.809	0.63	166550864	400000	
Ca	44	2	45	34029.128	ppb	34029.128	0.62	107100	400000	
Ti	47	2	45	-0.450	ppb	-0.450	-48.64	3	4000	
V	51	2	72	141.756	ppb	141.756	0.50	153983	2000	
Cr	52	2	72	4.982	ppb	4.982	5.74	7122	5000	
Mn	55	2	72	0.922	ppb	0.922	16.41	630	10000	
Fe	57	2	72	20.117	ppb	20.117	13.00	673	400000	
Co	59	2	72	0.067	ppb	0.067	33.55	160	2000	
Ni	60	2	72	1.181	ppb	1.181	27.16	1110	5000	
Cu	63	2	72	1.032	ppb	1.032	1.26	2967	5000	
Zn	66	2	72	3.452	ppb	3.452	19.68	1230	5000	
As	75	2	72	1.239	ppb	1.239	17.40	229	2000	
Se	78	1	72	5.788	ppb	5.788	6.69	1405	2000	
Sr	88	2	72	437.518	ppb	437.518	1.27	257226	4000	
Zr	90	2	72	34.319	ppb	34.319	14.52	247	1000	
Nb	93	2	72	-0.142	ppb	-0.142	-17.58	537	200	
Mo	95	2	115	9.316	ppb	9.316	3.51	8290	2000	
Pd	105	2	115	0.008	ppb	0.008	100.69	27	100	
Ag	107	2	115	-0.001	ppb	-0.001	-436.19	37	100	
Cd	111	2	115	-0.024	ppb	-0.024	0.00	0	2000	
Sn	120	2	115	0.130	ppb	0.130	28.84	320	2000	
Sb	121	2	115	0.284	ppb	0.284	17.79	340	1000	
Ba	137	2	115	11.644	ppb	11.644	6.93	3827	5000	
W	182	2	165	1.327	ppb	1.327	6.40	6782	100	
Pt	195	2	165	0.008	ppb	0.008	55.74	83	100	
Tl	205	2	165	0.010	ppb	0.010	97.37	213	2000	
Pb	208	2	165	0.042	ppb	0.042	33.01	1630	5000	
Th	232	2	165	0.030	ppb	0.030	30.33	747	2000	
U	238	2	165	0.287	ppb	0.287	7.70	4091	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	643654	0.74	822129	78.29	60	120	
Sc (IS)	45	1	HMI H2	27361554	0.39	31063320	88.08	60	120	
Sc (IS)	45	2	HMI He	1014363	0.32	1110240	91.36	60	120	
Sc (IS)	45	3	No Gas	47914993	0.28	52905316	90.57	60	120	
Ge Internal Standard	72	1	HMI H2	10301367	0.11	11878391	86.72	60	120	
Ge Internal Standard	72	2	HMI He	1138387	0.62	1238950	91.88	60	120	
In Internal Standard	115	2	HMI He	3622136	1.24	3889250	93.13	60	120	
Ho-165	165	2	HMI He	17551855	0.21	18939303	92.67	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-4-B
Data File Name	154SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:04:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.916	ppb	-31.916	-6.19	105092	500000	
Li	7	2	45	-40.082	ppb	-40.082	-58.20	5431	500000	
Li	7	3	45	-58.399	ppb	-58.399	-2.07	3162786	50000	
Be	9	1	6	0.014	ppb	0.014	282.27	7	2000	
B	11	1	6	239.790	ppb	239.790	1.07	69519	2000	
Na	23	1	45	571106.454	ppb	571106.454	0.96	1871371652	2000	>LDR
Na	23	2	45	542163.907	ppb	542163.907	0.89	130922688	400000	
Mg	24	2	45	70681.660	ppb	70681.660	0.30	8043824	400000	
Al	27	2	45	34.502	ppb	34.502	15.87	1310	400000	
K	39	1	45	28853.175	ppb	28853.175	1.21	102016412	400000	
K	39	2	45	30625.836	ppb	30625.836	1.03	1706155	400000	
Ca	40	1	45	33251.291	ppb	33251.291	0.29	162144201	400000	
Ca	44	2	45	33365.113	ppb	33365.113	0.40	103158	400000	
Ti	47	2	45	0.327	ppb	0.327	275.55	23	4000	
V	51	2	72	61.975	ppb	61.975	1.20	68103	2000	
Cr	52	2	72	1316.173	ppb	1316.173	1.72	1788275	5000	
Mn	55	2	72	115.261	ppb	115.261	0.23	61354	10000	
Fe	57	2	72	4991.080	ppb	4991.080	0.87	127142	400000	
Co	59	2	72	12.616	ppb	12.616	2.86	29651	2000	
Ni	60	2	72	492.937	ppb	492.937	0.93	330355	5000	
Cu	63	2	72	21.233	ppb	21.233	1.06	40077	5000	
Zn	66	2	72	2.728	ppb	2.728	14.04	1017	5000	
As	75	2	72	0.779	ppb	0.779	10.65	150	2000	
Se	78	1	72	4.423	ppb	4.423	7.26	1063	2000	
Sr	88	2	72	422.374	ppb	422.374	1.25	244277	4000	
Zr	90	2	72	16.693	ppb	16.693	51.16	153	1000	
Nb	93	2	72	0.072	ppb	0.072	25.21	1177	200	
Mo	95	2	115	17.061	ppb	17.061	8.31	14992	2000	
Pd	105	2	115	0.011	ppb	0.011	134.74	30	100	
Ag	107	2	115	0.000	ppb	0.000	15774.08	40	100	
Cd	111	2	115	0.011	ppb	0.011	368.95	13	2000	
Sn	120	2	115	0.610	ppb	0.610	11.64	827	2000	
Sb	121	2	115	0.200	ppb	0.200	17.38	257	1000	
Ba	137	2	115	11.448	ppb	11.448	9.48	3721	5000	
W	182	2	165	1.565	ppb	1.565	2.07	7726	100	
Pt	195	2	165	0.003	ppb	0.003	276.44	67	100	
Tl	205	2	165	0.009	ppb	0.009	120.86	200	2000	
Pb	208	2	165	0.046	ppb	0.046	30.31	1650	5000	
Th	232	2	165	0.018	ppb	0.018	28.89	593	2000	
U	238	2	165	0.056	ppb	0.056	19.46	920	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	633146	0.14	822129	77.01	60	120	
Sc (IS)	45	1	HMI H2	27216045	0.52	31063320	87.61	60	120	
Sc (IS)	45	2	HMI He	996463	0.75	1110240	89.75	60	120	
Sc (IS)	45	3	No Gas	46417821	1.09	52905316	87.74	60	120	
Ge Internal Standard	72	1	HMI H2	10179334	0.19	11878391	85.70	60	120	
Ge Internal Standard	72	2	HMI He	1119815	0.90	1238950	90.38	60	120	
In Internal Standard	115	2	HMI He	3578188	1.11	3889250	92.00	60	120	
Ho-165	165	2	HMI He	17373542	1.31	18939303	91.73	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-6-B
Data File Name	155SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:08:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.918	ppb	-37.918	-6.45	101071	500000	
Li	7	2	45	-41.832	ppb	-41.832	-24.28	5351	500000	
Li	7	3	45	-58.156	ppb	-58.156	-4.77	3176418	50000	
Be	9	1	6	0.025	ppb	0.025	231.90	10	2000	
B	11	1	6	240.620	ppb	240.620	1.02	68896	2000	
Na	23	1	45	587488.306	ppb	587488.306	0.57	1883390425	2000	>LDR
Na	23	2	45	551306.766	ppb	551306.766	1.22	131768501	400000	
Mg	24	2	45	72489.025	ppb	72489.025	0.80	8165614	400000	
Al	27	2	45	43.087	ppb	43.087	5.95	1547	400000	
K	39	1	45	29575.037	ppb	29575.037	1.31	102067832	400000	
K	39	2	45	31044.738	ppb	31044.738	1.28	1711652	400000	
Ca	40	1	45	34352.394	ppb	34352.394	0.76	163882254	400000	
Ca	44	2	45	34287.497	ppb	34287.497	1.94	104921	400000	
Ti	47	2	45	0.334	ppb	0.334	179.95	23	4000	
V	51	2	72	37.769	ppb	37.769	1.11	42246	2000	
Cr	52	2	72	823.225	ppb	823.225	0.51	1103836	5000	
Mn	55	2	72	231.079	ppb	231.079	0.60	121261	10000	
Fe	57	2	72	6190.147	ppb	6190.147	1.15	155577	400000	
Co	59	2	72	24.741	ppb	24.741	1.06	57374	2000	
Ni	60	2	72	998.217	ppb	998.217	0.74	659843	5000	
Cu	63	2	72	34.631	ppb	34.631	0.93	63869	5000	
Zn	66	2	72	5.219	ppb	5.219	13.27	1660	5000	
As	75	2	72	0.480	ppb	0.480	32.92	99	2000	
Se	78	1	72	4.726	ppb	4.726	7.56	1113	2000	
Sr	88	2	72	433.103	ppb	433.103	0.86	247192	4000	
Zr	90	2	72	19.662	ppb	19.662	39.22	167	1000	
Nb	93	2	72	0.073	ppb	0.073	88.84	1163	200	
Mo	95	2	115	11.625	ppb	11.625	1.05	10191	2000	
Pd	105	2	115	-0.006	ppb	-0.006	-67.45	7	100	
Ag	107	2	115	0.011	ppb	0.011	173.08	73	100	
Cd	111	2	115	0.019	ppb	0.019	280.94	17	2000	
Sn	120	2	115	0.465	ppb	0.465	39.45	670	2000	
Sb	121	2	115	0.116	ppb	0.116	27.73	177	1000	
Ba	137	2	115	14.196	ppb	14.196	3.54	4601	5000	
W	182	2	165	1.184	ppb	1.184	6.09	6042	100	
Pt	195	2	165	-0.003	ppb	-0.003	-270.21	43	100	
Tl	205	2	165	0.004	ppb	0.004	81.81	160	2000	
Pb	208	2	165	0.031	ppb	0.031	72.24	1480	5000	
Th	232	2	165	0.015	ppb	0.015	37.40	550	2000	
U	238	2	165	0.041	ppb	0.041	5.77	703	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	625314	0.46	822129	76.06	60	120	
Sc (IS)	45	1	HMI H2	26626864	0.57	31063320	85.72	60	120	
Sc (IS)	45	2	HMI He	986329	0.69	1110240	88.84	60	120	
Sc (IS)	45	3	No Gas	46582621	0.23	52905316	88.05	60	120	
Ge Internal Standard	72	1	HMI H2	9989252	1.04	11878391	84.10	60	120	
Ge Internal Standard	72	2	HMI He	1105148	1.11	1238950	89.20	60	120	
In Internal Standard	115	2	HMI He	3569677	1.40	3889250	91.78	60	120	
Ho-165	165	2	HMI He	17198345	0.43	18939303	90.81	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	156_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:11:58-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	416.944	ppb	2.109	253081	500	83.4	90	110	>+\-10%
Li	7	2	45	411.524	ppb	8.201	12959	500	82.3	90	110	>+\-10%
Li	7	3	45	387.353	ppb	3.855	7889734	500	77.5	90	110	>+\-10%
Be	9	1	6	48.348	ppb	0.368	16510	50	96.7	90	110	
B	11	1	6	59.917	ppb	2.110	20558	50	119.8	90	110	>+\-10%
Na	23	1	45	6310.723	ppb	0.759	22069261	5000	126.2	90	110	>+\-10%
Na	23	2	45	6230.514	ppb	1.259	1608301	5000	124.6	90	110	>+\-10%
Mg	24	2	45	4541.952	ppb	0.438	550669	5000	90.8	90	110	
Al	27	2	45	4893.017	ppb	1.051	154025	5000	97.9	90	110	
K	39	1	45	5009.254	ppb	0.525	27243894	5000	100.2	90	110	
K	39	2	45	5091.757	ppb	1.458	314536	5000	101.8	90	110	
Ca	40	1	45	5040.046	ppb	0.392	26145885	5000	100.8	90	110	
Ca	44	2	45	4873.308	ppb	3.659	16066	5000	97.5	90	110	
Ti	47	2	45	43.398	ppb	17.305	1213	50	86.8	90	110	>+\-10%
V	51	2	72	46.381	ppb	0.299	55674	50	92.8	90	110	
Cr	52	2	72	49.247	ppb	1.270	72150	50	98.5	90	110	
Mn	55	2	72	50.905	ppb	0.839	29200	50	101.8	90	110	
Fe	57	2	72	4892.219	ppb	0.969	133939	5000	97.8	90	110	
Co	59	2	72	49.870	ppb	0.675	125939	50	99.7	90	110	
Ni	60	2	72	48.562	ppb	1.169	35267	50	97.1	90	110	
Cu	63	2	72	49.797	ppb	1.279	99528	50	99.6	90	110	
Zn	66	2	72	45.763	ppb	1.340	13470	50	91.5	90	110	
As	75	2	72	50.036	ppb	1.106	8917	50	100.1	90	110	
Se	78	1	72	51.295	ppb	0.607	13336	50	102.6	90	110	
Sr	88	2	72	50.868	ppb	0.530	31633	50	101.7	90	110	
Zr	90	2	72	97.414	ppb	26.052	603	50	194.8	90	110	>+\-10%
Nb	93	2	72	89.285	ppb	1.058	292292	100	89.3	90	110	>+\-10%
Mo	95	2	115	49.408	ppb	1.684	46835	50	98.8	90	110	
Pd	105	2	115	50.908	ppb	0.474	74424	50	101.8	90	110	
Ag	107	2	115	48.794	ppb	1.230	156250	50	97.6	90	110	
Cd	111	2	115	51.480	ppb	4.268	21601	50	103.0	90	110	
Sn	120	2	115	49.226	ppb	2.073	56750	50	98.5	90	110	
Sb	121	2	115	48.559	ppb	2.120	49610	50	97.1	90	110	
Ba	137	2	115	49.446	ppb	5.331	17325	50	98.9	90	110	
W	182	2	165	47.090	ppb	0.645	217851	50	94.2	90	110	
Pt	195	2	165	47.754	ppb	1.243	177949	50	95.5	90	110	
Tl	205	2	165	49.032	ppb	0.631	422952	50	98.1	90	110	
Pb	208	2	165	49.650	ppb	0.259	564964	50	99.3	90	110	
Th	232	2	165	49.853	ppb	0.311	675810	50	99.7	90	110	
U	238	2	165	49.419	ppb	1.005	724564	50	98.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	723898	0.48	822129	88.05	60	120	
Sc (IS)	45	1	HMI H2	28899655	0.32	31063320	93.03	60	120	
Sc (IS)	45	2	HMI He	1060044	0.12	1110240	95.48	60	120	
Sc (IS)	45	3	No Gas	49280484	1.37	52905316	93.15	60	120	
Ge Internal Standard	72	1	HMI H2	11070047	0.72	11878391	93.19	60	120	
Ge Internal Standard	72	2	HMI He	1203483	0.51	1238950	97.14	60	120	
In Internal Standard	115	2	HMI He	3864523	0.43	3889250	99.36	60	120	
Ho-165	165	2	HMI He	18779362	0.29	18939303	99.16	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	157_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:15:44-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-42.474	ppb	-8.8	3451524	10	
Be	9	1	6	0.010	ppb	320.1	7	0.5	
B	11	1	6	5.185	ppb	17.1	2704	0.5	>RL
Na	23	1	45	1421.432	ppb	1.1	5039065	25	>RL
Na	23	2	45	1305.097	ppb	0.4	346663	25	>RL
Mg	24	2	45	0.509	ppb	388.8	913	25	
Al	27	2	45	0.046	ppb	5298.9	313	15	
K	39	1	45	83.286	ppb	25.2	10453964	50	>RL
K	39	2	45	59.340	ppb	2.8	19007	50	>RL
Ca	40	1	45	8.133	ppb	3.3	98845	50	
Ca	44	2	45	9.498	ppb	118.8	77	25	
Ti	47	2	45	-0.458	ppb	-45.1	3	0.5	
V	51	2	72	-2.397	ppb	-5.0	897	1	
Cr	52	2	72	0.036	ppb	145.7	310	1	
Mn	55	2	72	0.169	ppb	47.3	237	0.5	
Fe	57	2	72	4.643	ppb	34.4	290	25	
Co	59	2	72	0.030	ppb	52.6	77	0.5	
Ni	60	2	72	0.090	ppb	53.6	390	1	
Cu	63	2	72	0.276	ppb	34.4	1650	1	
Zn	66	2	72	0.672	ppb	61.2	503	5	
As	75	2	72	0.014	ppb	163.3	25	1	
Se	78	1	72	1.040	ppb	27.7	279	1	>RL
Sr	88	2	72	0.092	ppb	87.3	77	0.5	
Zr	90	2	72	18.032	ppb	92.7	173	1	>RL
Nb	93	2	72	3.872	ppb	7.9	13717	2	>RL
Mo	95	2	115	0.231	ppb	12.2	243	0.5	
Pd	105	2	115	0.035	ppb	48.7	70	1	
Ag	107	2	115	0.012	ppb	30.8	83	1	
Cd	111	2	115	-0.016	ppb	-82.2	3	0.5	
Sn	120	2	115	0.173	ppb	2.4	403	1	
Sb	121	2	115	0.233	ppb	9.2	320	0.6	
Ba	137	2	115	0.018	ppb	233.1	13	0.5	
W	182	2	165	0.118	ppb	4.4	1700	1	
Pt	195	2	165	0.009	ppb	91.4	93	1	
Tl	205	2	165	0.005	ppb	117.5	183	0.1	
Pb	208	2	165	-0.020	ppb	-27.8	1040	0.5	
Th	232	2	165	0.029	ppb	12.5	790	1	
U	238	2	165	0.046	ppb	6.5	850	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	744674	0.95	822129	90.58	60	120	
Sc (IS)	45	1	HMI H2	28793824	0.30	31063320	92.69	60	120	
Sc (IS)	45	2	HMI He	1070917	0.62	1110240	96.46	60	120	
Sc (IS)	45	3	No Gas	48326118	0.68	52905316	91.34	60	120	
Ge Internal Standard	72	1	HMI H2	11152039	0.37	11878391	93.89	60	120	
Ge Internal Standard	72	2	HMI He	1208048	0.76	1238950	97.51	60	120	
In Internal Standard	115	2	HMI He	3985536	1.30	3889250	102.48	60	120	
Ho-165	165	2	HMI He	18868645	1.05	18939303	99.63	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	158WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:19:40-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.009	ppb	0	0	0.5
Na	23	2	45	1178.476	ppb	0.167100231	310997	25
Mg	24	2	45	-0.120	ppb	-740.3789896	830	25
Al	27	2	45	1.503	ppb	71.78147674	357	15
K	39	2	45	48.980	ppb	18.10858865	18225	50
Ca	44	2	45	19.860	ppb	95.34397718	110	25
V	51	2	72	-0.126	ppb	-43.03587321	3374	1
Cr	52	2	72	0.252	ppb	18.67948901	610	1
Mn	55	2	72	0.448	ppb	29.84319284	387	0.5
Fe	57	2	72	30.661	ppb	8.647386288	980	25
Co	59	2	72	0.045	ppb	42.34607634	110	0.5
Ni	60	2	72	0.150	ppb	53.07505965	423	1
Cu	63	2	72	0.777	ppb	0.807407731	2580	1
Zn	66	2	72	1.424	ppb	19.90763519	703	5
As	75	2	72	0.036	ppb	142.7602589	28	1
Se	78	1	72	0.714	ppb	25.38956996	192	1
Nb	93	2	72	3.355	ppb	9.894539971	11735	2
Mo	95	2	115	0.151	ppb	44.3440461	163	0.5
Pd	105	2	115	0.071	ppb	53.12277518	123	1
Ag	107	2	115	0.066	ppb	31.61833536	260	1
Cd	111	2	115	-0.016	ppb	-82.9778578	3	0.5
Sn	120	2	115	0.689	ppb	16.7572155	1003	1
Sb	121	2	115	0.528	ppb	12.56995286	623	0.6
Ba	137	2	115	0.028	ppb	153.9392701	17	0.5
W	182	2	165	0.253	ppb	2.19036813	2317	1
Pt	195	2	165	0.010	ppb	53.42651981	97	1
Tl	205	2	165	0.029	ppb	12.04362063	393	0.1
Pb	208	2	165	0.130	ppb	25.48776578	2744	0.5
Th	232	2	165	0.103	ppb	1.030861404	1790	1
U	238	2	165	0.023	ppb	13.86034498	517	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	762769	0.55	822129	92.78	60	120	
Sc (IS)	45	1	HMI H2	29069710	0.59	31063320	93.58	60	120	
Sc (IS)	45	2	HMI He	1061319	0.34	1110240	95.59	60	120	
Sc (IS)	45	3	No Gas	52453136	0.35	52905316	99.15	60	120	
Ge Internal Standard	72	1	HMI H2	11077710	0.96	11878391	93.26	60	120	
Ge Internal Standard	72	2	HMI He	1179091	1.06	1238950	95.17	60	120	
In Internal Standard	115	2	HMI He	3943016	0.94	3889250	101.38	60	120	
Ho-165	165	2	HMI He	18804562	1.15	18939303	99.29	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	159WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:23:28-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.039	ppb	43.01678019	17	0.5
Na	23	2	45	825.802	ppb	1.481371219	218304	25
Mg	24	2	45	-0.863	ppb	-64.87346767	733	25
Al	27	2	45	0.856	ppb	149.1721144	333	15
K	39	2	45	30.516	ppb	16.25700751	16984	50
Ca	44	2	45	1.795	ppb	344.8149823	50	25
V	51	2	72	-2.104	ppb	-5.72681365	1223	1
Cr	52	2	72	0.017	ppb	320.4933214	280	1
Mn	55	2	72	0.287	ppb	12.3317297	303	0.5
Fe	57	2	72	2.499	ppb	127.2326481	230	25
Co	59	2	72	0.040	ppb	9.589332478	100	0.5
Ni	60	2	72	-0.029	ppb	-268.3179446	303	1
Cu	63	2	72	0.451	ppb	18.58416038	1990	1
Zn	66	2	72	0.701	ppb	21.00597946	510	5
As	75	2	72	0.029	ppb	36.47671065	27	1
Se	78	1	72	0.307	ppb	29.12187146	88	1
Nb	93	2	72	0.970	ppb	2.366764715	4194	2
Mo	95	2	115	0.066	ppb	1.561362823	80	0.5
Pd	105	2	115	0.022	ppb	78.87992688	50	1
Ag	107	2	115	0.009	ppb	197.128891	73	1
Cd	111	2	115	-0.024	ppb	-1.38295E-06	0	0.5
Sn	120	2	115	0.041	ppb	99.4118359	243	1
Sb	121	2	115	-0.030	ppb	-36.50506927	43	0.6
Ba	137	2	115	0.093	ppb	120.904952	40	0.5
W	182	2	165	0.029	ppb	28.09350647	1297	1
Pt	195	2	165	0.011	ppb	56.31803307	103	1
Tl	205	2	165	0.004	ppb	245.2208934	173	0.1
Pb	208	2	165	-0.009	ppb	-97.01498105	1177	0.5
Th	232	2	165	0.003	ppb	235.1929723	437	1
U	238	2	165	0.004	ppb	119.3330199	237	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	750723	0.90	822129	91.31	60	120	
Sc (IS)	45	1	HMI H2	29212356	1.07	31063320	94.04	60	120	
Sc (IS)	45	2	HMI He	1051686	0.53	1110240	94.73	60	120	
Sc (IS)	45	3	No Gas	48771374	0.42	52905316	92.19	60	120	
Ge Internal Standard	72	1	HMI H2	11297201	0.87	11878391	95.11	60	120	
Ge Internal Standard	72	2	HMI He	1204036	0.71	1238950	97.18	60	120	
In Internal Standard	115	2	HMI He	3925757	1.23	3889250	100.94	60	120	
Ho-165	165	2	HMI He	18987156	1.07	18939303	100.25	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	160WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:27:15-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.040	ppb	210.852244	17	0.5
Na	23	2	45	740.547	ppb	1.137921276	196368	25
Mg	24	2	45	-1.742	ppb	-41.27620616	627	25
Al	27	2	45	-2.987	ppb	-52.01486325	213	15
K	39	2	45	25.206	ppb	27.17493757	16657	50
Ca	44	2	45	-1.253	ppb	-651.4003684	40	25
V	51	2	72	-2.177	ppb	-2.796409646	1130	1
Cr	52	2	72	0.039	ppb	194.9975947	310	1
Mn	55	2	72	0.227	ppb	16.19950564	267	0.5
Fe	57	2	72	6.505	ppb	43.56348321	337	25
Co	59	2	72	0.052	ppb	31.09641092	130	0.5
Ni	60	2	72	-0.020	ppb	-553.032599	307	1
Cu	63	2	72	0.345	ppb	8.153827542	1764	1
Zn	66	2	72	0.263	ppb	37.13976648	380	5
As	75	2	72	0.057	ppb	80.29899733	32	1
Se	78	1	72	0.691	ppb	36.92466611	185	1
Nb	93	2	72	0.687	ppb	26.63440052	3241	2
Mo	95	2	115	0.076	ppb	60.39340471	90	0.5
Pd	105	2	115	0.011	ppb	182.9292455	33	1
Ag	107	2	115	0.001	ppb	400.2806464	47	1
Cd	111	2	115	0.007	ppb	178.4894717	13	0.5
Sn	120	2	115	0.067	ppb	59.25702753	273	1
Sb	121	2	115	-0.010	ppb	-136.5727266	63	0.6
Ba	137	2	115	0.056	ppb	58.73231437	27	0.5
W	182	2	165	0.025	ppb	80.80138696	1273	1
Pt	195	2	165	0.004	ppb	64.79858252	77	1
Tl	205	2	165	0.010	ppb	38.1220636	230	0.1
Pb	208	2	165	-0.007	ppb	-100.0815974	1197	0.5
Th	232	2	165	0.004	ppb	229.7765783	457	1
U	238	2	165	0.004	ppb	28.86046492	227	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	730399	0.67	822129	88.84	60	120	
Sc (IS)	45	1	HMI H2	28496993	0.47	31063320	91.74	60	120	
Sc (IS)	45	2	HMI He	1050618	0.51	1110240	94.63	60	120	
Sc (IS)	45	3	No Gas	47764644	0.95	52905316	90.28	60	120	
Ge Internal Standard	72	1	HMI H2	11048802	0.22	11878391	93.02	60	120	
Ge Internal Standard	72	2	HMI He	1192882	0.42	1238950	96.28	60	120	
In Internal Standard	115	2	HMI He	3926195	0.86	3889250	100.95	60	120	
Ho-165	165	2	HMI He	18868278	0.82	18939303	99.62	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	161WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:31:02-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.001	ppb	1409.18549	3	0.5
Na	23	2	45	673.013	ppb	0.447795085	174305	25
Mg	24	2	45	-2.565	ppb	-37.11193657	513	25
Al	27	2	45	-1.467	ppb	-68.45161901	253	15
K	39	2	45	19.571	ppb	54.663244	15883	50
Ca	44	2	45	3.297	ppb	150.199708	53	25
V	51	2	72	-2.223	ppb	-7.455297744	1060	1
Cr	52	2	72	0.022	ppb	180.489595	280	1
Mn	55	2	72	0.152	ppb	72.42358237	220	0.5
Fe	57	2	72	3.700	ppb	39.78724228	257	25
Co	59	2	72	0.043	ppb	10.61941094	107	0.5
Ni	60	2	72	-0.023	ppb	-651.8469021	300	1
Cu	63	2	72	0.358	ppb	36.92635663	1760	1
Zn	66	2	72	0.749	ppb	53.21541101	510	5
As	75	2	72	0.022	ppb	494.4006829	25	1
Se	78	1	72	0.753	ppb	17.55558849	197	1
Nb	93	2	72	0.366	ppb	49.4355179	2167	2
Mo	95	2	115	0.070	ppb	52.9595677	83	0.5
Pd	105	2	115	0.009	ppb	74.75995783	30	1
Ag	107	2	115	0.000	ppb	9688.849402	43	1
Cd	111	2	115	-0.008	ppb	-337.5970949	7	0.5
Sn	120	2	115	0.012	ppb	474.6722913	207	1
Sb	121	2	115	-0.013	ppb	-3.086566167	60	0.6
Ba	137	2	115	0.019	ppb	226.769741	13	0.5
W	182	2	165	0.026	ppb	30.774009	1267	1
Pt	195	2	165	0.011	ppb	112.5904896	100	1
Tl	205	2	165	0.004	ppb	53.72865543	170	0.1
Pb	208	2	165	-0.024	ppb	-76.66522024	990	0.5
Th	232	2	165	0.002	ppb	287.020357	423	1
U	238	2	165	0.001	ppb	805.8725653	183	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	716217	0.66	822129	87.12	60	120	
Sc (IS)	45	1	HMI H2	28051457	0.42	31063320	90.30	60	120	
Sc (IS)	45	2	HMI He	1022035	0.75	1110240	92.06	60	120	
Sc (IS)	45	3	No Gas	46019343	0.52	52905316	86.98	60	120	
Ge Internal Standard	72	1	HMI H2	10824922	0.26	11878391	91.13	60	120	
Ge Internal Standard	72	2	HMI He	1173268	0.51	1238950	94.70	60	120	
In Internal Standard	115	2	HMI He	3874901	0.68	3889250	99.63	60	120	
Ho-165	165	2	HMI He	18716123	0.64	18939303	98.82	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	162WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:34:48-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	084CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.062	ppb	74.69999406	23	0.5
Na	23	2	45	590.411	ppb	1.094066295	151212	25
Mg	24	2	45	-2.347	ppb	-32.5707756	530	25
Al	27	2	45	-2.665	ppb	-162.2277151	213	15
K	39	2	45	21.896	ppb	43.62186914	15746	50
Ca	44	2	45	4.599	ppb	279.2831851	57	25
V	51	2	72	-2.394	ppb	-8.389549484	853	1
Cr	52	2	72	0.045	ppb	117.4383421	307	1
Mn	55	2	72	0.199	ppb	69.18975116	240	0.5
Fe	57	2	72	1.739	ppb	229.5610383	200	25
Co	59	2	72	0.028	ppb	52.12641728	67	0.5
Ni	60	2	72	-0.060	ppb	-177.2700917	267	1
Cu	63	2	72	0.432	ppb	29.69589486	1857	1
Zn	66	2	72	0.464	ppb	35.44796119	420	5
As	75	2	72	0.026	ppb	123.4134321	25	1
Se	78	1	72	0.595	ppb	13.98162414	155	1
Nb	93	2	72	0.265	ppb	47.02614781	1804	2
Mo	95	2	115	0.064	ppb	61.81081702	77	0.5
Pd	105	2	115	-0.002	ppb	-395.797353	13	1
Ag	107	2	115	-0.001	ppb	-12.81723213	40	1
Cd	111	2	115	0.000	ppb	5139.904009	10	0.5
Sn	120	2	115	0.030	ppb	43.93357342	223	1
Sb	121	2	115	-0.042	ppb	-40.51732594	30	0.6
Ba	137	2	115	-0.009	ppb	-184.3375702	3	0.5
W	182	2	165	0.015	ppb	145.6966061	1197	1
Pt	195	2	165	0.002	ppb	307.8654635	67	1
Tl	205	2	165	0.000	ppb	19428.06495	137	0.1
Pb	208	2	165	-0.018	ppb	-56.99610296	1047	0.5
Th	232	2	165	0.004	ppb	45.95424877	440	1
U	238	2	165	-0.002	ppb	-250.8886727	143	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	704846	0.48	822129	85.73	60	120	
Sc (IS)	45	1	HMI H2	27578402	1.26	31063320	88.78	60	120	
Sc (IS)	45	2	HMI He	1004558	0.69	1110240	90.48	60	120	
Sc (IS)	45	3	No Gas	45606288	0.40	52905316	86.20	60	120	
Ge Internal Standard	72	1	HMI H2	10635527	0.88	11878391	89.54	60	120	
Ge Internal Standard	72	2	HMI He	1145536	0.96	1238950	92.46	60	120	
In Internal Standard	115	2	HMI He	3815431	0.81	3889250	98.10	60	120	
Ho-165	165	2	HMI He	18445600	0.81	18939303	97.39	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5424511
Data File Name	163CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:38:35-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	107468	0.00
Li	7	2	HMI He	5164	0.11
Li	7	3	No Gas	3323054	0.00
Be	9	1	HMI H2	3	5196.15
B	11	1	HMI H2	1300	0.21
Na	23	1	HMI H2	1967972	0.00
Na	23	2	HMI He	131356	0.00
Mg	24	2	HMI He	1010	1.44
Al	27	2	HMI He	527	7.57
K	39	2	HMI He	16360	0.02
Ca	44	2	HMI He	110	28.62
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	970	1.48
Cr	52	2	HMI He	353	1.22
Mn	55	2	HMI He	320	7.63
Fe	57	2	HMI He	487	1.29
Co	59	2	HMI He	110	21.87
Ni	60	2	HMI He	477	3.53
Cu	63	2	HMI He	4181	0.24
Zn	66	2	HMI He	1140	0.60
As	75	2	HMI He	25	197.84
Se	78	1	HMI H2	120	14.70
Sr	88	2	HMI He	77	59.75
Zr	90	2	HMI He	170	5.99
Nb	93	2	HMI He	1460	0.99
Mo	95	2	HMI He	73	38.71
Pd	105	2	HMI He	13	324.76
Ag	107	2	HMI He	37	113.62
Cd	111	2	HMI He	7	2598.08
Sn	120	2	HMI He	407	1.26
Sb	121	2	HMI He	10	1000.00
Ba	137	2	HMI He	60	73.49
W	182	2	HMI He	1137	0.78
Pt	195	2	HMI He	53	142.08
Tl	205	2	HMI He	170	9.15
Pb	208	2	HMI He	1197	1.09
Th	232	2	HMI He	377	4.01
U	238	2	HMI He	237	8.05

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	691144	0.18
Sc (IS)	45	1	HMI H2	26906402	0.43
Sc (IS)	45	2	HMI He	993193	0.86
Sc (IS)	45	3	No Gas	45487536	1.75
Ge Internal Standard	72	1	HMI H2	10456558	0.67
Ge Internal Standard	72	2	HMI He	1135267	0.76
In Internal Standard	115	2	HMI He	3770965	1.17
Ho-165	165	2	HMI He	18476501	1.20

Calibration Standard Report

Sample Table

Sample Name	ic-5424512
Data File Name	164CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:42:22-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	163CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	371561	0.00
Li	7	2	HMI He	19263	0.01
Li	7	3	No Gas	11562882	0.00
Be	9	1	HMI H2	30318	0.00
B	11	1	HMI H2	31618	0.01
Na	23	1	HMI H2	33481287	0.00
Na	23	2	HMI He	2410044	0.00
Mg	24	2	HMI He	1045494	0.00
Al	27	2	HMI He	288220	0.00
K	39	1	HMI H2	41296694	0.00
K	39	2	HMI He	557906	0.00
Ca	40	1	HMI H2	48476824	0.00
Ca	44	2	HMI He	31855	0.00
Ti	47	2	HMI He	2640	0.30
V	51	2	HMI He	103579	0.00
Cr	52	2	HMI He	132602	0.00
Mn	55	2	HMI He	54564	0.00
Fe	57	2	HMI He	253436	0.00
Co	59	2	HMI He	228090	0.00
Ni	60	2	HMI He	64625	0.00
Cu	63	2	HMI He	182950	0.00
Zn	66	2	HMI He	25093	0.01
As	75	2	HMI He	16243	0.01
Se	78	1	HMI H2	23917	0.00
Sr	88	2	HMI He	59813	0.00
Zr	90	2	HMI He	870	1.00
Nb	93	2	HMI He	630593	0.00
Mo	95	2	HMI He	89047	0.00
Pd	105	2	HMI He	138566	0.00
Ag	107	2	HMI He	294970	0.00
Cd	111	2	HMI He	39848	0.00
Sn	120	2	HMI He	110301	0.00
Sb	121	2	HMI He	96493	0.00
Ba	137	2	HMI He	33124	0.01
Nd	146	2	HMI He	122026	0.00
Sm	147	2	HMI He	105871	0.00
Sm	150	2	HMI He	101257	0.00
Gd	156	1	HMI H2	469267	0.00
Gd	157	1	HMI H2	353932	0.00
W	182	2	HMI He	439100	0.00
Pt	195	2	HMI He	355577	0.00
Tl	205	2	HMI He	841812	0.00
Pb	208	2	HMI He	1122683	0.00
Th	232	2	HMI He	1356788	0.00
U	238	2	HMI He	1456829	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	659656	0.79	691144	95.44	60	120	
Sc (IS)	45	1	HMI H2	26690001	0.60	26906402	99.20	60	120	
Sc (IS)	45	2	HMI He	995660	0.44	993193	100.25	60	120	
Sc (IS)	45	3	No Gas	45093556	0.77	45487536	99.13	60	120	
Ge Internal Standard	72	1	HMI H2	10321827	0.55	10456558	98.71	60	120	
Ge Internal Standard	72	2	HMI He	1138590	0.68	1135267	100.29	60	120	
In Internal Standard	115	2	HMI He	3698871	1.19	3770965	98.09	60	120	
Ho-165	165	2	HMI He	18451980	0.44	18476501	99.87	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	165_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:46:08-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	163CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	463.808	ppb	6.097	239434	500	92.8	90	110	
Li	7	2	45	508.035	ppb	11.750	12232	500	101.6	90	110	
Li	7	3	45	495.246	ppb	1.155	7368379	500	99.0	90	110	
Be	9	1	6	46.971	ppb	4.885	14828	50	93.9	90	110	
B	11	1	6	45.949	ppb	6.250	15822	50	91.9	90	110	
Na	23	1	45	4678.604	ppb	6.524	17416032	5000	93.6	90	110	
Na	23	2	45	5100.302	ppb	0.581	1283274	5000	102.0	90	110	
Mg	24	2	45	4994.203	ppb	0.529	518425	5000	99.9	90	110	
Al	27	2	45	4955.435	ppb	0.559	141940	5000	99.1	90	110	
K	39	1	45	4616.070	ppb	8.881	25077165	5000	92.3	90	110	
K	39	2	45	5011.500	ppb	0.116	285453	5000	100.2	90	110	
Ca	40	1	45	4696.559	ppb	7.502	23873070	5000	93.9	90	110	
Ca	44	2	45	4754.327	ppb	4.658	15079	5000	95.1	90	110	
Ti	47	2	45	47.087	ppb	6.164	1233	50	94.2	90	110	
V	51	2	72	49.897	ppb	1.280	52178	50	99.8	90	110	
Cr	52	2	72	49.878	ppb	1.346	66332	50	99.8	90	110	
Mn	55	2	72	49.348	ppb	2.121	27096	50	98.7	90	110	
Fe	57	2	72	4879.094	ppb	1.197	123931	5000	97.6	90	110	
Co	59	2	72	51.537	ppb	0.605	117623	50	103.1	90	110	
Ni	60	2	72	50.211	ppb	3.746	32688	50	100.4	90	110	
Cu	63	2	72	49.256	ppb	1.240	92258	50	98.5	90	110	
Zn	66	2	72	47.876	ppb	2.730	12609	50	95.8	90	110	
As	75	2	72	50.572	ppb	0.352	8228	50	101.1	90	110	
Se	78	1	72	49.182	ppb	6.208	12169	50	98.4	90	110	
Sr	88	2	72	48.324	ppb	1.324	28947	50	96.6	90	110	
Zr	90	2	72	28.956	ppb	23.960	373	50	57.9	90	110	>+\-10%
Nb	93	2	72	102.205	ppb	0.620	323000	100	102.2	90	110	
Mo	95	2	115	49.012	ppb	2.151	44076	50	98.0	90	110	
Pd	105	2	115	51.407	ppb	1.436	71877	50	102.8	90	110	
Ag	107	2	115	50.046	ppb	0.146	148977	50	100.1	90	110	
Cd	111	2	115	48.344	ppb	5.639	19444	50	96.7	90	110	
Sn	120	2	115	48.992	ppb	2.461	54729	50	98.0	90	110	
Sb	121	2	115	49.337	ppb	1.769	48034	50	98.7	90	110	
Ba	137	2	115	50.939	ppb	2.666	17055	50	101.9	90	110	
W	182	2	165	49.473	ppb	0.825	219118	50	98.9	90	110	
Pt	195	2	165	50.006	ppb	2.130	178901	50	100.0	90	110	
Tl	205	2	165	49.795	ppb	0.109	421772	50	99.6	90	110	
Pb	208	2	165	49.496	ppb	0.768	559607	50	99.0	90	110	
Th	232	2	165	49.180	ppb	0.780	671449	50	98.4	90	110	
U	238	2	165	49.642	ppb	0.629	727656	50	99.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	687229	2.08	691144	99.43	60	120	
Sc (IS)	45	1	HMI H2	27867904	3.69	26906402	103.57	60	120	
Sc (IS)	45	2	HMI He	987611	0.50	993193	99.44	60	120	
Sc (IS)	45	3	No Gas	44963959	0.32	45487536	98.85	60	120	
Ge Internal Standard	72	1	HMI H2	10636056	2.79	10456558	101.72	60	120	
Ge Internal Standard	72	2	HMI He	1138766	0.82	1135267	100.31	60	120	
In Internal Standard	115	2	HMI He	3732198	0.41	3770965	98.97	60	120	
Ho-165	165	2	HMI He	18562327	0.38	18476501	100.46	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	166_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:49:55-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	163CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	2.225	ppb	184.0	3237236	10	
Be	9	1	6	0.054	ppb	119.2	20	0.5	
B	11	1	6	1.580	ppb	39.2	1764	0.5	>RL
Na	23	1	45	-61.643	ppb	-9.1	1735648	25	
Na	23	2	45	-123.144	ppb	-10.6	100972	25	
Mg	24	2	45	-2.586	ppb	-27.9	723	25	
Al	27	2	45	-11.775	ppb	-7.4	183	15	
K	39	1	45	243.373	ppb	7.0	9915017	50	>RL
K	39	2	45	-32.860	ppb	-18.6	14244	50	
Ca	40	1	45	-34.672	ppb	-0.4	90974	50	
Ca	44	2	45	-15.378	ppb	-76.3	60	25	
Ti	47	2	45	0.649	ppb	69.6	17	0.5	>RL
V	51	2	72	0.204	ppb	91.5	1153	1	
Cr	52	2	72	-0.064	ppb	-101.5	263	1	
Mn	55	2	72	-0.151	ppb	-30.0	233	0.5	
Fe	57	2	72	-10.119	ppb	-30.1	227	25	
Co	59	2	72	-0.023	ppb	-108.1	57	0.5	
Ni	60	2	72	-0.485	ppb	-18.6	163	1	
Cu	63	2	72	-1.160	ppb	-7.0	2070	1	
Zn	66	2	72	-3.080	ppb	-7.5	397	5	
As	75	2	72	-0.022	ppb	-95.8	22	1	
Se	78	1	72	0.118	ppb	32.0	145	1	
Sr	88	2	72	-0.095	ppb	-18.0	20	0.5	
Zr	90	2	72	-15.603	ppb	-24.6	60	1	
Nb	93	2	72	5.320	ppb	8.4	17762	2	>RL
Mo	95	2	115	0.092	ppb	55.0	153	0.5	
Pd	105	2	115	0.070	ppb	19.7	110	1	
Ag	107	2	115	0.005	ppb	141.5	50	1	
Cd	111	2	115	-0.017	ppb	0.0	0	0.5	
Sn	120	2	115	0.012	ppb	717.3	410	1	
Sb	121	2	115	0.534	ppb	22.2	523	0.6	
Ba	137	2	115	-0.126	ppb	-36.9	17	0.5	
W	182	2	165	0.147	ppb	19.5	1750	1	
Pt	195	2	165	0.018	ppb	39.7	117	1	
Tl	205	2	165	0.011	ppb	5.5	257	0.1	
Pb	208	2	165	-0.017	ppb	-63.9	987	0.5	
Th	232	2	165	0.036	ppb	23.0	843	1	
U	238	2	165	0.036	ppb	32.1	750	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	675818	0.51	691144	97.78	60	120	
Sc (IS)	45	1	HMI H2	26353915	0.08	26906402	97.95	60	120	
Sc (IS)	45	2	HMI He	970163	0.32	993193	97.68	60	120	
Sc (IS)	45	3	No Gas	44058356	0.79	45487536	96.86	60	120	
Ge Internal Standard	72	1	HMI H2	10232726	0.43	10456558	97.86	60	120	
Ge Internal Standard	72	2	HMI He	1111462	0.43	1135267	97.90	60	120	
In Internal Standard	115	2	HMI He	3679810	1.20	3770965	97.58	60	120	
Ho-165	165	2	HMI He	18121887	0.35	18476501	98.08	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	167LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:53:42-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	163CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	8.360	ppb	81.204	3299176	50	16.7	70	130	>+/-30%
Be	9	1	6	1.017	ppb	1.679	317	1	101.7	70	130	
Na	23	2	45	-140.470	ppb	-12.885	97522	50	-280.9	70	130	>+/-30%
Mg	24	2	45	45.119	ppb	2.606	5601	50	90.2	70	130	
Al	27	2	45	16.749	ppb	17.485	987	30	55.8	70	130	>+/-30%
K	39	2	45	90.111	ppb	12.579	20816	100	90.1	70	130	
Ca	44	2	45	45.660	ppb	48.722	250	50	91.3	70	130	
V	51	2	72	5.099	ppb	1.749	6068	5	102.0	70	130	
Cr	52	2	72	1.979	ppb	7.462	2907	2	99.0	70	130	
Mn	55	2	72	0.828	ppb	27.942	753	1	82.8	70	130	
Fe	57	2	72	47.013	ppb	18.864	1640	50	94.0	70	130	
Co	59	2	72	0.961	ppb	1.683	2250	1	96.1	70	130	
Ni	60	2	72	1.550	ppb	18.365	1440	2	77.5	70	130	
Cu	63	2	72	0.874	ppb	21.861	5631	2	43.7	70	130	>+/-30%
Zn	66	2	72	7.932	ppb	12.208	2977	10	79.3	70	130	
As	75	2	72	4.836	ppb	9.914	792	5	96.7	70	130	
Se	78	1	72	4.480	ppb	4.420	1176	5	89.6	70	130	
Sr	88	2	72	0.858	ppb	31.253	577	1	85.8	70	130	
Zr	90	2	72	-4.900	ppb	-171.922	133	0.5	-980.0	70	130	>+/-30%
Nb	93	2	72	12.115	ppb	4.151	38704	2	605.7	70	130	>+/-30%
Mo	95	2	115	1.848	ppb	2.505	1730	2	92.4	70	130	
Pd	105	2	115	0.041	ppb	35.478	70	1	4.1	70	130	>+/-30%
Ag	107	2	115	5.042	ppb	1.339	15032	5	100.8	70	130	
Cd	111	2	115	0.762	ppb	33.878	313	1	76.2	70	130	
Sn	120	2	115	9.509	ppb	1.430	10941	10	95.1	70	130	
Sb	121	2	115	2.175	ppb	5.438	2127	2	108.8	70	130	
Ba	137	2	115	0.572	ppb	20.374	250	1	57.2	70	130	>+/-30%
W	182	2	165	5.042	ppb	1.999	22867	1	504.2	70	130	>+/-30%
Pt	195	2	165	0.024	ppb	25.359	137	1	2.4	70	130	>+/-30%
Tl	205	2	165	0.977	ppb	2.311	8266	1	97.7	70	130	
Pb	208	2	165	1.016	ppb	3.346	12396	1	101.6	70	130	
Th	232	2	165	2.038	ppb	1.848	27587	2	101.9	70	130	
U	238	2	165	1.056	ppb	3.157	15387	1	105.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	670630	0.27	691144	97.03	60	120	
Sc (IS)	45	1	HMI H2	26266359	0.60	26906402	97.62	60	120	
Sc (IS)	45	2	HMI He	974052	0.33	993193	98.07	60	120	
Sc (IS)	45	3	No Gas	44225824	0.70	45487536	97.23	60	120	
Ge Internal Standard	72	1	HMI H2	10246609	0.26	10456558	97.99	60	120	
Ge Internal Standard	72	2	HMI He	1113639	0.24	1135267	98.09	60	120	
In Internal Standard	115	2	HMI He	3729823	0.99	3770965	98.91	60	120	
Ho-165	165	2	HMI He	18171035	0.62	18476501	98.35	60	120	

Blank Report

Sample Table

Sample Name	mb 280-437009/1-a
Data File Name	168_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T20:57:33-07:00
Sample Type	Blank
Dilution	1
Comment	437009 6020A
ISTD Ref File Name	163CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-5.312	ppb	-168.7621408	102890	0.5
Li	7	2	45	17.862	ppb	78.95661692	5348	0.5
Li	7	3	45	-11.325	ppb	-54.08801095	3079245	10
Be	9	1	6	0.044	ppb	43.23242741	17	0.5
B	11	1	6	-0.086	ppb	-1049.423835	1220	0.5
Na	23	1	45	-141.423	ppb	-6.12087868	1473165	25
Na	23	2	45	-142.463	ppb	-8.999629542	97721	25
Mg	24	2	45	-4.414	ppb	-8.365590387	543	25
Al	27	2	45	-11.959	ppb	-3.105286475	180	15
K	39	1	45	-1241.419	ppb	-0.618602448	5169110	50
K	39	2	45	-29.935	ppb	-39.84145776	14551	50
Ca	40	1	45	-35.325	ppb	-0.317649274	87031	50
Ca	44	2	45	-12.352	ppb	-158.6596259	70	25
Ti	47	2	45	0.128	ppb	173.2050808	3	0.5
V	51	2	72	-0.225	ppb	-52.65072706	727	1
Cr	52	2	72	0.066	ppb	36.85792328	433	1
Mn	55	2	72	-0.197	ppb	-25.28522882	210	0.5
Fe	57	2	72	-10.281	ppb	-12.78185757	223	25
Co	59	2	72	-0.030	ppb	-29.21398217	40	0.5
Ni	60	2	72	-0.491	ppb	-0.14440194	160	1
Cu	63	2	72	-1.281	ppb	-3.957753453	1867	1
Zn	66	2	72	0.437	ppb	110.1512085	1223	5
As	75	2	72	0.002	ppb	2654.570635	25	1
Se	78	1	72	-0.132	ppb	-49.61120962	85	1
Sr	88	2	72	-0.055	ppb	-128.6459098	43	0.5
Zr	90	2	72	-6.396	ppb	-47.07954701	123	1
Nb	93	2	72	1.012	ppb	9.100564223	4554	2
Mo	95	2	115	0.001	ppb	2456.266099	73	0.5
Pd	105	2	115	0.005	ppb	384.0742092	20	1
Ag	107	2	115	-0.001	ppb	-748.7515958	33	1
Cd	111	2	115	-0.017	ppb	-1.40151E-06	0	0.5
Sn	120	2	115	-0.106	ppb	-70.0360035	283	1
Sb	121	2	115	0.110	ppb	59.04228973	117	0.6
Ba	137	2	115	0.003	ppb	2009.121651	60	0.5
W	182	2	165	0.055	ppb	67.56043994	1370	1
Pt	195	2	165	0.007	ppb	23.82945702	77	1
Tl	205	2	165	0.000	ppb	-4391.241624	167	0.1
Pb	208	2	165	0.015	ppb	61.2485427	1360	0.5
Th	232	2	165	0.020	ppb	60.05134255	643	1
U	238	2	165	0.005	ppb	128.9817583	310	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	662937	0.48	691144	95.92	60	120	
Sc (IS)	45	1	HMI H2	26105122	0.42	26906402	97.02	60	120	
Sc (IS)	45	2	HMI He	980526	0.46	993193	98.72	60	120	
Sc (IS)	45	3	No Gas	43376876	0.68	45487536	95.36	60	120	
Ge Internal Standard	72	1	HMI H2	10108912	0.25	10456558	96.68	60	120	
Ge Internal Standard	72	2	HMI He	1115834	0.28	1135267	98.29	60	120	
In Internal Standard	115	2	HMI He	3716348	0.75	3770965	98.55	60	120	
Ho-165	165	2	HMI He	18390026	0.31	18476501	99.53	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5424511
Data File Name	169CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:01:22-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	103135	0.00
Li	7	2	HMI He	5298	0.05
Li	7	3	No Gas	3178993	0.00
Be	9	1	HMI H2	7	1299.04
B	11	1	HMI H2	1077	1.09
Na	23	1	HMI H2	1304861	0.00
Na	23	2	HMI He	79007	0.00
Mg	24	2	HMI He	680	2.63
Al	27	2	HMI He	237	12.67
K	39	2	HMI He	14418	0.03
Ca	44	2	HMI He	63	146.08
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	983	0.32
Cr	52	2	HMI He	253	12.69
Mn	55	2	HMI He	190	19.39
Fe	57	2	HMI He	160	21.75
Co	59	2	HMI He	67	68.74
Ni	60	2	HMI He	253	8.58
Cu	63	2	HMI He	4164	0.08
Zn	66	2	HMI He	520	2.79
As	75	2	HMI He	24	107.73
Se	78	1	HMI H2	61	44.27
Sr	88	2	HMI He	97	40.52
Zr	90	2	HMI He	63	80.14
Nb	93	2	HMI He	2774	0.35
Mo	95	2	HMI He	110	51.61
Pd	105	2	HMI He	20	250.00
Ag	107	2	HMI He	10	1732.05
Cd	111	2	HMI He	3	5196.15
Sn	120	2	HMI He	203	21.13
Sb	121	2	HMI He	43	122.99
Ba	137	2	HMI He	33	274.95
W	182	2	HMI He	1120	0.84
Pt	195	2	HMI He	60	27.78
Tl	205	2	HMI He	163	10.82
Pb	208	2	HMI He	1173	1.06
Th	232	2	HMI He	347	4.58
U	238	2	HMI He	207	8.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	670791	0.47
Sc (IS)	45	1	HMI H2	26124840	0.32
Sc (IS)	45	2	HMI He	964610	0.90
Sc (IS)	45	3	No Gas	43477389	0.70
Ge Internal Standard	72	1	HMI H2	10160483	0.35
Ge Internal Standard	72	2	HMI He	1098439	0.66
In Internal Standard	115	2	HMI He	3683657	0.35
Ho-165	165	2	HMI He	18078300	0.92

Calibration Standard Report

Sample Table

Sample Name	ic-5424512
Data File Name	170CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:05:08-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	169CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	361206	0.00
Li	7	2	HMI He	19026	0.01
Li	7	3	No Gas	11688744	0.00
Be	9	1	HMI H2	30281	0.01
B	11	1	HMI H2	31177	0.00
Na	23	1	HMI H2	32365570	0.00
Na	23	2	HMI He	2307907	0.00
Mg	24	2	HMI He	1027039	0.00
Al	27	2	HMI He	282848	0.00
K	39	1	HMI H2	40120765	0.00
K	39	2	HMI He	541339	0.00
Ca	40	1	HMI H2	47563699	0.00
Ca	44	2	HMI He	29845	0.01
Ti	47	2	HMI He	2290	0.32
V	51	2	HMI He	101407	0.00
Cr	52	2	HMI He	130879	0.00
Mn	55	2	HMI He	53061	0.00
Fe	57	2	HMI He	246755	0.00
Co	59	2	HMI He	222636	0.00
Ni	60	2	HMI He	63430	0.00
Cu	63	2	HMI He	177666	0.00
Zn	66	2	HMI He	24071	0.01
As	75	2	HMI He	16093	0.00
Se	78	1	HMI H2	22965	0.01
Sr	88	2	HMI He	57832	0.00
Zr	90	2	HMI He	590	0.50
Nb	93	2	HMI He	618553	0.00
Mo	95	2	HMI He	87198	0.00
Pd	105	2	HMI He	134758	0.00
Ag	107	2	HMI He	288704	0.00
Cd	111	2	HMI He	38377	0.00
Sn	120	2	HMI He	107258	0.00
Sb	121	2	HMI He	94087	0.00
Ba	137	2	HMI He	33275	0.00
Nd	146	2	HMI He	120345	0.00
Sm	147	2	HMI He	104591	0.00
Sm	150	2	HMI He	98907	0.00
Gd	156	1	HMI H2	464347	0.00
Gd	157	1	HMI H2	350388	0.00
W	182	2	HMI He	437384	0.00
Pt	195	2	HMI He	356148	0.00
Tl	205	2	HMI He	840853	0.00
Pb	208	2	HMI He	1114987	0.00
Th	232	2	HMI He	1348957	0.00
U	238	2	HMI He	1453266	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	630328	0.52	670791	93.97	60	120	
Sc (IS)	45	1	HMI H2	25595146	0.49	26124840	97.97	60	120	
Sc (IS)	45	2	HMI He	946609	0.97	964610	98.13	60	120	
Sc (IS)	45	3	No Gas	44315428	1.01	43477389	101.93	60	120	
Ge Internal Standard	72	1	HMI H2	9833685	0.51	10160483	96.78	60	120	
Ge Internal Standard	72	2	HMI He	1085436	0.67	1098439	98.82	60	120	
In Internal Standard	115	2	HMI He	3561150	0.44	3683657	96.67	60	120	
Ho-165	165	2	HMI He	17981528	1.24	18078300	99.46	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	171_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:08:54-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	169CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	506.188	ppb	2.663	240790	500	101.2	90	110	
Li	7	2	45	481.091	ppb	2.310	12235	500	96.2	90	110	
Li	7	3	45	475.787	ppb	5.821	7393085	500	95.2	90	110	
Be	9	1	6	49.839	ppb	0.720	15922	50	99.7	90	110	
B	11	1	6	49.867	ppb	1.796	16934	50	99.7	90	110	
Na	23	1	45	4989.446	ppb	0.586	17370225	5000	99.8	90	110	
Na	23	2	45	5196.391	ppb	1.256	1276778	5000	103.9	90	110	
Mg	24	2	45	5050.870	ppb	1.275	535948	5000	101.0	90	110	
Al	27	2	45	4989.050	ppb	1.107	145826	5000	99.8	90	110	
K	39	1	45	4831.882	ppb	1.007	25118169	5000	96.6	90	110	
K	39	2	45	5020.661	ppb	0.986	287906	5000	100.4	90	110	
Ca	40	1	45	5042.814	ppb	0.733	24871430	5000	100.9	90	110	
Ca	44	2	45	4949.132	ppb	3.152	15282	5000	99.0	90	110	
Ti	47	2	45	61.728	ppb	7.823	1460	50	123.5	90	110	>+\-10%
V	51	2	72	50.595	ppb	3.178	53516	50	101.2	90	110	
Cr	52	2	72	50.797	ppb	1.935	68837	50	101.6	90	110	
Mn	55	2	72	51.561	ppb	0.418	28375	50	103.1	90	110	
Fe	57	2	72	4978.067	ppb	1.329	127041	5000	99.6	90	110	
Co	59	2	72	51.902	ppb	1.430	119458	50	103.8	90	110	
Ni	60	2	72	52.686	ppb	4.152	34656	50	105.4	90	110	
Cu	63	2	72	50.292	ppb	0.616	94460	50	100.6	90	110	
Zn	66	2	72	52.158	ppb	8.706	13237	50	104.3	90	110	
As	75	2	72	49.235	ppb	2.259	8202	50	98.5	90	110	
Se	78	1	72	50.947	ppb	0.920	12225	50	101.9	90	110	
Sr	88	2	72	49.095	ppb	0.513	29398	50	98.2	90	110	
Zr	90	2	72	52.839	ppb	36.525	353	50	105.7	90	110	
Nb	93	2	72	104.190	ppb	1.529	334412	100	104.2	90	110	
Mo	95	2	115	51.245	ppb	1.391	45915	50	102.5	90	110	
Pd	105	2	115	52.215	ppb	1.026	72226	50	104.4	90	110	
Ag	107	2	115	51.691	ppb	1.617	153152	50	103.4	90	110	
Cd	111	2	115	50.979	ppb	2.392	20079	50	102.0	90	110	
Sn	120	2	115	49.698	ppb	2.438	54802	50	99.4	90	110	
Sb	121	2	115	51.296	ppb	1.626	49552	50	102.6	90	110	
Ba	137	2	115	48.684	ppb	4.724	16641	50	97.4	90	110	
W	182	2	165	50.851	ppb	1.730	227633	50	101.7	90	110	
Pt	195	2	165	51.275	ppb	0.946	186488	50	102.5	90	110	
Tl	205	2	165	51.081	ppb	0.479	438636	50	102.2	90	110	
Pb	208	2	165	51.118	ppb	0.902	582497	50	102.2	90	110	
Th	232	2	165	51.075	ppb	1.224	703596	50	102.2	90	110	
U	238	2	165	50.943	ppb	1.185	755992	50	101.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	664863	0.25	670791	99.12	60	120	
Sc (IS)	45	1	HMI H2	26481024	0.29	26124840	101.36	60	120	
Sc (IS)	45	2	HMI He	977419	1.09	964610	101.33	60	120	
Sc (IS)	45	3	No Gas	45133626	1.06	43477389	103.81	60	120	
Ge Internal Standard	72	1	HMI H2	10249613	0.28	10160483	100.88	60	120	
Ge Internal Standard	72	2	HMI He	1121911	0.89	1098439	102.14	60	120	
In Internal Standard	115	2	HMI He	3654820	0.67	3683657	99.22	60	120	
Ho-165	165	2	HMI He	18357877	0.86	18078300	101.55	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5424511
Data File Name	172CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:17:45-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	104975	0.00
Li	7	2	HMI He	5541	0.14
Li	7	3	No Gas	3171712	0.00
Be	9	1	HMI H2	3	5196.15
B	11	1	HMI H2	1187	0.08
Na	23	1	HMI H2	894104	0.00
Na	23	2	HMI He	65217	0.00
Mg	24	2	HMI He	513	4.40
Al	27	2	HMI He	57	95.15
K	39	2	HMI He	14231	0.01
Ca	44	2	HMI He	53	146.37
Ti	47	2	HMI He	3	5196.15
V	51	2	HMI He	1397	1.15
Cr	52	2	HMI He	257	8.36
Mn	55	2	HMI He	117	15.29
Fe	57	2	HMI He	170	33.37
Co	59	2	HMI He	73	28.41
Ni	60	2	HMI He	187	11.60
Cu	63	2	HMI He	1480	0.92
Zn	66	2	HMI He	400	2.17
As	75	2	HMI He	26	135.52
Se	78	1	HMI H2	43	45.74
Sr	88	2	HMI He	33	137.48
Zr	90	2	HMI He	90	24.69
Nb	93	2	HMI He	9157	0.10
Mo	95	2	HMI He	87	40.68
Pd	105	2	HMI He	77	25.99
Ag	107	2	HMI He	53	81.20
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	253	7.03
Sb	121	2	HMI He	197	21.99
Ba	137	2	HMI He	3	5196.15
W	182	2	HMI He	1207	1.14
Pt	195	2	HMI He	40	125.00
Tl	205	2	HMI He	223	4.17
Pb	208	2	HMI He	887	0.32
Th	232	2	HMI He	670	1.74
U	238	2	HMI He	447	1.76

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	680701	0.46
Sc (IS)	45	1	HMI H2	26528605	0.43
Sc (IS)	45	2	HMI He	1014720	0.75
Sc (IS)	45	3	No Gas	43446903	0.98
Ge Internal Standard	72	1	HMI H2	10271630	0.87
Ge Internal Standard	72	2	HMI He	1158236	0.59
In Internal Standard	115	2	HMI He	3843567	1.41
Ho-165	165	2	HMI He	18572367	0.09

Calibration Standard Report

Sample Table

Sample Name	ic-5424512
Data File Name	173CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:28:46-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	366165	0.00
Li	7	2	HMI He	18412	0.02
Li	7	3	No Gas	11117261	0.00
Be	9	1	HMI H2	29857	0.01
B	11	1	HMI H2	30626	0.01
Na	23	1	HMI H2	32487773	0.00
Na	23	2	HMI He	2413161	0.00
Mg	24	2	HMI He	1071015	0.00
Al	27	2	HMI He	299444	0.00
K	39	1	HMI H2	40997957	0.00
K	39	2	HMI He	574287	0.00
Ca	40	1	HMI H2	48563319	0.00
Ca	44	2	HMI He	30957	0.01
Ti	47	2	HMI He	2567	0.44
V	51	2	HMI He	104265	0.00
Cr	52	2	HMI He	133762	0.00
Mn	55	2	HMI He	55996	0.00
Fe	57	2	HMI He	257531	0.00
Co	59	2	HMI He	232084	0.00
Ni	60	2	HMI He	64253	0.00
Cu	63	2	HMI He	182367	0.00
Zn	66	2	HMI He	25597	0.02
As	75	2	HMI He	16468	0.01
Se	78	1	HMI H2	23319	0.00
Sr	88	2	HMI He	61534	0.00
Zr	90	2	HMI He	620	1.35
Nb	93	2	HMI He	653482	0.00
Mo	95	2	HMI He	90499	0.00
Pd	105	2	HMI He	142090	0.00
Ag	107	2	HMI He	297912	0.00
Cd	111	2	HMI He	40356	0.01
Sn	120	2	HMI He	112403	0.00
Sb	121	2	HMI He	99645	0.00
Ba	137	2	HMI He	33756	0.00
Nd	146	2	HMI He	123405	0.00
Sm	147	2	HMI He	106612	0.00
Sm	150	2	HMI He	102194	0.00
Gd	156	1	HMI H2	477179	0.00
Gd	157	1	HMI H2	357829	0.00
W	182	2	HMI He	446880	0.00
Pt	195	2	HMI He	363511	0.00
Tl	205	2	HMI He	857776	0.00
Pb	208	2	HMI He	1136812	0.00
Th	232	2	HMI He	1379186	0.00
U	238	2	HMI He	1488484	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	646891	0.14	680701	95.03	60	120	
Sc (IS)	45	1	HMI H2	26013854	0.15	26528605	98.06	60	120	
Sc (IS)	45	2	HMI He	1009181	0.36	1014720	99.45	60	120	
Sc (IS)	45	3	No Gas	42569679	0.24	43446903	97.98	60	120	
Ge Internal Standard	72	1	HMI H2	10004562	0.65	10271630	97.40	60	120	
Ge Internal Standard	72	2	HMI He	1146954	0.44	1158236	99.03	60	120	
In Internal Standard	115	2	HMI He	3755653	1.12	3843567	97.71	60	120	
Ho-165	165	2	HMI He	18455504	0.38	18572367	99.37	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	174_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:32:33-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	505.454	ppb	0.589	234566	500	101.1	90	110	
Li	7	2	45	542.491	ppb	10.340	12102	500	108.5	90	110	
Li	7	3	45	512.099	ppb	0.218	7167272	500	102.4	90	110	
Be	9	1	6	50.854	ppb	6.033	15298	50	101.7	90	110	
B	11	1	6	50.988	ppb	3.504	16290	50	102.0	90	110	
Na	23	1	45	5018.069	ppb	1.195	16638276	5000	100.4	90	110	
Na	23	2	45	5210.414	ppb	0.751	1247013	5000	104.2	90	110	
Mg	24	2	45	5111.483	ppb	1.119	530013	5000	102.2	90	110	
Al	27	2	45	4974.569	ppb	2.563	144160	5000	99.5	90	110	
K	39	1	45	4900.503	ppb	1.629	24615175	5000	98.0	90	110	
K	39	2	45	5044.362	ppb	2.662	287085	5000	100.9	90	110	
Ca	40	1	45	5020.316	ppb	1.036	24289731	5000	100.4	90	110	
Ca	44	2	45	5056.431	ppb	1.149	15172	5000	101.1	90	110	
Ti	47	2	45	50.944	ppb	6.451	1267	50	101.9	90	110	
V	51	2	72	51.225	ppb	1.477	52797	50	102.4	90	110	
Cr	52	2	72	52.003	ppb	2.409	68026	50	104.0	90	110	
Mn	55	2	72	51.091	ppb	1.942	27981	50	102.2	90	110	
Fe	57	2	72	5023.417	ppb	0.749	126368	5000	100.5	90	110	
Co	59	2	72	51.397	ppb	0.239	116478	50	102.8	90	110	
Ni	60	2	72	51.933	ppb	1.348	32661	50	103.9	90	110	
Cu	63	2	72	52.208	ppb	1.168	93629	50	104.4	90	110	
Zn	66	2	72	51.213	ppb	4.455	12983	50	102.4	90	110	
As	75	2	72	51.201	ppb	0.573	8244	50	102.4	90	110	
Se	78	1	72	51.626	ppb	0.842	12115	50	103.3	90	110	
Sr	88	2	72	49.481	ppb	0.669	29739	50	99.0	90	110	
Zr	90	2	72	53.369	ppb	31.196	363	50	106.7	90	110	
Nb	93	2	72	101.603	ppb	1.276	328411	100	101.6	90	110	
Mo	95	2	115	49.123	ppb	2.544	43970	50	98.2	90	110	
Pd	105	2	115	50.992	ppb	0.400	71636	50	102.0	90	110	
Ag	107	2	115	50.602	ppb	0.194	148992	50	101.2	90	110	
Cd	111	2	115	50.251	ppb	3.375	20042	50	100.5	90	110	
Sn	120	2	115	48.788	ppb	1.670	54320	50	97.6	90	110	
Sb	121	2	115	50.324	ppb	0.474	49646	50	100.6	90	110	
Ba	137	2	115	49.822	ppb	3.626	16621	50	99.6	90	110	
W	182	2	165	50.083	ppb	0.677	222887	50	100.2	90	110	
Pt	195	2	165	50.465	ppb	0.526	182217	50	100.9	90	110	
Tl	205	2	165	51.053	ppb	0.701	435059	50	102.1	90	110	
Pb	208	2	165	51.620	ppb	0.759	583269	50	103.2	90	110	
Th	232	2	165	51.202	ppb	0.912	701697	50	102.4	90	110	
U	238	2	165	50.955	ppb	0.781	753513	50	101.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	651813	0.44	680701	95.76	60	120	
Sc (IS)	45	1	HMI H2	25857172	0.36	26528605	97.47	60	120	
Sc (IS)	45	2	HMI He	976687	1.40	1014720	96.25	60	120	
Sc (IS)	45	3	No Gas	42320593	0.21	43446903	97.41	60	120	
Ge Internal Standard	72	1	HMI H2	10050384	0.23	10271630	97.85	60	120	
Ge Internal Standard	72	2	HMI He	1119626	0.39	1158236	96.67	60	120	
In Internal Standard	115	2	HMI He	3711082	0.41	3843567	96.55	60	120	
Ho-165	165	2	HMI He	18329961	0.26	18572367	98.69	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	175_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:36:19-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-0.326	ppb	-475.6	3112376	10	
Be	9	1	6	0.033	ppb	151.3	13	0.5	
B	11	1	6	1.307	ppb	51.9	1550	0.5	>RL
Na	23	1	45	-53.452	ppb	-6.7	702245	25	
Na	23	2	45	-59.120	ppb	-3.7	49045	25	
Mg	24	2	45	2.669	ppb	26.6	767	25	
Al	27	2	45	6.445	ppb	41.7	240	15	
K	39	1	45	150.938	ppb	11.6	9568845	50	>RL
K	39	2	45	1.824	ppb	1009.9	13717	50	
Ca	40	1	45	-5.181	ppb	-6.3	88986	50	
Ca	44	2	45	5.243	ppb	290.8	67	25	
Ti	47	2	45	0.278	ppb	253.0	10	0.5	
V	51	2	72	0.230	ppb	73.0	1560	1	
Cr	52	2	72	0.035	ppb	166.4	290	1	
Mn	55	2	72	0.010	ppb	769.4	117	0.5	
Fe	57	2	72	-0.241	ppb	-1646.3	157	25	
Co	59	2	72	0.010	ppb	137.6	93	0.5	
Ni	60	2	72	0.116	ppb	73.0	250	1	
Cu	63	2	72	0.186	ppb	82.5	1737	1	
Zn	66	2	72	-0.049	ppb	-585.9	370	5	
As	75	2	72	0.003	ppb	1903.0	25	1	
Se	78	1	72	-0.019	ppb	-182.7	37	1	
Sr	88	2	72	0.025	ppb	194.6	47	0.5	
Zr	90	2	72	10.582	ppb	49.0	140	1	>RL
Nb	93	2	72	2.768	ppb	21.5	17335	2	>RL
Mo	95	2	115	0.138	ppb	60.0	207	0.5	
Pd	105	2	115	0.045	ppb	21.9	137	1	
Ag	107	2	115	0.011	ppb	97.3	83	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.081	ppb	53.5	333	1	
Sb	121	2	115	0.308	ppb	16.3	490	0.6	
Ba	137	2	115	0.020	ppb	146.7	10	0.5	
W	182	2	165	0.122	ppb	8.5	1730	1	
Pt	195	2	165	0.006	ppb	129.7	60	1	
Tl	205	2	165	0.008	ppb	169.9	290	0.1	
Pb	208	2	165	0.012	ppb	70.7	1013	0.5	
Th	232	2	165	0.024	ppb	35.1	983	1	
U	238	2	165	0.025	ppb	25.2	803	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	662785	0.51	680701	97.37	60	120	
Sc (IS)	45	1	HMI H2	25808010	0.60	26528605	97.28	60	120	
Sc (IS)	45	2	HMI He	970942	0.45	1014720	95.69	60	120	
Sc (IS)	45	3	No Gas	42667338	1.26	43446903	98.21	60	120	
Ge Internal Standard	72	1	HMI H2	10046829	0.63	10271630	97.81	60	120	
Ge Internal Standard	72	2	HMI He	1105480	0.18	1158236	95.45	60	120	
In Internal Standard	115	2	HMI He	3702014	1.15	3843567	96.32	60	120	
Ho-165	165	2	HMI He	18318772	0.72	18572367	98.63	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	176LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:40:11-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	10.344	ppb	45.743	3276763	50	20.7	70	130	>+/-30%
Be	9	1	6	1.081	ppb	36.021	333	1	108.1	70	130	
Na	23	2	45	-15.799	ppb	-34.251	57813	50	-31.6	70	130	>+/-30%
Mg	24	2	45	52.071	ppb	10.730	5751	50	104.1	70	130	
Al	27	2	45	32.658	ppb	16.177	977	30	108.9	70	130	
K	39	2	45	105.311	ppb	7.173	18960	100	105.3	70	130	
Ca	44	2	45	44.392	ppb	35.587	180	50	88.8	70	130	
V	51	2	72	5.098	ppb	8.692	6375	5	102.0	70	130	
Cr	52	2	72	2.081	ppb	1.991	2917	2	104.1	70	130	
Mn	55	2	72	1.251	ppb	11.644	783	1	125.1	70	130	
Fe	57	2	72	53.504	ppb	22.646	1487	50	107.0	70	130	
Co	59	2	72	1.037	ppb	6.046	2384	1	103.7	70	130	
Ni	60	2	72	2.130	ppb	12.665	1490	2	106.5	70	130	
Cu	63	2	72	2.096	ppb	5.277	5058	2	104.8	70	130	
Zn	66	2	72	10.739	ppb	10.247	2984	10	107.4	70	130	
As	75	2	72	4.806	ppb	3.410	785	5	96.1	70	130	
Se	78	1	72	4.905	ppb	5.820	1181	5	98.1	70	130	
Sr	88	2	72	0.950	ppb	16.281	593	1	95.0	70	130	
Zr	90	2	72	10.637	ppb	18.755	140	0.5	2127.3	70	130	>+/-30%
Nb	93	2	72	10.495	ppb	4.416	41248	2	524.7	70	130	>+/-30%
Mo	95	2	115	2.070	ppb	3.669	1900	2	103.5	70	130	
Pd	105	2	115	-0.002	ppb	-2149.899	70	1	-0.2	70	130	>+/-30%
Ag	107	2	115	5.257	ppb	3.569	15259	5	105.1	70	130	
Cd	111	2	115	1.172	ppb	21.990	460	1	117.2	70	130	
Sn	120	2	115	9.672	ppb	6.302	10778	10	96.7	70	130	
Sb	121	2	115	1.801	ppb	10.055	1927	2	90.1	70	130	
Ba	137	2	115	1.179	ppb	19.507	390	1	117.9	70	130	
W	182	2	165	4.967	ppb	1.008	23178	1	496.7	70	130	>+/-30%
Pt	195	2	165	0.027	ppb	38.221	137	1	2.7	70	130	>+/-30%
Tl	205	2	165	0.995	ppb	3.895	8697	1	99.5	70	130	
Pb	208	2	165	1.022	ppb	4.168	12400	1	102.2	70	130	
Th	232	2	165	1.972	ppb	4.079	27657	2	98.6	70	130	
U	238	2	165	1.014	ppb	4.665	15430	1	101.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	661173	0.66	680701	97.13	60	120	
Sc (IS)	45	1	HMI H2	25821717	0.18	26528605	97.34	60	120	
Sc (IS)	45	2	HMI He	954212	1.04	1014720	94.04	60	120	
Sc (IS)	45	3	No Gas	43719724	0.55	43446903	100.63	60	120	
Ge Internal Standard	72	1	HMI H2	9988241	0.38	10271630	97.24	60	120	
Ge Internal Standard	72	2	HMI He	1103243	0.14	1158236	95.25	60	120	
In Internal Standard	115	2	HMI He	3647902	0.80	3843567	94.91	60	120	
Ho-165	165	2	HMI He	18328431	0.49	18572367	98.69	60	120	

Blank Report

Sample Table

Sample Name	mb 280-437009/1-a
Data File Name	177_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:43:59-07:00
Sample Type	Blank
Dilution	1
Comment	437009 6020A
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-2.604	ppb	-286.7088644	101585	0.5
Li	7	2	45	-8.121	ppb	-365.4275304	5221	0.5
Li	7	3	45	-3.782	ppb	-115.0608875	3105002	10
Be	9	1	6	0.033	ppb	113.9951737	13	0.5
B	11	1	6	0.115	ppb	240.0657739	1180	0.5
Na	23	1	45	-80.099	ppb	-2.444590381	619508	25
Na	23	2	45	-78.907	ppb	-3.476390875	44762	25
Mg	24	2	45	0.866	ppb	79.62878659	583	25
Al	27	2	45	5.144	ppb	31.18116804	203	15
K	39	1	45	-1266.502	ppb	-0.760959779	5099690	50
K	39	2	45	-5.138	ppb	-23.16466012	13397	50
Ca	40	1	45	-6.474	ppb	-7.349253593	82884	50
Ca	44	2	45	0.606	ppb	2088.976996	53	25
Ti	47	2	45	0.005	ppb	4520.807875	3	0.5
V	51	2	72	-0.282	ppb	-55.70808237	1060	1
Cr	52	2	72	0.098	ppb	58.11491679	373	1
Mn	55	2	72	0.180	ppb	9.70059351	210	0.5
Fe	57	2	72	0.512	ppb	218.008725	177	25
Co	59	2	72	-0.015	ppb	-119.0271396	37	0.5
Ni	60	2	72	0.119	ppb	34.74775222	253	1
Cu	63	2	72	0.112	ppb	110.6065786	1620	1
Zn	66	2	72	1.956	ppb	13.06604728	863	5
As	75	2	72	-0.035	ppb	-127.5144238	20	1
Se	78	1	72	-0.036	ppb	-235.1878166	33	1
Sr	88	2	72	-0.009	ppb	-210.1626396	27	0.5
Zr	90	2	72	5.189	ppb	83.98479132	113	1
Nb	93	2	72	-0.881	ppb	-9.285839212	6045	2
Mo	95	2	115	0.019	ppb	315.700534	100	0.5
Pd	105	2	115	-0.034	ppb	-53.58627335	27	1
Ag	107	2	115	-0.005	ppb	-206.3249277	37	1
Cd	111	2	115	0.008	ppb	173.2050808	3	0.5
Sn	120	2	115	0.027	ppb	114.0923699	273	1
Sb	121	2	115	-0.077	ppb	-33.83484571	113	0.6
Ba	137	2	115	0.050	ppb	0.964671676	20	0.5
W	182	2	165	0.032	ppb	64.18808951	1360	1
Pt	195	2	165	-0.001	ppb	-162.6324605	37	1
Tl	205	2	165	-0.003	ppb	-240.480016	197	0.1
Pb	208	2	165	0.021	ppb	66.86126954	1130	0.5
Th	232	2	165	-0.009	ppb	-48.09094751	543	1
U	238	2	165	-0.005	ppb	-89.09373973	380	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	656970	0.22	680701	96.51	60	120	
Sc (IS)	45	1	HMI H2	25843830	0.27	26528605	97.42	60	120	
Sc (IS)	45	2	HMI He	974979	0.80	1014720	96.08	60	120	
Sc (IS)	45	3	No Gas	42950293	0.37	43446903	98.86	60	120	
Ge Internal Standard	72	1	HMI H2	10023619	0.49	10271630	97.59	60	120	
Ge Internal Standard	72	2	HMI He	1113640	0.61	1158236	96.15	60	120	
In Internal Standard	115	2	HMI He	3708090	0.81	3843567	96.48	60	120	
Ho-165	165	2	HMI He	18695696	0.26	18572367	100.66	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-437009/2-a
Data File Name	178_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:47:46-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437009 6020A
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	74.792	74.792	ppb	8.642	122901	400	18.7	80	120	>+/-20%
Li	7	2	45	62.427	62.427	ppb	45.010	6082	400	15.6	80	120	>+/-20%
Li	7	3	45	66.045	66.045	ppb	12.059	3673877	400	16.5	80	120	>+/-20%
Be	9	1	6	36.909	36.909	ppb	2.922	11168	40	92.3	80	120	
Na	23	2	45	-83.923	-83.923	ppb	-4.424	43475	40	-209.8	80	120	>+/-20%
Mg	24	2	45	-0.923	-0.923	ppb	-96.444	397	40	-2.3	80	120	>+/-20%
Al	27	2	45	393.290	393.290	ppb	1.191	11392	40	983.2	80	120	>+/-20%
K	39	2	45	-7.035	-7.035	ppb	-144.056	13250	40	-17.6	80	120	>+/-20%
Ca	44	2	45	179.987	179.987	ppb	4.987	587	40	450.0	80	120	>+/-20%
V	51	2	72	39.053	39.053	ppb	2.858	40103	40	97.6	80	120	
Cr	52	2	72	40.458	40.458	ppb	1.029	52369	40	101.1	80	120	
Mn	55	2	72	40.040	40.040	ppb	2.097	21700	40	100.1	80	120	
Fe	57	2	72	398.306	398.306	ppb	0.808	10054	40	995.8	80	120	>+/-20%
Co	59	2	72	40.096	40.096	ppb	1.257	89838	40	100.2	80	120	
Ni	60	2	72	42.030	42.030	ppb	3.691	26165	40	105.1	80	120	
Cu	63	2	72	40.587	40.587	ppb	1.410	72261	40	101.5	80	120	
Zn	66	2	72	40.435	40.435	ppb	6.353	10214	40	101.1	80	120	
As	75	2	72	37.686	37.686	ppb	0.802	6005	40	94.2	80	120	
Se	78	1	72	37.076	37.076	ppb	2.957	8755	40	92.7	80	120	
Nb	93	2	72	-1.308	-1.308	ppb	-17.080	4684	40	-3.3	80	120	>+/-20%
Mo	95	2	115	37.121	37.121	ppb	0.179	33314	40	92.8	80	120	
Pd	105	2	115	-0.029	-0.029	ppb	-57.257	33	40	-0.1	80	120	>+/-20%
Ag	107	2	115	41.813	41.813	ppb	1.391	123358	40	104.5	80	120	
Cd	111	2	115	38.468	38.468	ppb	4.141	15372	40	96.2	80	120	
Sn	120	2	115	37.514	37.514	ppb	2.214	41908	40	93.8	80	120	
Sb	121	2	115	36.577	36.577	ppb	2.245	36205	40	91.4	80	120	
Ba	137	2	115	38.093	38.093	ppb	2.592	12733	40	95.2	80	120	
W	182	2	165	38.296	38.296	ppb	1.440	172754	40	95.7	80	120	
Pt	195	2	165	0.012	0.012	ppb	34.170	83	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.360	39.360	ppb	1.434	339485	40	98.4	80	120	
Pb	208	2	165	40.099	40.099	ppb	0.395	458712	40	100.2	80	120	
Th	232	2	165	38.779	38.779	ppb	0.386	537983	40	96.9	80	120	
U	238	2	165	39.053	39.053	ppb	0.496	584532	40	97.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	655465	0.47	680701	96.29	60	120	
Sc (IS)	45	1	HMI H2	26073202	0.68	26528605	98.28	60	120	
Sc (IS)	45	2	HMI He	971660	0.30	1014720	95.76	60	120	
Sc (IS)	45	3	No Gas	43005768	0.66	43446903	98.98	60	120	
Ge Internal Standard	72	1	HMI H2	10098991	0.36	10271630	98.32	60	120	
Ge Internal Standard	72	2	HMI He	1106746	0.45	1158236	95.55	60	120	
In Internal Standard	115	2	HMI He	3718340	0.47	3843567	96.74	60	120	
Ho-165	165	2	HMI He	18549917	0.78	18572367	99.88	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-1-b
Data File Name	179SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:51:35-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	289.628	ppb	289.628	12.49	160312	500000	
Li	7	2	45	307.154	ppb	307.154	1.27	8436	500000	
Li	7	3	45	279.221	ppb	279.221	1.12	5029214	50000	
Be	9	1	6	0.045	ppb	0.045	213.53	13	2000	
B	11	1	6	467.513	ppb	467.513	7.23	115344	2000	
Na	23	1	45	1029924.445	ppb	1029924.445	9.31	2909153770	2000	>LDR
Na	23	2	45	1005804.383	ppb	1005804.383	0.80	210374210	400000	
Mg	24	2	45	223834.876	ppb	223834.876	0.94	21336233	400000	
Al	27	2	45	80.157	ppb	80.157	16.89	2187	400000	
K	39	1	45	19996.690	ppb	19996.690	8.61	65097449	400000	
K	39	2	45	21075.081	ppb	21075.081	1.01	1063721	400000	
Ca	40	1	45	262119.651	ppb	262119.651	10.35	1134106943	400000	
Ca	44	2	45	279713.662	ppb	279713.662	1.13	769701	400000	
Ti	47	2	45	2.497	ppb	2.497	106.29	60	4000	
V	51	2	72	-0.105	ppb	-0.105	-53.99	1100	2000	
Cr	52	2	72	0.952	ppb	0.952	12.57	1317	5000	
Mn	55	2	72	16.789	ppb	16.789	2.30	8199	10000	
Fe	57	2	72	110.926	ppb	110.926	0.31	2610	400000	
Co	59	2	72	0.288	ppb	0.288	18.44	640	2000	
Ni	60	2	72	4.159	ppb	4.159	3.46	2460	5000	
Cu	63	2	72	3.902	ppb	3.902	3.98	7359	5000	
Zn	66	2	72	4.696	ppb	4.696	6.01	1363	5000	
As	75	2	72	0.675	ppb	0.675	26.84	118	2000	
Se	78	1	72	123.133	ppb	123.133	9.47	25256	2000	
Sr	88	2	72	5564.926	ppb	5564.926	0.38	2954943	4000	
Zr	90	2	72	567.582	ppb	567.582	11.54	2677	1000	
Nb	93	2	72	-1.145	ppb	-1.145	-4.33	4641	200	
Mo	95	2	115	1.030	ppb	1.030	27.89	880	2000	
Pd	105	2	115	0.098	ppb	0.098	68.19	187	100	
Ag	107	2	115	0.017	ppb	0.017	65.37	90	100	
Cd	111	2	115	0.077	ppb	0.077	142.28	27	2000	
Sn	120	2	115	0.355	ppb	0.355	3.59	560	2000	
Sb	121	2	115	0.321	ppb	0.321	5.60	443	1000	
Ba	137	2	115	17.023	ppb	17.023	6.95	4988	5000	
W	182	2	165	0.171	ppb	0.171	3.79	1784	100	
Pt	195	2	165	0.019	ppb	0.019	40.95	100	100	
Tl	205	2	165	0.065	ppb	0.065	9.64	710	2000	
Pb	208	2	165	0.105	ppb	0.105	12.65	1884	5000	
Th	232	2	165	0.167	ppb	0.167	7.89	2697	2000	
U	238	2	165	31.121	ppb	31.121	0.84	421482	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537725	4.09	680701	79.00	60	120	
Sc (IS)	45	1	HMI H2	23323079	5.84	26528605	87.92	60	120	
Sc (IS)	45	2	HMI He	898636	0.92	1014720	88.56	60	120	
Sc (IS)	45	3	No Gas	40060211	0.21	43446903	92.20	60	120	
Ge Internal Standard	72	1	HMI H2	8829598	4.94	10271630	85.96	60	120	
Ge Internal Standard	72	2	HMI He	990255	0.63	1158236	85.50	60	120	
In Internal Standard	115	2	HMI He	3259993	1.04	3843567	84.82	60	120	
Ho-165	165	2	HMI He	16781234	0.50	18572367	90.36	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-1-bSD@5
Data File Name	180SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:55:25-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	45.314	ppb	45.314	70.11	110979	500000	
Li	7	2	45	69.470	ppb	69.470	25.05	5755	500000	
Li	7	3	45	54.051	ppb	54.051	7.78	3494181	50000	
Be	9	1	6	0.001	ppb	0.001	1746.87	3	2000	
B	11	1	6	95.002	ppb	95.002	14.71	27550	2000	
Na	23	1	45	200553.159	ppb	200553.159	20.57	606294311	2000	>LDR
Na	23	2	45	205720.939	ppb	205720.939	0.14	43442933	400000	
Mg	24	2	45	46577.223	ppb	46577.223	0.48	4478162	400000	
Al	27	2	45	33.188	ppb	33.188	7.96	943	400000	
K	39	1	45	3725.399	ppb	3725.399	29.22	20149522	400000	
K	39	2	45	4279.981	ppb	4279.981	1.61	228020	400000	
Ca	40	1	45	50604.066	ppb	50604.066	24.39	233482203	400000	
Ca	44	2	45	56682.140	ppb	56682.140	0.21	157348	400000	
Ti	47	2	45	0.741	ppb	0.741	116.69	20	4000	
V	51	2	72	-0.059	ppb	-0.059	-140.94	1203	2000	
Cr	52	2	72	0.123	ppb	0.123	36.62	380	5000	
Mn	55	2	72	3.365	ppb	3.365	12.86	1817	10000	
Fe	57	2	72	23.727	ppb	23.727	24.34	710	400000	
Co	59	2	72	0.043	ppb	0.043	15.31	157	2000	
Ni	60	2	72	1.013	ppb	1.013	22.80	760	5000	
Cu	63	2	72	1.025	ppb	1.025	21.76	3024	5000	
Zn	66	2	72	4.680	ppb	4.680	10.87	1433	5000	
As	75	2	72	0.092	ppb	0.092	152.08	37	2000	
Se	78	1	72	21.489	ppb	21.489	17.77	4840	2000	
Sr	88	2	72	1020.182	ppb	1020.182	0.88	571105	4000	
Zr	90	2	72	41.923	ppb	41.923	18.93	283	1000	
Nb	93	2	72	-1.988	ppb	-1.988	-3.88	2424	200	
Mo	95	2	115	0.168	ppb	0.168	14.86	213	2000	
Pd	105	2	115	0.010	ppb	0.010	245.05	80	100	
Ag	107	2	115	0.006	ppb	0.006	147.18	63	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.030	ppb	0.030	210.96	253	2000	
Sb	121	2	115	-0.055	ppb	-0.055	-106.72	123	1000	
Ba	137	2	115	3.167	ppb	3.167	9.96	967	5000	
W	182	2	165	0.010	ppb	0.010	437.24	1173	100	
Pt	195	2	165	0.009	ppb	0.009	80.57	67	100	
Tl	205	2	165	0.017	ppb	0.017	66.22	350	2000	
Pb	208	2	165	0.033	ppb	0.033	53.16	1183	5000	
Th	232	2	165	-0.008	ppb	-0.008	-120.43	527	2000	
U	238	2	165	6.304	ppb	6.304	1.20	88965	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	616468	8.98	680701	90.56	60	120	
Sc (IS)	45	1	HMI H2	25284977	12.73	26528605	95.31	60	120	
Sc (IS)	45	2	HMI He	906296	1.03	1014720	89.31	60	120	
Sc (IS)	45	3	No Gas	42011234	0.63	43446903	96.70	60	120	
Ge Internal Standard	72	1	HMI H2	9713870	10.36	10271630	94.57	60	120	
Ge Internal Standard	72	2	HMI He	1043877	1.12	1158236	90.13	60	120	
In Internal Standard	115	2	HMI He	3390383	1.63	3843567	88.21	60	120	
Ho-165	165	2	HMI He	17420173	1.21	18572367	93.80	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-1-c ms
Data File Name	181SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T21:59:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	343.207	ppb	343.207	1.41	173897	500000	
Li	7	2	45	396.501	ppb	396.501	4.15	9183	500000	
Li	7	3	45	342.408	ppb	342.408	1.12	5445269	50000	
Be	9	1	6	41.554	ppb	41.554	4.82	10197	2000	
B	11	1	6	495.544	ppb	495.544	1.37	121041	2000	
Na	23	1	45	999986.189	ppb	999986.189	0.84	2844817771	2000	>LDR
Na	23	2	45	1000234.821	ppb	1000234.821	0.52	203038604	400000	
Mg	24	2	45	221849.345	ppb	221849.345	1.26	20522789	400000	
Al	27	2	45	440.418	ppb	440.418	2.91	11445	400000	
K	39	1	45	19410.432	ppb	19410.432	1.10	63838046	400000	
K	39	2	45	20794.327	ppb	20794.327	1.05	1018755	400000	
Ca	40	1	45	252436.267	ppb	252436.267	1.09	1100450944	400000	
Ca	44	2	45	275837.076	ppb	275837.076	1.02	736626	400000	
Ti	47	2	45	1.983	ppb	1.983	80.18	47	4000	
V	51	2	72	38.766	ppb	38.766	0.88	34736	2000	
Cr	52	2	72	39.340	ppb	39.340	2.37	44425	5000	
Mn	55	2	72	54.318	ppb	54.318	3.88	25647	10000	
Fe	57	2	72	484.045	ppb	484.045	3.30	10628	400000	
Co	59	2	72	37.472	ppb	37.472	0.18	73245	2000	
Ni	60	2	72	42.841	ppb	42.841	1.97	23260	5000	
Cu	63	2	72	41.004	ppb	41.004	1.93	63674	5000	
Zn	66	2	72	40.481	ppb	40.481	2.40	8920	5000	
As	75	2	72	37.831	ppb	37.831	1.10	5258	2000	
Se	78	1	72	160.887	ppb	160.887	1.43	32721	2000	
Sr	88	2	72	5503.904	ppb	5503.904	2.18	2849330	4000	
Zr	90	2	72	11481.288	ppb	11481.288	0.68	51374	1000	>LDR
Nb	93	2	72	-1.562	ppb	-1.562	-5.93	3394	200	
Mo	95	2	115	39.226	ppb	39.226	0.57	29749	2000	
Pd	105	2	115	0.045	ppb	0.045	83.40	117	100	
Ag	107	2	115	37.763	ppb	37.763	0.77	94168	100	
Cd	111	2	115	35.721	ppb	35.721	3.39	12062	2000	
Sn	120	2	115	36.748	ppb	36.748	1.02	34701	2000	
Sb	121	2	115	37.840	ppb	37.840	1.18	31654	1000	
Ba	137	2	115	52.479	ppb	52.479	3.42	14825	5000	
W	182	2	165	38.169	ppb	38.169	1.38	151760	100	
Pt	195	2	165	0.020	ppb	0.020	31.73	100	100	
Tl	205	2	165	35.496	ppb	35.496	0.84	269867	2000	
Pb	208	2	165	35.761	ppb	35.761	1.24	360643	5000	
Th	232	2	165	36.555	ppb	36.555	1.69	446980	2000	
U	238	2	165	67.460	ppb	67.460	1.58	889631	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	531591	0.45	680701	78.09	60	120	
Sc (IS)	45	1	HMI H2	23405582	0.57	26528605	88.23	60	120	
Sc (IS)	45	2	HMI He	872115	0.71	1014720	85.95	60	120	
Sc (IS)	45	3	No Gas	39621932	0.34	43446903	91.20	60	120	
Ge Internal Standard	72	1	HMI H2	8731904	0.86	10271630	85.01	60	120	
Ge Internal Standard	72	2	HMI He	965458	0.20	1158236	83.36	60	120	
In Internal Standard	115	2	HMI He	3142678	0.83	3843567	81.76	60	120	
Ho-165	165	2	HMI He	16350711	1.31	18572367	88.04	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-1-d msd
Data File Name	182SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:03:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	352.557	ppb	352.557	2.32	169148	500000	
Li	7	2	45	426.939	ppb	426.939	4.68	9046	500000	
Li	7	3	45	352.193	ppb	352.193	3.04	5427363	50000	
Be	9	1	6	37.125	ppb	37.125	5.13	8826	2000	
B	11	1	6	493.187	ppb	493.187	1.01	116714	2000	
Na	23	1	45	998720.118	ppb	998720.118	0.15	2728897453	2000	>LDR
Na	23	2	45	1002313.377	ppb	1002313.377	2.80	193239117	400000	
Mg	24	2	45	222418.100	ppb	222418.100	3.01	19541684	400000	
Al	27	2	45	437.093	ppb	437.093	3.85	10784	400000	
K	39	1	45	19350.043	ppb	19350.043	1.10	61150401	400000	
K	39	2	45	20671.446	ppb	20671.446	2.13	962092	400000	
Ca	40	1	45	256523.402	ppb	256523.402	0.81	1074086011	400000	
Ca	44	2	45	270472.198	ppb	270472.198	2.19	686117	400000	
Ti	47	2	45	2.569	ppb	2.569	117.87	57	4000	
V	51	2	72	39.118	ppb	39.118	5.27	33456	2000	
Cr	52	2	72	39.660	ppb	39.660	3.56	42780	5000	
Mn	55	2	72	51.796	ppb	51.796	1.24	23377	10000	
Fe	57	2	72	492.298	ppb	492.298	6.64	10321	400000	
Co	59	2	72	37.810	ppb	37.810	2.64	70609	2000	
Ni	60	2	72	42.104	ppb	42.104	4.27	21834	5000	
Cu	63	2	72	41.580	ppb	41.580	2.82	61662	5000	
Zn	66	2	72	40.682	ppb	40.682	3.74	8566	5000	
As	75	2	72	37.313	ppb	37.313	0.39	4956	2000	
Se	78	1	72	162.109	ppb	162.109	2.00	31789	2000	
Sr	88	2	72	5347.684	ppb	5347.684	1.72	2645089	4000	
Zr	90	2	72	11395.696	ppb	11395.696	5.27	48688	1000	>LDR
Nb	93	2	72	-1.717	ppb	-1.717	-2.23	2844	200	
Mo	95	2	115	39.693	ppb	39.693	3.21	28406	2000	
Pd	105	2	115	0.061	ppb	0.061	45.96	127	100	
Ag	107	2	115	38.392	ppb	38.392	1.45	90363	100	
Cd	111	2	115	36.103	ppb	36.103	4.78	11505	2000	
Sn	120	2	115	36.923	ppb	36.923	2.06	32903	2000	
Sb	121	2	115	38.536	ppb	38.536	0.71	30424	1000	
Ba	137	2	115	54.513	ppb	54.513	1.58	14535	5000	
W	182	2	165	38.224	ppb	38.224	4.61	144771	100	
Pt	195	2	165	0.025	ppb	0.025	36.70	110	100	
Tl	205	2	165	35.594	ppb	35.594	2.85	257846	2000	
Pb	208	2	165	35.983	ppb	35.983	2.17	345822	5000	
Th	232	2	165	36.867	ppb	36.867	4.30	429426	2000	
U	238	2	165	67.353	ppb	67.353	3.08	846374	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	514997	0.49	680701	75.66	60	120	
Sc (IS)	45	1	HMI H2	22479718	0.41	26528605	84.74	60	120	
Sc (IS)	45	2	HMI He	828761	3.20	1014720	81.67	60	120	
Sc (IS)	45	3	No Gas	38975060	1.42	43446903	89.71	60	120	
Ge Internal Standard	72	1	HMI H2	8418438	0.32	10271630	81.96	60	120	
Ge Internal Standard	72	2	HMI He	922698	2.82	1158236	79.66	60	120	
In Internal Standard	115	2	HMI He	2966664	1.84	3843567	77.19	60	120	
Ho-165	165	2	HMI He	15587075	3.01	18572367	83.93	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-1-b PDS
Data File Name	183SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:06:56-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	262.033	ppb	262.033	2.52	150810	500000	
Li	7	2	45	303.934	ppb	303.934	4.52	8079	500000	
Li	7	3	45	247.751	ppb	247.751	2.20	4697803	50000	
Be	9	1	6	208.060	ppb	208.060	0.27	49332	2000	
B	11	1	6	460.099	ppb	460.099	1.70	108678	2000	
Na	23	1	45	977476.776	ppb	977476.776	0.63	2711375960	2000	>LDR
Na	23	2	45	989658.527	ppb	989658.527	0.75	199104730	400000	
Mg	24	2	45	219443.098	ppb	219443.098	0.99	20120349	400000	
Al	27	2	45	2061.017	ppb	2061.017	1.94	52899	400000	
K	39	1	45	19060.816	ppb	19060.816	0.35	61268026	400000	
K	39	2	45	20789.208	ppb	20789.208	1.27	1009471	400000	
Ca	40	1	45	250069.356	ppb	250069.356	0.40	1062926011	400000	
Ca	44	2	45	272388.461	ppb	272388.461	0.82	720958	400000	
Ti	47	2	45	7.461	ppb	7.461	17.75	167	4000	
V	51	2	72	218.144	ppb	218.144	0.92	189990	2000	
Cr	52	2	72	214.671	ppb	214.671	0.79	241363	5000	
Mn	55	2	72	220.687	ppb	220.687	0.56	103860	10000	
Fe	57	2	72	2182.236	ppb	2182.236	3.35	47409	400000	
Co	59	2	72	211.463	ppb	211.463	0.33	412879	2000	
Ni	60	2	72	212.350	ppb	212.350	1.98	114617	5000	
Cu	63	2	72	211.493	ppb	211.493	2.15	323108	5000	
Zn	66	2	72	215.241	ppb	215.241	0.70	45971	5000	
As	75	2	72	203.662	ppb	203.662	0.65	28199	2000	
Se	78	1	72	339.205	ppb	339.205	0.66	67829	2000	
Sr	88	2	72	5345.918	ppb	5345.918	1.11	2766360	4000	
Zr	90	2	72	62680.391	ppb	62680.391	0.66	280018	1000	>LDR
Nb	93	2	72	9.574	ppb	9.574	5.14	33594	200	
Mo	95	2	115	212.355	ppb	212.355	1.84	160701	2000	
Pd	105	2	115	0.109	ppb	0.109	63.25	193	100	
Ag	107	2	115	38.761	ppb	38.761	1.86	96628	100	
Cd	111	2	115	204.515	ppb	204.515	1.61	69051	2000	
Sn	120	2	115	205.650	ppb	205.650	1.56	193201	2000	
Sb	121	2	115	202.612	ppb	202.612	0.88	168743	1000	
Ba	137	2	115	224.718	ppb	224.718	3.72	63451	5000	
W	182	2	165	210.913	ppb	210.913	0.26	841673	100	
Pt	195	2	165	0.057	ppb	0.057	16.82	220	100	
Tl	205	2	165	201.261	ppb	201.261	1.68	1543704	2000	
Pb	208	2	165	193.052	ppb	193.052	1.09	1961823	5000	
Th	232	2	165	16.498	ppb	16.498	0.61	203975	2000	
U	238	2	165	250.644	ppb	250.644	1.60	3335539	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	513738	0.41	680701	75.47	60	120	
Sc (IS)	45	1	HMI H2	22820461	0.11	26528605	86.02	60	120	
Sc (IS)	45	2	HMI He	864362	0.52	1014720	85.18	60	120	
Sc (IS)	45	3	No Gas	39271730	0.43	43446903	90.39	60	120	
Ge Internal Standard	72	1	HMI H2	8589520	0.48	10271630	83.62	60	120	
Ge Internal Standard	72	2	HMI He	965064	1.10	1158236	83.32	60	120	
In Internal Standard	115	2	HMI He	3142164	1.54	3843567	81.75	60	120	
Ho-165	165	2	HMI He	16503662	0.52	18572367	88.86	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-2-b
Data File Name	184SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:10:46-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	274.265	ppb	274.265	0.82	154756	500000	
Li	7	2	45	315.207	ppb	315.207	13.47	8219	500000	
Li	7	3	45	245.871	ppb	245.871	2.16	4718305	50000	
Be	9	1	6	0.519	ppb	0.519	37.85	127	2000	
B	11	1	6	1192.031	ppb	1192.031	1.22	282636	2000	
Na	23	1	45	272795.838	ppb	272795.838	0.67	762749962	2000	>LDR
Na	23	2	45	273273.185	ppb	273273.185	1.18	55133961	400000	
Mg	24	2	45	300544.119	ppb	300544.119	0.46	27614226	400000	
Al	27	2	45	4743.079	ppb	4743.079	0.63	121928	400000	
K	39	1	45	15290.667	ppb	15290.667	0.96	51107943	400000	
K	39	2	45	16662.889	ppb	16662.889	0.48	813229	400000	
Ca	40	1	45	458798.007	ppb	458798.007	0.23	1964244557	400000	
Ca	44	2	45	496414.719	ppb	496414.719	1.30	1316600	400000	
Ti	47	2	45	86.074	ppb	86.074	9.84	1897	4000	
V	51	2	72	13.418	ppb	13.418	4.76	12830	2000	
Cr	52	2	72	11.147	ppb	11.147	0.99	12790	5000	
Mn	55	2	72	1476.226	ppb	1476.226	1.36	697083	10000	
Fe	57	2	72	7469.813	ppb	7469.813	2.34	162575	400000	
Co	59	2	72	11.414	ppb	11.414	2.59	22442	2000	
Ni	60	2	72	31.523	ppb	31.523	4.89	17221	5000	
Cu	63	2	72	7.843	ppb	7.843	2.59	13227	5000	
Zn	66	2	72	24.822	ppb	24.822	8.37	5621	5000	
As	75	2	72	2.982	ppb	2.982	10.34	436	2000	
Se	78	1	72	22.769	ppb	22.769	6.88	4641	2000	
Sr	88	2	72	3490.981	ppb	3490.981	0.85	1814266	4000	
Zr	90	2	72	1642.766	ppb	1642.766	2.79	7442	1000	
Nb	93	2	72	-2.268	ppb	-2.268	-3.60	1483	200	
Mo	95	2	115	4.823	ppb	4.823	6.03	3811	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-81.37	40	100	
Ag	107	2	115	0.035	ppb	0.035	25.79	133	100	
Cd	111	2	115	0.058	ppb	0.058	2.36	20	2000	
Sn	120	2	115	0.887	ppb	0.887	7.87	1063	2000	
Sb	121	2	115	0.550	ppb	0.550	7.09	633	1000	
Ba	137	2	115	77.074	ppb	77.074	1.97	22289	5000	
W	182	2	165	0.700	ppb	0.700	2.76	3921	100	
Pt	195	2	165	0.006	ppb	0.006	185.06	57	100	
Tl	205	2	165	0.082	ppb	0.082	21.93	840	2000	
Pb	208	2	165	3.521	ppb	3.521	2.34	37119	5000	
Th	232	2	165	1.258	ppb	1.258	4.51	16361	2000	
U	238	2	165	104.347	ppb	104.347	0.77	1410545	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	518332	0.94	680701	76.15	60	120	
Sc (IS)	45	1	HMI H2	22986890	0.70	26528605	86.65	60	120	
Sc (IS)	45	2	HMI He	866160	0.36	1014720	85.36	60	120	
Sc (IS)	45	3	No Gas	39561047	0.14	43446903	91.06	60	120	
Ge Internal Standard	72	1	HMI H2	8693865	1.17	10271630	84.64	60	120	
Ge Internal Standard	72	2	HMI He	969174	1.01	1158236	83.68	60	120	
In Internal Standard	115	2	HMI He	3218290	2.33	3843567	83.73	60	120	
Ho-165	165	2	HMI He	16760935	0.71	18572367	90.25	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-3-b
Data File Name	185SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:14:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-25.608	ppb	-25.608	-4.62	86354	500000	
Li	7	2	45	9.050	ppb	9.050	131.50	4764	500000	
Li	7	3	45	-21.631	ppb	-21.631	-10.95	2652316	50000	
Be	9	1	6	0.139	ppb	0.139	73.14	37	2000	
B	11	1	6	2263.585	ppb	2263.585	1.02	546087	2000	
Na	23	1	45	160363.246	ppb	160363.246	0.40	455833100	2000	>LDR
Na	23	2	45	162765.610	ppb	162765.610	2.97	32398551	400000	
Mg	24	2	45	84992.422	ppb	84992.422	3.40	7698796	400000	
Al	27	2	45	271.970	ppb	271.970	9.63	6932	400000	
K	39	1	45	3792.550	ppb	3792.550	1.84	19063885	400000	
K	39	2	45	5189.817	ppb	5189.817	2.53	257977	400000	
Ca	40	1	45	111335.683	ppb	111335.683	0.65	484300179	400000	
Ca	44	2	45	115883.268	ppb	115883.268	1.91	303112	400000	
Ti	47	2	45	4.465	ppb	4.465	25.68	100	4000	
V	51	2	72	1.262	ppb	1.262	6.96	2250	2000	
Cr	52	2	72	0.751	ppb	0.751	5.03	1053	5000	
Mn	55	2	72	500.343	ppb	500.343	2.84	234614	10000	
Fe	57	2	72	33498.844	ppb	33498.844	4.13	723178	400000	
Co	59	2	72	3.065	ppb	3.065	1.28	6028	2000	
Ni	60	2	72	12.030	ppb	12.030	4.61	6619	5000	
Cu	63	2	72	1.481	ppb	1.481	6.47	3477	5000	
Zn	66	2	72	5.800	ppb	5.800	10.74	1560	5000	
As	75	2	72	33.157	ppb	33.157	3.25	4595	2000	
Se	78	1	72	0.079	ppb	0.079	117.25	53	2000	
Sr	88	2	72	797.653	ppb	797.653	2.77	411517	4000	
Zr	90	2	72	244.248	ppb	244.248	7.39	1163	1000	
Nb	93	2	72	-2.543	ppb	-2.543	-1.96	730	200	
Mo	95	2	115	16.068	ppb	16.068	5.76	12459	2000	
Pd	105	2	115	-0.028	ppb	-0.028	-50.95	30	100	
Ag	107	2	115	0.013	ppb	0.013	138.01	77	100	
Cd	111	2	115	0.058	ppb	0.058	100.63	20	2000	
Sn	120	2	115	0.232	ppb	0.232	26.14	433	2000	
Sb	121	2	115	0.228	ppb	0.228	9.84	357	1000	
Ba	137	2	115	604.331	ppb	604.331	3.21	173979	5000	
W	182	2	165	0.847	ppb	0.847	10.95	4571	100	
Pt	195	2	165	0.004	ppb	0.004	125.14	50	100	
Tl	205	2	165	0.003	ppb	0.003	136.95	227	2000	
Pb	208	2	165	0.712	ppb	0.712	5.47	8231	5000	
Th	232	2	165	0.080	ppb	0.080	11.85	1630	2000	
U	238	2	165	0.386	ppb	0.386	1.98	5678	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	528209	1.00	680701	77.60	60	120	
Sc (IS)	45	1	HMI H2	23351585	0.33	26528605	88.02	60	120	
Sc (IS)	45	2	HMI He	854227	1.79	1014720	84.18	60	120	
Sc (IS)	45	3	No Gas	38475130	0.81	43446903	88.56	60	120	
Ge Internal Standard	72	1	HMI H2	8908249	1.02	10271630	86.73	60	120	
Ge Internal Standard	72	2	HMI He	962434	2.26	1158236	83.09	60	120	
In Internal Standard	115	2	HMI He	3204677	2.19	3843567	83.38	60	120	
Ho-165	165	2	HMI He	16939372	1.82	18572367	91.21	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	186_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:18:27-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	466.185	ppb	1.589	207664	500	93.2	90	110	
Li	7	2	45	555.773	ppb	4.669	11085	500	111.2	90	110	>+\-10%
Li	7	3	45	587.266	ppb	27.966	6265483	500	117.5	90	110	>+\-10%
Be	9	1	6	50.263	ppb	3.689	13340	50	100.5	90	110	
B	11	1	6	105.922	ppb	0.790	28772	50	211.8	90	110	>+\-10%
Na	23	1	45	5297.835	ppb	0.665	16218796	5000	106.0	90	110	
Na	23	2	45	5570.115	ppb	2.293	1199989	5000	111.4	90	110	>+\-10%
Mg	24	2	45	5124.086	ppb	2.238	479897	5000	102.5	90	110	
Al	27	2	45	5027.600	ppb	2.247	131622	5000	100.6	90	110	
K	39	1	45	4726.882	ppb	0.530	22281761	5000	94.5	90	110	
K	39	2	45	4999.024	ppb	1.525	257150	5000	100.0	90	110	
Ca	40	1	45	4995.719	ppb	0.154	22379609	5000	99.9	90	110	
Ca	44	2	45	5249.098	ppb	2.362	14224	5000	105.0	90	110	
Ti	47	2	45	52.005	ppb	12.829	1170	50	104.0	90	110	
V	51	2	72	51.010	ppb	0.921	47970	50	102.0	90	110	
Cr	52	2	72	51.835	ppb	0.737	61860	50	103.7	90	110	
Mn	55	2	72	50.633	ppb	1.796	25303	50	101.3	90	110	
Fe	57	2	72	5088.409	ppb	2.868	116766	5000	101.8	90	110	
Co	59	2	72	51.936	ppb	1.659	107375	50	103.9	90	110	
Ni	60	2	72	53.995	ppb	2.031	30974	50	108.0	90	110	
Cu	63	2	72	52.255	ppb	1.241	85489	50	104.5	90	110	
Zn	66	2	72	50.508	ppb	2.277	11689	50	101.0	90	110	
As	75	2	72	51.144	ppb	1.859	7512	50	102.3	90	110	
Se	78	1	72	50.330	ppb	0.948	10982	50	100.7	90	110	
Sr	88	2	72	50.683	ppb	2.558	27788	50	101.4	90	110	
Zr	90	2	72	100.345	ppb	16.281	553	50	200.7	90	110	>+\-10%
Nb	93	2	72	87.301	ppb	0.776	258578	100	87.3	90	110	>+\-10%
Mo	95	2	115	49.651	ppb	0.380	41392	50	99.3	90	110	
Pd	105	2	115	51.435	ppb	1.824	67295	50	102.9	90	110	
Ag	107	2	115	52.068	ppb	1.132	142779	50	104.1	90	110	
Cd	111	2	115	49.680	ppb	1.026	18453	50	99.4	90	110	
Sn	120	2	115	49.400	ppb	2.654	51222	50	98.8	90	110	
Sb	121	2	115	49.459	ppb	0.933	45445	50	98.9	90	110	
Ba	137	2	115	51.619	ppb	1.966	16037	50	103.2	90	110	
W	182	2	165	50.190	ppb	0.716	213735	50	100.4	90	110	
Pt	195	2	165	49.938	ppb	1.003	172543	50	99.9	90	110	
Tl	205	2	165	51.127	ppb	0.083	416914	50	102.3	90	110	
Pb	208	2	165	51.417	ppb	1.160	555923	50	102.8	90	110	
Th	232	2	165	50.503	ppb	0.993	662292	50	101.0	90	110	
U	238	2	165	51.013	ppb	1.385	721848	50	102.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	574953	0.30	680701	84.46	60	120	
Sc (IS)	45	1	HMI H2	23939953	0.15	26528605	90.24	60	120	
Sc (IS)	45	2	HMI He	882251	1.38	1014720	86.95	60	120	
Sc (IS)	45	3	No Gas	34745402	15.56	43446903	79.97	60	120	
Ge Internal Standard	72	1	HMI H2	9344337	0.41	10271630	90.97	60	120	
Ge Internal Standard	72	2	HMI He	1021461	0.69	1158236	88.19	60	120	
In Internal Standard	115	2	HMI He	3456259	0.32	3843567	89.92	60	120	
Ho-165	165	2	HMI He	17539978	0.31	18572367	94.44	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	187_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:22:14-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-13.969	ppb	-11.4	2756854	10	
Be	9	1	6	0.002	ppb	1345.7	3	0.5	
B	11	1	6	18.812	ppb	7.6	6168	0.5	>RL
Na	23	1	45	314.425	ppb	0.6	1752485	25	>RL
Na	23	2	45	283.340	ppb	1.7	117995	25	>RL
Mg	24	2	45	7.432	ppb	17.7	1173	25	
Al	27	2	45	6.053	ppb	9.4	213	15	
K	39	1	45	81.311	ppb	7.4	8828096	50	>RL
K	39	2	45	4.630	ppb	130.3	12943	50	
Ca	40	1	45	5.091	ppb	39.9	130672	50	
Ca	44	2	45	3.207	ppb	260.5	57	25	
Ti	47	2	45	-0.128	ppb	0.0	0	0.5	
V	51	2	72	0.135	ppb	104.3	1383	1	
Cr	52	2	72	-0.011	ppb	-597.7	217	1	
Mn	55	2	72	0.076	ppb	120.5	143	0.5	
Fe	57	2	72	3.701	ppb	21.1	240	25	
Co	59	2	72	0.002	ppb	1348.7	70	0.5	
Ni	60	2	72	0.043	ppb	280.9	193	1	
Cu	63	2	72	0.285	ppb	50.9	1804	1	
Zn	66	2	72	-0.148	ppb	-155.7	327	5	
As	75	2	72	-0.014	ppb	-282.4	22	1	
Se	78	1	72	0.026	ppb	424.8	45	1	
Sr	88	2	72	0.119	ppb	84.8	97	0.5	
Zr	90	2	72	-5.037	ppb	-95.7	57	1	
Nb	93	2	72	1.521	ppb	24.5	12703	2	
Mo	95	2	115	0.067	ppb	26.0	137	0.5	
Pd	105	2	115	-0.020	ppb	-93.6	43	1	
Ag	107	2	115	0.001	ppb	599.9	53	1	
Cd	111	2	115	0.009	ppb	173.2	3	0.5	
Sn	120	2	115	0.064	ppb	40.0	300	1	
Sb	121	2	115	0.320	ppb	17.3	480	0.6	
Ba	137	2	115	0.095	ppb	137.4	33	0.5	
W	182	2	165	0.095	ppb	46.6	1567	1	
Pt	195	2	165	0.025	ppb	51.0	127	1	
Tl	205	2	165	0.002	ppb	289.5	233	0.1	
Pb	208	2	165	0.013	ppb	102.6	987	0.5	
Th	232	2	165	0.012	ppb	15.2	797	1	
U	238	2	165	0.031	ppb	16.4	873	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	597716	1.15	680701	87.81	60	120	
Sc (IS)	45	1	HMI H2	24369645	0.62	26528605	91.86	60	120	
Sc (IS)	45	2	HMI He	906234	0.31	1014720	89.31	60	120	
Sc (IS)	45	3	No Gas	39171794	0.25	43446903	90.16	60	120	
Ge Internal Standard	72	1	HMI H2	9552280	0.54	10271630	93.00	60	120	
Ge Internal Standard	72	2	HMI He	1043225	0.81	1158236	90.07	60	120	
In Internal Standard	115	2	HMI He	3534535	0.29	3843567	91.96	60	120	
Ho-165	165	2	HMI He	17790867	0.93	18572367	95.79	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	188LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:26:00-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-10.427	ppb	-20.552	2863774	50	-20.9	70	130	>+/-30%
Be	9	1	6	0.925	ppb	13.735	260	1	92.5	70	130	
Na	23	2	45	262.883	ppb	3.215	115653	50	525.8	70	130	>+/-30%
Mg	24	2	45	58.337	ppb	10.027	6172	50	116.7	70	130	
Al	27	2	45	36.635	ppb	6.805	1053	30	122.1	70	130	
K	39	2	45	95.824	ppb	10.325	17835	100	95.8	70	130	
Ca	44	2	45	39.457	ppb	9.353	160	50	78.9	70	130	
V	51	2	72	5.026	ppb	2.162	6078	5	100.5	70	130	
Cr	52	2	72	2.032	ppb	8.787	2750	2	101.6	70	130	
Mn	55	2	72	1.022	ppb	22.566	637	1	102.2	70	130	
Fe	57	2	72	52.490	ppb	10.982	1410	50	105.0	70	130	
Co	59	2	72	0.946	ppb	13.307	2100	1	94.6	70	130	
Ni	60	2	72	2.284	ppb	16.268	1530	2	114.2	70	130	
Cu	63	2	72	2.178	ppb	1.338	5015	2	108.9	70	130	
Zn	66	2	72	10.536	ppb	10.195	2830	10	105.4	70	130	
As	75	2	72	4.666	ppb	5.016	735	5	93.3	70	130	
Se	78	1	72	4.967	ppb	8.437	1147	5	99.3	70	130	
Sr	88	2	72	1.029	ppb	29.888	617	1	102.9	70	130	
Zr	90	2	72	15.655	ppb	76.940	160	0.5	3131.0	70	130	>+/-30%
Nb	93	2	72	5.913	ppb	3.960	26078	2	295.6	70	130	>+/-30%
Mo	95	2	115	1.697	ppb	7.718	1557	2	84.8	70	130	
Pd	105	2	115	-0.021	ppb	-77.787	43	1	-2.1	70	130	>+/-30%
Ag	107	2	115	5.046	ppb	3.464	14502	5	100.9	70	130	
Cd	111	2	115	1.022	ppb	6.982	397	1	102.2	70	130	
Sn	120	2	115	9.493	ppb	5.962	10478	10	94.9	70	130	
Sb	121	2	115	2.027	ppb	14.900	2124	2	101.4	70	130	
Ba	137	2	115	1.027	ppb	10.508	337	1	102.7	70	130	
W	182	2	165	5.069	ppb	2.464	23435	1	506.9	70	130	>+/-30%
Pt	195	2	165	0.033	ppb	35.067	157	1	3.3	70	130	>+/-30%
Tl	205	2	165	1.002	ppb	0.853	8680	1	100.2	70	130	
Pb	208	2	165	1.034	ppb	0.417	12440	1	103.4	70	130	
Th	232	2	165	1.997	ppb	0.322	27774	2	99.8	70	130	
U	238	2	165	0.984	ppb	1.684	14866	1	98.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	602379	0.35	680701	88.49	60	120	
Sc (IS)	45	1	HMI H2	24372813	0.28	26528605	91.87	60	120	
Sc (IS)	45	2	HMI He	922031	0.80	1014720	90.87	60	120	
Sc (IS)	45	3	No Gas	40309047	0.42	43446903	92.78	60	120	
Ge Internal Standard	72	1	HMI H2	9574452	0.82	10271630	93.21	60	120	
Ge Internal Standard	72	2	HMI He	1063759	1.06	1158236	91.84	60	120	
In Internal Standard	115	2	HMI He	3610473	1.76	3843567	93.94	60	120	
Ho-165	165	2	HMI He	18179891	1.20	18572367	97.89	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-4-b
Data File Name	189SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:29:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	259.839	ppb	259.839	2.04	153406	500000	
Li	7	2	45	250.621	ppb	250.621	6.51	7739	500000	
Li	7	3	45	241.310	ppb	241.310	2.59	4611390	50000	
Be	9	1	6	0.059	ppb	0.059	82.23	17	2000	
B	11	1	6	2535.267	ppb	2535.267	0.45	599192	2000	
Na	23	1	45	315027.704	ppb	315027.704	0.50	892411587	2000	>LDR
Na	23	2	45	310824.724	ppb	310824.724	0.44	64663387	400000	
Mg	24	2	45	324158.160	ppb	324158.160	0.47	30714479	400000	
Al	27	2	45	464.950	ppb	464.950	9.55	12376	400000	
K	39	1	45	18491.113	ppb	18491.113	0.55	60909484	400000	
K	39	2	45	19762.376	ppb	19762.376	1.08	992274	400000	
Ca	40	1	45	419552.364	ppb	419552.364	1.18	1820082053	400000	
Ca	44	2	45	464496.576	ppb	464496.576	0.90	1270545	400000	
Ti	47	2	45	11.037	ppb	11.037	13.17	253	4000	
V	51	2	72	0.756	ppb	0.756	44.72	1884	2000	
Cr	52	2	72	1.462	ppb	1.462	17.58	1924	5000	
Mn	55	2	72	983.989	ppb	983.989	0.51	479294	10000	
Fe	57	2	72	609.299	ppb	609.299	2.40	13814	400000	
Co	59	2	72	4.903	ppb	4.903	0.45	9977	2000	
Ni	60	2	72	28.639	ppb	28.639	6.36	16153	5000	
Cu	63	2	72	2.413	ppb	2.413	12.37	5081	5000	
Zn	66	2	72	6.780	ppb	6.780	13.47	1834	5000	
As	75	2	72	0.873	ppb	0.873	24.71	148	2000	
Se	78	1	72	221.460	ppb	221.460	3.23	45560	2000	
Sr	88	2	72	5159.769	ppb	5159.769	0.53	2765660	4000	
Zr	90	2	72	178.403	ppb	178.403	16.37	903	1000	
Nb	93	2	72	-1.315	ppb	-1.315	-7.12	4208	200	
Mo	95	2	115	10.104	ppb	10.104	2.66	8246	2000	
Pd	105	2	115	0.073	ppb	0.073	45.15	160	100	
Ag	107	2	115	0.000	ppb	0.000	-20949.66	47	100	
Cd	111	2	115	0.019	ppb	0.019	86.63	7	2000	
Sn	120	2	115	0.531	ppb	0.531	80.08	757	2000	
Sb	121	2	115	0.047	ppb	0.047	216.83	213	1000	
Ba	137	2	115	17.707	ppb	17.707	3.82	5345	5000	
W	182	2	165	16.067	ppb	16.067	0.34	68227	100	
Pt	195	2	165	-0.001	ppb	-0.001	-522.73	33	100	
Tl	205	2	165	0.085	ppb	0.085	13.35	890	2000	
Pb	208	2	165	0.323	ppb	0.323	7.29	4267	5000	
Th	232	2	165	0.121	ppb	0.121	2.71	2190	2000	
U	238	2	165	96.297	ppb	96.297	0.23	1343236	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	517542	0.87	680701	76.03	60	120	
Sc (IS)	45	1	HMI H2	23291910	0.32	26528605	87.80	60	120	
Sc (IS)	45	2	HMI He	893242	0.88	1014720	88.03	60	120	
Sc (IS)	45	3	No Gas	38945639	0.62	43446903	89.64	60	120	
Ge Internal Standard	72	1	HMI H2	8835282	0.57	10271630	86.02	60	120	
Ge Internal Standard	72	2	HMI He	999571	0.53	1158236	86.30	60	120	
In Internal Standard	115	2	HMI He	3357980	1.47	3843567	87.37	60	120	
Ho-165	165	2	HMI He	17294722	0.43	18572367	93.12	60	120	

Sample Report

Sample Table

Sample Name	280-116408-e-5-b
Data File Name	190SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:33:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	246.942	ppb	246.942	5.62	149606	500000	
Li	7	2	45	300.774	ppb	300.774	16.88	7972	500000	
Li	7	3	45	228.547	ppb	228.547	7.67	4523681	50000	
Be	9	1	6	0.032	ppb	0.032	1.45	10	2000	
B	11	1	6	2190.185	ppb	2190.185	0.67	504698	2000	
Na	23	1	45	341699.438	ppb	341699.438	1.34	963012359	2000	>LDR
Na	23	2	45	341146.500	ppb	341146.500	1.87	68097244	400000	
Mg	24	2	45	344395.898	ppb	344395.898	2.35	31311461	400000	
Al	27	2	45	80.070	ppb	80.070	19.64	2080	400000	
K	39	1	45	16699.585	ppb	16699.585	0.78	55523388	400000	
K	39	2	45	18103.375	ppb	18103.375	1.39	873315	400000	
Ca	40	1	45	328984.697	ppb	328984.697	0.97	1420022912	400000	
Ca	44	2	45	350953.078	ppb	350953.078	0.93	921238	400000	
Ti	47	2	45	2.923	ppb	2.923	38.47	67	4000	
V	51	2	72	-0.143	ppb	-0.143	-53.91	1040	2000	
Cr	52	2	72	0.435	ppb	0.435	13.70	703	5000	
Mn	55	2	72	22.080	ppb	22.080	0.75	10484	10000	
Fe	57	2	72	135.823	ppb	135.823	8.73	3087	400000	
Co	59	2	72	0.606	ppb	0.606	14.82	1243	2000	
Ni	60	2	72	14.000	ppb	14.000	4.59	7706	5000	
Cu	63	2	72	3.344	ppb	3.344	2.08	6328	5000	
Zn	66	2	72	7.067	ppb	7.067	14.90	1830	5000	
As	75	2	72	1.462	ppb	1.462	17.42	224	2000	
Se	78	1	72	58.917	ppb	58.917	1.23	12124	2000	
Sr	88	2	72	5546.011	ppb	5546.011	1.80	2871513	4000	
Zr	90	2	72	225.136	ppb	225.136	20.21	1083	1000	
Nb	93	2	72	-1.852	ppb	-1.852	-1.79	2610	200	
Mo	95	2	115	0.303	ppb	0.303	20.53	310	2000	
Pd	105	2	115	0.056	ppb	0.056	95.44	133	100	
Ag	107	2	115	0.014	ppb	0.014	2.36	80	100	
Cd	111	2	115	0.058	ppb	0.058	100.68	20	2000	
Sn	120	2	115	1.090	ppb	1.090	4.63	1270	2000	
Sb	121	2	115	0.498	ppb	0.498	7.09	593	1000	
Ba	137	2	115	14.891	ppb	14.891	7.59	4344	5000	
W	182	2	165	0.103	ppb	0.103	46.63	1503	100	
Pt	195	2	165	0.004	ppb	0.004	73.80	50	100	
Tl	205	2	165	0.101	ppb	0.101	13.13	983	2000	
Pb	208	2	165	0.103	ppb	0.103	13.11	1860	5000	
Th	232	2	165	0.014	ppb	0.014	26.17	780	2000	
U	238	2	165	57.302	ppb	57.302	0.35	773468	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	504501	1.09	680701	74.11	60	120	
Sc (IS)	45	1	HMI H2	23175794	0.89	26528605	87.36	60	120	
Sc (IS)	45	2	HMI He	857273	1.50	1014720	84.48	60	120	
Sc (IS)	45	3	No Gas	39000887	0.83	43446903	89.77	60	120	
Ge Internal Standard	72	1	HMI H2	8816983	0.82	10271630	85.84	60	120	
Ge Internal Standard	72	2	HMI He	965654	1.74	1158236	83.37	60	120	
In Internal Standard	115	2	HMI He	3245570	1.03	3843567	84.44	60	120	
Ho-165	165	2	HMI He	16732356	1.31	18572367	90.09	60	120	

Sample Report

Sample Table

Sample Name	280-116593-e-1-d
Data File Name	191SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:37:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	399.367	ppb	399.367	2.61	167272	500000	
Li	7	2	45	476.751	ppb	476.751	4.06	9083	500000	
Li	7	3	45	391.785	ppb	391.785	0.78	5124318	50000	
Be	9	1	6	0.073	ppb	0.073	142.81	17	2000	
B	11	1	6	13439.413	ppb	13439.413	1.39	2647496	2000	>LDR
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2069917.453	ppb	2069917.453	1.67	378543074	400000	>LDR
Mg	24	2	45	619413.014	ppb	619413.014	2.39	51629553	400000	
Al	27	2	45	21.845	ppb	21.845	31.02	553	400000	
K	39	1	45	197082.630	ppb	197082.630	0.52	511745992	400000	
K	39	2	45	203824.276	ppb	203824.276	1.38	8901005	400000	
Ca	40	1	45	411609.104	ppb	411609.104	0.41	1603310109	400000	
Ca	44	2	45	462346.667	ppb	462346.667	5.33	1112209	400000	
Ti	47	2	45	1.207	ppb	1.207	62.99	27	4000	
V	51	2	72	-0.090	ppb	-0.090	-101.42	960	2000	
Cr	52	2	72	0.265	ppb	0.265	20.75	453	5000	
Mn	55	2	72	5417.827	ppb	5417.827	2.06	2253444	10000	
Fe	57	2	72	851.386	ppb	851.386	4.76	16430	400000	
Co	59	2	72	0.770	ppb	0.770	12.65	1383	2000	
Ni	60	2	72	11.864	ppb	11.864	6.55	5795	5000	
Cu	63	2	72	0.886	ppb	0.886	14.72	2284	5000	
Zn	66	2	72	3.242	ppb	3.242	9.93	903	5000	
As	75	2	72	109.407	ppb	109.407	0.38	13412	2000	
Se	78	1	72	3.242	ppb	3.242	20.56	612	2000	
Sr	88	2	72	9900.675	ppb	9900.675	1.82	4532236	4000	
Zr	90	2	72	54.950	ppb	54.950	6.70	283	1000	
Nb	93	2	72	-1.253	ppb	-1.253	-13.25	3744	200	
Mo	95	2	115	85.087	ppb	85.087	3.36	58050	2000	
Pd	105	2	115	0.166	ppb	0.166	29.82	233	100	
Ag	107	2	115	0.048	ppb	0.048	188.81	147	100	
Cd	111	2	115	0.044	ppb	0.044	86.64	13	2000	
Sn	120	2	115	0.024	ppb	0.024	206.40	207	2000	
Sb	121	2	115	5.154	ppb	5.154	4.64	4007	1000	
Ba	137	2	115	33.819	ppb	33.819	1.10	8610	5000	
W	182	2	165	27.805	ppb	27.805	1.53	99469	100	
Pt	195	2	165	-0.006	ppb	-0.006	-30.86	13	100	
Tl	205	2	165	-0.008	ppb	-0.008	-45.52	123	2000	
Pb	208	2	165	0.016	ppb	0.016	122.27	843	5000	
Th	232	2	165	0.006	ppb	0.006	21.65	593	2000	
U	238	2	165	0.487	ppb	0.487	7.24	6108	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	431907	0.28	680701	63.45	60	120	
Sc (IS)	45	1	HMI H2	20913779	0.12	26528605	78.83	60	120	
Sc (IS)	45	2	HMI He	785903	1.18	1014720	77.45	60	120	
Sc (IS)	45	3	No Gas	34926454	0.57	43446903	80.39	60	120	
Ge Internal Standard	72	1	HMI H2	7689067	0.42	10271630	74.86	60	120	
Ge Internal Standard	72	2	HMI He	853813	1.25	1158236	73.72	60	120	
In Internal Standard	115	2	HMI He	2831864	1.82	3843567	73.68	60	120	
Ho-165	165	2	HMI He	14672379	1.20	18572367	79.00	60	120	

Sample Report

Sample Table

Sample Name	280-116545-d-1-a
Data File Name	192SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:41:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-35.424	ppb	-35.424	-9.02	80083	500000	
Li	7	2	45	-26.271	ppb	-26.271	-93.65	4318	500000	
Li	7	3	45	-52.029	ppb	-52.029	-7.38	2423667	50000	
Be	9	1	6	0.032	ppb	0.032	230.61	10	2000	
B	11	1	6	1017.589	ppb	1017.589	0.95	236336	2000	
Na	23	1	45	88729.551	ppb	88729.551	1.00	240685456	2000	>LDR
Na	23	2	45	88573.224	ppb	88573.224	0.66	17416570	400000	
Mg	24	2	45	27220.627	ppb	27220.627	0.84	2432838	400000	
Al	27	2	45	19.063	ppb	19.063	16.45	523	400000	
K	39	1	45	2889.300	ppb	2889.300	0.42	15708456	400000	
K	39	2	45	4261.721	ppb	4261.721	1.05	211076	400000	
Ca	40	1	45	77928.936	ppb	77928.936	0.45	323079762	400000	
Ca	44	2	45	78862.151	ppb	78862.151	1.27	203463	400000	
Ti	47	2	45	1.112	ppb	1.112	193.17	27	4000	
V	51	2	72	-0.160	ppb	-0.160	-64.67	1043	2000	
Cr	52	2	72	0.235	ppb	0.235	20.45	487	5000	
Mn	55	2	72	637.592	ppb	637.592	0.53	305312	10000	
Fe	57	2	72	483.818	ppb	483.818	2.31	10811	400000	
Co	59	2	72	0.378	ppb	0.378	19.35	813	2000	
Ni	60	2	72	1.048	ppb	1.048	9.59	733	5000	
Cu	63	2	72	1.614	ppb	1.614	10.48	3757	5000	
Zn	66	2	72	2.443	ppb	2.443	11.92	867	5000	
As	75	2	72	1.012	ppb	1.012	9.54	165	2000	
Se	78	1	72	0.072	ppb	0.072	98.12	51	2000	
Sr	88	2	72	459.233	ppb	459.233	0.92	241979	4000	
Zr	90	2	72	34.534	ppb	34.534	47.84	233	1000	
Nb	93	2	72	-2.454	ppb	-2.454	-1.72	993	200	
Mo	95	2	115	16.670	ppb	16.670	3.17	13404	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-147.33	60	100	
Ag	107	2	115	0.001	ppb	0.001	1503.22	50	100	
Cd	111	2	115	0.019	ppb	0.019	86.63	7	2000	
Sn	120	2	115	0.321	ppb	0.321	42.23	537	2000	
Sb	121	2	115	-0.124	ppb	-0.124	-24.33	60	1000	
Ba	137	2	115	105.642	ppb	105.642	0.85	31524	5000	
W	182	2	165	0.098	ppb	0.098	61.82	1520	100	
Pt	195	2	165	0.003	ppb	0.003	159.00	47	100	
Tl	205	2	165	-0.009	ppb	-0.009	-27.02	133	2000	
Pb	208	2	165	0.102	ppb	0.102	13.38	1894	5000	
Th	232	2	165	-0.013	ppb	-0.013	-93.57	453	2000	
U	238	2	165	1.683	ppb	1.683	0.84	23686	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	507447	0.56	680701	74.55	60	120	
Sc (IS)	45	1	HMI H2	22253833	0.43	26528605	83.89	60	120	
Sc (IS)	45	2	HMI He	842416	0.43	1014720	83.02	60	120	
Sc (IS)	45	3	No Gas	38339213	0.47	43446903	88.24	60	120	
Ge Internal Standard	72	1	HMI H2	8711865	0.41	10271630	84.81	60	120	
Ge Internal Standard	72	2	HMI He	982546	0.09	1158236	84.83	60	120	
In Internal Standard	115	2	HMI He	3320433	1.35	3843567	86.39	60	120	
Ho-165	165	2	HMI He	17153701	0.86	18572367	92.36	60	120	

Sample Report

Sample Table

Sample Name	280-116545-d-2-a
Data File Name	193SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:45:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-21.527	ppb	-21.527	-6.46	87230	500000	
Li	7	2	45	-0.976	ppb	-0.976	-1201.92	4811	500000	
Li	7	3	45	-24.479	ppb	-24.479	-14.18	2621736	50000	
Be	9	1	6	0.003	ppb	0.003	771.52	3	2000	
B	11	1	6	1049.826	ppb	1049.826	1.36	253253	2000	
Na	23	1	45	98454.571	ppb	98454.571	0.77	279870816	2000	>LDR
Na	23	2	45	97993.548	ppb	97993.548	0.99	20189464	400000	
Mg	24	2	45	11711.898	ppb	11711.898	1.18	1097330	400000	
Al	27	2	45	244.358	ppb	244.358	2.99	6449	400000	
K	39	1	45	5798.715	ppb	5798.715	1.22	24771310	400000	
K	39	2	45	7079.146	ppb	7079.146	0.52	359326	400000	
Ca	40	1	45	49554.389	ppb	49554.389	0.84	215394883	400000	
Ca	44	2	45	52691.529	ppb	52691.529	0.87	142517	400000	
Ti	47	2	45	5.200	ppb	5.200	55.46	120	4000	
V	51	2	72	3.988	ppb	3.988	5.16	4908	2000	
Cr	52	2	72	0.712	ppb	0.712	36.58	1080	5000	
Mn	55	2	72	31.170	ppb	31.170	3.99	15689	10000	
Fe	57	2	72	307.770	ppb	307.770	4.79	7239	400000	
Co	59	2	72	0.205	ppb	0.205	15.63	490	2000	
Ni	60	2	72	2.687	ppb	2.687	6.92	1707	5000	
Cu	63	2	72	1.622	ppb	1.622	1.16	3937	5000	
Zn	66	2	72	3.809	ppb	3.809	8.54	1213	5000	
As	75	2	72	9.970	ppb	9.970	6.44	1490	2000	
Se	78	1	72	0.334	ppb	0.334	11.43	109	2000	
Sr	88	2	72	829.288	ppb	829.288	0.73	456431	4000	
Zr	90	2	72	104.113	ppb	104.113	26.26	573	1000	
Nb	93	2	72	-2.478	ppb	-2.478	-2.31	967	200	
Mo	95	2	115	9.344	ppb	9.344	1.69	7933	2000	
Pd	105	2	115	-0.032	ppb	-0.032	-49.22	27	100	
Ag	107	2	115	-0.003	ppb	-0.003	-319.56	40	100	
Cd	111	2	115	0.018	ppb	0.018	173.21	7	2000	
Sn	120	2	115	0.023	ppb	0.023	451.74	253	2000	
Sb	121	2	115	0.417	ppb	0.417	16.78	563	1000	
Ba	137	2	115	56.204	ppb	56.204	3.87	17635	5000	
W	182	2	165	0.341	ppb	0.341	10.25	2610	100	
Pt	195	2	165	-0.002	ppb	-0.002	-120.08	30	100	
Tl	205	2	165	-0.009	ppb	-0.009	-34.91	140	2000	
Pb	208	2	165	0.260	ppb	0.260	13.70	3687	5000	
Th	232	2	165	0.032	ppb	0.032	40.81	1063	2000	
U	238	2	165	0.220	ppb	0.220	8.79	3574	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	527142	0.57	680701	77.44	60	120	
Sc (IS)	45	1	HMI H2	23327954	0.48	26528605	87.94	60	120	
Sc (IS)	45	2	HMI He	882979	1.31	1014720	87.02	60	120	
Sc (IS)	45	3	No Gas	38330246	0.48	43446903	88.22	60	120	
Ge Internal Standard	72	1	HMI H2	9174897	0.38	10271630	89.32	60	120	
Ge Internal Standard	72	2	HMI He	1026341	1.03	1158236	88.61	60	120	
In Internal Standard	115	2	HMI He	3490939	0.68	3843567	90.83	60	120	
Ho-165	165	2	HMI He	17712813	0.74	18572367	95.37	60	120	

Sample Report

Sample Table

Sample Name	280-116558-b-1-b
Data File Name	194SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:48:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-39.788	ppb	-39.788	-33.55	74552	500000	
Li	7	2	45	-38.453	ppb	-38.453	-82.73	4127	500000	
Li	7	3	45	-55.586	ppb	-55.586	-9.69	2256807	50000	
Be	9	1	6	0.085	ppb	0.085	52.30	20	2000	
B	11	1	6	1841.606	ppb	1841.606	6.99	377175	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	>LDR
Na	23	2	45	1662067.666	ppb	1662067.666	0.81	321243049	400000	
Mg	24	2	45	135435.200	ppb	135435.200	0.61	11931524	400000	
Al	27	2	45	574.358	ppb	574.358	2.96	14198	400000	
K	39	1	45	68958.264	ppb	68958.264	9.68	183872831	400000	
K	39	2	45	68924.170	ppb	68924.170	0.98	3188664	400000	
Ca	40	1	45	56298.843	ppb	56298.843	12.25	219090343	400000	
Ca	44	2	45	58332.992	ppb	58332.992	1.63	148383	400000	
Ti	47	2	45	186.927	ppb	186.927	4.09	3947	4000	
V	51	2	72	66.618	ppb	66.618	1.83	56584	2000	
Cr	52	2	72	21.386	ppb	21.386	3.12	23313	5000	
Mn	55	2	72	154.699	ppb	154.699	2.64	70049	10000	
Fe	57	2	72	1192.640	ppb	1192.640	3.96	24976	400000	
Co	59	2	72	0.558	ppb	0.558	17.57	1107	2000	
Ni	60	2	72	2.771	ppb	2.771	13.30	1587	5000	
Cu	63	2	72	12.866	ppb	12.866	1.72	20021	5000	
Zn	66	2	72	8.154	ppb	8.154	5.73	1984	5000	
As	75	2	72	17.380	ppb	17.380	3.74	2334	2000	
Se	78	1	72	0.570	ppb	0.570	22.13	139	2000	
Sr	88	2	72	988.411	ppb	988.411	1.29	491965	4000	
Zr	90	2	72	396.869	ppb	396.869	8.49	1777	1000	
Nb	93	2	72	-1.260	ppb	-1.260	-5.66	4051	200	
Mo	95	2	115	1.735	ppb	1.735	9.48	1363	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-80.02	50	100	
Ag	107	2	115	0.011	ppb	0.011	70.41	70	100	
Cd	111	2	115	0.030	ppb	0.030	173.21	10	2000	
Sn	120	2	115	0.119	ppb	0.119	94.95	313	2000	
Sb	121	2	115	0.055	ppb	0.055	71.45	203	1000	
Ba	137	2	115	94.955	ppb	94.955	0.07	26433	5000	
W	182	2	165	2.023	ppb	2.023	4.84	8797	100	
Pt	195	2	165	0.004	ppb	0.004	168.61	47	100	
Tl	205	2	165	-0.018	ppb	-0.018	-20.36	60	2000	
Pb	208	2	165	0.683	ppb	0.683	4.97	7438	5000	
Th	232	2	165	0.870	ppb	0.870	2.92	10902	2000	
U	238	2	165	3.506	ppb	3.506	2.78	45301	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	449182	4.60	680701	65.99	60	120	
Sc (IS)	45	1	HMI H2	21012017	7.33	26528605	79.21	60	120	
Sc (IS)	45	2	HMI He	830484	0.44	1014720	81.84	60	120	
Sc (IS)	45	3	No Gas	36082510	0.49	43446903	83.05	60	120	
Ge Internal Standard	72	1	HMI H2	7912951	5.71	10271630	77.04	60	120	
Ge Internal Standard	72	2	HMI He	928170	0.25	1158236	80.14	60	120	
In Internal Standard	115	2	HMI He	3097282	1.66	3843567	80.58	60	120	
Ho-165	165	2	HMI He	15892256	0.79	18572367	85.57	60	120	

Sample Report

Sample Table

Sample Name	280-116558-b-2-b
Data File Name	195SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:52:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.891	ppb	-31.891	-9.49	82252	500000	
Li	7	2	45	30.728	ppb	30.728	59.90	4848	500000	
Li	7	3	45	-31.704	ppb	-31.704	-6.87	2409635	50000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	118.366	ppb	118.366	1.92	28602	2000	
Na	23	1	45	13044.005	ppb	13044.005	0.46	36634254	2000	>LDR
Na	23	2	45	13453.121	ppb	13453.121	0.76	2645428	400000	
Mg	24	2	45	4861.190	ppb	4861.190	0.59	427413	400000	
Al	27	2	45	374.408	ppb	374.408	4.17	9243	400000	
K	39	1	45	3704.466	ppb	3704.466	1.64	18232087	400000	
K	39	2	45	5089.815	ppb	5089.815	0.76	245546	400000	
Ca	40	1	45	19809.151	ppb	19809.151	0.06	83592407	400000	
Ca	44	2	45	20472.923	ppb	20472.923	2.47	51953	400000	
Ti	47	2	45	4.785	ppb	4.785	30.55	103	4000	
V	51	2	72	4.006	ppb	4.006	6.40	4668	2000	
Cr	52	2	72	0.982	ppb	0.982	9.57	1327	5000	
Mn	55	2	72	441.002	ppb	441.002	0.97	209086	10000	
Fe	57	2	72	18978.095	ppb	18978.095	0.91	414351	400000	
Co	59	2	72	5.480	ppb	5.480	4.53	10845	2000	
Ni	60	2	72	11.666	ppb	11.666	4.79	6495	5000	
Cu	63	2	72	17.574	ppb	17.574	2.01	28205	5000	
Zn	66	2	72	24.951	ppb	24.951	3.64	5668	5000	
As	75	2	72	4.351	ppb	4.351	4.36	629	2000	
Se	78	1	72	0.950	ppb	0.950	4.55	235	2000	
Sr	88	2	72	147.157	ppb	147.157	1.88	76781	4000	
Zr	90	2	72	14.308	ppb	14.308	55.63	140	1000	
Nb	93	2	72	-2.544	ppb	-2.544	-1.24	737	200	
Mo	95	2	115	1.379	ppb	1.379	5.23	1173	2000	
Pd	105	2	115	-0.037	ppb	-0.037	-21.55	20	100	
Ag	107	2	115	0.261	ppb	0.261	8.03	730	100	
Cd	111	2	115	0.272	ppb	0.272	26.22	97	2000	
Sn	120	2	115	0.296	ppb	0.296	15.99	510	2000	
Sb	121	2	115	0.131	ppb	0.131	47.70	283	1000	
Ba	137	2	115	88.838	ppb	88.838	1.79	26433	5000	
W	182	2	165	0.073	ppb	0.073	40.56	1403	100	
Pt	195	2	165	0.004	ppb	0.004	72.55	50	100	
Tl	205	2	165	0.007	ppb	0.007	105.68	263	2000	
Pb	208	2	165	0.903	ppb	0.903	7.79	10239	5000	
Th	232	2	165	0.084	ppb	0.084	19.21	1684	2000	
U	238	2	165	0.233	ppb	0.233	9.31	3594	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	513371	0.54	680701	75.42	60	120	
Sc (IS)	45	1	HMI H2	22631114	0.09	26528605	85.31	60	120	
Sc (IS)	45	2	HMI He	828062	0.29	1014720	81.60	60	120	
Sc (IS)	45	3	No Gas	35942739	0.83	43446903	82.73	60	120	
Ge Internal Standard	72	1	HMI H2	8938472	0.33	10271630	87.02	60	120	
Ge Internal Standard	72	2	HMI He	972690	0.15	1158236	83.98	60	120	
In Internal Standard	115	2	HMI He	3310580	0.45	3843567	86.13	60	120	
Ho-165	165	2	HMI He	16968221	0.54	18572367	91.36	60	120	

Sample Report

Sample Table

Sample Name	280-116558-b-4-b
Data File Name	196SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T22:56:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-30.188	ppb	-30.188	-28.27	83239	500000	
Li	7	2	45	-16.208	ppb	-16.208	-92.98	4521	500000	
Li	7	3	45	-31.251	ppb	-31.251	-15.27	2454132	50000	
Be	9	1	6	0.016	ppb	0.016	285.75	7	2000	
B	11	1	6	35.671	ppb	35.671	3.40	9604	2000	
Na	23	1	45	692.962	ppb	692.962	2.17	2687834	2000	
Na	23	2	45	660.385	ppb	660.385	1.62	187504	400000	
Mg	24	2	45	8.157	ppb	8.157	7.23	1180	400000	
Al	27	2	45	13.791	ppb	13.791	0.80	400	400000	
K	39	1	45	-1341.371	ppb	-1341.371	-1.68	4289354	400000	
K	39	2	45	25.449	ppb	25.449	17.24	13283	400000	
Ca	40	1	45	5.563	ppb	5.563	25.35	124198	400000	
Ca	44	2	45	6.907	ppb	6.907	285.33	63	400000	
Ti	47	2	45	0.179	ppb	0.179	297.15	7	4000	
V	51	2	72	-0.608	ppb	-0.608	-25.03	657	2000	
Cr	52	2	72	0.187	ppb	0.187	68.16	437	5000	
Mn	55	2	72	1.024	ppb	1.024	11.09	597	10000	
Fe	57	2	72	8.373	ppb	8.373	22.30	333	400000	
Co	59	2	72	-0.003	ppb	-0.003	-593.57	57	2000	
Ni	60	2	72	-0.007	ppb	-0.007	-151.17	157	5000	
Cu	63	2	72	1.963	ppb	1.963	4.94	4354	5000	
Zn	66	2	72	2.651	ppb	2.651	12.15	923	5000	
As	75	2	72	-0.011	ppb	-0.011	-190.22	21	2000	
Se	78	1	72	0.759	ppb	0.759	14.46	195	2000	
Sr	88	2	72	0.190	ppb	0.190	45.21	130	4000	
Zr	90	2	72	4.924	ppb	4.924	116.59	100	1000	
Nb	93	2	72	-2.613	ppb	-2.613	-0.24	560	200	
Mo	95	2	115	-0.016	ppb	-0.016	-194.17	63	2000	
Pd	105	2	115	-0.045	ppb	-0.045	-17.31	10	100	
Ag	107	2	115	-0.005	ppb	-0.005	-221.06	33	100	
Cd	111	2	115	0.018	ppb	0.018	173.21	7	2000	
Sn	120	2	115	0.048	ppb	0.048	181.84	273	2000	
Sb	121	2	115	-0.155	ppb	-0.155	-18.08	33	1000	
Ba	137	2	115	0.284	ppb	0.284	50.09	90	5000	
W	182	2	165	0.030	ppb	0.030	85.65	1240	100	
Pt	195	2	165	0.014	ppb	0.014	97.21	83	100	
Tl	205	2	165	-0.008	ppb	-0.008	-56.39	143	2000	
Pb	208	2	165	0.093	ppb	0.093	2.98	1803	5000	
Th	232	2	165	-0.019	ppb	-0.019	-48.23	370	2000	
U	238	2	165	-0.013	ppb	-0.013	-23.64	240	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	533346	0.79	680701	78.35	60	120	
Sc (IS)	45	1	HMI H2	22797170	0.68	26528605	85.93	60	120	
Sc (IS)	45	2	HMI He	860363	0.70	1014720	84.79	60	120	
Sc (IS)	45	3	No Gas	36563251	1.08	43446903	84.16	60	120	
Ge Internal Standard	72	1	HMI H2	8923943	0.33	10271630	86.88	60	120	
Ge Internal Standard	72	2	HMI He	995267	0.02	1158236	85.93	60	120	
In Internal Standard	115	2	HMI He	3407879	0.68	3843567	88.66	60	120	
Ho-165	165	2	HMI He	17186281	0.41	18572367	92.54	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-1-d
Data File Name	197SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:00:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	354.298	ppb	354.298	18.27	160947	500000	
Li	7	2	45	409.192	ppb	409.192	9.06	8723	500000	
Li	7	3	45	346.871	ppb	346.871	3.30	4872973	50000	
Be	9	1	6	0.039	ppb	0.039	220.38	10	2000	
B	11	1	6	1513.945	ppb	1513.945	10.89	322989	2000	
Na	23	1	45	888849.164	ppb	888849.164	13.28	2300081459	2000	>LDR
Na	23	2	45	875455.990	ppb	875455.990	0.14	166254981	400000	
Mg	24	2	45	1707.622	ppb	1707.622	0.50	148194	400000	
Al	27	2	45	38.597	ppb	38.597	9.20	980	400000	
K	39	1	45	2185.822	ppb	2185.822	23.02	13217166	400000	
K	39	2	45	3128.862	ppb	3128.862	1.29	153131	400000	
Ca	40	1	45	12428.979	ppb	12428.979	14.56	49340509	400000	
Ca	44	2	45	15816.129	ppb	15816.129	2.78	39558	400000	
Ti	47	2	45	0.032	ppb	0.032	877.54	3	4000	
V	51	2	72	4.180	ppb	4.180	3.90	4588	2000	
Cr	52	2	72	0.066	ppb	0.066	62.16	277	5000	
Mn	55	2	72	11.917	ppb	11.917	7.17	5471	10000	
Fe	57	2	72	12.547	ppb	12.547	35.30	397	400000	
Co	59	2	72	-0.003	ppb	-0.003	-214.98	53	2000	
Ni	60	2	72	-0.012	ppb	-0.012	-492.64	143	5000	
Cu	63	2	72	1.048	ppb	1.048	6.14	2714	5000	
Zn	66	2	72	5.780	ppb	5.780	15.03	1497	5000	
As	75	2	72	0.350	ppb	0.350	7.19	67	2000	
Se	78	1	72	5.204	ppb	5.204	25.04	1015	2000	
Sr	88	2	72	681.697	ppb	681.697	0.59	338525	4000	
Zr	90	2	72	11.972	ppb	11.972	58.35	123	1000	
Nb	93	2	72	-2.509	ppb	-2.509	-1.85	793	200	
Mo	95	2	115	167.304	ppb	167.304	2.12	126935	2000	
Pd	105	2	115	-0.033	ppb	-0.033	-52.00	23	100	
Ag	107	2	115	0.000	ppb	0.000	-9392.99	43	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.141	ppb	0.141	37.05	340	2000	
Sb	121	2	115	-0.017	ppb	-0.017	-308.90	147	1000	
Ba	137	2	115	7.585	ppb	7.585	2.37	2150	5000	
W	182	2	165	0.126	ppb	0.126	39.19	1527	100	
Pt	195	2	165	0.012	ppb	0.012	102.96	73	100	
Tl	205	2	165	-0.003	ppb	-0.003	-223.09	173	2000	
Pb	208	2	165	1.279	ppb	1.279	6.51	13362	5000	
Th	232	2	165	-0.011	ppb	-0.011	-109.65	447	2000	
U	238	2	165	48.153	ppb	48.153	0.57	621703	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	468839	6.33	680701	68.88	60	120	
Sc (IS)	45	1	HMI H2	21434608	7.70	26528605	80.80	60	120	
Sc (IS)	45	2	HMI He	815854	0.57	1014720	80.40	60	120	
Sc (IS)	45	3	No Gas	35245882	0.88	43446903	81.12	60	120	
Ge Internal Standard	72	1	HMI H2	8194778	7.41	10271630	79.78	60	120	
Ge Internal Standard	72	2	HMI He	926034	0.90	1158236	79.95	60	120	
In Internal Standard	115	2	HMI He	3150176	1.38	3843567	81.96	60	120	
Ho-165	165	2	HMI He	16003160	1.04	18572367	86.17	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	198_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:04:09-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	489.935	ppb	33.169	193962	500	98.0	90	110	
Li	7	2	45	505.319	ppb	13.475	10027	500	101.1	90	110	
Li	7	3	45	436.547	ppb	1.298	5806713	500	87.3	90	110	>+\-10%
Be	9	1	6	53.520	ppb	24.636	12723	50	107.0	90	110	
B	11	1	6	103.316	ppb	18.890	25282	50	206.6	90	110	>+\-10%
Na	23	1	45	6573.729	ppb	24.804	18015749	5000	131.5	90	110	>+\-10%
Na	23	2	45	6248.168	ppb	2.074	1277620	5000	125.0	90	110	>+\-10%
Mg	24	2	45	5096.351	ppb	2.285	455355	5000	101.9	90	110	
Al	27	2	45	5105.777	ppb	3.750	127497	5000	102.1	90	110	
K	39	1	45	5258.556	ppb	30.806	21633517	5000	105.2	90	110	
K	39	2	45	5089.821	ppb	1.642	249551	5000	101.8	90	110	
Ca	40	1	45	5385.558	ppb	28.287	21701956	5000	107.7	90	110	
Ca	44	2	45	5366.103	ppb	4.401	13874	5000	107.3	90	110	
Ti	47	2	45	50.813	ppb	6.224	1090	50	101.6	90	110	
V	51	2	72	51.245	ppb	2.747	46071	50	102.5	90	110	
Cr	52	2	72	52.379	ppb	2.955	59770	50	104.8	90	110	
Mn	55	2	72	52.260	ppb	1.478	24969	50	104.5	90	110	
Fe	57	2	72	5095.065	ppb	2.204	111802	5000	101.9	90	110	
Co	59	2	72	52.158	ppb	1.254	103121	50	104.3	90	110	
Ni	60	2	72	53.343	ppb	2.041	29261	50	106.7	90	110	
Cu	63	2	72	54.019	ppb	2.499	84460	50	108.0	90	110	
Zn	66	2	72	52.416	ppb	5.962	11582	50	104.8	90	110	
As	75	2	72	51.552	ppb	4.784	7239	50	103.1	90	110	
Se	78	1	72	52.984	ppb	21.119	10611	50	106.0	90	110	
Sr	88	2	72	51.085	ppb	3.816	26780	50	102.2	90	110	
Zr	90	2	72	54.953	ppb	69.934	323	50	109.9	90	110	
Nb	93	2	72	89.297	ppb	2.518	252722	100	89.3	90	110	>+\-10%
Mo	95	2	115	49.605	ppb	3.411	39550	50	99.2	90	110	
Pd	105	2	115	51.704	ppb	1.713	64706	50	103.4	90	110	
Ag	107	2	115	51.557	ppb	2.245	135225	50	103.1	90	110	
Cd	111	2	115	52.491	ppb	4.833	18650	50	105.0	90	110	
Sn	120	2	115	50.383	ppb	3.825	49958	50	100.8	90	110	
Sb	121	2	115	49.161	ppb	4.412	43202	50	98.3	90	110	
Ba	137	2	115	51.812	ppb	2.349	15396	50	103.6	90	110	
W	182	2	165	50.480	ppb	2.383	204754	50	101.0	90	110	
Pt	195	2	165	50.506	ppb	2.565	166223	50	101.0	90	110	
Tl	205	2	165	51.454	ppb	1.950	399656	50	102.9	90	110	
Pb	208	2	165	52.023	ppb	2.839	535759	50	104.0	90	110	
Th	232	2	165	51.795	ppb	1.654	647035	50	103.6	90	110	
U	238	2	165	51.855	ppb	2.340	698938	50	103.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524059	10.54	680701	76.99	60	120	
Sc (IS)	45	1	HMI H2	22166051	15.00	26528605	83.56	60	120	
Sc (IS)	45	2	HMI He	841690	1.37	1014720	82.95	60	120	
Sc (IS)	45	3	No Gas	37428419	0.21	43446903	86.15	60	120	
Ge Internal Standard	72	1	HMI H2	8722488	11.81	10271630	84.92	60	120	
Ge Internal Standard	72	2	HMI He	976779	0.84	1158236	84.33	60	120	
In Internal Standard	115	2	HMI He	3306271	1.08	3843567	86.02	60	120	
Ho-165	165	2	HMI He	16710430	1.52	18572367	89.97	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	199_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:07:55-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-27.968	ppb	-15.3	2582308	10	
Be	9	1	6	0.015	ppb	147.1	7	0.5	
B	11	1	6	27.347	ppb	3.2	7979	0.5	>RL
Na	23	1	45	503.692	ppb	0.7	2203407	25	>RL
Na	23	2	45	446.385	ppb	0.5	145711	25	>RL
Mg	24	2	45	6.900	ppb	14.3	1073	25	
Al	27	2	45	5.117	ppb	19.5	180	15	
K	39	1	45	144.827	ppb	21.0	8589948	50	>RL
K	39	2	45	23.497	ppb	44.3	13283	50	
Ca	40	1	45	-1.866	ppb	-21.1	94376	50	
Ca	44	2	45	11.692	ppb	122.7	77	25	
Ti	47	2	45	-0.128	ppb	0.0	0	0.5	
V	51	2	72	-0.171	ppb	-104.9	1057	1	
Cr	52	2	72	0.009	ppb	376.3	233	1	
Mn	55	2	72	0.099	ppb	106.8	150	0.5	
Fe	57	2	72	2.468	ppb	90.9	203	25	
Co	59	2	72	-0.010	ppb	-103.8	43	0.5	
Ni	60	2	72	0.044	ppb	154.5	187	1	
Cu	63	2	72	0.231	ppb	19.2	1650	1	
Zn	66	2	72	-0.154	ppb	-145.5	313	5	
As	75	2	72	0.038	ppb	222.1	28	1	
Se	78	1	72	0.584	ppb	25.2	163	1	
Sr	88	2	72	0.169	ppb	10.9	120	0.5	
Zr	90	2	72	2.597	ppb	222.8	90	1	>RL
Nb	93	2	72	1.551	ppb	24.0	12319	2	
Mo	95	2	115	0.124	ppb	35.4	180	0.5	
Pd	105	2	115	0.034	ppb	110.3	113	1	
Ag	107	2	115	0.000	ppb	-2524.6	47	1	
Cd	111	2	115	0.018	ppb	86.6	7	0.5	
Sn	120	2	115	0.084	ppb	66.5	313	1	
Sb	121	2	115	0.107	ppb	46.5	273	0.6	
Ba	137	2	115	0.023	ppb	142.9	10	0.5	
W	182	2	165	0.127	ppb	5.7	1650	1	
Pt	195	2	165	0.009	ppb	51.9	67	1	
Tl	205	2	165	0.002	ppb	263.7	227	0.1	
Pb	208	2	165	0.026	ppb	41.4	1103	0.5	
Th	232	2	165	0.019	ppb	25.1	867	1	
U	238	2	165	0.028	ppb	28.8	807	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	561385	0.35	680701	82.47	60	120	
Sc (IS)	45	1	HMI H2	23215150	0.65	26528605	87.51	60	120	
Sc (IS)	45	2	HMI He	866601	0.56	1014720	85.40	60	120	
Sc (IS)	45	3	No Gas	38118608	0.66	43446903	87.74	60	120	
Ge Internal Standard	72	1	HMI H2	9175411	0.24	10271630	89.33	60	120	
Ge Internal Standard	72	2	HMI He	1004478	0.61	1158236	86.72	60	120	
In Internal Standard	115	2	HMI He	3444038	0.18	3843567	89.61	60	120	
Ho-165	165	2	HMI He	17255115	0.36	18572367	92.91	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	200LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:11:42-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-14.805	ppb	-30.094	2669294	50	-29.6	70	130	>+/-30%
Be	9	1	6	0.892	ppb	28.529	237	1	89.2	70	130	
Na	23	2	45	368.271	ppb	2.597	132312	50	736.5	70	130	>+/-30%
Mg	24	2	45	52.339	ppb	15.120	5345	50	104.7	70	130	
Al	27	2	45	31.359	ppb	16.737	870	30	104.5	70	130	
K	39	2	45	114.360	ppb	3.339	17975	100	114.4	70	130	
Ca	44	2	45	66.708	ppb	32.244	227	50	133.4	70	130	>+/-30%
V	51	2	72	4.952	ppb	4.095	5715	5	99.0	70	130	
Cr	52	2	72	2.295	ppb	3.247	2927	2	114.7	70	130	
Mn	55	2	72	1.206	ppb	11.826	697	1	120.6	70	130	
Fe	57	2	72	53.056	ppb	5.936	1353	50	106.1	70	130	
Co	59	2	72	1.066	ppb	6.081	2247	1	106.6	70	130	
Ni	60	2	72	2.253	ppb	14.113	1437	2	112.7	70	130	
Cu	63	2	72	2.124	ppb	7.732	4684	2	106.2	70	130	
Zn	66	2	72	9.524	ppb	10.809	2467	10	95.2	70	130	
As	75	2	72	4.533	ppb	6.294	680	5	90.7	70	130	
Se	78	1	72	5.123	ppb	12.351	1145	5	102.5	70	130	
Sr	88	2	72	1.028	ppb	5.838	587	1	102.8	70	130	
Zr	90	2	72	28.067	ppb	77.271	210	0.5	5613.3	70	130	>+/-30%
Nb	93	2	72	5.438	ppb	5.988	23457	2	271.9	70	130	>+/-30%
Mo	95	2	115	1.870	ppb	14.279	1640	2	93.5	70	130	
Pd	105	2	115	-0.022	ppb	-88.528	40	1	-2.2	70	130	>+/-30%
Ag	107	2	115	5.224	ppb	4.567	14448	5	104.5	70	130	
Cd	111	2	115	1.252	ppb	20.865	467	1	125.2	70	130	
Sn	120	2	115	9.977	ppb	5.141	10585	10	99.8	70	130	
Sb	121	2	115	2.066	ppb	8.645	2080	2	103.3	70	130	
Ba	137	2	115	0.972	ppb	5.788	307	1	97.2	70	130	
W	182	2	165	4.924	ppb	0.474	21712	1	492.4	70	130	>+/-30%
Pt	195	2	165	0.028	ppb	32.391	133	1	2.8	70	130	>+/-30%
Tl	205	2	165	1.008	ppb	6.980	8313	1	100.8	70	130	
Pb	208	2	165	1.054	ppb	2.120	12059	1	105.4	70	130	
Th	232	2	165	1.917	ppb	0.637	25409	2	95.8	70	130	
U	238	2	165	0.961	ppb	5.229	13831	1	96.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	568349	0.14	680701	83.49	60	120	
Sc (IS)	45	1	HMI H2	23571432	0.28	26528605	88.85	60	120	
Sc (IS)	45	2	HMI He	882306	0.28	1014720	86.95	60	120	
Sc (IS)	45	3	No Gas	38015066	0.86	43446903	87.50	60	120	
Ge Internal Standard	72	1	HMI H2	9282980	0.46	10271630	90.37	60	120	
Ge Internal Standard	72	2	HMI He	1011913	0.09	1158236	87.37	60	120	
In Internal Standard	115	2	HMI He	3475001	1.89	3843567	90.41	60	120	
Ho-165	165	2	HMI He	17313113	0.54	18572367	93.22	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-2-b
Data File Name	201SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:15:29-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	392.488	ppb	392.488	4.38	168266	500000	
Li	7	2	45	435.074	ppb	435.074	4.67	8863	500000	
Li	7	3	45	367.807	ppb	367.807	1.50	5034625	50000	
Be	9	1	6	0.005	ppb	0.005	540.72	3	2000	
B	11	1	6	1416.284	ppb	1416.284	1.85	303421	2000	
Na	23	1	45	989839.664	ppb	989839.664	1.38	2553456975	2000	>LDR
Na	23	2	45	990734.007	ppb	990734.007	1.54	185434244	400000	
Mg	24	2	45	1863.594	ppb	1863.594	0.91	159398	400000	
Al	27	2	45	18.360	ppb	18.360	13.54	483	400000	
K	39	1	45	3389.773	ppb	3389.773	0.83	16281139	400000	
K	39	2	45	4015.215	ppb	4015.215	1.33	190495	400000	
Ca	40	1	45	14070.487	ppb	14070.487	0.77	55710808	400000	
Ca	44	2	45	19566.538	ppb	19566.538	1.66	48231	400000	
Ti	47	2	45	0.036	ppb	0.036	781.86	3	4000	
V	51	2	72	-0.327	ppb	-0.327	-41.85	837	2000	
Cr	52	2	72	0.174	ppb	0.174	24.81	390	5000	
Mn	55	2	72	11.364	ppb	11.364	5.50	5181	10000	
Fe	57	2	72	43.609	ppb	43.609	5.91	1033	400000	
Co	59	2	72	-0.006	ppb	-0.006	-93.02	47	2000	
Ni	60	2	72	0.063	ppb	0.063	132.26	180	5000	
Cu	63	2	72	0.142	ppb	0.142	89.66	1380	5000	
Zn	66	2	72	3.935	ppb	3.935	19.29	1110	5000	
As	75	2	72	0.237	ppb	0.237	91.01	52	2000	
Se	78	1	72	0.563	ppb	0.563	14.47	139	2000	
Sr	88	2	72	1204.748	ppb	1204.748	0.17	593450	4000	
Zr	90	2	72	2.804	ppb	2.804	171.15	83	1000	
Nb	93	2	72	-1.222	ppb	-1.222	-4.74	4107	200	
Mo	95	2	115	51.591	ppb	51.591	1.03	38343	2000	
Pd	105	2	115	-0.041	ppb	-0.041	-12.55	13	100	
Ag	107	2	115	0.004	ppb	0.004	361.36	53	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.168	ppb	0.168	33.44	357	2000	
Sb	121	2	115	0.019	ppb	0.019	658.48	173	1000	
Ba	137	2	115	15.608	ppb	15.608	9.28	4321	5000	
W	182	2	165	0.240	ppb	0.240	24.80	1934	100	
Pt	195	2	165	0.002	ppb	0.002	9.76	40	100	
Tl	205	2	165	-0.007	ppb	-0.007	-126.46	137	2000	
Pb	208	2	165	0.170	ppb	0.170	5.58	2394	5000	
Th	232	2	165	0.011	ppb	0.011	111.08	697	2000	
U	238	2	165	9.532	ppb	9.532	1.44	121136	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	468548	0.78	680701	68.83	60	120	
Sc (IS)	45	1	HMI H2	21224194	0.63	26528605	80.00	60	120	
Sc (IS)	45	2	HMI He	804270	1.79	1014720	79.26	60	120	
Sc (IS)	45	3	No Gas	35404290	0.67	43446903	81.49	60	120	
Ge Internal Standard	72	1	HMI H2	8030642	0.71	10271630	78.18	60	120	
Ge Internal Standard	72	2	HMI He	918584	1.55	1158236	79.31	60	120	
In Internal Standard	115	2	HMI He	3081148	1.89	3843567	80.16	60	120	
Ho-165	165	2	HMI He	15711602	1.51	18572367	84.60	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-3-b
Data File Name	202SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:19:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	92.875	ppb	92.875	6.12	108976	500000	
Li	7	2	45	142.807	ppb	142.807	13.25	6071	500000	
Li	7	3	45	88.828	ppb	88.828	2.96	3263194	50000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	281.349	ppb	281.349	0.49	66096	2000	
Na	23	1	45	320786.311	ppb	320786.311	1.12	868220974	2000	>LDR
Na	23	2	45	321286.788	ppb	321286.788	1.17	62338597	400000	
Mg	24	2	45	560.808	ppb	560.808	0.44	49985	400000	
Al	27	2	45	35.873	ppb	35.873	4.18	933	400000	
K	39	1	45	879.161	ppb	879.161	2.15	10234646	400000	
K	39	2	45	2040.243	ppb	2040.243	0.29	106033	400000	
Ca	40	1	45	4835.112	ppb	4835.112	3.80	20135320	400000	
Ca	44	2	45	6364.229	ppb	6364.229	1.86	16280	400000	
Ti	47	2	45	0.189	ppb	0.189	290.70	7	4000	
V	51	2	72	3.939	ppb	3.939	5.70	4561	2000	
Cr	52	2	72	0.541	ppb	0.541	12.17	820	5000	
Mn	55	2	72	0.702	ppb	0.702	28.11	427	10000	
Fe	57	2	72	18.145	ppb	18.145	9.23	533	400000	
Co	59	2	72	0.029	ppb	0.029	69.78	117	2000	
Ni	60	2	72	0.282	ppb	0.282	44.95	307	5000	
Cu	63	2	72	0.382	ppb	0.382	12.78	1810	5000	
Zn	66	2	72	5.814	ppb	5.814	12.49	1563	5000	
As	75	2	72	0.274	ppb	0.274	28.21	59	2000	
Se	78	1	72	12.929	ppb	12.929	4.45	2638	2000	
Sr	88	2	72	300.143	ppb	300.143	0.91	154962	4000	
Zr	90	2	72	10.182	ppb	10.182	46.83	120	1000	
Nb	93	2	72	-2.087	ppb	-2.087	-4.02	1967	200	
Mo	95	2	115	4.156	ppb	4.156	8.09	3301	2000	
Pd	105	2	115	-0.031	ppb	-0.031	-29.63	27	100	
Ag	107	2	115	0.028	ppb	0.028	43.80	117	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	-0.030	ppb	-0.030	-24.26	183	2000	
Sb	121	2	115	-0.115	ppb	-0.115	-41.01	67	1000	
Ba	137	2	115	95.091	ppb	95.091	5.79	27599	5000	
W	182	2	165	0.024	ppb	0.024	289.18	1167	100	
Pt	195	2	165	0.009	ppb	0.009	56.40	63	100	
Tl	205	2	165	-0.007	ppb	-0.007	-76.08	147	2000	
Pb	208	2	165	0.854	ppb	0.854	5.73	9455	5000	
Th	232	2	165	-0.009	ppb	-0.009	-59.04	480	2000	
U	238	2	165	26.612	ppb	26.612	2.50	354059	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	508289	0.75	680701	74.67	60	120	
Sc (IS)	45	1	HMI H2	22254986	0.69	26528605	83.89	60	120	
Sc (IS)	45	2	HMI He	833161	0.87	1014720	82.11	60	120	
Sc (IS)	45	3	No Gas	36371453	0.45	43446903	83.71	60	120	
Ge Internal Standard	72	1	HMI H2	8647968	0.28	10271630	84.19	60	120	
Ge Internal Standard	72	2	HMI He	962732	1.09	1158236	83.12	60	120	
In Internal Standard	115	2	HMI He	3228159	1.10	3843567	83.99	60	120	
Ho-165	165	2	HMI He	16483980	0.76	18572367	88.76	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-4-b
Data File Name	203SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:23:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	138.676	ppb	138.676	3.47	119007	500000	
Li	7	2	45	193.755	ppb	193.755	11.90	6482	500000	
Li	7	3	45	126.917	ppb	126.917	0.36	3530137	50000	
Be	9	1	6	0.018	ppb	0.018	274.64	7	2000	
B	11	1	6	498.192	ppb	498.192	1.18	115239	2000	
Na	23	1	45	420511.988	ppb	420511.988	1.30	1135201076	2000	>LDR
Na	23	2	45	419759.038	ppb	419759.038	0.28	79811772	400000	
Mg	24	2	45	659.244	ppb	659.244	1.45	57516	400000	
Al	27	2	45	37.610	ppb	37.610	6.50	957	400000	
K	39	1	45	1204.962	ppb	1204.962	1.79	11095707	400000	
K	39	2	45	2339.394	ppb	2339.394	1.90	117479	400000	
Ca	40	1	45	5826.937	ppb	5826.937	1.28	24191282	400000	
Ca	44	2	45	7295.310	ppb	7295.310	4.63	18286	400000	
Ti	47	2	45	0.997	ppb	0.997	74.19	23	4000	
V	51	2	72	11.815	ppb	11.815	3.17	11021	2000	
Cr	52	2	72	0.620	ppb	0.620	5.48	880	5000	
Mn	55	2	72	0.621	ppb	0.621	31.57	377	10000	
Fe	57	2	72	22.566	ppb	22.566	4.68	610	400000	
Co	59	2	72	0.052	ppb	0.052	50.32	157	2000	
Ni	60	2	72	0.549	ppb	0.549	11.80	437	5000	
Cu	63	2	72	0.330	ppb	0.330	21.39	1680	5000	
Zn	66	2	72	3.691	ppb	3.691	21.64	1080	5000	
As	75	2	72	0.507	ppb	0.507	13.44	89	2000	
Se	78	1	72	14.112	ppb	14.112	2.31	2852	2000	
Sr	88	2	72	346.429	ppb	346.429	2.00	173461	4000	
Zr	90	2	72	10.983	ppb	10.983	147.77	120	1000	
Nb	93	2	72	-2.210	ppb	-2.210	-2.27	1584	200	
Mo	95	2	115	3.596	ppb	3.596	5.06	2790	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-73.17	47	100	
Ag	107	2	115	0.019	ppb	0.019	108.13	90	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.032	ppb	0.032	268.75	237	2000	
Sb	121	2	115	-0.108	ppb	-0.108	-39.97	70	1000	
Ba	137	2	115	36.221	ppb	36.221	3.46	10228	5000	
W	182	2	165	0.011	ppb	0.011	252.33	1080	100	
Pt	195	2	165	0.003	ppb	0.003	540.91	43	100	
Tl	205	2	165	-0.012	ppb	-0.012	-36.81	100	2000	
Pb	208	2	165	0.248	ppb	0.248	13.42	3200	5000	
Th	232	2	165	-0.015	ppb	-0.015	-93.20	397	2000	
U	238	2	165	17.176	ppb	17.176	1.23	221552	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503439	0.75	680701	73.96	60	120	
Sc (IS)	45	1	HMI H2	22202404	0.78	26528605	83.69	60	120	
Sc (IS)	45	2	HMI He	816569	0.29	1014720	80.47	60	120	
Sc (IS)	45	3	No Gas	36436164	0.38	43446903	83.86	60	120	
Ge Internal Standard	72	1	HMI H2	8578780	0.74	10271630	83.52	60	120	
Ge Internal Standard	72	2	HMI He	933670	0.39	1158236	80.61	60	120	
In Internal Standard	115	2	HMI He	3141292	0.31	3843567	81.73	60	120	
Ho-165	165	2	HMI He	15969409	0.95	18572367	85.98	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-5-b
Data File Name	204SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:26:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	89.494	ppb	89.494	12.27	106357	500000	
Li	7	2	45	112.865	ppb	112.865	17.95	5661	500000	
Li	7	3	45	71.662	ppb	71.662	4.22	3193036	50000	
Be	9	1	6	0.004	ppb	0.004	672.00	3	2000	
B	11	1	6	787.395	ppb	787.395	0.55	181703	2000	
Na	23	1	45	414979.417	ppb	414979.417	0.19	1103726917	2000	>LDR
Na	23	2	45	412189.355	ppb	412189.355	0.34	78715690	400000	
Mg	24	2	45	255.403	ppb	255.403	4.26	22635	400000	
Al	27	2	45	216.920	ppb	216.920	4.78	5325	400000	
K	39	1	45	978.591	ppb	978.591	2.93	10325264	400000	
K	39	2	45	2044.145	ppb	2044.145	1.33	104549	400000	
Ca	40	1	45	4616.861	ppb	4616.861	0.57	18904093	400000	
Ca	44	2	45	5206.707	ppb	5206.707	9.49	13116	400000	
Ti	47	2	45	6.272	ppb	6.272	64.22	133	4000	
V	51	2	72	49.211	ppb	49.211	0.49	42526	2000	
Cr	52	2	72	0.637	ppb	0.637	13.98	903	5000	
Mn	55	2	72	6.703	ppb	6.703	6.52	3157	10000	
Fe	57	2	72	80.902	ppb	80.902	8.26	1840	400000	
Co	59	2	72	0.122	ppb	0.122	43.86	290	2000	
Ni	60	2	72	1.067	ppb	1.067	14.50	710	5000	
Cu	63	2	72	6.000	ppb	6.000	2.36	10074	5000	
Zn	66	2	72	5.983	ppb	5.983	10.56	1557	5000	
As	75	2	72	9.493	ppb	9.493	0.94	1297	2000	
Se	78	1	72	1.391	ppb	1.391	10.24	311	2000	
Sr	88	2	72	160.599	ppb	160.599	0.84	80785	4000	
Zr	90	2	72	98.430	ppb	98.430	6.26	500	1000	
Nb	93	2	72	-2.025	ppb	-2.025	-9.04	2077	200	
Mo	95	2	115	26.988	ppb	26.988	1.76	20429	2000	
Pd	105	2	115	-0.036	ppb	-0.036	-62.50	20	100	
Ag	107	2	115	-0.005	ppb	-0.005	-198.58	30	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.143	ppb	0.143	29.52	340	2000	
Sb	121	2	115	0.426	ppb	0.426	29.78	513	1000	
Ba	137	2	115	31.245	ppb	31.245	6.26	8803	5000	
W	182	2	165	6.283	ppb	6.283	2.52	25342	100	
Pt	195	2	165	0.005	ppb	0.005	110.21	50	100	
Tl	205	2	165	0.000	ppb	0.000	-2394.53	190	2000	
Pb	208	2	165	2.786	ppb	2.786	1.08	28223	5000	
Th	232	2	165	0.030	ppb	0.030	48.71	933	2000	
U	238	2	165	4.195	ppb	4.195	3.09	54539	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503636	0.60	680701	73.99	60	120	
Sc (IS)	45	1	HMI H2	21873259	0.40	26528605	82.45	60	120	
Sc (IS)	45	2	HMI He	820121	0.61	1014720	80.82	60	120	
Sc (IS)	45	3	No Gas	36918185	0.73	43446903	84.97	60	120	
Ge Internal Standard	72	1	HMI H2	8504428	1.05	10271630	82.80	60	120	
Ge Internal Standard	72	2	HMI He	937780	0.12	1158236	80.97	60	120	
In Internal Standard	115	2	HMI He	3133257	0.69	3843567	81.52	60	120	
Ho-165	165	2	HMI He	16014198	0.95	18572367	86.23	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-6-b
Data File Name	205SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:30:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	89.845	ppb	89.845	7.17	109241	500000	
Li	7	2	45	105.748	ppb	105.748	34.79	5525	500000	
Li	7	3	45	87.800	ppb	87.800	2.06	3291217	50000	
Be	9	1	6	0.017	ppb	0.017	279.43	7	2000	
B	11	1	6	244.895	ppb	244.895	2.51	57133	2000	
Na	23	1	45	372181.849	ppb	372181.849	4.26	1015439105	2000	>LDR
Na	23	2	45	383835.356	ppb	383835.356	1.03	72498734	400000	
Mg	24	2	45	328.808	ppb	328.808	2.21	28698	400000	
Al	27	2	45	103.637	ppb	103.637	7.07	2540	400000	
K	39	1	45	674.952	ppb	674.952	15.73	9759824	400000	
K	39	2	45	1876.251	ppb	1876.251	1.95	95858	400000	
Ca	40	1	45	3197.568	ppb	3197.568	5.39	13457146	400000	
Ca	44	2	45	3944.972	ppb	3944.972	3.65	9844	400000	
Ti	47	2	45	2.134	ppb	2.134	34.20	47	4000	
V	51	2	72	34.094	ppb	34.094	2.64	29718	2000	
Cr	52	2	72	0.848	ppb	0.848	13.65	1130	5000	
Mn	55	2	72	3.153	ppb	3.153	6.75	1530	10000	
Fe	57	2	72	103.754	ppb	103.754	13.08	2314	400000	
Co	59	2	72	0.050	ppb	0.050	80.32	153	2000	
Ni	60	2	72	0.363	ppb	0.363	10.84	340	5000	
Cu	63	2	72	0.456	ppb	0.456	45.37	1867	5000	
Zn	66	2	72	4.590	ppb	4.590	12.71	1267	5000	
As	75	2	72	0.506	ppb	0.506	7.29	89	2000	
Se	78	1	72	13.966	ppb	13.966	8.29	2832	2000	
Sr	88	2	72	164.283	ppb	164.283	1.25	82392	4000	
Zr	90	2	72	96.946	ppb	96.946	110.44	491	1000	
Nb	93	2	72	-2.388	ppb	-2.388	-2.71	1120	200	
Mo	95	2	115	10.278	ppb	10.278	1.60	7773	2000	
Pd	105	2	115	-0.027	ppb	-0.027	-30.00	30	100	
Ag	107	2	115	0.001	ppb	0.001	612.80	47	100	
Cd	111	2	115	0.030	ppb	0.030	99.20	10	2000	
Sn	120	2	115	0.016	ppb	0.016	225.93	220	2000	
Sb	121	2	115	-0.144	ppb	-0.144	-0.41	40	1000	
Ba	137	2	115	115.383	ppb	115.383	1.92	32272	5000	
W	182	2	165	0.065	ppb	0.065	97.80	1277	100	
Pt	195	2	165	0.003	ppb	0.003	60.63	43	100	
Tl	205	2	165	-0.014	ppb	-0.014	-16.78	90	2000	
Pb	208	2	165	0.091	ppb	0.091	12.63	1643	5000	
Th	232	2	165	0.003	ppb	0.003	539.96	607	2000	
U	238	2	165	13.800	ppb	13.800	0.36	176694	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503939	2.68	680701	74.03	60	120	
Sc (IS)	45	1	HMI H2	22454246	2.89	26528605	84.64	60	120	
Sc (IS)	45	2	HMI He	811149	1.11	1014720	79.94	60	120	
Sc (IS)	45	3	No Gas	36762901	0.19	43446903	84.62	60	120	
Ge Internal Standard	72	1	HMI H2	8614349	2.36	10271630	83.87	60	120	
Ge Internal Standard	72	2	HMI He	934907	1.24	1158236	80.72	60	120	
In Internal Standard	115	2	HMI He	3112366	1.23	3843567	80.98	60	120	
Ho-165	165	2	HMI He	15845731	0.59	18572367	85.32	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-7-b
Data File Name	206SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:34:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	184.618	ppb	184.618	5.14	128212	500000	
Li	7	2	45	228.246	ppb	228.246	14.84	6749	500000	
Li	7	3	45	167.251	ppb	167.251	1.02	3834538	50000	
Be	9	1	6	0.048	ppb	0.048	211.58	13	2000	
B	11	1	6	1201.501	ppb	1201.501	0.58	272588	2000	
Na	23	1	45	557542.637	ppb	557542.637	1.82	1491891018	2000	>LDR
Na	23	2	45	588762.589	ppb	588762.589	9.89	110118992	400000	
Mg	24	2	45	1134.484	ppb	1134.484	12.52	96994	400000	
Al	27	2	45	80.884	ppb	80.884	14.32	1970	400000	
K	39	1	45	1838.928	ppb	1838.928	4.33	12706955	400000	
K	39	2	45	3022.974	ppb	3022.974	9.30	146139	400000	
Ca	40	1	45	6456.285	ppb	6456.285	2.45	26560515	400000	
Ca	44	2	45	8708.385	ppb	8708.385	10.25	21463	400000	
Ti	47	2	45	0.535	ppb	0.535	61.58	13	4000	
V	51	2	72	-0.164	ppb	-0.164	-64.91	977	2000	
Cr	52	2	72	0.162	ppb	0.162	43.55	380	5000	
Mn	55	2	72	59.887	ppb	59.887	11.60	26860	10000	
Fe	57	2	72	69.436	ppb	69.436	10.97	1567	400000	
Co	59	2	72	0.063	ppb	0.063	42.89	177	2000	
Ni	60	2	72	0.249	ppb	0.249	35.29	277	5000	
Cu	63	2	72	-0.087	ppb	-0.087	-145.25	1047	5000	
Zn	66	2	72	2.864	ppb	2.864	11.57	900	5000	
As	75	2	72	11.960	ppb	11.960	9.17	1595	2000	
Se	78	1	72	0.561	ppb	0.561	23.93	145	2000	
Sr	88	2	72	373.464	ppb	373.464	10.39	183803	4000	
Zr	90	2	72	121.160	ppb	121.160	25.44	583	1000	
Nb	93	2	72	-2.227	ppb	-2.227	-2.25	1520	200	
Mo	95	2	115	29.453	ppb	29.453	12.05	21888	2000	
Pd	105	2	115	-0.035	ppb	-0.035	-53.67	20	100	
Ag	107	2	115	-0.010	ppb	-0.010	-51.80	17	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.255	ppb	0.255	27.17	437	2000	
Sb	121	2	115	-0.110	ppb	-0.110	-46.84	67	1000	
Ba	137	2	115	34.684	ppb	34.684	14.55	9584	5000	
W	182	2	165	2.436	ppb	2.436	9.74	10344	100	
Pt	195	2	165	-0.002	ppb	-0.002	-185.70	27	100	
Tl	205	2	165	-0.015	ppb	-0.015	-11.98	83	2000	
Pb	208	2	165	0.046	ppb	0.046	30.90	1203	5000	
Th	232	2	165	0.004	ppb	0.004	234.97	613	2000	
U	238	2	165	17.129	ppb	17.129	11.00	218914	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	495960	0.16	680701	72.86	60	120	
Sc (IS)	45	1	HMI H2	22012574	1.24	26528605	82.98	60	120	
Sc (IS)	45	2	HMI He	806447	5.77	1014720	79.47	60	120	
Sc (IS)	45	3	No Gas	36703743	0.76	43446903	84.48	60	120	
Ge Internal Standard	72	1	HMI H2	8454709	1.42	10271630	82.31	60	120	
Ge Internal Standard	72	2	HMI He	921055	5.34	1158236	79.52	60	120	
In Internal Standard	115	2	HMI He	3094833	7.20	3843567	80.52	60	120	
Ho-165	165	2	HMI He	15877897	4.85	18572367	85.49	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-8-b
Data File Name	207SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:38:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	166.933	ppb	166.933	2.96	123422	500000	
Li	7	2	45	206.109	ppb	206.109	20.22	6435	500000	
Li	7	3	45	166.123	ppb	166.123	2.61	3733584	50000	
Be	9	1	6	0.004	ppb	0.004	628.48	3	2000	
B	11	1	6	1346.099	ppb	1346.099	1.38	302555	2000	
Na	23	1	45	532503.801	ppb	532503.801	0.88	1415151019	2000	>LDR
Na	23	2	45	540880.901	ppb	540880.901	0.74	100044509	400000	
Mg	24	2	45	847.299	ppb	847.299	1.15	71818	400000	
Al	27	2	45	26.816	ppb	26.816	16.57	677	400000	
K	39	1	45	1539.261	ppb	1539.261	1.79	11818262	400000	
K	39	2	45	2619.438	ppb	2619.438	0.05	126657	400000	
Ca	40	1	45	4815.387	ppb	4815.387	1.34	19699571	400000	
Ca	44	2	45	6057.090	ppb	6057.090	0.64	14778	400000	
Ti	47	2	45	0.537	ppb	0.537	107.29	13	4000	
V	51	2	72	-0.220	ppb	-0.220	-46.96	917	2000	
Cr	52	2	72	0.103	ppb	0.103	113.53	310	5000	
Mn	55	2	72	32.598	ppb	32.598	4.00	14531	10000	
Fe	57	2	72	64.192	ppb	64.192	15.53	1443	400000	
Co	59	2	72	0.074	ppb	0.074	30.43	193	2000	
Ni	60	2	72	0.263	ppb	0.263	34.24	280	5000	
Cu	63	2	72	0.182	ppb	0.182	48.31	1423	5000	
Zn	66	2	72	3.684	ppb	3.684	10.35	1050	5000	
As	75	2	72	4.561	ppb	4.561	7.29	615	2000	
Se	78	1	72	0.351	ppb	0.351	20.70	104	2000	
Sr	88	2	72	258.500	ppb	258.500	0.99	126048	4000	
Zr	90	2	72	35.491	ppb	35.491	28.98	220	1000	
Nb	93	2	72	-2.279	ppb	-2.279	-3.48	1367	200	
Mo	95	2	115	34.114	ppb	34.114	3.02	24983	2000	
Pd	105	2	115	-0.038	ppb	-0.038	-35.10	17	100	
Ag	107	2	115	-0.018	ppb	-0.018	0.00	0	100	
Cd	111	2	115	0.031	ppb	0.031	1.19	10	2000	
Sn	120	2	115	0.266	ppb	0.266	23.37	440	2000	
Sb	121	2	115	-0.076	ppb	-0.076	-68.11	93	1000	
Ba	137	2	115	19.643	ppb	19.643	2.69	5358	5000	
W	182	2	165	2.367	ppb	2.367	3.22	9901	100	
Pt	195	2	165	0.004	ppb	0.004	85.67	47	100	
Tl	205	2	165	-0.003	ppb	-0.003	-143.66	167	2000	
Pb	208	2	165	0.114	ppb	0.114	13.13	1834	5000	
Th	232	2	165	0.003	ppb	0.003	852.61	593	2000	
U	238	2	165	37.330	ppb	37.330	1.33	468550	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	491575	1.43	680701	72.22	60	120	
Sc (IS)	45	1	HMI H2	21858866	0.30	26528605	82.40	60	120	
Sc (IS)	45	2	HMI He	794516	1.20	1014720	78.30	60	120	
Sc (IS)	45	3	No Gas	35810214	0.32	43446903	82.42	60	120	
Ge Internal Standard	72	1	HMI H2	8433883	0.20	10271630	82.11	60	120	
Ge Internal Standard	72	2	HMI He	909154	0.21	1158236	78.49	60	120	
In Internal Standard	115	2	HMI He	3034336	1.20	3843567	78.95	60	120	
Ho-165	165	2	HMI He	15554883	0.64	18572367	83.75	60	120	

Sample Report

Sample Table

Sample Name	280-116413-b-9-b
Data File Name	208SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:42:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437009 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	464.013	ppb	464.013	3.37	177664	500000	
Li	7	2	45	555.288	ppb	555.288	2.77	9700	500000	
Li	7	3	45	439.712	ppb	439.712	0.35	5446329	50000	
Be	9	1	6	0.005	ppb	0.005	532.25	3	2000	
B	11	1	6	1300.182	ppb	1300.182	1.21	269851	2000	
Na	23	1	45	1136677.422	ppb	1136677.422	0.82	2837232704	2000	>LDR
Na	23	2	45	1146307.864	ppb	1146307.864	0.80	206036964	400000	
Mg	24	2	45	2298.456	ppb	2298.456	0.88	188671	400000	
Al	27	2	45	34.224	ppb	34.224	13.12	827	400000	
K	39	1	45	4327.175	ppb	4327.175	2.09	18108437	400000	
K	39	2	45	4786.831	ppb	4786.831	0.80	216006	400000	
Ca	40	1	45	18195.319	ppb	18195.319	0.91	69681014	400000	
Ca	44	2	45	25801.790	ppb	25801.790	1.32	61051	400000	
Ti	47	2	45	-0.128	ppb	-0.128	0.00	0	4000	
V	51	2	72	-0.333	ppb	-0.333	-46.92	793	2000	
Cr	52	2	72	0.212	ppb	0.212	40.70	410	5000	
Mn	55	2	72	77.229	ppb	77.229	1.33	33042	10000	
Fe	57	2	72	65.017	ppb	65.017	3.60	1407	400000	
Co	59	2	72	0.089	ppb	0.089	34.26	213	2000	
Ni	60	2	72	0.100	ppb	0.100	148.64	190	5000	
Cu	63	2	72	0.112	ppb	0.112	92.68	1273	5000	
Zn	66	2	72	4.855	ppb	4.855	2.87	1237	5000	
As	75	2	72	4.747	ppb	4.747	9.73	616	2000	
Se	78	1	72	0.475	ppb	0.475	29.20	119	2000	
Sr	88	2	72	1669.789	ppb	1669.789	0.31	784220	4000	
Zr	90	2	72	33.358	ppb	33.358	44.43	203	1000	
Nb	93	2	72	-2.458	ppb	-2.458	-2.07	877	200	
Mo	95	2	115	32.708	ppb	32.708	2.70	23126	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-53.87	37	100	
Ag	107	2	115	-0.010	ppb	-0.010	-87.13	17	100	
Cd	111	2	115	0.021	ppb	0.021	86.60	7	2000	
Sn	120	2	115	0.210	ppb	0.210	38.76	377	2000	
Sb	121	2	115	-0.111	ppb	-0.111	-35.93	63	1000	
Ba	137	2	115	32.910	ppb	32.910	4.59	8663	5000	
W	182	2	165	0.455	ppb	0.455	8.94	2620	100	
Pt	195	2	165	0.014	ppb	0.014	51.08	73	100	
Tl	205	2	165	-0.011	ppb	-0.011	-21.10	107	2000	
Pb	208	2	165	0.062	ppb	0.062	18.18	1287	5000	
Th	232	2	165	-0.011	ppb	-0.011	-33.76	417	2000	
U	238	2	165	35.100	ppb	35.100	0.73	424783	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	453887	1.66	680701	66.68	60	120	
Sc (IS)	45	1	HMI H2	20538126	1.80	26528605	77.42	60	120	
Sc (IS)	45	2	HMI He	772266	0.73	1014720	76.11	60	120	
Sc (IS)	45	3	No Gas	34971194	0.34	43446903	80.49	60	120	
Ge Internal Standard	72	1	HMI H2	7820141	1.70	10271630	76.13	60	120	
Ge Internal Standard	72	2	HMI He	875843	0.76	1158236	75.62	60	120	
In Internal Standard	115	2	HMI He	2928773	0.63	3843567	76.20	60	120	
Ho-165	165	2	HMI He	14996703	0.31	18572367	80.75	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	209_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:46:14-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	471.263	ppb	2.374	192202	500	94.3	90	110	
Li	7	2	45	554.655	ppb	11.771	10084	500	110.9	90	110	>+\-10%
Li	7	3	45	460.112	ppb	2.583	5895756	500	92.0	90	110	
Be	9	1	6	51.238	ppb	2.027	12456	50	102.5	90	110	
B	11	1	6	95.361	ppb	0.576	23820	50	190.7	90	110	>+\-10%
Na	23	1	45	6271.298	ppb	0.847	17528565	5000	125.4	90	110	>+\-10%
Na	23	2	45	6404.992	ppb	3.814	1248155	5000	128.1	90	110	>+\-10%
Mg	24	2	45	5098.652	ppb	0.305	434716	5000	102.0	90	110	
Al	27	2	45	4989.737	ppb	1.286	118917	5000	99.8	90	110	
K	39	1	45	4855.223	ppb	1.135	20847774	5000	97.1	90	110	
K	39	2	45	5075.295	ppb	0.722	237478	5000	101.5	90	110	
Ca	40	1	45	4990.889	ppb	0.128	20572102	5000	99.8	90	110	
Ca	44	2	45	5100.100	ppb	2.026	12583	5000	102.0	90	110	
Ti	47	2	45	48.716	ppb	17.176	997	50	97.4	90	110	
V	51	2	72	50.752	ppb	0.110	43466	50	101.5	90	110	
Cr	52	2	72	51.401	ppb	2.036	55851	50	102.8	90	110	
Mn	55	2	72	50.320	ppb	0.955	22899	50	100.6	90	110	
Fe	57	2	72	5017.365	ppb	1.151	104846	5000	100.3	90	110	
Co	59	2	72	51.878	ppb	0.275	97671	50	103.8	90	110	
Ni	60	2	72	51.972	ppb	2.973	27156	50	103.9	90	110	
Cu	63	2	72	52.039	ppb	2.280	77535	50	104.1	90	110	
Zn	66	2	72	49.310	ppb	6.563	10401	50	98.6	90	110	
As	75	2	72	50.277	ppb	1.159	6726	50	100.6	90	110	
Se	78	1	72	50.480	ppb	4.098	10185	50	101.0	90	110	
Sr	88	2	72	50.145	ppb	1.914	25040	50	100.3	90	110	
Zr	90	2	72	54.485	ppb	7.686	307	50	109.0	90	110	
Nb	93	2	72	85.494	ppb	1.522	230726	100	85.5	90	110	>+\-10%
Mo	95	2	115	49.447	ppb	1.751	37334	50	98.9	90	110	
Pd	105	2	115	50.735	ppb	2.932	60113	50	101.5	90	110	
Ag	107	2	115	52.068	ppb	0.667	129306	50	104.1	90	110	
Cd	111	2	115	49.072	ppb	0.934	16507	50	98.1	90	110	
Sn	120	2	115	50.485	ppb	1.507	47405	50	101.0	90	110	
Sb	121	2	115	48.874	ppb	3.262	40674	50	97.7	90	110	
Ba	137	2	115	50.400	ppb	3.698	14181	50	100.8	90	110	
W	182	2	165	49.431	ppb	0.390	192629	50	98.9	90	110	
Pt	195	2	165	50.144	ppb	1.923	158524	50	100.3	90	110	
Tl	205	2	165	50.144	ppb	1.533	374130	50	100.3	90	110	
Pb	208	2	165	50.559	ppb	0.375	500216	50	101.1	90	110	
Th	232	2	165	50.201	ppb	0.283	602399	50	100.4	90	110	
U	238	2	165	50.543	ppb	0.761	654428	50	101.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	526674	0.44	680701	77.37	60	120	
Sc (IS)	45	1	HMI H2	22027586	0.30	26528605	83.03	60	120	
Sc (IS)	45	2	HMI He	803030	1.04	1014720	79.14	60	120	
Sc (IS)	45	3	No Gas	36947396	0.35	43446903	85.04	60	120	
Ge Internal Standard	72	1	HMI H2	8641915	0.47	10271630	84.13	60	120	
Ge Internal Standard	72	2	HMI He	930152	1.14	1158236	80.31	60	120	
In Internal Standard	115	2	HMI He	3130132	0.31	3843567	81.44	60	120	
Ho-165	165	2	HMI He	16049674	0.85	18572367	86.42	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	210_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:50:00-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-19.102	ppb	-7.5	2613903	10	
Be	9	1	6	-0.011	ppb	0.0	0	0.5	
B	11	1	6	25.692	ppb	3.1	7462	0.5	>RL
Na	23	1	45	912.505	ppb	2.1	3232555	25	>RL
Na	23	2	45	848.882	ppb	2.5	215456	25	>RL
Mg	24	2	45	5.531	ppb	33.4	900	25	
Al	27	2	45	3.849	ppb	38.0	140	15	
K	39	1	45	118.631	ppb	15.1	8201497	50	>RL
K	39	2	45	43.872	ppb	34.2	13547	50	
Ca	40	1	45	-3.222	ppb	-18.4	85237	50	
Ca	44	2	45	9.181	ppb	130.0	67	25	
Ti	47	2	45	-0.128	ppb	0.0	0	0.5	
V	51	2	72	-0.267	ppb	-41.3	917	1	
Cr	52	2	72	0.026	ppb	349.1	240	1	
Mn	55	2	72	0.182	ppb	24.3	180	0.5	
Fe	57	2	72	0.768	ppb	723.3	157	25	
Co	59	2	72	-0.005	ppb	-173.5	50	0.5	
Ni	60	2	72	0.019	ppb	760.0	163	1	
Cu	63	2	72	-0.049	ppb	-144.9	1140	1	
Zn	66	2	72	0.007	ppb	3778.3	330	5	
As	75	2	72	0.044	ppb	36.9	27	1	
Se	78	1	72	0.568	ppb	34.7	152	1	
Sr	88	2	72	0.064	ppb	80.7	60	0.5	
Zr	90	2	72	5.985	ppb	41.6	100	1	>RL
Nb	93	2	72	1.434	ppb	20.6	11335	2	
Mo	95	2	115	0.060	ppb	56.5	120	0.5	
Pd	105	2	115	-0.015	ppb	-85.1	47	1	
Ag	107	2	115	-0.003	ppb	-69.7	37	1	
Cd	111	2	115	0.029	ppb	173.2	10	0.5	
Sn	120	2	115	0.019	ppb	154.6	233	1	
Sb	121	2	115	0.182	ppb	37.2	323	0.6	
Ba	137	2	115	0.092	ppb	97.4	30	0.5	
W	182	2	165	0.094	ppb	37.6	1430	1	
Pt	195	2	165	0.012	ppb	106.3	73	1	
Tl	205	2	165	-0.003	ppb	-37.8	177	0.1	
Pb	208	2	165	0.016	ppb	104.4	940	0.5	
Th	232	2	165	0.013	ppb	31.6	750	1	
U	238	2	165	0.032	ppb	27.7	810	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	554488	0.87	680701	81.46	60	120	
Sc (IS)	45	1	HMI H2	22358426	0.63	26528605	84.28	60	120	
Sc (IS)	45	2	HMI He	823033	0.62	1014720	81.11	60	120	
Sc (IS)	45	3	No Gas	37657689	0.52	43446903	86.68	60	120	
Ge Internal Standard	72	1	HMI H2	8749951	0.64	10271630	85.19	60	120	
Ge Internal Standard	72	2	HMI He	949621	1.02	1158236	81.99	60	120	
In Internal Standard	115	2	HMI He	3258457	0.81	3843567	84.78	60	120	
Ho-165	165	2	HMI He	16298396	0.88	18572367	87.76	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	211LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:53:47-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-5.991	ppb	-167.923	2712264	50	-12.0	70	130	>+/-30%
Be	9	1	6	0.813	ppb	14.314	213	1	81.3	70	130	
Na	23	2	45	691.339	ppb	0.363	191922	50	1382.7	70	130	>+/-30%
Mg	24	2	45	54.696	ppb	2.030	5378	50	109.4	70	130	
Al	27	2	45	32.781	ppb	18.110	877	30	109.3	70	130	
K	39	2	45	125.304	ppb	8.219	17882	100	125.3	70	130	
Ca	44	2	45	63.238	ppb	1.182	210	50	126.5	70	130	
V	51	2	72	4.501	ppb	10.643	5145	5	90.0	70	130	
Cr	52	2	72	1.917	ppb	9.226	2407	2	95.9	70	130	
Mn	55	2	72	1.139	ppb	11.586	643	1	113.9	70	130	
Fe	57	2	72	53.714	ppb	4.449	1327	50	107.4	70	130	
Co	59	2	72	1.028	ppb	9.601	2104	1	102.8	70	130	
Ni	60	2	72	2.319	ppb	22.358	1430	2	116.0	70	130	
Cu	63	2	72	2.001	ppb	7.152	4351	2	100.0	70	130	
Zn	66	2	72	10.120	ppb	10.131	2520	10	101.2	70	130	
As	75	2	72	4.532	ppb	7.994	659	5	90.6	70	130	
Se	78	1	72	5.076	ppb	11.485	1097	5	101.5	70	130	
Sr	88	2	72	1.056	ppb	22.683	583	1	105.6	70	130	
Zr	90	2	72	11.098	ppb	63.452	127	0.5	2219.6	70	130	>+/-30%
Nb	93	2	72	5.690	ppb	6.712	23437	2	284.5	70	130	>+/-30%
Mo	95	2	115	1.664	ppb	20.606	1417	2	83.2	70	130	
Pd	105	2	115	-0.008	ppb	-54.615	57	1	-0.8	70	130	>+/-30%
Ag	107	2	115	5.027	ppb	3.599	13400	5	100.5	70	130	
Cd	111	2	115	1.046	ppb	17.783	377	1	104.6	70	130	
Sn	120	2	115	9.147	ppb	1.051	9370	10	91.5	70	130	
Sb	121	2	115	1.861	ppb	12.308	1820	2	93.0	70	130	
Ba	137	2	115	0.986	ppb	30.158	300	1	98.6	70	130	
W	182	2	165	4.768	ppb	3.721	20593	1	476.8	70	130	>+/-30%
Pt	195	2	165	0.040	ppb	37.528	170	1	4.0	70	130	>+/-30%
Tl	205	2	165	0.995	ppb	8.346	8030	1	99.5	70	130	
Pb	208	2	165	0.950	ppb	2.197	10709	1	95.0	70	130	
Th	232	2	165	1.976	ppb	4.419	25600	2	98.8	70	130	
U	238	2	165	0.988	ppb	1.668	13898	1	98.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	561084	0.28	680701	82.43	60	120	
Sc (IS)	45	1	HMI H2	22915240	0.54	26528605	86.38	60	120	
Sc (IS)	45	2	HMI He	852435	0.93	1014720	84.01	60	120	
Sc (IS)	45	3	No Gas	37734184	0.73	43446903	86.85	60	120	
Ge Internal Standard	72	1	HMI H2	8976796	0.41	10271630	87.39	60	120	
Ge Internal Standard	72	2	HMI He	981255	0.63	1158236	84.72	60	120	
In Internal Standard	115	2	HMI He	3349365	0.73	3843567	87.14	60	120	
Ho-165	165	2	HMI He	16931139	0.28	18572367	91.16	60	120	

Blank Report

Sample Table

Sample Name	mb 280-437003/1-a
Data File Name	212_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-12T23:57:37-07:00
Sample Type	Blank
Dilution	1
Comment	437003 6020A
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-17.074	ppb	-24.35194022	85888	0.5
Li	7	2	45	9.563	ppb	255.7667126	4734	0.5
Li	7	3	45	-28.814	ppb	-17.37000113	2605391	10
Be	9	1	6	-0.011	ppb	0	0	0.5
B	11	1	6	15.256	ppb	8.825199513	4824	0.5
Na	23	1	45	510.849	ppb	0.817617045	2173847	25
Na	23	2	45	469.918	ppb	4.323024758	147227	25
Mg	24	2	45	4.602	ppb	18.77770987	843	25
Al	27	2	45	8.974	ppb	14.40730108	273	15
K	39	1	45	-1267.549	ppb	-0.629259655	4475522	50
K	39	2	45	9.717	ppb	64.81410694	12352	50
Ca	40	1	45	-2.041	ppb	-62.78622965	91508	50
Ca	44	2	45	7.160	ppb	82.31135506	63	25
Ti	47	2	45	0.184	ppb	294.226281	7	0.5
V	51	2	72	-0.486	ppb	-70.21357431	753	1
Cr	52	2	72	0.099	ppb	22.71481104	330	1
Mn	55	2	72	0.142	ppb	59.46851819	167	0.5
Fe	57	2	72	3.307	ppb	7.068669794	217	25
Co	59	2	72	-0.011	ppb	-165.0353886	40	0.5
Ni	60	2	72	0.053	ppb	22.83496297	187	1
Cu	63	2	72	-0.055	ppb	-65.32976062	1167	1
Zn	66	2	72	3.462	ppb	31.15926899	1083	5
As	75	2	72	-0.046	ppb	-30.84157964	16	1
Se	78	1	72	0.073	ppb	70.89418182	52	1
Sr	88	2	72	0.067	ppb	72.01878476	63	0.5
Zr	90	2	72	0.128	ppb	3980.188894	77	1
Nb	93	2	72	-1.790	ppb	-5.80816799	2817	2
Mo	95	2	115	-0.011	ppb	-374.7647435	67	0.5
Pd	105	2	115	-0.029	ppb	-27.22672975	30	1
Ag	107	2	115	-0.009	ppb	-170.6986954	23	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.019	ppb	638.2212385	240	1
Sb	121	2	115	-0.102	ppb	-29.5252905	80	0.6
Ba	137	2	115	0.100	ppb	75.20503543	33	0.5
W	182	2	165	0.028	ppb	194.9352039	1203	1
Pt	195	2	165	0.011	ppb	77.74705643	73	1
Tl	205	2	165	-0.001	ppb	-701.2728032	193	0.1
Pb	208	2	165	0.047	ppb	32.590308	1287	0.5
Th	232	2	165	0.001	ppb	697.4754546	620	1
U	238	2	165	-0.010	ppb	-51.92629795	263	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	554539	0.11	680701	81.47	60	120	
Sc (IS)	45	1	HMI H2	22695898	0.38	26528605	85.55	60	120	
Sc (IS)	45	2	HMI He	848139	0.94	1014720	83.58	60	120	
Sc (IS)	45	3	No Gas	38555500	1.81	43446903	88.74	60	120	
Ge Internal Standard	72	1	HMI H2	8873344	0.77	10271630	86.39	60	120	
Ge Internal Standard	72	2	HMI He	979218	0.45	1158236	84.54	60	120	
In Internal Standard	115	2	HMI He	3357494	0.65	3843567	87.35	60	120	
Ho-165	165	2	HMI He	16793252	0.29	18572367	90.42	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-437003/2-a
Data File Name	213_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:01:25-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437003 6020A
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	54.873	54.873	ppb	20.179	103937	400	13.7	80	120	>+/-20%
Li	7	2	45	88.827	88.827	ppb	24.081	5678	400	22.2	80	120	>+/-20%
Li	7	3	45	50.542	50.542	ppb	8.955	3090227	400	12.6	80	120	>+/-20%
Be	9	1	6	39.096	39.096	ppb	5.385	9960	40	97.7	80	120	
Na	23	2	45	328.480	328.480	ppb	1.558	121120	40	821.2	80	120	>+/-20%
Mg	24	2	45	3.403	3.403	ppb	29.935	747	40	8.5	80	120	>+/-20%
Al	27	2	45	409.554	409.554	ppb	1.370	10507	40	1023.9	80	120	>+/-20%
K	39	2	45	13.112	13.112	ppb	31.157	12699	40	32.8	80	120	>+/-20%
Ca	44	2	45	188.846	188.846	ppb	10.436	543	40	472.1	80	120	>+/-20%
V	51	2	72	38.576	38.576	ppb	0.642	35585	40	96.4	80	120	
Cr	52	2	72	39.678	39.678	ppb	2.717	46121	40	99.2	80	120	
Mn	55	2	72	38.206	38.206	ppb	1.747	18599	40	95.5	80	120	
Fe	57	2	72	394.089	394.089	ppb	3.488	8933	40	985.2	80	120	>+/-20%
Co	59	2	72	40.185	40.185	ppb	2.278	80849	40	100.5	80	120	
Ni	60	2	72	39.913	39.913	ppb	4.406	22318	40	99.8	80	120	
Cu	63	2	72	39.910	39.910	ppb	1.382	63828	40	99.8	80	120	
Zn	66	2	72	41.542	41.542	ppb	2.646	9413	40	103.9	80	120	
As	75	2	72	36.770	36.770	ppb	3.708	5261	40	91.9	80	120	
Se	78	1	72	36.111	36.111	ppb	1.941	7585	40	90.3	80	120	
Nb	93	2	72	-1.971	-1.971	ppb	-3.287	2354	40	-4.9	80	120	>+/-20%
Mo	95	2	115	37.922	37.922	ppb	1.594	31028	40	94.8	80	120	
Pd	105	2	115	-0.040	-0.040	ppb	-29.915	17	40	-0.1	80	120	>+/-20%
Ag	107	2	115	40.879	40.879	ppb	2.783	109971	40	102.2	80	120	
Cd	111	2	115	37.858	37.858	ppb	1.313	13794	40	94.6	80	120	
Sn	120	2	115	38.107	38.107	ppb	2.564	38809	40	95.3	80	120	
Sb	121	2	115	36.004	36.004	ppb	1.332	32499	40	90.0	80	120	
Ba	137	2	115	38.224	38.224	ppb	3.970	11652	40	95.6	80	120	
W	182	2	165	37.681	37.681	ppb	0.888	156075	40	94.2	80	120	
Pt	195	2	165	0.006	0.006	ppb	57.158	57	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.337	39.337	ppb	0.343	311504	40	98.3	80	120	
Pb	208	2	165	39.709	39.709	ppb	0.579	417056	40	99.3	80	120	
Th	232	2	165	38.457	38.457	ppb	0.390	489823	40	96.1	80	120	
U	238	2	165	38.895	38.895	ppb	0.743	534506	40	97.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	551984	0.69	680701	81.09	60	120	
Sc (IS)	45	1	HMI H2	23034415	0.33	26528605	86.83	60	120	
Sc (IS)	45	2	HMI He	860819	0.57	1014720	84.83	60	120	
Sc (IS)	45	3	No Gas	37450062	0.20	43446903	86.20	60	120	
Ge Internal Standard	72	1	HMI H2	8982793	0.33	10271630	87.45	60	120	
Ge Internal Standard	72	2	HMI He	993772	0.50	1158236	85.80	60	120	
In Internal Standard	115	2	HMI He	3390511	0.75	3843567	88.21	60	120	
Ho-165	165	2	HMI He	17030599	0.45	18572367	91.70	60	120	

Sample Report

Sample Table

Sample Name	lcsd 280-437003/3-a
Data File Name	214SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:05:11-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	59.031	ppb	59.031	11.35	104720	500000	
Li	7	2	45	46.533	ppb	46.533	22.36	5238	500000	
Li	7	3	45	45.083	ppb	45.083	5.31	3046892	50000	
Be	9	1	6	38.744	ppb	38.744	1.09	9927	2000	
B	11	1	6	44.602	ppb	44.602	1.55	12256	2000	
Na	23	1	45	314.842	ppb	314.842	2.65	1654762	2000	
Na	23	2	45	286.109	ppb	286.109	3.50	113176	400000	
Mg	24	2	45	3.985	ppb	3.985	29.14	803	400000	
Al	27	2	45	410.345	ppb	410.345	2.42	10578	400000	
K	39	1	45	-1328.943	ppb	-1328.943	-2.53	4361397	400000	
K	39	2	45	12.522	ppb	12.522	114.05	12733	400000	
Ca	40	1	45	-1.696	ppb	-1.696	-1.20	94201	400000	
Ca	44	2	45	178.966	ppb	178.966	24.18	520	400000	
Ti	47	2	45	0.781	ppb	0.781	116.78	20	4000	
V	51	2	72	38.401	ppb	38.401	1.41	35511	2000	
Cr	52	2	72	40.372	ppb	40.372	1.14	47031	5000	
Mn	55	2	72	39.193	ppb	39.193	2.80	19120	10000	
Fe	57	2	72	404.605	ppb	404.605	4.72	9190	400000	
Co	59	2	72	40.363	ppb	40.363	0.63	81392	2000	
Ni	60	2	72	41.758	ppb	41.758	2.01	23393	5000	
Cu	63	2	72	40.282	ppb	40.282	0.42	64558	5000	
Zn	66	2	72	42.207	ppb	42.207	0.67	9580	5000	
As	75	2	72	36.468	ppb	36.468	1.47	5230	2000	
Se	78	1	72	37.380	ppb	37.380	2.00	7844	2000	
Sr	88	2	72	38.220	ppb	38.220	1.93	20442	4000	
Zr	90	2	72	11257.456	ppb	11257.456	2.20	51966	1000	>LDR
Nb	93	2	72	-2.167	ppb	-2.167	-3.00	1810	200	
Mo	95	2	115	37.578	ppb	37.578	0.84	31042	2000	
Pd	105	2	115	-0.042	ppb	-0.042	-10.67	13	100	
Ag	107	2	115	41.012	ppb	41.012	1.00	111376	100	
Cd	111	2	115	38.666	ppb	38.666	2.40	14221	2000	
Sn	120	2	115	38.239	ppb	38.239	1.07	39313	2000	
Sb	121	2	115	36.089	ppb	36.089	1.37	32883	1000	
Ba	137	2	115	38.785	ppb	38.785	1.37	11932	5000	
W	182	2	165	37.658	ppb	37.658	1.50	155795	100	
Pt	195	2	165	0.014	ppb	0.014	64.60	83	100	
Tl	205	2	165	39.460	ppb	39.460	0.23	312098	2000	
Pb	208	2	165	40.254	ppb	40.254	0.81	422246	5000	
Th	232	2	165	38.836	ppb	38.836	0.96	494043	2000	
U	238	2	165	39.229	ppb	39.229	0.34	538438	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	555063	0.85	680701	81.54	60	120	
Sc (IS)	45	1	HMI H2	22993857	0.46	26528605	86.68	60	120	
Sc (IS)	45	2	HMI He	864961	0.67	1014720	85.24	60	120	
Sc (IS)	45	3	No Gas	37390659	0.71	43446903	86.06	60	120	
Ge Internal Standard	72	1	HMI H2	8975398	0.43	10271630	87.38	60	120	
Ge Internal Standard	72	2	HMI He	996058	0.61	1158236	86.00	60	120	
In Internal Standard	115	2	HMI He	3422685	0.92	3843567	89.05	60	120	
Ho-165	165	2	HMI He	17010058	0.64	18572367	91.59	60	120	

Sample Report

Sample Table

Sample Name	280-116511-b-1-b
Data File Name	215SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:08:57-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-21.343	ppb	-21.343	-17.22	85737	500000	
Li	7	2	45	4.708	ppb	4.708	192.20	4758	500000	
Li	7	3	45	-27.116	ppb	-27.116	-33.17	2533918	50000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	13.945	ppb	13.945	5.18	4418	2000	
Na	23	1	45	2422.613	ppb	2422.613	0.30	7519039	2000	
Na	23	2	45	2381.054	ppb	2381.054	1.32	532831	400000	
Mg	24	2	45	2888.458	ppb	2888.458	1.54	264466	400000	
Al	27	2	45	13.908	ppb	13.908	38.66	403	400000	
K	39	1	45	1730.603	ppb	1730.603	1.97	12927039	400000	
K	39	2	45	3104.907	ppb	3104.907	1.73	160590	400000	
Ca	40	1	45	24609.169	ppb	24609.169	0.87	105134792	400000	
Ca	44	2	45	24751.525	ppb	24751.525	0.47	65357	400000	
Ti	47	2	45	0.178	ppb	0.178	298.23	7	4000	
V	51	2	72	-0.348	ppb	-0.348	-46.27	890	2000	
Cr	52	2	72	0.255	ppb	0.255	31.17	517	5000	
Mn	55	2	72	0.452	ppb	0.452	39.67	320	10000	
Fe	57	2	72	7.307	ppb	7.307	75.28	310	400000	
Co	59	2	72	0.008	ppb	0.008	360.84	80	2000	
Ni	60	2	72	0.609	ppb	0.609	25.10	500	5000	
Cu	63	2	72	2.659	ppb	2.659	2.55	5455	5000	
Zn	66	2	72	3.634	ppb	3.634	14.58	1140	5000	
As	75	2	72	0.030	ppb	0.030	230.82	27	2000	
Se	78	1	72	0.181	ppb	0.181	71.11	75	2000	
Sr	88	2	72	84.555	ppb	84.555	2.43	45226	4000	
Zr	90	2	72	319.945	ppb	319.945	9.08	1553	1000	
Nb	93	2	72	-2.339	ppb	-2.339	-3.31	1330	200	
Mo	95	2	115	0.117	ppb	0.117	70.86	173	2000	
Pd	105	2	115	-0.048	ppb	-0.048	-18.74	7	100	
Ag	107	2	115	0.003	ppb	0.003	275.48	57	100	
Cd	111	2	115	0.018	ppb	0.018	173.21	7	2000	
Sn	120	2	115	0.223	ppb	0.223	38.27	453	2000	
Sb	121	2	115	0.256	ppb	0.256	56.06	407	1000	
Ba	137	2	115	4.556	ppb	4.556	4.76	1403	5000	
W	182	2	165	1.035	ppb	1.035	13.58	5378	100	
Pt	195	2	165	0.001	ppb	0.001	811.08	40	100	
Tl	205	2	165	0.008	ppb	0.008	57.03	270	2000	
Pb	208	2	165	0.051	ppb	0.051	29.48	1350	5000	
Th	232	2	165	0.098	ppb	0.098	20.36	1860	2000	
U	238	2	165	0.177	ppb	0.177	4.63	2850	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	545178	0.35	680701	80.09	60	120	
Sc (IS)	45	1	HMI H2	22917817	0.80	26528605	86.39	60	120	
Sc (IS)	45	2	HMI He	861738	0.41	1014720	84.92	60	120	
Sc (IS)	45	3	No Gas	37321580	1.05	43446903	85.90	60	120	
Ge Internal Standard	72	1	HMI H2	8932933	0.29	10271630	86.97	60	120	
Ge Internal Standard	72	2	HMI He	996852	0.06	1158236	86.07	60	120	
In Internal Standard	115	2	HMI He	3420553	0.19	3843567	88.99	60	120	
Ho-165	165	2	HMI He	17075139	0.41	18572367	91.94	60	120	

Sample Report

Sample Table

Sample Name	280-116511-b-2-b
Data File Name	216SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:12:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-24.541	ppb	-24.541	-31.26	85060	500000	
Li	7	2	45	-19.055	ppb	-19.055	-175.89	4544	500000	
Li	7	3	45	-18.611	ppb	-18.611	-54.81	2584838	50000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	11.226	ppb	11.226	5.83	3757	2000	
Na	23	1	45	4361.805	ppb	4361.805	1.02	12929052	2000	
Na	23	2	45	4235.601	ppb	4235.601	0.28	914517	400000	
Mg	24	2	45	5731.348	ppb	5731.348	0.33	530018	400000	
Al	27	2	45	8.575	ppb	8.575	21.48	270	400000	
K	39	1	45	2768.615	ppb	2768.615	1.42	15850493	400000	
K	39	2	45	4124.910	ppb	4124.910	1.01	211655	400000	
Ca	40	1	45	46458.203	ppb	46458.203	0.67	198546510	400000	
Ca	44	2	45	47720.315	ppb	47720.315	1.53	127322	400000	
Ti	47	2	45	0.324	ppb	0.324	1.08	10	4000	
V	51	2	72	-0.159	ppb	-0.159	-80.38	1070	2000	
Cr	52	2	72	0.467	ppb	0.467	23.41	770	5000	
Mn	55	2	72	8.799	ppb	8.799	2.95	4418	10000	
Fe	57	2	72	36.384	ppb	36.384	6.71	970	400000	
Co	59	2	72	0.008	ppb	0.008	213.44	80	2000	
Ni	60	2	72	0.411	ppb	0.411	94.43	393	5000	
Cu	63	2	72	4.735	ppb	4.735	3.34	8806	5000	
Zn	66	2	72	8.977	ppb	8.977	2.53	2334	5000	
As	75	2	72	-0.022	ppb	-0.022	-165.14	20	2000	
Se	78	1	72	0.102	ppb	0.102	216.20	59	2000	
Sr	88	2	72	189.457	ppb	189.457	1.03	102316	4000	
Zr	90	2	72	164.234	ppb	164.234	23.47	843	1000	
Nb	93	2	72	-2.396	ppb	-2.396	-0.65	1180	200	
Mo	95	2	115	0.682	ppb	0.682	19.03	640	2000	
Pd	105	2	115	-0.045	ppb	-0.045	-17.13	10	100	
Ag	107	2	115	-0.010	ppb	-0.010	-36.04	20	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.118	ppb	0.118	73.56	347	2000	
Sb	121	2	115	0.032	ppb	0.032	232.66	203	1000	
Ba	137	2	115	9.864	ppb	9.864	8.13	3040	5000	
W	182	2	165	1.081	ppb	1.081	3.77	5568	100	
Pt	195	2	165	0.008	ppb	0.008	78.42	63	100	
Tl	205	2	165	-0.002	ppb	-0.002	-188.57	187	2000	
Pb	208	2	165	0.096	ppb	0.096	28.21	1827	5000	
Th	232	2	165	0.029	ppb	0.029	42.21	987	2000	
U	238	2	165	1.768	ppb	1.768	4.19	24755	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	547548	0.81	680701	80.44	60	120	
Sc (IS)	45	1	HMI H2	22935988	0.92	26528605	86.46	60	120	
Sc (IS)	45	2	HMI He	871080	0.78	1014720	85.84	60	120	
Sc (IS)	45	3	No Gas	37194701	0.85	43446903	85.61	60	120	
Ge Internal Standard	72	1	HMI H2	9010480	0.50	10271630	87.72	60	120	
Ge Internal Standard	72	2	HMI He	1006849	0.07	1158236	86.93	60	120	
In Internal Standard	115	2	HMI He	3426863	0.22	3843567	89.16	60	120	
Ho-165	165	2	HMI He	17077616	0.36	18572367	91.95	60	120	

Sample Report

Sample Table

Sample Name	280-116511-b-3-b
Data File Name	217SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:16:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-21.515	ppb	-21.515	-30.76	86867	500000	
Li	7	2	45	-34.076	ppb	-34.076	-74.06	4354	500000	
Li	7	3	45	-19.845	ppb	-19.845	-3.75	2595532	50000	
Be	9	1	6	0.055	ppb	0.055	41.28	17	2000	
B	11	1	6	11.594	ppb	11.594	5.26	3891	2000	
Na	23	1	45	3615.398	ppb	3615.398	0.17	10988299	2000	
Na	23	2	45	3552.124	ppb	3552.124	0.54	771975	400000	
Mg	24	2	45	3701.970	ppb	3701.970	0.80	340727	400000	
Al	27	2	45	13.030	ppb	13.030	34.26	383	400000	
K	39	1	45	1819.817	ppb	1819.817	0.97	13356994	400000	
K	39	2	45	3202.624	ppb	3202.624	0.55	166196	400000	
Ca	40	1	45	27938.840	ppb	27938.840	0.15	120973785	400000	
Ca	44	2	45	30020.563	ppb	30020.563	1.47	79707	400000	
Ti	47	2	45	0.023	ppb	0.023	1152.02	3	4000	
V	51	2	72	-0.258	ppb	-0.258	-35.08	980	2000	
Cr	52	2	72	0.228	ppb	0.228	46.37	490	5000	
Mn	55	2	72	0.235	ppb	0.235	27.08	217	10000	
Fe	57	2	72	14.130	ppb	14.130	24.79	467	400000	
Co	59	2	72	-0.005	ppb	-0.005	-143.56	53	2000	
Ni	60	2	72	0.773	ppb	0.773	13.91	597	5000	
Cu	63	2	72	7.152	ppb	7.152	1.56	12636	5000	
Zn	66	2	72	2.953	ppb	2.953	30.98	1000	5000	
As	75	2	72	0.060	ppb	0.060	99.76	31	2000	
Se	78	1	72	0.093	ppb	0.093	121.71	57	2000	
Sr	88	2	72	416.846	ppb	416.846	1.11	224920	4000	
Zr	90	2	72	85.488	ppb	85.488	41.37	477	1000	
Nb	93	2	72	-2.393	ppb	-2.393	-2.92	1190	200	
Mo	95	2	115	0.418	ppb	0.418	12.35	423	2000	
Pd	105	2	115	-0.050	ppb	-0.050	-8.85	3	100	
Ag	107	2	115	-0.013	ppb	-0.013	-33.49	13	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.065	ppb	0.065	5.22	293	2000	
Sb	121	2	115	-0.054	ppb	-0.054	-70.46	127	1000	
Ba	137	2	115	9.876	ppb	9.876	22.32	3054	5000	
W	182	2	165	1.496	ppb	1.496	11.34	7326	100	
Pt	195	2	165	0.013	ppb	0.013	107.03	80	100	
Tl	205	2	165	0.002	ppb	0.002	230.81	223	2000	
Pb	208	2	165	0.041	ppb	0.041	58.71	1250	5000	
Th	232	2	165	0.011	ppb	0.011	30.74	757	2000	
U	238	2	165	0.881	ppb	0.881	4.31	12630	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	553337	0.55	680701	81.29	60	120	
Sc (IS)	45	1	HMI H2	23229480	0.42	26528605	87.56	60	120	
Sc (IS)	45	2	HMI He	866565	0.50	1014720	85.40	60	120	
Sc (IS)	45	3	No Gas	37468440	0.37	43446903	86.24	60	120	
Ge Internal Standard	72	1	HMI H2	9074794	0.61	10271630	88.35	60	120	
Ge Internal Standard	72	2	HMI He	1006169	0.55	1158236	86.87	60	120	
In Internal Standard	115	2	HMI He	3441421	1.03	3843567	89.54	60	120	
Ho-165	165	2	HMI He	17194525	0.43	18572367	92.58	60	120	

Sample Report

Sample Table

Sample Name	280-116407-f-5-b
Data File Name	218SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:20:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	26.279	ppb	26.279	12.29	96045	500000	
Li	7	2	45	38.878	ppb	38.878	31.30	5081	500000	
Li	7	3	45	25.646	ppb	25.646	22.68	2904406	50000	
Be	9	1	6	0.126	ppb	0.126	37.80	33	2000	
B	11	1	6	70.536	ppb	70.536	2.42	17962	2000	
Na	23	1	45	24665.562	ppb	24665.562	0.31	68932322	2000	>LDR
Na	23	2	45	24818.691	ppb	24818.691	0.73	4980169	400000	
Mg	24	2	45	73148.797	ppb	73148.797	0.64	6617873	400000	
Al	27	2	45	1131.454	ppb	1131.454	4.58	28673	400000	
K	39	1	45	2418.881	ppb	2418.881	1.40	14744012	400000	
K	39	2	45	3800.607	ppb	3800.607	1.17	191867	400000	
Ca	40	1	45	152657.999	ppb	152657.999	0.88	646688270	400000	
Ca	44	2	45	155869.719	ppb	155869.719	0.24	407083	400000	
Ti	47	2	45	10.327	ppb	10.327	26.69	227	4000	
V	51	2	72	1.996	ppb	1.996	9.55	2934	2000	
Cr	52	2	72	2.126	ppb	2.126	10.67	2640	5000	
Mn	55	2	72	134.133	ppb	134.133	2.23	64099	10000	
Fe	57	2	72	2647.899	ppb	2647.899	1.33	58334	400000	
Co	59	2	72	1.799	ppb	1.799	6.47	3627	2000	
Ni	60	2	72	2.972	ppb	2.972	24.82	1784	5000	
Cu	63	2	72	1.078	ppb	1.078	3.30	2917	5000	
Zn	66	2	72	7.074	ppb	7.074	6.57	1860	5000	
As	75	2	72	5.780	ppb	5.780	3.47	834	2000	
Se	78	1	72	0.010	ppb	0.010	570.05	39	2000	
Sr	88	2	72	328.777	ppb	328.777	0.98	172692	4000	
Zr	90	2	72	293.562	ppb	293.562	7.83	1407	1000	
Nb	93	2	72	-2.428	ppb	-2.428	-1.96	1060	200	
Mo	95	2	115	3.039	ppb	3.039	6.61	2474	2000	
Pd	105	2	115	-0.045	ppb	-0.045	-0.23	10	100	
Ag	107	2	115	-0.005	ppb	-0.005	-354.49	33	100	
Cd	111	2	115	0.047	ppb	0.047	124.04	17	2000	
Sn	120	2	115	0.021	ppb	0.021	197.64	237	2000	
Sb	121	2	115	-0.016	ppb	-0.016	-248.43	153	1000	
Ba	137	2	115	26.905	ppb	26.905	3.26	7936	5000	
W	182	2	165	0.171	ppb	0.171	17.78	1790	100	
Pt	195	2	165	0.010	ppb	0.010	60.02	70	100	
Tl	205	2	165	0.032	ppb	0.032	3.23	450	2000	
Pb	208	2	165	0.937	ppb	0.937	4.99	10512	5000	
Th	232	2	165	0.384	ppb	0.384	7.89	5431	2000	
U	238	2	165	4.209	ppb	4.209	1.35	57539	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	529723	0.38	680701	77.82	60	120	
Sc (IS)	45	1	HMI H2	22742781	0.48	26528605	85.73	60	120	
Sc (IS)	45	2	HMI He	852837	0.24	1014720	84.05	60	120	
Sc (IS)	45	3	No Gas	37318177	0.67	43446903	85.89	60	120	
Ge Internal Standard	72	1	HMI H2	8820173	0.98	10271630	85.87	60	120	
Ge Internal Standard	72	2	HMI He	979376	0.28	1158236	84.56	60	120	
In Internal Standard	115	2	HMI He	3281802	1.25	3843567	85.38	60	120	
Ho-165	165	2	HMI He	16833688	0.47	18572367	90.64	60	120	

Sample Report

Sample Table

Sample Name	280-116452-d-1-b
Data File Name	219SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:24:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.088	ppb	-10.088	-38.35	87933	500000	
Li	7	2	45	13.539	ppb	13.539	186.26	4798	500000	
Li	7	3	45	-19.163	ppb	-19.163	-15.44	2627747	50000	
Be	9	1	6	0.016	ppb	0.016	286.01	7	2000	
B	11	1	6	38.740	ppb	38.740	5.96	10447	2000	
Na	23	1	45	28056.627	ppb	28056.627	1.27	78535439	2000	>LDR
Na	23	2	45	28361.741	ppb	28361.741	1.24	5672011	400000	
Mg	24	2	45	14204.815	ppb	14204.815	1.09	1283041	400000	
Al	27	2	45	10.398	ppb	10.398	32.89	310	400000	
K	39	1	45	1880.670	ppb	1880.670	2.24	13285745	400000	
K	39	2	45	3211.085	ppb	3211.085	1.07	163643	400000	
Ca	40	1	45	81930.842	ppb	81930.842	0.82	348155901	400000	
Ca	44	2	45	84105.930	ppb	84105.930	0.33	219259	400000	
Ti	47	2	45	-0.128	ppb	-0.128	0.00	0	4000	
V	51	2	72	3.905	ppb	3.905	5.99	4638	2000	
Cr	52	2	72	1.319	ppb	1.319	5.85	1730	5000	
Mn	55	2	72	0.224	ppb	0.224	14.10	207	10000	
Fe	57	2	72	11.847	ppb	11.847	9.94	407	400000	
Co	59	2	72	0.000	ppb	0.000	4391.72	63	2000	
Ni	60	2	72	0.263	ppb	0.263	76.55	303	5000	
Cu	63	2	72	0.001	ppb	0.001	20273.75	1260	5000	
Zn	66	2	72	2.154	ppb	2.154	43.69	807	5000	
As	75	2	72	0.652	ppb	0.652	15.23	114	2000	
Se	78	1	72	1.754	ppb	1.754	6.89	400	2000	
Sr	88	2	72	483.586	ppb	483.586	0.26	255458	4000	
Zr	90	2	72	137.502	ppb	137.502	15.95	703	1000	
Nb	93	2	72	-2.488	ppb	-2.488	-0.36	900	200	
Mo	95	2	115	0.997	ppb	0.997	21.71	890	2000	
Pd	105	2	115	-0.045	ppb	-0.045	-30.26	10	100	
Ag	107	2	115	-0.013	ppb	-0.013	-34.33	13	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	-0.026	ppb	-0.026	-60.75	197	2000	
Sb	121	2	115	-0.130	ppb	-0.130	-38.54	57	1000	
Ba	137	2	115	76.976	ppb	76.976	2.14	23451	5000	
W	182	2	165	0.129	ppb	0.129	47.32	1627	100	
Pt	195	2	165	0.005	ppb	0.005	191.14	53	100	
Tl	205	2	165	-0.005	ppb	-0.005	-191.45	160	2000	
Pb	208	2	165	0.024	ppb	0.024	40.44	1063	5000	
Th	232	2	165	-0.002	ppb	-0.002	-576.54	587	2000	
U	238	2	165	3.868	ppb	3.868	2.39	53227	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	538288	0.12	680701	79.08	60	120	
Sc (IS)	45	1	HMI H2	22810903	0.75	26528605	85.99	60	120	
Sc (IS)	45	2	HMI He	851220	1.03	1014720	83.89	60	120	
Sc (IS)	45	3	No Gas	37863561	0.29	43446903	87.15	60	120	
Ge Internal Standard	72	1	HMI H2	8896517	0.05	10271630	86.61	60	120	
Ge Internal Standard	72	2	HMI He	985045	0.25	1158236	85.05	60	120	
In Internal Standard	115	2	HMI He	3389435	0.51	3843567	88.18	60	120	
Ho-165	165	2	HMI He	16934760	0.70	18572367	91.18	60	120	

Sample Report

Sample Table

Sample Name	280-116452-d-2-b
Data File Name	220SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:27:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.372	ppb	-14.372	-81.64	86901	500000	
Li	7	2	45	-5.475	ppb	-5.475	-109.81	4558	500000	
Li	7	3	45	-22.109	ppb	-22.109	-20.86	2560501	50000	
Be	9	1	6	0.030	ppb	0.030	135.14	10	2000	
B	11	1	6	53.031	ppb	53.031	3.29	13954	2000	
Na	23	1	45	22011.564	ppb	22011.564	0.93	61757532	2000	>LDR
Na	23	2	45	22133.709	ppb	22133.709	0.88	4408545	400000	
Mg	24	2	45	5552.414	ppb	5552.414	0.23	498359	400000	
Al	27	2	45	14.865	ppb	14.865	25.59	420	400000	
K	39	1	45	1115.375	ppb	1115.375	2.67	11145687	400000	
K	39	2	45	2514.492	ppb	2514.492	1.12	129846	400000	
Ca	40	1	45	36172.472	ppb	36172.472	0.73	153713588	400000	
Ca	44	2	45	37239.854	ppb	37239.854	1.52	96446	400000	
Ti	47	2	45	0.337	ppb	0.337	138.00	10	4000	
V	51	2	72	5.300	ppb	5.300	6.84	5841	2000	
Cr	52	2	72	2.507	ppb	2.507	6.82	3077	5000	
Mn	55	2	72	0.191	ppb	0.191	68.58	190	10000	
Fe	57	2	72	15.121	ppb	15.121	16.68	477	400000	
Co	59	2	72	-0.018	ppb	-0.018	-16.25	27	2000	
Ni	60	2	72	0.424	ppb	0.424	31.27	390	5000	
Cu	63	2	72	-0.090	ppb	-0.090	-155.95	1113	5000	
Zn	66	2	72	2.902	ppb	2.902	15.38	963	5000	
As	75	2	72	1.238	ppb	1.238	14.82	196	2000	
Se	78	1	72	0.471	ppb	0.471	30.63	135	2000	
Sr	88	2	72	233.886	ppb	233.886	2.00	122954	4000	
Zr	90	2	72	61.834	ppb	61.834	25.16	357	1000	
Nb	93	2	72	-2.504	ppb	-2.504	-2.01	853	200	
Mo	95	2	115	4.060	ppb	4.060	3.28	3357	2000	
Pd	105	2	115	-0.040	ppb	-0.040	-30.28	17	100	
Ag	107	2	115	-0.004	ppb	-0.004	-152.08	37	100	
Cd	111	2	115	0.019	ppb	0.019	173.21	7	2000	
Sn	120	2	115	-0.024	ppb	-0.024	-207.76	197	2000	
Sb	121	2	115	-0.106	ppb	-0.106	-12.59	77	1000	
Ba	137	2	115	134.163	ppb	134.163	1.92	40474	5000	
W	182	2	165	0.225	ppb	0.225	2.50	2014	100	
Pt	195	2	165	0.005	ppb	0.005	179.91	53	100	
Tl	205	2	165	-0.006	ppb	-0.006	-143.75	157	2000	
Pb	208	2	165	0.069	ppb	0.069	14.10	1527	5000	
Th	232	2	165	-0.005	ppb	-0.005	-25.09	543	2000	
U	238	2	165	1.135	ppb	1.135	3.81	15847	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	538147	0.81	680701	79.06	60	120	
Sc (IS)	45	1	HMI H2	22802978	0.94	26528605	85.96	60	120	
Sc (IS)	45	2	HMI He	845408	0.05	1014720	83.31	60	120	
Sc (IS)	45	3	No Gas	37192739	0.54	43446903	85.61	60	120	
Ge Internal Standard	72	1	HMI H2	8904671	0.38	10271630	86.69	60	120	
Ge Internal Standard	72	2	HMI He	980176	0.13	1158236	84.63	60	120	
In Internal Standard	115	2	HMI He	3356789	0.52	3843567	87.34	60	120	
Ho-165	165	2	HMI He	16872304	0.21	18572367	90.85	60	120	

Sample Report

Sample Table

Sample Name	280-116561-d-1-b
Data File Name	221SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:31:35-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-20.766	ppb	-20.766	-33.49	86847	500000	
Li	7	2	45	-1.141	ppb	-1.141	-3463.12	4654	500000	
Li	7	3	45	-27.171	ppb	-27.171	-31.13	2562062	50000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	30.257	ppb	30.257	9.09	8423	2000	
Na	23	1	45	24447.378	ppb	24447.378	2.20	69631864	2000	>LDR
Na	23	2	45	25095.525	ppb	25095.525	0.91	5047514	400000	
Mg	24	2	45	12503.253	ppb	12503.253	4.98	1134229	400000	
Al	27	2	45	9.156	ppb	9.156	7.07	280	400000	
K	39	1	45	1634.733	ppb	1634.733	6.46	12800941	400000	
K	39	2	45	3091.216	ppb	3091.216	1.57	158674	400000	
Ca	40	1	45	86847.531	ppb	86847.531	3.61	374907674	400000	
Ca	44	2	45	92577.374	ppb	92577.374	0.84	242401	400000	
Ti	47	2	45	-0.128	ppb	-0.128	0.00	0	4000	
V	51	2	72	3.571	ppb	3.571	7.71	4311	2000	
Cr	52	2	72	5.408	ppb	5.408	82.48	6379	5000	
Mn	55	2	72	0.219	ppb	0.219	62.58	203	10000	
Fe	57	2	72	19.734	ppb	19.734	7.06	577	400000	
Co	59	2	72	-0.011	ppb	-0.011	-167.47	40	2000	
Ni	60	2	72	0.096	ppb	0.096	34.13	210	5000	
Cu	63	2	72	0.245	ppb	0.245	57.32	1627	5000	
Zn	66	2	72	2.542	ppb	2.542	25.36	883	5000	
As	75	2	72	0.775	ppb	0.775	14.90	131	2000	
Se	78	1	72	4.459	ppb	4.459	11.05	968	2000	
Sr	88	2	72	432.557	ppb	432.557	0.67	226798	4000	
Zr	90	2	72	64.990	ppb	64.990	25.57	370	1000	
Nb	93	2	72	-2.568	ppb	-2.568	-1.83	673	200	
Mo	95	2	115	1.511	ppb	1.511	15.54	1297	2000	
Pd	105	2	115	-0.050	ppb	-0.050	-9.02	3	100	
Ag	107	2	115	-0.001	ppb	-0.001	-745.85	43	100	
Cd	111	2	115	0.028	ppb	0.028	100.63	10	2000	
Sn	120	2	115	-0.042	ppb	-0.042	-188.66	180	2000	
Sb	121	2	115	-0.095	ppb	-0.095	-52.32	87	1000	
Ba	137	2	115	122.195	ppb	122.195	3.42	36900	5000	
W	182	2	165	0.198	ppb	0.198	35.55	1917	100	
Pt	195	2	165	0.002	ppb	0.002	225.69	43	100	
Tl	205	2	165	-0.008	ppb	-0.008	-67.73	143	2000	
Pb	208	2	165	0.037	ppb	0.037	34.02	1203	5000	
Th	232	2	165	-0.015	ppb	-0.015	-3.03	417	2000	
U	238	2	165	1.846	ppb	1.846	1.00	25720	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	542125	0.60	680701	79.64	60	120	
Sc (IS)	45	1	HMI H2	23180868	1.53	26528605	87.38	60	120	
Sc (IS)	45	2	HMI He	854988	0.85	1014720	84.26	60	120	
Sc (IS)	45	3	No Gas	37742663	1.16	43446903	86.87	60	120	
Ge Internal Standard	72	1	HMI H2	8977512	1.63	10271630	87.40	60	120	
Ge Internal Standard	72	2	HMI He	977704	0.69	1158236	84.41	60	120	
In Internal Standard	115	2	HMI He	3360835	1.18	3843567	87.44	60	120	
Ho-165	165	2	HMI He	17005709	0.66	18572367	91.56	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	222_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:35:23-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	457.472	ppb	1.517	197162	500	91.5	90	110	
Li	7	2	45	544.245	ppb	9.697	10537	500	108.8	90	110	
Li	7	3	45	451.545	ppb	0.743	5992949	500	90.3	90	110	
Be	9	1	6	51.927	ppb	3.028	13153	50	103.9	90	110	
B	11	1	6	54.049	ppb	3.137	14481	50	108.1	90	110	
Na	23	1	45	5032.515	ppb	0.876	14816135	5000	100.7	90	110	
Na	23	2	45	4926.207	ppb	0.246	1027106	5000	98.5	90	110	
Mg	24	2	45	5055.265	ppb	1.068	455414	5000	101.1	90	110	
Al	27	2	45	4963.190	ppb	1.419	124975	5000	99.3	90	110	
K	39	1	45	4813.347	ppb	1.359	21614561	5000	96.3	90	110	
K	39	2	45	5006.258	ppb	1.026	247656	5000	100.1	90	110	
Ca	40	1	45	4963.935	ppb	0.367	21329877	5000	99.3	90	110	
Ca	44	2	45	5276.869	ppb	1.238	13754	5000	105.5	90	110	
Ti	47	2	45	47.216	ppb	22.655	1020	50	94.4	90	110	
V	51	2	72	50.335	ppb	2.024	45388	50	100.7	90	110	
Cr	52	2	72	50.695	ppb	0.812	57993	50	101.4	90	110	
Mn	55	2	72	49.943	ppb	3.835	23921	50	99.9	90	110	
Fe	57	2	72	4977.887	ppb	1.377	109507	5000	99.6	90	110	
Co	59	2	72	50.626	ppb	0.258	100326	50	101.3	90	110	
Ni	60	2	72	51.265	ppb	1.392	28195	50	102.5	90	110	
Cu	63	2	72	51.888	ppb	2.322	81370	50	103.8	90	110	
Zn	66	2	72	50.876	ppb	0.573	11282	50	101.8	90	110	
As	75	2	72	49.547	ppb	1.409	6976	50	99.1	90	110	
Se	78	1	72	49.549	ppb	1.780	10352	50	99.1	90	110	
Sr	88	2	72	49.057	ppb	1.582	25784	50	98.1	90	110	
Zr	90	2	72	317.338	ppb	6.909	1513	50	634.7	90	110	>+\-10%
Nb	93	2	72	86.836	ppb	0.231	246573	100	86.8	90	110	>+\-10%
Mo	95	2	115	47.683	ppb	2.445	38620	50	95.4	90	110	
Pd	105	2	115	49.514	ppb	2.207	62931	50	99.0	90	110	
Ag	107	2	115	50.280	ppb	0.756	133946	50	100.6	90	110	
Cd	111	2	115	50.758	ppb	4.694	18313	50	101.5	90	110	
Sn	120	2	115	49.214	ppb	0.948	49576	50	98.4	90	110	
Sb	121	2	115	48.137	ppb	2.331	42971	50	96.3	90	110	
Ba	137	2	115	50.688	ppb	0.813	15299	50	101.4	90	110	
W	182	2	165	49.293	ppb	1.457	201701	50	98.6	90	110	
Pt	195	2	165	49.791	ppb	1.084	165316	50	99.6	90	110	
Tl	205	2	165	50.423	ppb	1.132	395057	50	100.8	90	110	
Pb	208	2	165	50.665	ppb	0.576	526360	50	101.3	90	110	
Th	232	2	165	50.460	ppb	0.847	635811	50	100.9	90	110	
U	238	2	165	50.378	ppb	1.495	684932	50	100.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	548778	0.74	680701	80.62	60	120	
Sc (IS)	45	1	HMI H2	22962790	0.72	26528605	86.56	60	120	
Sc (IS)	45	2	HMI He	848435	0.48	1014720	83.61	60	120	
Sc (IS)	45	3	No Gas	37939914	1.05	43446903	87.32	60	120	
Ge Internal Standard	72	1	HMI H2	8946106	0.72	10271630	87.10	60	120	
Ge Internal Standard	72	2	HMI He	979055	0.68	1158236	84.53	60	120	
In Internal Standard	115	2	HMI He	3357812	0.88	3843567	87.36	60	120	
Ho-165	165	2	HMI He	16853670	0.90	18572367	90.75	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	223_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:39:11-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-21.108	ppb	-39.1	2611105	10	
Be	9	1	6	0.041	ppb	144.5	13	0.5	
B	11	1	6	7.929	ppb	8.9	3000	0.5	>RL
Na	23	1	45	51.042	ppb	8.8	913236	25	>RL
Na	23	2	45	62.369	ppb	5.4	66821	25	>RL
Mg	24	2	45	5.304	ppb	26.5	907	25	
Al	27	2	45	6.863	ppb	21.1	220	15	
K	39	1	45	69.123	ppb	3.4	8256292	50	>RL
K	39	2	45	2.525	ppb	343.7	12015	50	
Ca	40	1	45	-0.631	ppb	-36.1	98291	50	
Ca	44	2	45	-1.836	ppb	-724.5	40	25	
Ti	47	2	45	-0.128	ppb	0.0	0	0.5	
V	51	2	72	0.603	ppb	33.7	1710	1	
Cr	52	2	72	0.003	ppb	343.6	220	1	
Mn	55	2	72	-0.025	ppb	-349.5	87	0.5	
Fe	57	2	72	2.095	ppb	109.7	190	25	
Co	59	2	72	-0.004	ppb	-177.4	53	0.5	
Ni	60	2	72	-0.070	ppb	-135.1	120	1	
Cu	63	2	72	-0.014	ppb	-212.6	1230	1	
Zn	66	2	72	-0.116	ppb	-130.4	313	5	
As	75	2	72	-0.013	ppb	-426.5	20	1	
Se	78	1	72	-0.082	ppb	-46.7	20	1	
Sr	88	2	72	0.073	ppb	39.2	67	0.5	
Zr	90	2	72	6.742	ppb	18.4	107	1	>RL
Nb	93	2	72	1.009	ppb	46.8	10518	2	
Mo	95	2	115	0.063	ppb	72.9	127	0.5	
Pd	105	2	115	-0.008	ppb	-246.2	57	1	
Ag	107	2	115	0.004	ppb	155.0	57	1	
Cd	111	2	115	0.037	ppb	114.7	13	0.5	
Sn	120	2	115	0.105	ppb	100.8	327	1	
Sb	121	2	115	0.238	ppb	33.8	383	0.6	
Ba	137	2	115	0.012	ppb	154.3	7	0.5	
W	182	2	165	0.107	ppb	14.8	1537	1	
Pt	195	2	165	0.018	ppb	109.2	97	1	
Tl	205	2	165	0.003	ppb	174.6	230	0.1	
Pb	208	2	165	0.008	ppb	42.7	893	0.5	
Th	232	2	165	0.015	ppb	7.9	800	1	
U	238	2	165	0.027	ppb	65.8	770	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	560036	0.67	680701	82.27	60	120	
Sc (IS)	45	1	HMI H2	22885435	0.72	26528605	86.27	60	120	
Sc (IS)	45	2	HMI He	848158	0.24	1014720	83.59	60	120	
Sc (IS)	45	3	No Gas	37823519	0.21	43446903	87.06	60	120	
Ge Internal Standard	72	1	HMI H2	8924504	0.41	10271630	86.88	60	120	
Ge Internal Standard	72	2	HMI He	979599	0.36	1158236	84.58	60	120	
In Internal Standard	115	2	HMI He	3359096	0.58	3843567	87.40	60	120	
Ho-165	165	2	HMI He	16937470	1.16	18572367	91.20	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	224LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:43:01-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-15.005	ppb	-40.418	2667707	50	-30.0	70	130	>+/-30%
Be	9	1	6	0.851	ppb	23.592	223	1	85.1	70	130	
Na	23	2	45	101.244	ppb	1.354	74879	50	202.5	70	130	>+/-30%
Mg	24	2	45	55.212	ppb	4.974	5425	50	110.4	70	130	
Al	27	2	45	32.626	ppb	29.876	873	30	108.8	70	130	
K	39	2	45	92.665	ppb	12.002	16343	100	92.7	70	130	
Ca	44	2	45	54.280	ppb	34.787	187	50	108.6	70	130	
V	51	2	72	5.087	ppb	6.702	5678	5	101.7	70	130	
Cr	52	2	72	2.184	ppb	1.861	2720	2	109.2	70	130	
Mn	55	2	72	1.016	ppb	31.444	587	1	101.6	70	130	
Fe	57	2	72	49.894	ppb	16.517	1247	50	99.8	70	130	
Co	59	2	72	0.915	ppb	10.264	1884	1	91.5	70	130	
Ni	60	2	72	2.276	ppb	12.810	1410	2	113.8	70	130	
Cu	63	2	72	1.968	ppb	9.920	4314	2	98.4	70	130	
Zn	66	2	72	9.696	ppb	11.048	2437	10	97.0	70	130	
As	75	2	72	4.478	ppb	10.218	654	5	89.6	70	130	
Se	78	1	72	4.369	ppb	8.213	941	5	87.4	70	130	
Sr	88	2	72	1.027	ppb	44.917	570	1	102.7	70	130	
Zr	90	2	72	76.891	ppb	30.401	427	0.5	15378.2	70	130	>+/-30%
Nb	93	2	72	5.367	ppb	7.342	22622	2	268.4	70	130	>+/-30%
Mo	95	2	115	1.725	ppb	4.744	1477	2	86.2	70	130	
Pd	105	2	115	-0.027	ppb	-102.908	33	1	-2.7	70	130	>+/-30%
Ag	107	2	115	4.901	ppb	0.438	13160	5	98.0	70	130	
Cd	111	2	115	0.984	ppb	10.807	357	1	98.4	70	130	
Sn	120	2	115	9.152	ppb	3.785	9444	10	91.5	70	130	
Sb	121	2	115	1.975	ppb	6.132	1937	2	98.8	70	130	
Ba	137	2	115	1.200	ppb	29.235	367	1	120.0	70	130	
W	182	2	165	4.922	ppb	0.296	21111	1	492.2	70	130	>+/-30%
Pt	195	2	165	0.035	ppb	18.374	153	1	3.5	70	130	>+/-30%
Tl	205	2	165	1.035	ppb	2.277	8300	1	103.5	70	130	
Pb	208	2	165	0.991	ppb	4.255	11079	1	99.1	70	130	
Th	232	2	165	2.031	ppb	0.958	26154	2	101.5	70	130	
U	238	2	165	1.026	ppb	3.947	14335	1	102.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	561948	0.71	680701	82.55	60	120	
Sc (IS)	45	1	HMI H2	22933652	0.15	26528605	86.45	60	120	
Sc (IS)	45	2	HMI He	852547	0.44	1014720	84.02	60	120	
Sc (IS)	45	3	No Gas	38012621	0.51	43446903	87.49	60	120	
Ge Internal Standard	72	1	HMI H2	8898884	0.57	10271630	86.64	60	120	
Ge Internal Standard	72	2	HMI He	984384	0.11	1158236	84.99	60	120	
In Internal Standard	115	2	HMI He	3373427	0.39	3843567	87.77	60	120	
Ho-165	165	2	HMI He	16841813	0.49	18572367	90.68	60	120	

Sample Report

Sample Table

Sample Name	280-116561-d-2-b
Data File Name	225SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:46:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-13.271	ppb	-13.271	-7.44	85952	500000	
Li	7	2	45	-2.646	ppb	-2.646	-206.13	4591	500000	
Li	7	3	45	-18.470	ppb	-18.470	-26.92	2596513	50000	
Be	9	1	6	0.003	ppb	0.003	816.20	3	2000	
B	11	1	6	51.570	ppb	51.570	3.04	13533	2000	
Na	23	1	45	23621.448	ppb	23621.448	1.16	65292694	2000	>LDR
Na	23	2	45	23802.592	ppb	23802.592	1.16	4739294	400000	
Mg	24	2	45	6078.435	ppb	6078.435	0.81	545816	400000	
Al	27	2	45	10.452	ppb	10.452	50.52	310	400000	
K	39	1	45	1293.461	ppb	1293.461	1.50	11479854	400000	
K	39	2	45	2543.928	ppb	2543.928	1.23	131294	400000	
Ca	40	1	45	46655.430	ppb	46655.430	0.92	195458777	400000	
Ca	44	2	45	47249.553	ppb	47249.553	2.89	122414	400000	
Ti	47	2	45	-0.128	ppb	-0.128	0.00	0	4000	
V	51	2	72	4.194	ppb	4.194	4.25	4851	2000	
Cr	52	2	72	3.754	ppb	3.754	6.59	4484	5000	
Mn	55	2	72	0.073	ppb	0.073	128.35	133	10000	
Fe	57	2	72	9.274	ppb	9.274	36.76	347	400000	
Co	59	2	72	-0.018	ppb	-0.018	-59.17	27	2000	
Ni	60	2	72	0.151	ppb	0.151	84.41	240	5000	
Cu	63	2	72	0.557	ppb	0.557	30.10	2107	5000	
Zn	66	2	72	2.078	ppb	2.078	28.37	783	5000	
As	75	2	72	0.842	ppb	0.842	21.87	140	2000	
Se	78	1	72	1.247	ppb	1.247	6.96	292	2000	
Sr	88	2	72	228.471	ppb	228.471	0.50	119659	4000	
Zr	90	2	72	13.455	ppb	13.455	37.94	137	1000	
Nb	93	2	72	-1.675	ppb	-1.675	-5.71	3124	200	
Mo	95	2	115	1.930	ppb	1.930	10.77	1624	2000	
Pd	105	2	115	-0.045	ppb	-0.045	-17.97	10	100	
Ag	107	2	115	-0.011	ppb	-0.011	-19.68	17	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.051	ppb	0.051	99.86	270	2000	
Sb	121	2	115	-0.026	ppb	-0.026	-239.72	147	1000	
Ba	137	2	115	164.865	ppb	164.865	2.05	49356	5000	
W	182	2	165	0.392	ppb	0.392	5.19	2704	100	
Pt	195	2	165	0.004	ppb	0.004	127.99	50	100	
Tl	205	2	165	0.001	ppb	0.001	678.27	213	2000	
Pb	208	2	165	0.037	ppb	0.037	49.19	1197	5000	
Th	232	2	165	0.004	ppb	0.004	355.72	660	2000	
U	238	2	165	0.888	ppb	0.888	2.40	12533	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	535752	0.43	680701	78.71	60	120	
Sc (IS)	45	1	HMI H2	22483656	0.45	26528605	84.75	60	120	
Sc (IS)	45	2	HMI He	845874	0.57	1014720	83.36	60	120	
Sc (IS)	45	3	No Gas	37344067	0.31	43446903	85.95	60	120	
Ge Internal Standard	72	1	HMI H2	8805527	0.24	10271630	85.73	60	120	
Ge Internal Standard	72	2	HMI He	976500	0.29	1158236	84.31	60	120	
In Internal Standard	115	2	HMI He	3331516	1.07	3843567	86.68	60	120	
Ho-165	165	2	HMI He	16938237	0.74	18572367	91.20	60	120	

Sample Report

Sample Table

Sample Name	280-116592-d-1-g
Data File Name	226SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:50:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.591	ppb	-8.591	-94.99	87490	500000	
Li	7	2	45	14.450	ppb	14.450	169.36	4758	500000	
Li	7	3	45	-16.914	ppb	-16.914	-18.85	2601789	50000	
Be	9	1	6	0.016	ppb	0.016	284.42	7	2000	
B	11	1	6	34.824	ppb	34.824	1.66	9380	2000	
Na	23	1	45	26972.724	ppb	26972.724	1.04	74860136	2000	>LDR
Na	23	2	45	27267.038	ppb	27267.038	1.77	5399626	400000	
Mg	24	2	45	13167.254	ppb	13167.254	4.27	1176969	400000	
Al	27	2	45	3.594	ppb	3.594	66.18	137	400000	
K	39	1	45	1059.919	ppb	1059.919	2.23	10897189	400000	
K	39	2	45	2386.028	ppb	2386.028	1.56	123389	400000	
Ca	40	1	45	72559.285	ppb	72559.285	0.67	305621755	400000	
Ca	44	2	45	74653.139	ppb	74653.139	2.74	192599	400000	
Ti	47	2	45	-0.128	ppb	-0.128	0.00	0	4000	
V	51	2	72	4.164	ppb	4.164	8.68	4811	2000	
Cr	52	2	72	0.780	ppb	0.780	15.38	1100	5000	
Mn	55	2	72	0.356	ppb	0.356	59.22	267	10000	
Fe	57	2	72	16.950	ppb	16.950	13.20	513	400000	
Co	59	2	72	0.463	ppb	0.463	20.27	973	2000	
Ni	60	2	72	0.558	ppb	0.558	23.74	460	5000	
Cu	63	2	72	0.025	ppb	0.025	90.90	1283	5000	
Zn	66	2	72	4.818	ppb	4.818	30.68	1367	5000	
As	75	2	72	0.433	ppb	0.433	17.50	82	2000	
Se	78	1	72	1.858	ppb	1.858	14.63	417	2000	
Sr	88	2	72	470.786	ppb	470.786	0.41	245809	4000	
Zr	90	2	72	14.289	ppb	14.289	56.00	140	1000	
Nb	93	2	72	-1.917	ppb	-1.917	-6.77	2454	200	
Mo	95	2	115	1.118	ppb	1.118	11.95	977	2000	
Pd	105	2	115	-0.037	ppb	-0.037	-21.63	20	100	
Ag	107	2	115	-0.006	ppb	-0.006	-183.40	30	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	-0.024	ppb	-0.024	-202.49	197	2000	
Sb	121	2	115	-0.076	ppb	-0.076	-45.77	103	1000	
Ba	137	2	115	74.723	ppb	74.723	3.81	22489	5000	
W	182	2	165	0.499	ppb	0.499	10.73	3137	100	
Pt	195	2	165	-0.006	ppb	-0.006	-58.81	17	100	
Tl	205	2	165	0.001	ppb	0.001	1056.99	210	2000	
Pb	208	2	165	0.037	ppb	0.037	80.41	1197	5000	
Th	232	2	165	-0.008	ppb	-0.008	-83.07	507	2000	
U	238	2	165	3.655	ppb	3.655	1.78	50252	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	532245	0.44	680701	78.19	60	120	
Sc (IS)	45	1	HMI H2	22608458	0.76	26528605	85.22	60	120	
Sc (IS)	45	2	HMI He	842614	1.72	1014720	83.04	60	120	
Sc (IS)	45	3	No Gas	37262511	1.04	43446903	85.77	60	120	
Ge Internal Standard	72	1	HMI H2	8806944	0.72	10271630	85.74	60	120	
Ge Internal Standard	72	2	HMI He	973595	0.41	1158236	84.06	60	120	
In Internal Standard	115	2	HMI He	3349082	0.63	3843567	87.13	60	120	
Ho-165	165	2	HMI He	16911310	0.28	18572367	91.06	60	120	

Sample Report

Sample Table

Sample Name	280-116592-d-1-gSD@5
Data File Name	227SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:54:25-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.122	ppb	-11.122	-61.53	87334	500000	
Li	7	2	45	14.193	ppb	14.193	138.23	4738	500000	
Li	7	3	45	-19.032	ppb	-19.032	-6.22	2608233	50000	
Be	9	1	6	0.029	ppb	0.029	136.87	10	2000	
B	11	1	6	12.362	ppb	12.362	17.88	4074	2000	
Na	23	1	45	5697.345	ppb	5697.345	0.80	16492371	2000	
Na	23	2	45	6054.662	ppb	6054.662	1.07	1236920	400000	
Mg	24	2	45	2664.308	ppb	2664.308	1.30	237719	400000	
Al	27	2	45	5.747	ppb	5.747	18.57	190	400000	
K	39	1	45	120.610	ppb	120.610	14.71	8338451	400000	
K	39	2	45	478.976	ppb	478.976	1.72	34097	400000	
Ca	40	1	45	15033.657	ppb	15033.657	0.70	63703392	400000	
Ca	44	2	45	15287.967	ppb	15287.967	1.44	39348	400000	
Ti	47	2	45	1.120	ppb	1.120	193.04	27	4000	
V	51	2	72	0.902	ppb	0.902	29.46	1964	2000	
Cr	52	2	72	0.236	ppb	0.236	23.40	483	5000	
Mn	55	2	72	0.137	ppb	0.137	24.32	163	10000	
Fe	57	2	72	9.133	ppb	9.133	28.40	343	400000	
Co	59	2	72	0.101	ppb	0.101	14.90	260	2000	
Ni	60	2	72	0.470	ppb	0.470	12.53	413	5000	
Cu	63	2	72	0.035	ppb	0.035	165.44	1300	5000	
Zn	66	2	72	2.988	ppb	2.988	8.26	977	5000	
As	75	2	72	0.011	ppb	0.011	344.61	24	2000	
Se	78	1	72	0.284	ppb	0.284	26.92	96	2000	
Sr	88	2	72	95.249	ppb	95.249	3.04	49822	4000	
Zr	90	2	72	2.472	ppb	2.472	599.38	87	1000	
Nb	93	2	72	-2.328	ppb	-2.328	-4.36	1330	200	
Mo	95	2	115	0.254	ppb	0.254	17.67	280	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-139.86	43	100	
Ag	107	2	115	-0.007	ppb	-0.007	-28.29	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	-0.051	ppb	-0.051	-118.50	170	2000	
Sb	121	2	115	-0.136	ppb	-0.136	-21.63	50	1000	
Ba	137	2	115	16.346	ppb	16.346	9.17	4921	5000	
W	182	2	165	0.108	ppb	0.108	41.01	1544	100	
Pt	195	2	165	0.004	ppb	0.004	196.46	50	100	
Tl	205	2	165	-0.007	ppb	-0.007	-10.91	147	2000	
Pb	208	2	165	0.011	ppb	0.011	82.55	927	5000	
Th	232	2	165	-0.011	ppb	-0.011	-48.55	467	2000	
U	238	2	165	0.776	ppb	0.776	2.96	11019	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	551704	0.63	680701	81.05	60	120	
Sc (IS)	45	1	HMI H2	22716950	0.78	26528605	85.63	60	120	
Sc (IS)	45	2	HMI He	839610	0.41	1014720	82.74	60	120	
Sc (IS)	45	3	No Gas	37568883	0.16	43446903	86.47	60	120	
Ge Internal Standard	72	1	HMI H2	8919569	0.18	10271630	86.84	60	120	
Ge Internal Standard	72	2	HMI He	974887	0.52	1158236	84.17	60	120	
In Internal Standard	115	2	HMI He	3349669	0.87	3843567	87.15	60	120	
Ho-165	165	2	HMI He	16964211	0.41	18572367	91.34	60	120	

Sample Report

Sample Table

Sample Name	280-116592-d-1-h ms
Data File Name	228SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T00:58:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	63.917	ppb	63.917	11.38	101997	500000	
Li	7	2	45	75.688	ppb	75.688	54.04	5348	500000	
Li	7	3	45	53.933	ppb	53.933	2.27	3066952	50000	
Be	9	1	6	38.315	ppb	38.315	2.43	9243	2000	
B	11	1	6	68.183	ppb	68.183	1.84	17160	2000	
Na	23	1	45	27162.765	ppb	27162.765	1.29	73873974	2000	>LDR
Na	23	2	45	27228.613	ppb	27228.613	0.48	5322515	400000	
Mg	24	2	45	13138.290	ppb	13138.290	3.12	1159378	400000	
Al	27	2	45	404.558	ppb	404.558	2.36	10027	400000	
K	39	1	45	1081.225	ppb	1081.225	2.40	10737243	400000	
K	39	2	45	2406.977	ppb	2406.977	1.00	122766	400000	
Ca	40	1	45	72657.913	ppb	72657.913	0.86	299903376	400000	
Ca	44	2	45	74103.747	ppb	74103.747	1.53	188759	400000	
Ti	47	2	45	1.442	ppb	1.442	74.30	33	4000	
V	51	2	72	44.100	ppb	44.100	1.17	39264	2000	
Cr	52	2	72	40.115	ppb	40.115	1.89	45191	5000	
Mn	55	2	72	39.398	ppb	39.398	0.87	18586	10000	
Fe	57	2	72	400.244	ppb	400.244	5.11	8793	400000	
Co	59	2	72	39.571	ppb	39.571	0.28	77168	2000	
Ni	60	2	72	39.986	ppb	39.986	2.63	21670	5000	
Cu	63	2	72	38.498	ppb	38.498	0.70	59721	5000	
Zn	66	2	72	44.145	ppb	44.145	3.23	9674	5000	
As	75	2	72	37.791	ppb	37.791	4.47	5240	2000	
Se	78	1	72	39.239	ppb	39.239	2.91	7932	2000	
Sr	88	2	72	504.191	ppb	504.191	0.51	260447	4000	
Zr	90	2	72	11250.983	ppb	11250.983	0.96	50230	1000	>LDR
Nb	93	2	72	-2.254	ppb	-2.254	-0.76	1514	200	
Mo	95	2	115	38.362	ppb	38.362	1.33	30297	2000	
Pd	105	2	115	-0.047	ppb	-0.047	-19.77	7	100	
Ag	107	2	115	40.841	ppb	40.841	0.95	106048	100	
Cd	111	2	115	39.044	ppb	39.044	4.18	13734	2000	
Sn	120	2	115	38.075	ppb	38.075	3.35	37421	2000	
Sb	121	2	115	38.645	ppb	38.645	1.85	33655	1000	
Ba	137	2	115	114.597	ppb	114.597	3.23	33700	5000	
W	182	2	165	39.720	ppb	39.720	0.15	161722	100	
Pt	195	2	165	0.000	ppb	0.000	11451.53	37	100	
Tl	205	2	165	39.591	ppb	39.591	1.36	308252	2000	
Pb	208	2	165	39.292	ppb	39.292	1.83	405771	5000	
Th	232	2	165	39.535	ppb	39.535	1.25	495097	2000	
U	238	2	165	43.916	ppb	43.916	1.08	593334	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	522613	0.41	680701	76.78	60	120	
Sc (IS)	45	1	HMI H2	22156448	0.79	26528605	83.52	60	120	
Sc (IS)	45	2	HMI He	831632	0.98	1014720	81.96	60	120	
Sc (IS)	45	3	No Gas	36883069	0.50	43446903	84.89	60	120	
Ge Internal Standard	72	1	HMI H2	8645952	1.31	10271630	84.17	60	120	
Ge Internal Standard	72	2	HMI He	963262	0.65	1158236	83.17	60	120	
In Internal Standard	115	2	HMI He	3272829	1.77	3843567	85.15	60	120	
Ho-165	165	2	HMI He	16746483	1.19	18572367	90.17	60	120	

Sample Report

Sample Table

Sample Name	280-116592-d-1-i msd
Data File Name	229SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:01:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	68.951	ppb	68.951	16.63	100102	500000	
Li	7	2	45	82.455	ppb	82.455	1.73	5425	500000	
Li	7	3	45	50.078	ppb	50.078	19.49	3050409	50000	
Be	9	1	6	40.768	ppb	40.768	7.35	9667	2000	
B	11	1	6	72.341	ppb	72.341	6.82	17845	2000	
Na	23	1	45	28535.835	ppb	28535.835	8.26	75147862	2000	>LDR
Na	23	2	45	27158.422	ppb	27158.422	1.20	5314711	400000	
Mg	24	2	45	12725.392	ppb	12725.392	1.62	1124159	400000	
Al	27	2	45	396.832	ppb	396.832	2.41	9847	400000	
K	39	1	45	1155.687	ppb	1155.687	19.97	10605590	400000	
K	39	2	45	2356.601	ppb	2356.601	1.88	120567	400000	
Ca	40	1	45	76784.687	ppb	76784.687	9.82	306864822	400000	
Ca	44	2	45	74634.100	ppb	74634.100	1.13	190309	400000	
Ti	47	2	45	0.655	ppb	0.655	81.14	17	4000	
V	51	2	72	43.992	ppb	43.992	0.52	39144	2000	
Cr	52	2	72	40.811	ppb	40.811	2.08	45943	5000	
Mn	55	2	72	41.825	ppb	41.825	4.28	19711	10000	
Fe	57	2	72	489.311	ppb	489.311	5.95	10711	400000	
Co	59	2	72	39.188	ppb	39.188	1.08	76365	2000	
Ni	60	2	72	40.000	ppb	40.000	2.67	21664	5000	
Cu	63	2	72	39.122	ppb	39.122	1.62	60628	5000	
Zn	66	2	72	42.409	ppb	42.409	3.32	9300	5000	
As	75	2	72	38.292	ppb	38.292	3.13	5306	2000	
Se	78	1	72	40.800	ppb	40.800	4.27	8045	2000	
Sr	88	2	72	507.099	ppb	507.099	0.62	261765	4000	
Zr	90	2	72	11497.639	ppb	11497.639	0.96	51294	1000	>LDR
Nb	93	2	72	-2.303	ppb	-2.303	-1.86	1380	200	
Mo	95	2	115	39.085	ppb	39.085	1.10	30978	2000	
Pd	105	2	115	-0.045	ppb	-0.045	-17.99	10	100	
Ag	107	2	115	40.796	ppb	40.796	1.98	106310	100	
Cd	111	2	115	37.843	ppb	37.843	1.12	13357	2000	
Sn	120	2	115	37.764	ppb	37.764	2.59	37258	2000	
Sb	121	2	115	37.395	ppb	37.395	2.63	32693	1000	
Ba	137	2	115	112.919	ppb	112.919	0.49	33331	5000	
W	182	2	165	39.260	ppb	39.260	0.60	160645	100	
Pt	195	2	165	0.007	ppb	0.007	153.43	60	100	
Tl	205	2	165	39.042	ppb	39.042	0.82	305485	2000	
Pb	208	2	165	39.288	ppb	39.288	2.08	407704	5000	
Th	232	2	165	39.361	ppb	39.361	1.44	495352	2000	
U	238	2	165	43.553	ppb	43.553	1.04	591333	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	514772	4.52	680701	75.62	60	120	
Sc (IS)	45	1	HMI H2	21519664	4.83	26528605	81.12	60	120	
Sc (IS)	45	2	HMI He	832608	1.44	1014720	82.05	60	120	
Sc (IS)	45	3	No Gas	37007172	0.14	43446903	85.18	60	120	
Ge Internal Standard	72	1	HMI H2	8445409	3.32	10271630	82.22	60	120	
Ge Internal Standard	72	2	HMI He	962567	0.35	1158236	83.11	60	120	
In Internal Standard	115	2	HMI He	3284247	0.44	3843567	85.45	60	120	
Ho-165	165	2	HMI He	16828930	1.06	18572367	90.61	60	120	

Sample Report

Sample Table

Sample Name	280-116592-d-1-g PDS
Data File Name	230SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:05:46-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.203	ppb	-14.203	-18.57	84032	500000	
Li	7	2	45	-18.861	ppb	-18.861	-84.81	4348	500000	
Li	7	3	45	-16.618	ppb	-16.618	-21.44	2557569	50000	
Be	9	1	6	203.577	ppb	203.577	1.49	49061	2000	
B	11	1	6	34.538	ppb	34.538	4.08	9133	2000	
Na	23	1	45	26544.575	ppb	26544.575	0.75	71821404	2000	>LDR
Na	23	2	45	26675.628	ppb	26675.628	1.22	5223743	400000	
Mg	24	2	45	12450.040	ppb	12450.040	0.37	1100429	400000	
Al	27	2	45	2069.233	ppb	2069.233	3.31	51179	400000	
K	39	1	45	1003.259	ppb	1003.259	0.42	10468928	400000	
K	39	2	45	2365.140	ppb	2365.140	0.32	121024	400000	
Ca	40	1	45	70919.033	ppb	70919.033	0.25	291154302	400000	
Ca	44	2	45	72768.393	ppb	72768.393	0.27	185633	400000	
Ti	47	2	45	8.056	ppb	8.056	52.43	173	4000	
V	51	2	72	211.292	ppb	211.292	0.34	183889	2000	
Cr	52	2	72	209.735	ppb	209.735	1.55	235573	5000	
Mn	55	2	72	202.776	ppb	202.776	1.75	95354	10000	
Fe	57	2	72	2065.354	ppb	2065.354	0.71	44820	400000	
Co	59	2	72	200.288	ppb	200.288	0.65	390666	2000	
Ni	60	2	72	205.093	ppb	205.093	2.37	110595	5000	
Cu	63	2	72	202.923	ppb	202.923	1.22	309783	5000	
Zn	66	2	72	219.490	ppb	219.490	1.17	46821	5000	
As	75	2	72	196.434	ppb	196.434	1.77	27174	2000	
Se	78	1	72	195.540	ppb	195.540	1.93	39192	2000	
Sr	88	2	72	455.137	ppb	455.137	0.41	235328	4000	
Zr	90	2	72	61832.577	ppb	61832.577	0.41	275957	1000	>LDR
Nb	93	2	72	3.741	ppb	3.741	13.16	17759	200	
Mo	95	2	115	200.831	ppb	200.831	0.51	159539	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-133.20	47	100	
Ag	107	2	115	40.468	ppb	40.468	1.24	105907	100	
Cd	111	2	115	202.808	ppb	202.808	2.08	71884	2000	
Sn	120	2	115	205.997	ppb	205.997	0.52	203139	2000	
Sb	121	2	115	198.722	ppb	198.722	0.24	173737	1000	
Ba	137	2	115	278.144	ppb	278.144	1.23	82446	5000	
W	182	2	165	209.905	ppb	209.905	0.49	857235	100	
Pt	195	2	165	0.070	ppb	0.070	16.42	270	100	
Tl	205	2	165	216.760	ppb	216.760	1.32	1701321	2000	
Pb	208	2	165	203.229	ppb	203.229	0.12	2113526	5000	
Th	232	2	165	16.878	ppb	16.878	0.86	213548	2000	
U	238	2	165	231.105	ppb	231.105	0.76	3147631	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	522190	0.57	680701	76.71	60	120	
Sc (IS)	45	1	HMI H2	22036264	0.41	26528605	83.07	60	120	
Sc (IS)	45	2	HMI He	832920	0.22	1014720	82.08	60	120	
Sc (IS)	45	3	No Gas	36600414	0.42	43446903	84.24	60	120	
Ge Internal Standard	72	1	HMI H2	8606486	0.40	10271630	83.79	60	120	
Ge Internal Standard	72	2	HMI He	964114	0.85	1158236	83.24	60	120	
In Internal Standard	115	2	HMI He	3298170	0.33	3843567	85.81	60	120	
Ho-165	165	2	HMI He	16889769	0.78	18572367	90.94	60	120	

Sample Report

Sample Table

Sample Name	280-116592-d-2-c
Data File Name	231SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:09:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.558	ppb	-11.558	-102.31	85352	500000	
Li	7	2	45	-14.666	ppb	-14.666	-246.94	4438	500000	
Li	7	3	45	-19.583	ppb	-19.583	-7.85	2557124	50000	
Be	9	1	6	0.167	ppb	0.167	61.27	43	2000	
B	11	1	6	31.252	ppb	31.252	2.99	8423	2000	
Na	23	1	45	28850.072	ppb	28850.072	1.24	78665394	2000	>LDR
Na	23	2	45	29014.318	ppb	29014.318	1.11	5735992	400000	
Mg	24	2	45	11447.893	ppb	11447.893	0.22	1022419	400000	
Al	27	2	45	5.588	ppb	5.588	76.21	187	400000	
K	39	1	45	982.387	ppb	982.387	1.37	10502200	400000	
K	39	2	45	2344.271	ppb	2344.271	0.48	121309	400000	
Ca	40	1	45	72795.155	ppb	72795.155	0.86	301419516	400000	
Ca	44	2	45	73976.148	ppb	73976.148	1.39	190674	400000	
Ti	47	2	45	0.028	ppb	0.028	976.51	3	4000	
V	51	2	72	2.818	ppb	2.818	4.16	3647	2000	
Cr	52	2	72	1.830	ppb	1.830	11.26	2297	5000	
Mn	55	2	72	0.305	ppb	0.305	53.98	243	10000	
Fe	57	2	72	16.707	ppb	16.707	20.21	510	400000	
Co	59	2	72	0.007	ppb	0.007	255.38	77	2000	
Ni	60	2	72	0.291	ppb	0.291	42.36	317	5000	
Cu	63	2	72	0.068	ppb	0.068	19.55	1353	5000	
Zn	66	2	72	2.325	ppb	2.325	12.82	837	5000	
As	75	2	72	0.491	ppb	0.491	16.05	91	2000	
Se	78	1	72	2.225	ppb	2.225	3.22	488	2000	
Sr	88	2	72	423.157	ppb	423.157	0.47	221695	4000	
Zr	90	2	72	56.982	ppb	56.982	50.91	333	1000	
Nb	93	2	72	-2.663	ppb	-2.663	-0.81	413	200	
Mo	95	2	115	1.095	ppb	1.095	5.15	960	2000	
Pd	105	2	115	-0.037	ppb	-0.037	-36.81	20	100	
Ag	107	2	115	-0.012	ppb	-0.012	-34.82	13	100	
Cd	111	2	115	0.018	ppb	0.018	173.21	7	2000	
Sn	120	2	115	0.159	ppb	0.159	13.51	380	2000	
Sb	121	2	115	0.591	ppb	0.591	14.08	697	1000	
Ba	137	2	115	64.089	ppb	64.089	2.20	19338	5000	
W	182	2	165	0.230	ppb	0.230	18.19	2047	100	
Pt	195	2	165	0.003	ppb	0.003	208.05	47	100	
Tl	205	2	165	0.019	ppb	0.019	62.13	353	2000	
Pb	208	2	165	0.053	ppb	0.053	14.04	1360	5000	
Th	232	2	165	-0.004	ppb	-0.004	-112.36	567	2000	
U	238	2	165	2.795	ppb	2.795	0.67	38689	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	526664	0.50	680701	77.37	60	120	
Sc (IS)	45	1	HMI H2	22225810	0.27	26528605	83.78	60	120	
Sc (IS)	45	2	HMI He	841590	0.29	1014720	82.94	60	120	
Sc (IS)	45	3	No Gas	36888577	0.91	43446903	84.90	60	120	
Ge Internal Standard	72	1	HMI H2	8727086	0.27	10271630	84.96	60	120	
Ge Internal Standard	72	2	HMI He	976917	0.31	1158236	84.35	60	120	
In Internal Standard	115	2	HMI He	3356849	0.58	3843567	87.34	60	120	
Ho-165	165	2	HMI He	16986094	1.31	18572367	91.46	60	120	

Sample Report

Sample Table

Sample Name	280-116592-d-3-c
Data File Name	232SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:13:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437003 6020A
ISTD Ref FileName	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-15.599	ppb	-15.599	-35.29	85114	500000	
Li	7	2	45	10.726	ppb	10.726	123.02	4714	500000	
Li	7	3	45	-18.238	ppb	-18.238	-16.01	2542616	50000	
Be	9	1	6	0.072	ppb	0.072	57.35	20	2000	
B	11	1	6	23.605	ppb	23.605	4.81	6578	2000	
Na	23	1	45	22467.109	ppb	22467.109	0.13	61917746	2000	>LDR
Na	23	2	45	22701.234	ppb	22701.234	0.39	4502132	400000	
Mg	24	2	45	7209.581	ppb	7209.581	0.68	644366	400000	
Al	27	2	45	9.453	ppb	9.453	42.14	283	400000	
K	39	1	45	660.632	ppb	660.632	6.50	9703401	400000	
K	39	2	45	2039.753	ppb	2039.753	1.19	107135	400000	
Ca	40	1	45	47505.189	ppb	47505.189	0.96	198300464	400000	
Ca	44	2	45	49434.609	ppb	49434.609	0.62	127504	400000	
Ti	47	2	45	0.027	ppb	0.027	1005.39	3	4000	
V	51	2	72	5.394	ppb	5.394	2.31	5921	2000	
Cr	52	2	72	1.573	ppb	1.573	9.74	2010	5000	
Mn	55	2	72	0.191	ppb	0.191	43.97	190	10000	
Fe	57	2	72	5.414	ppb	5.414	62.51	263	400000	
Co	59	2	72	-0.001	ppb	-0.001	-934.72	60	2000	
Ni	60	2	72	0.643	ppb	0.643	7.95	510	5000	
Cu	63	2	72	0.167	ppb	0.167	112.74	1510	5000	
Zn	66	2	72	2.859	ppb	2.859	24.29	953	5000	
As	75	2	72	0.894	ppb	0.894	16.49	148	2000	
Se	78	1	72	1.824	ppb	1.824	11.52	407	2000	
Sr	88	2	72	309.417	ppb	309.417	1.07	162584	4000	
Zr	90	2	72	33.924	ppb	33.924	33.50	230	1000	
Nb	93	2	72	-2.677	ppb	-2.677	-0.78	377	200	
Mo	95	2	115	1.070	ppb	1.070	14.34	937	2000	
Pd	105	2	115	-0.040	ppb	-0.040	-30.54	17	100	
Ag	107	2	115	-0.010	ppb	-0.010	-0.33	20	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.063	ppb	0.063	74.94	283	2000	
Sb	121	2	115	0.135	ppb	0.135	52.03	290	1000	
Ba	137	2	115	109.150	ppb	109.150	1.47	32821	5000	
W	182	2	165	0.291	ppb	0.291	8.21	2317	100	
Pt	195	2	165	-0.001	ppb	-0.001	-669.46	33	100	
Tl	205	2	165	-0.007	ppb	-0.007	-137.00	150	2000	
Pb	208	2	165	0.046	ppb	0.046	38.36	1297	5000	
Th	232	2	165	-0.011	ppb	-0.011	-70.29	473	2000	
U	238	2	165	1.323	ppb	1.323	2.47	18674	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	526010	0.38	680701	77.27	60	120	
Sc (IS)	45	1	HMI H2	22403008	0.61	26528605	84.45	60	120	
Sc (IS)	45	2	HMI He	842030	0.65	1014720	82.98	60	120	
Sc (IS)	45	3	No Gas	36544318	0.40	43446903	84.11	60	120	
Ge Internal Standard	72	1	HMI H2	8727049	0.68	10271630	84.96	60	120	
Ge Internal Standard	72	2	HMI He	979776	0.44	1158236	84.59	60	120	
In Internal Standard	115	2	HMI He	3345705	0.44	3843567	87.05	60	120	
Ho-165	165	2	HMI He	17122334	0.51	18572367	92.19	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	233_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:17:06-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	453.823	ppb	1.047	193256	500	90.8	90	110	
Li	7	2	45	532.547	ppb	7.609	10377	500	106.5	90	110	
Li	7	3	45	444.952	ppb	0.702	5886251	500	89.0	90	110	>+\-10%
Be	9	1	6	49.349	ppb	0.792	12322	50	98.7	90	110	
B	11	1	6	51.126	ppb	2.924	13553	50	102.3	90	110	
Na	23	1	45	4958.692	ppb	0.611	14383111	5000	99.2	90	110	
Na	23	2	45	4871.549	ppb	0.341	1013152	5000	97.4	90	110	
Mg	24	2	45	5039.361	ppb	0.584	452565	5000	100.8	90	110	
Al	27	2	45	5010.682	ppb	0.546	125776	5000	100.2	90	110	
K	39	1	45	4811.278	ppb	0.852	21273011	5000	96.2	90	110	
K	39	2	45	5015.839	ppb	0.359	247337	5000	100.3	90	110	
Ca	40	1	45	4986.559	ppb	0.411	21093282	5000	99.7	90	110	
Ca	44	2	45	5002.123	ppb	7.558	12996	5000	100.0	90	110	
Ti	47	2	45	54.136	ppb	15.987	1167	50	108.3	90	110	
V	51	2	72	50.819	ppb	0.223	45847	50	101.6	90	110	
Cr	52	2	72	50.546	ppb	0.806	57869	50	101.1	90	110	
Mn	55	2	72	48.711	ppb	1.481	23353	50	97.4	90	110	
Fe	57	2	72	4977.920	ppb	0.620	109591	5000	99.6	90	110	
Co	59	2	72	50.718	ppb	1.764	100587	50	101.4	90	110	
Ni	60	2	72	50.411	ppb	0.787	27751	50	100.8	90	110	
Cu	63	2	72	50.748	ppb	0.404	79680	50	101.5	90	110	
Zn	66	2	72	50.786	ppb	2.455	11272	50	101.6	90	110	
As	75	2	72	48.648	ppb	3.523	6856	50	97.3	90	110	
Se	78	1	72	50.749	ppb	0.115	10499	50	101.5	90	110	
Sr	88	2	72	50.321	ppb	2.580	26466	50	100.6	90	110	
Zr	90	2	72	114.830	ppb	10.078	597	50	229.7	90	110	>+\-10%
Nb	93	2	72	86.438	ppb	0.770	245679	100	86.4	90	110	>+\-10%
Mo	95	2	115	49.526	ppb	0.921	39944	50	99.1	90	110	
Pd	105	2	115	50.221	ppb	1.962	63571	50	100.4	90	110	
Ag	107	2	115	51.234	ppb	0.999	135921	50	102.5	90	110	
Cd	111	2	115	49.558	ppb	1.649	17809	50	99.1	90	110	
Sn	120	2	115	49.816	ppb	2.500	49971	50	99.6	90	110	
Sb	121	2	115	48.055	ppb	2.453	42727	50	96.1	90	110	
Ba	137	2	115	49.517	ppb	2.115	14882	50	99.0	90	110	
W	182	2	165	49.319	ppb	0.987	204966	50	98.6	90	110	
Pt	195	2	165	49.209	ppb	1.393	165915	50	98.4	90	110	
Tl	205	2	165	50.453	ppb	1.096	401471	50	100.9	90	110	
Pb	208	2	165	50.779	ppb	0.721	535778	50	101.6	90	110	
Th	232	2	165	50.081	ppb	0.533	640901	50	100.2	90	110	
U	238	2	165	50.594	ppb	0.638	698630	50	101.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	540925	0.25	680701	79.47	60	120	
Sc (IS)	45	1	HMI H2	22605389	0.42	26528605	85.21	60	120	
Sc (IS)	45	2	HMI He	845806	0.50	1014720	83.35	60	120	
Sc (IS)	45	3	No Gas	37558568	0.21	43446903	86.45	60	120	
Ge Internal Standard	72	1	HMI H2	8859784	0.32	10271630	86.25	60	120	
Ge Internal Standard	72	2	HMI He	979843	0.37	1158236	84.60	60	120	
In Internal Standard	115	2	HMI He	3343921	0.81	3843567	87.00	60	120	
Ho-165	165	2	HMI He	17115948	0.17	18572367	92.16	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	234_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:20:53-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-18.838	ppb	-29.4	2587506	10	
Be	9	1	6	0.120	ppb	49.9	33	0.5	
B	11	1	6	6.619	ppb	22.3	2634	0.5	>RL
Na	23	1	45	-28.361	ppb	-5.9	683906	25	
Na	23	2	45	-27.338	ppb	-6.3	48868	25	
Mg	24	2	45	7.142	ppb	11.3	1067	25	
Al	27	2	45	5.177	ppb	45.4	177	15	
K	39	1	45	85.314	ppb	30.7	8198941	50	>RL
K	39	2	45	-4.222	ppb	-14.2	11638	50	
Ca	40	1	45	-0.038	ppb	-1499.8	99580	50	
Ca	44	2	45	21.512	ppb	65.8	100	25	
Ti	47	2	45	0.184	ppb	293.7	7	0.5	
V	51	2	72	0.669	ppb	48.6	1770	1	
Cr	52	2	72	0.032	ppb	64.7	253	1	
Mn	55	2	72	0.010	ppb	671.8	103	0.5	
Fe	57	2	72	1.626	ppb	154.6	180	25	
Co	59	2	72	-0.009	ppb	-134.9	43	0.5	
Ni	60	2	72	0.016	ppb	637.1	167	1	
Cu	63	2	72	-0.006	ppb	-1409.9	1243	1	
Zn	66	2	72	-0.164	ppb	-141.2	303	5	
As	75	2	72	0.005	ppb	873.1	23	1	
Se	78	1	72	-0.056	ppb	-86.8	25	1	
Sr	88	2	72	0.054	ppb	81.0	57	0.5	
Zr	90	2	72	0.124	ppb	8241.2	77	1	
Nb	93	2	72	1.220	ppb	17.0	11108	2	
Mo	95	2	115	0.069	ppb	39.9	133	0.5	
Pd	105	2	115	-0.004	ppb	-330.8	63	1	
Ag	107	2	115	-0.004	ppb	-151.0	37	1	
Cd	111	2	115	0.037	ppb	173.2	13	0.5	
Sn	120	2	115	0.080	ppb	65.0	307	1	
Sb	121	2	115	0.199	ppb	68.5	353	0.6	
Ba	137	2	115	0.067	ppb	77.1	23	0.5	
W	182	2	165	0.097	ppb	16.8	1514	1	
Pt	195	2	165	0.008	ppb	114.2	63	1	
Tl	205	2	165	0.001	ppb	440.6	217	0.1	
Pb	208	2	165	0.011	ppb	118.2	933	0.5	
Th	232	2	165	0.021	ppb	36.0	887	1	
U	238	2	165	0.026	ppb	21.1	777	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	553102	0.28	680701	81.25	60	120	
Sc (IS)	45	1	HMI H2	22602645	0.33	26528605	85.20	60	120	
Sc (IS)	45	2	HMI He	843896	0.55	1014720	83.17	60	120	
Sc (IS)	45	3	No Gas	37253414	0.79	43446903	85.74	60	120	
Ge Internal Standard	72	1	HMI H2	8871113	0.24	10271630	86.37	60	120	
Ge Internal Standard	72	2	HMI He	980241	0.21	1158236	84.63	60	120	
In Internal Standard	115	2	HMI He	3412903	2.04	3843567	88.80	60	120	
Ho-165	165	2	HMI He	17113057	1.13	18572367	92.14	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	235LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:24:40-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-10.437	ppb	-41.200	2655149	50	-20.9	70	130	>+/-30%
Be	9	1	6	0.974	ppb	28.549	250	1	97.4	70	130	
Na	23	2	45	21.551	ppb	32.656	58363	50	43.1	70	130	>+/-30%
Mg	24	2	45	53.410	ppb	2.586	5198	50	106.8	70	130	
Al	27	2	45	34.648	ppb	13.798	913	30	115.5	70	130	
K	39	2	45	87.872	ppb	7.356	15923	100	87.9	70	130	
Ca	44	2	45	78.508	ppb	18.351	247	50	157.0	70	130	>+/-30%
V	51	2	72	5.531	ppb	8.876	5981	5	110.6	70	130	
Cr	52	2	72	1.809	ppb	10.134	2257	2	90.4	70	130	
Mn	55	2	72	1.028	ppb	8.658	583	1	102.8	70	130	
Fe	57	2	72	46.439	ppb	12.229	1153	50	92.9	70	130	
Co	59	2	72	0.997	ppb	13.922	2017	1	99.7	70	130	
Ni	60	2	72	2.407	ppb	7.644	1460	2	120.3	70	130	
Cu	63	2	72	1.853	ppb	6.374	4074	2	92.7	70	130	
Zn	66	2	72	10.991	ppb	2.117	2677	10	109.9	70	130	
As	75	2	72	4.402	ppb	4.819	634	5	88.0	70	130	
Se	78	1	72	4.741	ppb	8.103	1011	5	94.8	70	130	
Sr	88	2	72	1.017	ppb	11.998	557	1	101.7	70	130	
Zr	90	2	72	42.644	ppb	22.093	267	0.5	8528.9	70	130	>+/-30%
Nb	93	2	72	4.886	ppb	3.874	20976	2	244.3	70	130	>+/-30%
Mo	95	2	115	1.919	ppb	6.881	1637	2	95.9	70	130	
Pd	105	2	115	-0.019	ppb	-118.854	43	1	-1.9	70	130	>+/-30%
Ag	107	2	115	4.976	ppb	4.135	13377	5	99.5	70	130	
Cd	111	2	115	0.919	ppb	8.594	333	1	91.9	70	130	
Sn	120	2	115	9.672	ppb	5.750	9974	10	96.7	70	130	
Sb	121	2	115	1.966	ppb	16.618	1934	2	98.3	70	130	
Ba	137	2	115	1.142	ppb	18.988	350	1	114.2	70	130	
W	182	2	165	4.791	ppb	1.067	20924	1	479.1	70	130	>+/-30%
Pt	195	2	165	0.048	ppb	37.234	200	1	4.8	70	130	>+/-30%
Tl	205	2	165	1.010	ppb	3.756	8240	1	101.0	70	130	
Pb	208	2	165	1.043	ppb	4.016	11816	1	104.3	70	130	
Th	232	2	165	1.951	ppb	1.312	25576	2	97.6	70	130	
U	238	2	165	0.990	ppb	1.472	14085	1	99.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	549983	0.79	680701	80.80	60	120	
Sc (IS)	45	1	HMI H2	22554442	0.33	26528605	85.02	60	120	
Sc (IS)	45	2	HMI He	842261	0.87	1014720	83.00	60	120	
Sc (IS)	45	3	No Gas	37375257	0.63	43446903	86.03	60	120	
Ge Internal Standard	72	1	HMI H2	8827091	0.63	10271630	85.94	60	120	
Ge Internal Standard	72	2	HMI He	969838	0.35	1158236	83.73	60	120	
In Internal Standard	115	2	HMI He	3377152	1.41	3843567	87.87	60	120	
Ho-165	165	2	HMI He	17121219	1.12	18572367	92.19	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	236WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:28:28-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.011	ppb	0	0	0.5
Na	23	2	45	-37.184	ppb	-18.21107996	46467	25
Mg	24	2	45	4.184	ppb	15.46131744	793	25
Al	27	2	45	4.402	ppb	62.90038704	157	15
K	39	2	45	-11.469	ppb	-121.4019441	11185	50
Ca	44	2	45	3.614	ppb	348.9922962	53	25
V	51	2	72	0.429	ppb	8.195643364	1537	1
Cr	52	2	72	0.011	ppb	852.0429247	227	1
Mn	55	2	72	0.034	ppb	129.6603818	113	0.5
Fe	57	2	72	0.672	ppb	242.92072	157	25
Co	59	2	72	-0.007	ppb	-259.40751	47	0.5
Ni	60	2	72	0.014	ppb	657.2697507	163	1
Cu	63	2	72	-0.069	ppb	-70.92127628	1130	1
Zn	66	2	72	-0.034	ppb	-203.0562513	327	5
As	75	2	72	0.121	ppb	91.34688667	39	1
Se	78	1	72	-0.088	ppb	-67.88113329	19	1
Nb	93	2	72	-2.000	ppb	-4.935468072	2210	2
Mo	95	2	115	-0.048	ppb	-15.76810263	37	0.5
Pd	105	2	115	-0.042	ppb	-11.12479715	13	1
Ag	107	2	115	-0.006	ppb	-256.5969888	30	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	-0.027	ppb	-143.8348928	193	1
Sb	121	2	115	-0.061	ppb	-44.59624243	117	0.6
Ba	137	2	115	0.012	ppb	308.4107833	7	0.5
W	182	2	165	0.002	ppb	1772.982385	1117	1
Pt	195	2	165	0.008	ppb	121.8212343	63	1
Tl	205	2	165	-0.002	ppb	-311.9848833	190	0.1
Pb	208	2	165	0.006	ppb	155.448306	880	0.5
Th	232	2	165	-0.005	ppb	-87.71923419	547	1
U	238	2	165	-0.007	ppb	-10.1593565	310	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	550542	0.26	680701	80.88	60	120	
Sc (IS)	45	1	HMI H2	22510395	0.20	26528605	84.85	60	120	
Sc (IS)	45	2	HMI He	835800	2.08	1014720	82.37	60	120	
Sc (IS)	45	3	No Gas	37705144	0.48	43446903	86.78	60	120	
Ge Internal Standard	72	1	HMI H2	8824841	0.38	10271630	85.91	60	120	
Ge Internal Standard	72	2	HMI He	966439	0.21	1158236	83.44	60	120	
In Internal Standard	115	2	HMI He	3349730	1.10	3843567	87.15	60	120	
Ho-165	165	2	HMI He	17051706	0.47	18572367	91.81	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	237WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:32:15-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.011	ppb	0	0	0.5
Na	23	2	45	-29.229	ppb	-19.81610274	48088	25
Mg	24	2	45	3.939	ppb	14.31799742	773	25
Al	27	2	45	4.022	ppb	98.49433957	147	15
K	39	2	45	-11.665	ppb	-27.1744007	11195	50
Ca	44	2	45	0.987	ppb	995.6646895	47	25
V	51	2	72	0.459	ppb	72.3102007	1570	1
Cr	52	2	72	-0.025	ppb	-268.7469361	187	1
Mn	55	2	72	0.047	ppb	155.9929996	120	0.5
Fe	57	2	72	0.329	ppb	693.1480857	150	25
Co	59	2	72	-0.014	ppb	-41.2486309	33	0.5
Ni	60	2	72	-0.043	ppb	-252.5593523	133	1
Cu	63	2	72	-0.120	ppb	-68.06401871	1057	1
Zn	66	2	72	-0.228	ppb	-64.66705144	287	5
As	75	2	72	-0.012	ppb	-701.8740423	20	1
Se	78	1	72	-0.054	ppb	-85.79733538	25	1
Nb	93	2	72	-2.289	ppb	-3.702769333	1430	2
Mo	95	2	115	-0.015	ppb	-52.65535381	63	0.5
Pd	105	2	115	-0.034	ppb	-12.43767893	23	1
Ag	107	2	115	-0.008	ppb	-101.8241482	27	1
Cd	111	2	115	0.009	ppb	173.2050808	3	0.5
Sn	120	2	115	0.023	ppb	406.2801549	243	1
Sb	121	2	115	-0.117	ppb	-24.22277212	67	0.6
Ba	137	2	115	0.091	ppb	132.7659563	30	0.5
W	182	2	165	-0.027	ppb	-112.8567238	997	1
Pt	195	2	165	0.011	ppb	64.06249097	73	1
Tl	205	2	165	-0.008	ppb	-70.88745084	140	0.1
Pb	208	2	165	0.010	ppb	128.6054238	920	0.5
Th	232	2	165	-0.018	ppb	-38.48451705	383	1
U	238	2	165	-0.015	ppb	-24.58721861	207	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	550441	1.06	680701	80.86	60	120	
Sc (IS)	45	1	HMI H2	22440439	0.58	26528605	84.59	60	120	
Sc (IS)	45	2	HMI He	836785	0.16	1014720	82.46	60	120	
Sc (IS)	45	3	No Gas	37361160	0.74	43446903	85.99	60	120	
Ge Internal Standard	72	1	HMI H2	8734028	0.57	10271630	85.03	60	120	
Ge Internal Standard	72	2	HMI He	970636	0.29	1158236	83.80	60	120	
In Internal Standard	115	2	HMI He	3338851	1.52	3843567	86.87	60	120	
Ho-165	165	2	HMI He	17077051	0.51	18572367	91.95	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	238WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:36:02-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.003	ppb	868.2367932	3	0.5
Na	23	2	45	-7.846	ppb	-237.6093096	51795	25
Mg	24	2	45	16.271	ppb	11.47506921	1850	25
Al	27	2	45	5.228	ppb	39.59766462	173	15
K	39	2	45	5.485	ppb	356.6861822	11882	50
Ca	44	2	45	5.553	ppb	246.2660658	57	25
V	51	2	72	0.644	ppb	23.4153819	1714	1
Cr	52	2	72	0.000	ppb	-47407.70386	210	1
Mn	55	2	72	0.081	ppb	124.2049446	137	0.5
Fe	57	2	72	7.286	ppb	53.31270819	297	25
Co	59	2	72	-0.011	ppb	-10.59850798	40	0.5
Ni	60	2	72	-0.052	ppb	-115.5080205	127	1
Cu	63	2	72	-0.181	ppb	-39.0808285	953	1
Zn	66	2	72	-0.229	ppb	-62.59197106	283	5
As	75	2	72	0.024	ppb	443.3983131	25	1
Se	78	1	72	-0.093	ppb	-79.63064315	17	1
Nb	93	2	72	-2.380	ppb	-3.635882613	1167	2
Mo	95	2	115	0.007	ppb	244.3290933	80	0.5
Pd	105	2	115	-0.047	ppb	-10.07106067	7	1
Ag	107	2	115	-0.006	ppb	-175.4648103	30	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	-0.080	ppb	-38.48920151	140	1
Sb	121	2	115	-0.135	ppb	-30.0448369	50	0.6
Ba	137	2	115	0.093	ppb	66.45277505	30	0.5
W	182	2	165	-0.037	ppb	-123.1191529	937	1
Pt	195	2	165	0.002	ppb	235.4383762	43	1
Tl	205	2	165	-0.005	ppb	-220.93885	160	0.1
Pb	208	2	165	0.109	ppb	2.291458505	1930	0.5
Th	232	2	165	-0.014	ppb	-22.40761407	427	1
U	238	2	165	-0.001	ppb	-846.3534399	380	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	551158	0.67	680701	80.97	60	120	
Sc (IS)	45	1	HMI H2	22423451	0.16	26528605	84.53	60	120	
Sc (IS)	45	2	HMI He	831780	6.26	1014720	81.97	60	120	
Sc (IS)	45	3	No Gas	37138384	0.12	43446903	85.48	60	120	
Ge Internal Standard	72	1	HMI H2	8789969	0.89	10271630	85.58	60	120	
Ge Internal Standard	72	2	HMI He	962535	5.49	1158236	83.10	60	120	
In Internal Standard	115	2	HMI He	3321514	6.40	3843567	86.42	60	120	
Ho-165	165	2	HMI He	16806652	7.30	18572367	90.49	60	120	

Blank Report

Sample Table

Sample Name	rinse-5417588
Data File Name	239WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:39:48-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	172CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.042	ppb	143.2034728	13	0.5
Na	23	2	45	-10.622	ppb	-43.02045346	51507	25
Mg	24	2	45	14.083	ppb	6.825355399	1667	25
Al	27	2	45	4.990	ppb	84.45206668	170	15
K	39	2	45	-6.884	ppb	-84.86678264	11372	50
Ca	44	2	45	7.556	ppb	195.4138683	63	25
V	51	2	72	0.611	ppb	16.97291438	1684	1
Cr	52	2	72	0.004	ppb	1472.165135	217	1
Mn	55	2	72	0.135	ppb	104.034736	160	0.5
Fe	57	2	72	6.596	ppb	17.53256378	283	25
Co	59	2	72	-0.007	ppb	-217.3092613	47	0.5
Ni	60	2	72	-0.071	ppb	-93.06564024	117	1
Cu	63	2	72	-0.198	ppb	-34.79939667	927	1
Zn	66	2	72	-0.372	ppb	-7.455731124	253	5
As	75	2	72	0.056	ppb	90.70445421	29	1
Se	78	1	72	-0.080	ppb	-72.91122226	20	1
Nb	93	2	72	-2.461	ppb	-1.698087046	950	2
Mo	95	2	115	-0.044	ppb	-75.87807334	40	0.5
Pd	105	2	115	-0.039	ppb	-41.96791879	17	1
Ag	107	2	115	-0.009	ppb	-24.80443795	23	1
Cd	111	2	115	0.019	ppb	173.2050808	7	0.5
Sn	120	2	115	-0.067	ppb	-52.96684329	153	1
Sb	121	2	115	-0.091	ppb	-65.37405933	90	0.6
Ba	137	2	115	0.035	ppb	110.8346665	13	0.5
W	182	2	165	-0.008	ppb	-340.2103965	1070	1
Pt	195	2	165	0.003	ppb	207.395005	47	1
Tl	205	2	165	0.000	ppb	3921.590728	207	0.1
Pb	208	2	165	0.086	ppb	18.23615284	1707	0.5
Th	232	2	165	-0.010	ppb	-66.37553723	480	1
U	238	2	165	-0.004	ppb	-111.0181957	350	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	547963	0.14	680701	80.50	60	120	
Sc (IS)	45	1	HMI H2	22387394	0.12	26528605	84.39	60	120	
Sc (IS)	45	2	HMI He	833458	0.45	1014720	82.14	60	120	
Sc (IS)	45	3	No Gas	37724671	1.49	43446903	86.83	60	120	
Ge Internal Standard	72	1	HMI H2	8710822	0.76	10271630	84.80	60	120	
Ge Internal Standard	72	2	HMI He	960174	0.28	1158236	82.90	60	120	
In Internal Standard	115	2	HMI He	3337417	0.31	3843567	86.83	60	120	
Ho-165	165	2	HMI He	16975202	0.45	18572367	91.40	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5424511
Data File Name	240CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:43:36-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	85023	0.00
Li	7	2	HMI He	4431	0.08
Li	7	3	No Gas	2600079	0.00
Be	9	1	HMI H2	10	1732.05
B	11	1	HMI H2	1680	0.49
Na	23	1	HMI H2	686870	0.00
Na	23	2	HMI He	47340	0.00
Mg	24	2	HMI He	1033	1.25
Al	27	2	HMI He	80	41.35
K	39	2	HMI He	11015	0.05
Ca	44	2	HMI He	63	137.31
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1527	0.81
Cr	52	2	HMI He	203	22.86
Mn	55	2	HMI He	100	55.68
Fe	57	2	HMI He	167	11.00
Co	59	2	HMI He	50	69.28
Ni	60	2	HMI He	177	20.60
Cu	63	2	HMI He	897	0.73
Zn	66	2	HMI He	323	7.18
As	75	2	HMI He	20	110.24
Se	78	1	HMI H2	21	268.51
Sr	88	2	HMI He	67	101.46
Zr	90	2	HMI He	90	37.04
Nb	93	2	HMI He	910	0.97
Mo	95	2	HMI He	33	137.48
Pd	105	2	HMI He	10	1732.05
Ag	107	2	HMI He	20	433.01
Cd	111	2	HMI He	7	1299.04
Sn	120	2	HMI He	150	17.78
Sb	121	2	HMI He	47	95.59
Ba	137	2	HMI He	20	0.00
W	182	2	HMI He	1127	0.16
Pt	195	2	HMI He	57	47.58
Tl	205	2	HMI He	183	12.02
Pb	208	2	HMI He	883	0.96
Th	232	2	HMI He	370	2.63
U	238	2	HMI He	203	21.95

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	549626	0.37
Sc (IS)	45	1	HMI H2	22416142	0.36
Sc (IS)	45	2	HMI He	833519	1.55
Sc (IS)	45	3	No Gas	37013496	0.23
Ge Internal Standard	72	1	HMI H2	8765589	0.79
Ge Internal Standard	72	2	HMI He	961800	1.12
In Internal Standard	115	2	HMI He	3323973	1.83
Ho-165	165	2	HMI He	16978678	1.85

Calibration Standard Report

Sample Table

Sample Name	ic-5424512
Data File Name	241CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:47:24-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	299020	0.00
Li	7	2	HMI He	15509	0.02
Li	7	3	No Gas	9112225	0.00
Be	9	1	HMI H2	24808	0.02
B	11	1	HMI H2	25690	0.00
Na	23	1	HMI H2	26964375	0.00
Na	23	2	HMI He	1992773	0.00
Mg	24	2	HMI He	881034	0.00
Al	27	2	HMI He	242044	0.00
K	39	1	HMI H2	34072531	0.00
K	39	2	HMI He	465027	0.00
Ca	40	1	HMI H2	40723513	0.00
Ca	44	2	HMI He	25550	0.00
Ti	47	2	HMI He	2150	0.36
V	51	2	HMI He	87489	0.00
Cr	52	2	HMI He	111493	0.00
Mn	55	2	HMI He	46308	0.01
Fe	57	2	HMI He	216513	0.00
Co	59	2	HMI He	192603	0.00
Ni	60	2	HMI He	54149	0.00
Cu	63	2	HMI He	150642	0.00
Zn	66	2	HMI He	20689	0.01
As	75	2	HMI He	13514	0.02
Se	78	1	HMI H2	20092	0.01
Sr	88	2	HMI He	50671	0.00
Zr	90	2	HMI He	610	2.81
Nb	93	2	HMI He	531378	0.00
Mo	95	2	HMI He	76185	0.00
Pd	105	2	HMI He	120678	0.00
Ag	107	2	HMI He	254422	0.00
Cd	111	2	HMI He	34373	0.01
Sn	120	2	HMI He	96187	0.00
Sb	121	2	HMI He	83286	0.00
Ba	137	2	HMI He	29576	0.01
Nd	146	2	HMI He	109935	0.00
Sm	147	2	HMI He	93835	0.00
Sm	150	2	HMI He	90858	0.00
Gd	156	1	HMI H2	408000	0.00
Gd	157	1	HMI H2	307482	0.00
W	182	2	HMI He	404190	0.00
Pt	195	2	HMI He	327432	0.00
Tl	205	2	HMI He	784389	0.00
Pb	208	2	HMI He	1043373	0.00
Th	232	2	HMI He	1268526	0.00
U	238	2	HMI He	1377907	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	525182	1.90	549626	95.55	60	120	
Sc (IS)	45	1	HMI H2	22055689	0.66	22416142	98.39	60	120	
Sc (IS)	45	2	HMI He	826532	0.36	833519	99.16	60	120	
Sc (IS)	45	3	No Gas	36797089	0.88	37013496	99.42	60	120	
Ge Internal Standard	72	1	HMI H2	8563928	0.75	8765589	97.70	60	120	
Ge Internal Standard	72	2	HMI He	952685	0.32	961800	99.05	60	120	
In Internal Standard	115	2	HMI He	3241720	0.53	3323973	97.53	60	120	
Ho-165	165	2	HMI He	16854301	0.24	16978678	99.27	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	242_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:51:11-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	511.542	ppb	3.556	194478	500	102.3	90	110	
Li	7	2	45	513.466	ppb	5.536	10154	500	102.7	90	110	
Li	7	3	45	496.448	ppb	2.645	5842146	500	99.3	90	110	
Be	9	1	6	47.861	ppb	0.607	12185	50	95.7	90	110	
B	11	1	6	48.885	ppb	2.429	13730	50	97.8	90	110	
Na	23	1	45	5075.765	ppb	0.858	14066810	5000	101.5	90	110	
Na	23	2	45	4808.540	ppb	0.057	987528	5000	96.2	90	110	
Mg	24	2	45	5023.304	ppb	0.658	445288	5000	100.5	90	110	
Al	27	2	45	5047.561	ppb	1.054	122828	5000	101.0	90	110	
K	39	1	45	5073.677	ppb	0.351	21026082	5000	101.5	90	110	
K	39	2	45	5025.041	ppb	1.287	240299	5000	100.5	90	110	
Ca	40	1	45	5061.772	ppb	0.722	20737353	5000	101.2	90	110	
Ca	44	2	45	5102.425	ppb	4.269	13133	5000	102.0	90	110	
Ti	47	2	45	53.210	ppb	4.210	1150	50	106.4	90	110	
V	51	2	72	50.666	ppb	2.575	45064	50	101.3	90	110	
Cr	52	2	72	51.348	ppb	1.552	57334	50	102.7	90	110	
Mn	55	2	72	49.818	ppb	2.659	23116	50	99.6	90	110	
Fe	57	2	72	4955.906	ppb	0.874	107362	5000	99.1	90	110	
Co	59	2	72	50.123	ppb	1.364	96547	50	100.2	90	110	
Ni	60	2	72	51.189	ppb	3.579	27798	50	102.4	90	110	
Cu	63	2	72	50.374	ppb	1.213	76308	50	100.7	90	110	
Zn	66	2	72	53.067	ppb	4.543	11128	50	106.1	90	110	
As	75	2	72	49.953	ppb	1.345	6759	50	99.9	90	110	
Se	78	1	72	50.695	ppb	2.305	10272	50	101.4	90	110	
Sr	88	2	72	50.768	ppb	2.578	25751	50	101.5	90	110	
Zr	90	2	72	24.511	ppb	71.468	217	50	49.0	90	110	>+\-10%
Nb	93	2	72	105.381	ppb	0.940	280348	100	105.4	90	110	
Mo	95	2	115	50.680	ppb	2.046	38761	50	101.4	90	110	
Pd	105	2	115	52.017	ppb	1.073	62995	50	104.0	90	110	
Ag	107	2	115	51.193	ppb	0.533	130712	50	102.4	90	110	
Cd	111	2	115	49.387	ppb	1.408	17038	50	98.8	90	110	
Sn	120	2	115	49.694	ppb	0.705	48044	50	99.4	90	110	
Sb	121	2	115	50.946	ppb	1.198	42603	50	101.9	90	110	
Ba	137	2	115	47.677	ppb	4.267	14158	50	95.4	90	110	
W	182	2	165	50.574	ppb	1.376	204488	50	101.1	90	110	
Pt	195	2	165	50.323	ppb	1.336	164418	50	100.6	90	110	
Tl	205	2	165	50.707	ppb	0.403	396916	50	101.4	90	110	
Pb	208	2	165	50.854	ppb	0.887	529808	50	101.7	90	110	
Th	232	2	165	50.113	ppb	0.509	634403	50	100.2	90	110	
U	238	2	165	50.711	ppb	0.394	697230	50	101.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	538880	0.35	549626	98.04	60	120	
Sc (IS)	45	1	HMI H2	22130329	0.40	22416142	98.72	60	120	
Sc (IS)	45	2	HMI He	830677	0.72	833519	99.66	60	120	
Sc (IS)	45	3	No Gas	36901702	0.10	37013496	99.70	60	120	
Ge Internal Standard	72	1	HMI H2	8627872	0.51	8765589	98.43	60	120	
Ge Internal Standard	72	2	HMI He	952484	0.41	961800	99.03	60	120	
In Internal Standard	115	2	HMI He	3253006	0.81	3323973	97.86	60	120	
Ho-165	165	2	HMI He	16815224	0.36	16978678	99.04	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	243_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:54:59-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	1.572	ppb	199.1	2642397	10	
Be	9	1	6	0.025	ppb	87.3	17	0.5	
B	11	1	6	1.481	ppb	45.8	2067	0.5	>RL
Na	23	1	45	-4.625	ppb	-71.8	671857	25	
Na	23	2	45	-2.282	ppb	-85.1	46942	25	
Mg	24	2	45	0.000	ppb	-343011.1	1033	25	
Al	27	2	45	6.416	ppb	25.2	237	15	
K	39	1	45	186.662	ppb	6.4	8039856	50	>RL
K	39	2	45	3.093	ppb	123.3	11171	50	
Ca	40	1	45	-7.517	ppb	-4.9	79974	50	
Ca	44	2	45	-3.771	ppb	-328.7	53	25	
Ti	47	2	45	0.155	ppb	173.2	3	0.5	
V	51	2	72	0.462	ppb	13.4	1920	1	
Cr	52	2	72	-0.033	ppb	-83.7	167	1	
Mn	55	2	72	-0.006	ppb	-999.4	97	0.5	
Fe	57	2	72	2.030	ppb	176.6	210	25	
Co	59	2	72	0.012	ppb	107.6	73	0.5	
Ni	60	2	72	-0.029	ppb	-528.4	160	1	
Cu	63	2	72	0.150	ppb	38.4	1120	1	
Zn	66	2	72	-0.077	ppb	-286.3	307	5	
As	75	2	72	-0.043	ppb	-136.1	14	1	
Se	78	1	72	0.007	ppb	441.2	23	1	
Sr	88	2	72	-0.033	ppb	-119.5	50	0.5	
Zr	90	2	72	0.703	ppb	1027.9	93	1	
Nb	93	2	72	4.698	ppb	11.3	13437	2	>RL
Mo	95	2	115	0.141	ppb	23.6	143	0.5	
Pd	105	2	115	0.126	ppb	41.4	167	1	
Ag	107	2	115	0.020	ppb	28.6	73	1	
Cd	111	2	115	0.000	ppb	-10592.3	7	0.5	
Sn	120	2	115	0.144	ppb	28.8	293	1	
Sb	121	2	115	0.404	ppb	26.4	393	0.6	
Ba	137	2	115	-0.055	ppb	-34.4	3	0.5	
W	182	2	165	0.152	ppb	33.3	1720	1	
Pt	195	2	165	0.012	ppb	120.3	93	1	
Tl	205	2	165	0.005	ppb	203.3	220	0.1	
Pb	208	2	165	0.035	ppb	24.7	1233	0.5	
Th	232	2	165	0.049	ppb	13.7	987	1	
U	238	2	165	0.062	ppb	17.0	1047	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	553302	0.25	549626	100.67	60	120	
Sc (IS)	45	1	HMI H2	22328521	0.17	22416142	99.61	60	120	
Sc (IS)	45	2	HMI He	834300	0.62	833519	100.09	60	120	
Sc (IS)	45	3	No Gas	37467801	0.65	37013496	101.23	60	120	
Ge Internal Standard	72	1	HMI H2	8720898	0.79	8765589	99.49	60	120	
Ge Internal Standard	72	2	HMI He	958062	0.05	961800	99.61	60	120	
In Internal Standard	115	2	HMI He	3333096	0.58	3323973	100.27	60	120	
Ho-165	165	2	HMI He	16762671	0.52	16978678	98.73	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5424515
Data File Name	244LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T01:58:48-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	10.434	ppb	12.464	2718701	50	20.9	70	130	>+/-30%
Be	9	1	6	1.157	ppb	8.153	313	1	115.7	70	130	
Na	23	2	45	54.284	ppb	9.774	58546	50	108.6	70	130	
Mg	24	2	45	49.468	ppb	10.536	5475	50	98.9	70	130	
Al	27	2	45	40.038	ppb	3.787	1067	30	133.5	70	130	>+/-30%
K	39	2	45	109.000	ppb	9.995	16160	100	109.0	70	130	
Ca	44	2	45	44.961	ppb	23.735	180	50	89.9	70	130	
V	51	2	72	5.150	ppb	2.370	6018	5	103.0	70	130	
Cr	52	2	72	1.947	ppb	10.097	2400	2	97.4	70	130	
Mn	55	2	72	1.111	ppb	19.737	620	1	111.1	70	130	
Fe	57	2	72	49.119	ppb	16.130	1243	50	98.2	70	130	
Co	59	2	72	1.012	ppb	11.620	2024	1	101.2	70	130	
Ni	60	2	72	2.223	ppb	16.988	1393	2	111.2	70	130	
Cu	63	2	72	2.159	ppb	6.978	4177	2	108.0	70	130	
Zn	66	2	72	10.692	ppb	10.457	2530	10	106.9	70	130	
As	75	2	72	4.412	ppb	1.931	624	5	88.2	70	130	
Se	78	1	72	4.412	ppb	8.724	928	5	88.2	70	130	
Sr	88	2	72	0.969	ppb	30.728	563	1	96.9	70	130	
Zr	90	2	72	18.234	ppb	30.698	187	0.5	3646.7	70	130	>+/-30%
Nb	93	2	72	11.695	ppb	2.123	32345	2	584.8	70	130	>+/-30%
Mo	95	2	115	2.051	ppb	10.865	1654	2	102.6	70	130	
Pd	105	2	115	0.032	ppb	43.683	50	1	3.2	70	130	>+/-30%
Ag	107	2	115	5.003	ppb	4.065	13223	5	100.1	70	130	
Cd	111	2	115	1.103	ppb	20.617	400	1	110.3	70	130	
Sn	120	2	115	9.939	ppb	2.506	10054	10	99.4	70	130	
Sb	121	2	115	2.177	ppb	15.649	1927	2	108.9	70	130	
Ba	137	2	115	0.815	ppb	21.583	270	1	81.5	70	130	
W	182	2	165	4.962	ppb	1.069	21331	1	496.2	70	130	>+/-30%
Pt	195	2	165	0.039	ppb	19.759	187	1	3.9	70	130	>+/-30%
Tl	205	2	165	1.014	ppb	1.099	8220	1	101.4	70	130	
Pb	208	2	165	1.020	ppb	1.501	11633	1	102.0	70	130	
Th	232	2	165	2.032	ppb	1.564	26398	2	101.6	70	130	
U	238	2	165	1.023	ppb	1.912	14439	1	102.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	555068	0.62	549626	100.99	60	120	
Sc (IS)	45	1	HMI H2	22355929	0.66	22416142	99.73	60	120	
Sc (IS)	45	2	HMI He	841336	0.63	833519	100.94	60	120	
Sc (IS)	45	3	No Gas	37708349	0.65	37013496	101.88	60	120	
Ge Internal Standard	72	1	HMI H2	8768751	0.15	8765589	100.04	60	120	
Ge Internal Standard	72	2	HMI He	965227	0.54	961800	100.36	60	120	
In Internal Standard	115	2	HMI He	3362807	0.34	3323973	101.17	60	120	
Ho-165	165	2	HMI He	17025017	0.63	16978678	100.27	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5415696
Data File Name	245ICSA.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:02:37-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-13.292	ppb	-15.1	2479340	1	
Be	9	1	6	0.003	ppb	1211.6	10	1	
B	11	1	6	1.732	ppb	67.8	1950	1	>RL or LOD
Na	23	1	45	99466.490	ppb	0.4	252182976	100000	
K	39	1	45	99272.559	ppb	0.3	261449856	100000	
Ca	40	1	45	98699.315	ppb	0.5	385698408	100000	
Ti	47	2	45	1923.427	ppb	9.0	40148	1	>RL or LOD
V	51	2	72	-0.082	ppb	-239.4	1383	1	
Cr	52	2	72	0.220	ppb	18.8	430	1	
Mn	55	2	72	0.889	ppb	8.6	490	1	
Co	59	2	72	0.003	ppb	280.8	53	1	
Ni	60	2	72	0.102	ppb	112.8	220	1	
Cu	63	2	72	0.391	ppb	16.5	1417	1	
Zn	66	2	72	0.521	ppb	14.5	410	1	
As	75	2	72	0.165	ppb	28.3	41	1	
Se	78	1	72	0.106	ppb	39.7	40	1	
Sr	88	2	72	0.811	ppb	41.9	457	1	
Zr	90	2	72	8.128	ppb	67.4	127	1	>RL or LOD
Nb	93	2	72	2.331	ppb	14.4	6799	1	>RL or LOD
Mo	95	2	115	2049.831	ppb	7.4	1491095	2000	>RL or LOD
Pd	105	2	115	0.039	ppb	134.1	53	1	
Ag	107	2	115	0.025	ppb	32.4	80	1	
Cd	111	2	115	0.484	ppb	51.2	163	1	
Sn	120	2	115	0.089	ppb	81.3	223	1	
Sb	121	2	115	0.146	ppb	67.6	160	1	
Ba	137	2	115	0.017	ppb	245.3	23	1	
W	182	2	165	0.170	ppb	14.9	1754	1	
Pt	195	2	165	0.004	ppb	377.4	67	1	
Tl	205	2	165	0.001	ppb	999.2	187	1	
Pb	208	2	165	0.073	ppb	25.0	1590	1	
Th	232	2	165	0.011	ppb	22.7	487	1	
U	238	2	165	0.009	ppb	53.2	317	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	506731	0.69	549626	92.20	60	120	
Sc (IS)	45	1	HMI H2	21215956	0.27	22416142	94.65	60	120	
Sc (IS)	45	2	HMI He	804179	4.10	833519	96.48	60	120	
Sc (IS)	45	3	No Gas	36521137	0.36	37013496	98.67	60	120	
Ge Internal Standard	72	1	HMI H2	8138112	0.03	8765589	92.84	60	120	
Ge Internal Standard	72	2	HMI He	914940	2.83	961800	95.13	60	120	
In Internal Standard	115	2	HMI He	3101869	3.57	3323973	93.32	60	120	
Ho-165	165	2	HMI He	16386758	4.63	16978678	96.51	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5415697
Data File Name	246ICSB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:06:22-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	921.980	ppb	1.647	271290	100	922.0	80	120	
Li	7	2	45	989.183	ppb	4.149	14821	100	989.2	80	120	
Li	7	3	45	913.014	ppb	0.458	8392920	100	913.0	80	120	
Be	9	1	6	91.805	ppb	1.346	21299	100	91.8	80	120	
B	11	1	6	90.779	ppb	2.247	21957	100	90.8	80	120	
Na	23	1	45	103870.573	ppb	0.464	263130583	100	103870.6	80	120	>+\-20%
K	39	1	45	104314.031	ppb	0.717	274162416	100	104314.0	80	120	>+\-20%
Ca	40	1	45	103404.215	ppb	0.189	403797674	100	103404.2	80	120	>+\-20%
V	51	2	72	97.206	ppb	2.584	80505	100	97.2	80	120	
Cr	52	2	72	95.293	ppb	0.712	100542	100	95.3	80	120	
Mn	55	2	72	95.514	ppb	0.372	41858	100	95.5	80	120	
Co	59	2	72	95.012	ppb	0.576	173163	100	95.0	80	120	
Ni	60	2	72	93.825	ppb	1.898	48081	100	93.8	80	120	
Cu	63	2	72	93.759	ppb	0.927	133705	100	93.8	80	120	
Zn	66	2	72	96.223	ppb	4.644	18847	100	96.2	80	120	
As	75	2	72	92.560	ppb	1.651	11837	100	92.6	80	120	
Se	78	1	72	92.533	ppb	1.982	17528	100	92.5	80	120	
Sr	88	2	72	97.546	ppb	1.268	46775	100	97.5	80	120	
Zr	90	2	72	21.432	ppb	9.658	190	100	21.4	80	120	>+\-20%
Nb	93	2	72	161.972	ppb	1.127	407356	100	162.0	80	120	>+\-20%
Mo	95	2	115	2091.503	ppb	0.636	1512925	100	2091.5	80	120	>+\-20%
Pd	105	2	115	92.538	ppb	1.415	106074	100	92.5	80	120	
Ag	107	2	115	92.698	ppb	0.290	224027	100	92.7	80	120	
Cd	111	2	115	94.740	ppb	2.870	30932	100	94.7	80	120	
Sn	120	2	115	91.973	ppb	1.795	84043	100	92.0	80	120	
Sb	121	2	115	99.189	ppb	3.248	78468	100	99.2	80	120	
Ba	137	2	115	94.379	ppb	1.294	26517	100	94.4	80	120	
W	182	2	165	95.956	ppb	1.341	375321	100	96.0	80	120	
Pt	195	2	165	92.965	ppb	1.577	294540	100	93.0	80	120	
Tl	205	2	165	90.649	ppb	1.027	688043	100	90.6	80	120	
Pb	208	2	165	91.019	ppb	1.585	918962	100	91.0	80	120	
Th	232	2	165	94.483	ppb	1.231	1159741	100	94.5	80	120	
U	238	2	165	93.775	ppb	1.409	1250265	100	93.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	491210	1.21	549626	89.37	60	120	
Sc (IS)	45	1	HMI H2	21201174	0.72	22416142	94.58	60	120	
Sc (IS)	45	2	HMI He	796064	0.43	833519	95.51	60	120	
Sc (IS)	45	3	No Gas	36142779	0.41	37013496	97.65	60	120	
Ge Internal Standard	72	1	HMI H2	8073733	0.17	8765589	92.11	60	120	
Ge Internal Standard	72	2	HMI He	901477	0.63	961800	93.73	60	120	
In Internal Standard	115	2	HMI He	3079161	0.39	3323973	92.63	60	120	
Ho-165	165	2	HMI He	16309528	0.99	16978678	96.06	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	247SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:10:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.079	ppb	-1.079	-45.42	83097	500000	
Li	7	2	45	-3.803	ppb	-3.803	-384.21	4281	500000	
Li	7	3	45	0.693	ppb	0.693	901.85	2591948	50000	
Be	9	1	6	0.133	ppb	0.133	45.79	43	2000	
B	11	1	6	0.338	ppb	0.338	371.70	1720	2000	
Na	23	1	45	28.812	ppb	28.812	17.30	748596	2000	
Na	23	2	45	23.110	ppb	23.110	25.72	50587	400000	
Mg	24	2	45	13.917	ppb	13.917	21.98	2210	400000	
Al	27	2	45	19.285	ppb	19.285	20.00	537	400000	
K	39	1	45	249.176	ppb	249.176	5.39	8076286	400000	
K	39	2	45	23.284	ppb	23.284	14.62	11785	400000	
Ca	40	1	45	10.403	ppb	10.403	13.07	151181	400000	
Ca	44	2	45	-3.177	ppb	-3.177	-385.19	53	400000	
Ti	47	2	45	0.631	ppb	0.631	43.31	13	4000	
V	51	2	72	0.213	ppb	0.213	25.23	1684	2000	
Cr	52	2	72	-0.003	ppb	-0.003	-1313.64	197	5000	
Mn	55	2	72	0.011	ppb	0.011	749.35	103	10000	
Fe	57	2	72	22.951	ppb	22.951	20.57	657	400000	
Co	59	2	72	0.006	ppb	0.006	186.45	60	2000	
Ni	60	2	72	-0.037	ppb	-0.037	-259.73	153	5000	
Cu	63	2	72	0.267	ppb	0.267	16.03	1280	5000	
Zn	66	2	72	-0.223	ppb	-0.223	-286.79	273	5000	
As	75	2	72	0.080	ppb	0.080	58.97	31	2000	
Se	78	1	72	0.014	ppb	0.014	360.21	24	2000	
Sr	88	2	72	-0.032	ppb	-0.032	-188.47	50	4000	
Zr	90	2	72	-2.942	ppb	-2.942	-164.32	73	1000	
Nb	93	2	72	3.662	ppb	3.662	10.88	10541	200	
Mo	95	2	115	2.707	ppb	2.707	9.78	2120	2000	
Pd	105	2	115	0.082	ppb	0.082	53.02	110	100	
Ag	107	2	115	0.013	ppb	0.013	69.53	53	100	
Cd	111	2	115	-0.010	ppb	-0.010	-173.01	3	2000	
Sn	120	2	115	0.098	ppb	0.098	88.83	243	2000	
Sb	121	2	115	0.048	ppb	0.048	76.09	87	1000	
Ba	137	2	115	-0.044	ppb	-0.044	-44.25	7	5000	
W	182	2	165	0.034	ppb	0.034	13.55	1250	100	
Pt	195	2	165	-0.002	ppb	-0.002	-743.59	50	100	
Tl	205	2	165	0.040	ppb	0.040	17.57	493	2000	
Pb	208	2	165	0.006	ppb	0.006	215.06	937	5000	
Th	232	2	165	0.036	ppb	0.036	12.99	817	2000	
U	238	2	165	0.060	ppb	0.060	14.74	1027	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	535176	0.83	549626	97.37	60	120	
Sc (IS)	45	1	HMI H2	21969372	0.13	22416142	98.01	60	120	
Sc (IS)	45	2	HMI He	812769	0.44	833519	97.51	60	120	
Sc (IS)	45	3	No Gas	36833332	0.23	37013496	99.51	60	120	
Ge Internal Standard	72	1	HMI H2	8630464	0.16	8765589	98.46	60	120	
Ge Internal Standard	72	2	HMI He	946046	0.23	961800	98.36	60	120	
In Internal Standard	115	2	HMI He	3281590	0.31	3323973	98.72	60	120	
Ho-165	165	2	HMI He	16768330	0.21	16978678	98.76	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	248_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:13:58-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	500.485	ppb	3.600	191380	500	100.1	90	110	
Li	7	2	45	518.984	ppb	4.605	10191	500	103.8	90	110	
Li	7	3	45	482.670	ppb	3.593	5793388	500	96.5	90	110	
Be	9	1	6	49.113	ppb	7.586	12256	50	98.2	90	110	
B	11	1	6	46.713	ppb	3.041	12936	50	93.4	90	110	
Na	23	1	45	5200.074	ppb	1.596	14341641	5000	104.0	90	110	
Na	23	2	45	4846.111	ppb	1.035	992686	5000	96.9	90	110	
Mg	24	2	45	5084.449	ppb	1.679	449701	5000	101.7	90	110	
Al	27	2	45	5084.492	ppb	1.997	123440	5000	101.7	90	110	
K	39	1	45	5154.254	ppb	1.582	21163237	5000	103.1	90	110	
K	39	2	45	5089.670	ppb	1.708	242716	5000	101.8	90	110	
Ca	40	1	45	5131.104	ppb	1.958	20941636	5000	102.6	90	110	
Ca	44	2	45	5093.807	ppb	1.916	13083	5000	101.9	90	110	
Ti	47	2	45	55.825	ppb	7.921	1203	50	111.6	90	110	>+\-10%
V	51	2	72	51.655	ppb	3.707	45740	50	103.3	90	110	
Cr	52	2	72	51.794	ppb	1.228	57615	50	103.6	90	110	
Mn	55	2	72	51.488	ppb	2.299	23797	50	103.0	90	110	
Fe	57	2	72	5078.601	ppb	1.945	109604	5000	101.6	90	110	
Co	59	2	72	51.645	ppb	1.307	99104	50	103.3	90	110	
Ni	60	2	72	53.656	ppb	2.339	29020	50	107.3	90	110	
Cu	63	2	72	52.221	ppb	3.061	78782	50	104.4	90	110	
Zn	66	2	72	52.323	ppb	3.218	10935	50	104.6	90	110	
As	75	2	72	50.642	ppb	2.277	6827	50	101.3	90	110	
Se	78	1	72	50.871	ppb	4.881	10226	50	101.7	90	110	
Sr	88	2	72	50.215	ppb	2.076	25377	50	100.4	90	110	
Zr	90	2	72	24.647	ppb	27.726	217	50	49.3	90	110	>+\-10%
Nb	93	2	72	100.495	ppb	1.237	266399	100	100.5	90	110	
Mo	95	2	115	50.037	ppb	0.354	38367	50	100.1	90	110	
Pd	105	2	115	52.025	ppb	1.138	63166	50	104.1	90	110	
Ag	107	2	115	51.292	ppb	0.512	131296	50	102.6	90	110	
Cd	111	2	115	51.552	ppb	2.405	17829	50	103.1	90	110	
Sn	120	2	115	49.747	ppb	0.882	48215	50	99.5	90	110	
Sb	121	2	115	50.951	ppb	3.353	42717	50	101.9	90	110	
Ba	137	2	115	51.709	ppb	3.796	15396	50	103.4	90	110	
W	182	2	165	50.680	ppb	1.287	204837	50	101.4	90	110	
Pt	195	2	165	50.712	ppb	1.147	165627	50	101.4	90	110	
Tl	205	2	165	50.573	ppb	0.924	395710	50	101.1	90	110	
Pb	208	2	165	50.833	ppb	1.126	529370	50	101.7	90	110	
Th	232	2	165	50.517	ppb	1.305	639263	50	101.0	90	110	
U	238	2	165	50.619	ppb	1.585	695680	50	101.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	528342	0.69	549626	96.13	60	120	
Sc (IS)	45	1	HMI H2	22049613	0.62	22416142	98.36	60	120	
Sc (IS)	45	2	HMI He	828904	1.01	833519	99.45	60	120	
Sc (IS)	45	3	No Gas	37170803	1.06	37013496	100.42	60	120	
Ge Internal Standard	72	1	HMI H2	8562197	0.82	8765589	97.68	60	120	
Ge Internal Standard	72	2	HMI He	948923	0.23	961800	98.66	60	120	
In Internal Standard	115	2	HMI He	3261183	0.22	3323973	98.11	60	120	
Ho-165	165	2	HMI He	16809031	0.41	16978678	99.00	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	249_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:17:44-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-3.358	ppb	-64.0	2606694	10	
Be	9	1	6	0.103	ppb	57.7	37	0.5	
B	11	1	6	0.680	ppb	163.3	1850	0.5	>RL
Na	23	1	45	4.492	ppb	34.5	690999	25	
Na	23	2	45	2.795	ppb	61.6	48229	25	
Mg	24	2	45	6.684	ppb	10.4	1637	25	
Al	27	2	45	8.918	ppb	43.3	300	15	
K	39	1	45	230.358	ppb	8.5	8097572	50	>RL
K	39	2	45	16.047	ppb	78.7	11835	50	
Ca	40	1	45	-2.433	ppb	-17.8	100140	50	
Ca	44	2	45	-7.743	ppb	-75.2	43	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.304	ppb	35.7	1790	1	
Cr	52	2	72	0.103	ppb	119.0	320	1	
Mn	55	2	72	0.107	ppb	59.1	150	0.5	
Fe	57	2	72	8.866	ppb	4.8	360	25	
Co	59	2	72	-0.003	ppb	-84.6	43	0.5	
Ni	60	2	72	-0.042	ppb	-296.6	153	1	
Cu	63	2	72	0.187	ppb	82.8	1180	1	
Zn	66	2	72	-0.082	ppb	-332.5	307	5	
As	75	2	72	0.048	ppb	148.5	27	1	
Se	78	1	72	-0.006	ppb	-940.1	20	1	
Sr	88	2	72	-0.066	ppb	-34.4	33	0.5	
Zr	90	2	72	-1.893	ppb	-401.8	80	1	
Nb	93	2	72	4.503	ppb	12.0	12963	2	>RL
Mo	95	2	115	0.447	ppb	33.3	383	0.5	
Pd	105	2	115	0.064	ppb	65.0	90	1	
Ag	107	2	115	0.022	ppb	115.8	77	1	
Cd	111	2	115	0.009	ppb	544.6	10	0.5	
Sn	120	2	115	0.060	ppb	18.0	210	1	
Sb	121	2	115	0.311	ppb	28.1	313	0.6	
Ba	137	2	115	0.054	ppb	173.2	37	0.5	
W	182	2	165	0.062	ppb	11.1	1373	1	
Pt	195	2	165	-0.001	ppb	-523.5	53	1	
Tl	205	2	165	0.013	ppb	87.4	287	0.1	
Pb	208	2	165	0.013	ppb	75.2	1013	0.5	
Th	232	2	165	0.037	ppb	6.7	833	1	
U	238	2	165	0.047	ppb	4.6	853	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	549353	0.47	549626	99.95	60	120	
Sc (IS)	45	1	HMI H2	22165012	0.89	22416142	98.88	60	120	
Sc (IS)	45	2	HMI He	839328	0.43	833519	100.70	60	120	
Sc (IS)	45	3	No Gas	37425338	0.43	37013496	101.11	60	120	
Ge Internal Standard	72	1	HMI H2	8705536	0.34	8765589	99.31	60	120	
Ge Internal Standard	72	2	HMI He	961496	0.29	961800	99.97	60	120	
In Internal Standard	115	2	HMI He	3340033	1.56	3323973	100.48	60	120	
Ho-165	165	2	HMI He	16903548	0.12	16978678	99.56	60	120	

Sample Report

Sample Table

Sample Name	280-116135-A-6-A
Data File Name	250SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:21:31-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435141 6020 As
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-15.359	ppb	-15.359	-22.21	80271	500000	
Li	7	2	45	-10.535	ppb	-10.535	-429.74	4301	500000	
Li	7	3	45	-21.081	ppb	-21.081	-10.68	2433988	50000	
Be	9	1	6	0.044	ppb	0.044	93.87	20	2000	
B	11	1	6	23.396	ppb	23.396	2.33	7065	2000	
Na	23	1	45	67798.097	ppb	67798.097	0.69	178740911	2000	>LDR
Na	23	2	45	66291.601	ppb	66291.601	1.23	13015151	400000	
Mg	24	2	45	37348.873	ppb	37348.873	0.15	3305351	400000	
Al	27	2	45	14.671	ppb	14.671	1.76	437	400000	
K	39	1	45	-427.607	ppb	-427.607	-6.12	6299812	400000	
K	39	2	45	754.951	ppb	754.951	1.00	45452	400000	
Ca	40	1	45	75948.346	ppb	75948.346	1.14	308271155	400000	
Ca	44	2	45	74846.372	ppb	74846.372	0.70	191846	400000	
Ti	47	2	45	1.233	ppb	1.233	78.08	27	4000	
V	51	2	72	0.627	ppb	0.627	49.17	2054	2000	
Cr	52	2	72	0.782	ppb	0.782	8.03	1073	5000	
Mn	55	2	72	18.013	ppb	18.013	2.48	8429	10000	
Fe	57	2	72	44.884	ppb	44.884	12.13	1137	400000	
Co	59	2	72	0.979	ppb	0.979	6.13	1937	2000	
Ni	60	2	72	12.948	ppb	12.948	4.02	7169	5000	
Cu	63	2	72	3.244	ppb	3.244	4.72	5751	5000	
Zn	66	2	72	11.150	ppb	11.150	4.06	2594	5000	
As	75	2	72	3.689	ppb	3.689	8.72	518	2000	
Se	78	1	72	1.518	ppb	1.518	6.74	323	2000	
Sr	88	2	72	100.920	ppb	100.920	1.16	51180	4000	
Zr	90	2	72	96.648	ppb	96.648	26.74	593	1000	
Nb	93	2	72	3.000	ppb	3.000	15.32	8867	200	
Mo	95	2	115	2.308	ppb	2.308	2.72	1797	2000	
Pd	105	2	115	0.011	ppb	0.011	40.84	23	100	
Ag	107	2	115	0.004	ppb	0.004	196.08	30	100	
Cd	111	2	115	0.049	ppb	0.049	123.82	23	2000	
Sn	120	2	115	0.131	ppb	0.131	27.76	273	2000	
Sb	121	2	115	0.399	ppb	0.399	15.65	380	1000	
Ba	137	2	115	85.209	ppb	85.209	3.26	25304	5000	
W	182	2	165	3.124	ppb	3.124	10.90	13684	100	
Pt	195	2	165	0.013	ppb	0.013	82.09	100	100	
Tl	205	2	165	0.016	ppb	0.016	59.26	303	2000	
Pb	208	2	165	0.189	ppb	0.189	8.38	2840	5000	
Th	232	2	165	0.062	ppb	0.062	16.61	1147	2000	
U	238	2	165	0.908	ppb	0.908	4.43	12680	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512428	0.33	549626	93.23	60	120	
Sc (IS)	45	1	HMI H2	22035140	0.39	22416142	98.30	60	120	
Sc (IS)	45	2	HMI He	830953	0.13	833519	99.69	60	120	
Sc (IS)	45	3	No Gas	36598393	0.62	37013496	98.88	60	120	
Ge Internal Standard	72	1	HMI H2	8487434	0.21	8765589	96.83	60	120	
Ge Internal Standard	72	2	HMI He	953464	0.19	961800	99.13	60	120	
In Internal Standard	115	2	HMI He	3254672	1.06	3323973	97.92	60	120	
Ho-165	165	2	HMI He	16819328	0.57	16978678	99.06	60	120	

Sample Report

Sample Table

Sample Name	280-116135-A-8-A
Data File Name	251SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:25:15-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435141 6020 As
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.533	ppb	-10.533	-78.30	80097	500000	
Li	7	2	45	-3.538	ppb	-3.538	-395.89	4334	500000	
Li	7	3	45	-16.679	ppb	-16.679	-13.68	2431998	50000	
Be	9	1	6	-0.038	ppb	-0.038	0.00	0	2000	
B	11	1	6	55.696	ppb	55.696	3.48	14508	2000	
Na	23	1	45	75093.774	ppb	75093.774	1.04	194953784	2000	>LDR
Na	23	2	45	72269.104	ppb	72269.104	0.38	14038497	400000	
Mg	24	2	45	25143.218	ppb	25143.218	0.96	2202544	400000	
Al	27	2	45	12.918	ppb	12.918	8.28	390	400000	
K	39	1	45	-62.955	ppb	-62.955	-16.45	7161877	400000	
K	39	2	45	1137.981	ppb	1137.981	5.10	62286	400000	
Ca	40	1	45	59610.765	ppb	59610.765	0.72	238381936	400000	
Ca	44	2	45	58330.308	ppb	58330.308	1.53	147988	400000	
Ti	47	2	45	0.467	ppb	0.467	173.21	10	4000	
V	51	2	72	0.639	ppb	0.639	22.64	2030	2000	
Cr	52	2	72	0.396	ppb	0.396	6.22	633	5000	
Mn	55	2	72	279.891	ppb	279.891	1.17	127474	10000	
Fe	57	2	72	4312.946	ppb	4312.946	1.91	92061	400000	
Co	59	2	72	3.913	ppb	3.913	5.33	7469	2000	
Ni	60	2	72	9.231	ppb	9.231	6.62	5078	5000	
Cu	63	2	72	0.225	ppb	0.225	20.06	1207	5000	
Zn	66	2	72	3.229	ppb	3.229	20.44	963	5000	
As	75	2	72	42.484	ppb	42.484	1.20	5666	2000	
Se	78	1	72	-0.016	ppb	-0.016	-196.63	17	2000	
Sr	88	2	72	131.694	ppb	131.694	0.52	65699	4000	
Zr	90	2	72	71.222	ppb	71.222	14.75	453	1000	
Nb	93	2	72	1.804	ppb	1.804	15.19	5598	200	
Mo	95	2	115	3.038	ppb	3.038	9.34	2320	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-414.31	7	100	
Ag	107	2	115	0.003	ppb	0.003	80.31	27	100	
Cd	111	2	115	0.069	ppb	0.069	73.33	30	2000	
Sn	120	2	115	0.002	ppb	0.002	3029.83	147	2000	
Sb	121	2	115	0.488	ppb	0.488	20.95	447	1000	
Ba	137	2	115	109.108	ppb	109.108	1.55	31901	5000	
W	182	2	165	0.298	ppb	0.298	10.66	2294	100	
Pt	195	2	165	0.004	ppb	0.004	138.23	70	100	
Tl	205	2	165	-0.002	ppb	-0.002	-500.02	167	2000	
Pb	208	2	165	0.069	ppb	0.069	15.67	1577	5000	
Th	232	2	165	0.016	ppb	0.016	68.51	560	2000	
U	238	2	165	1.523	ppb	1.523	2.03	20958	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	507185	0.17	549626	92.28	60	120	
Sc (IS)	45	1	HMI H2	21707535	0.74	22416142	96.84	60	120	
Sc (IS)	45	2	HMI He	822395	0.23	833519	98.67	60	120	
Sc (IS)	45	3	No Gas	36142957	0.26	37013496	97.65	60	120	
Ge Internal Standard	72	1	HMI H2	8359989	0.86	8765589	95.37	60	120	
Ge Internal Standard	72	2	HMI He	938237	0.40	961800	97.55	60	120	
In Internal Standard	115	2	HMI He	3204873	0.83	3323973	96.42	60	120	
Ho-165	165	2	HMI He	16670284	0.10	16978678	98.18	60	120	

Sample Report

Sample Table

Sample Name	280-116135-A-10-A
Data File Name	252SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:29:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435141 6020 As
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.221	ppb	-37.221	-10.55	65014	500000	
Li	7	2	45	-54.843	ppb	-54.843	-42.12	3351	500000	
Li	7	3	45	-35.699	ppb	-35.699	-14.45	2057360	50000	
Be	9	1	6	0.369	ppb	0.369	27.36	80	2000	
B	11	1	6	68.277	ppb	68.277	5.08	14311	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	2339328.571	ppb	2339328.571	0.67	402899381	400000	>LDR
Mg	24	2	45	16224.922	ppb	16224.922	1.37	1264529	400000	
Al	27	2	45	43.868	ppb	43.868	13.36	1010	400000	
K	39	1	45	560.771	ppb	560.771	2.75	7682438	400000	
K	39	2	45	1653.323	ppb	1653.323	0.77	76117	400000	
Ca	40	1	45	9667.121	ppb	9667.121	0.49	33841425	400000	
Ca	44	2	45	9644.954	ppb	9644.954	3.60	21817	400000	
Ti	47	2	45	95.110	ppb	95.110	3.80	1810	4000	
V	51	2	72	124.060	ppb	124.060	1.73	92731	2000	
Cr	52	2	72	11.566	ppb	11.566	0.95	11208	5000	
Mn	55	2	72	77.986	ppb	77.986	1.20	30981	10000	
Fe	57	2	72	241.931	ppb	241.931	3.86	4628	400000	
Co	59	2	72	12.492	ppb	12.492	2.39	20662	2000	
Ni	60	2	72	154.305	ppb	154.305	3.00	71537	5000	
Cu	63	2	72	0.580	ppb	0.580	11.46	1507	5000	
Zn	66	2	72	3.680	ppb	3.680	22.29	917	5000	
As	75	2	72	277.682	ppb	277.682	0.91	32139	2000	
Se	78	1	72	1.075	ppb	1.075	22.54	197	2000	
Sr	88	2	72	109.583	ppb	109.583	1.63	47601	4000	
Zr	90	2	72	10132.021	ppb	10132.021	1.79	45330	1000	>LDR
Nb	93	2	72	4.526	ppb	4.526	8.29	11065	200	
Mo	95	2	115	14.491	ppb	14.491	1.16	9367	2000	
Pd	105	2	115	0.051	ppb	0.051	37.88	60	100	
Ag	107	2	115	0.019	ppb	0.019	62.27	57	100	
Cd	111	2	115	0.073	ppb	0.073	144.46	27	2000	
Sn	120	2	115	0.196	ppb	0.196	13.93	283	2000	
Sb	121	2	115	0.806	ppb	0.806	18.00	607	1000	
Ba	137	2	115	192.932	ppb	192.932	0.15	48279	5000	
W	182	2	165	6.366	ppb	6.366	0.82	22704	100	
Pt	195	2	165	0.048	ppb	0.048	39.16	180	100	
Tl	205	2	165	-0.003	ppb	-0.003	-396.91	137	2000	
Pb	208	2	165	0.521	ppb	0.521	6.55	5351	5000	
Th	232	2	165	0.360	ppb	0.360	7.05	4181	2000	
U	238	2	165	2.812	ppb	2.812	4.27	33017	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	416325	0.38	549626	75.75	60	120	
Sc (IS)	45	1	HMI H2	18957923	0.36	22416142	84.57	60	120	
Sc (IS)	45	2	HMI He	731539	0.92	833519	87.77	60	120	
Sc (IS)	45	3	No Gas	32190226	0.60	37013496	86.97	60	120	
Ge Internal Standard	72	1	HMI H2	7141687	0.71	8765589	81.47	60	120	
Ge Internal Standard	72	2	HMI He	816713	0.85	961800	84.92	60	120	
In Internal Standard	115	2	HMI He	2743467	0.61	3323973	82.54	60	120	
Ho-165	165	2	HMI He	14288718	0.08	16978678	84.16	60	120	

Sample Report

Sample Table

Sample Name	280-116135-A-12-A
Data File Name	253SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:32:49-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435141 6020 As
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.921	ppb	-8.921	-63.06	79446	500000	
Li	7	2	45	33.131	ppb	33.131	32.87	4591	500000	
Li	7	3	45	-19.529	ppb	-19.529	-20.97	2416451	50000	
Be	9	1	6	-0.024	ppb	-0.024	-100.56	3	2000	
B	11	1	6	9.069	ppb	9.069	8.73	3611	2000	
Na	23	1	45	6046.293	ppb	6046.293	1.72	16107138	2000	
Na	23	2	45	5763.868	ppb	5763.868	3.24	1126056	400000	
Mg	24	2	45	30368.081	ppb	30368.081	0.54	2576560	400000	
Al	27	2	45	10.018	ppb	10.018	20.11	310	400000	
K	39	1	45	3170.209	ppb	3170.209	1.63	15441689	400000	
K	39	2	45	4388.416	ppb	4388.416	0.29	202584	400000	
Ca	40	1	45	15823.407	ppb	15823.407	1.26	62571207	400000	
Ca	44	2	45	15457.135	ppb	15457.135	2.38	38031	400000	
Ti	47	2	45	0.483	ppb	0.483	100.24	10	4000	
V	51	2	72	-0.652	ppb	-0.652	-35.57	920	2000	
Cr	52	2	72	0.249	ppb	0.249	33.21	463	5000	
Mn	55	2	72	242.529	ppb	242.529	1.46	108401	10000	
Fe	57	2	72	251.045	ppb	251.045	0.95	5408	400000	
Co	59	2	72	0.067	ppb	0.067	32.66	173	2000	
Ni	60	2	72	0.673	ppb	0.673	21.62	520	5000	
Cu	63	2	72	0.503	ppb	0.503	13.94	1587	5000	
Zn	66	2	72	14.450	ppb	14.450	4.98	3154	5000	
As	75	2	72	0.087	ppb	0.087	96.18	31	2000	
Se	78	1	72	0.208	ppb	0.208	57.17	61	2000	
Sr	88	2	72	23.567	ppb	23.567	2.08	11589	4000	
Zr	90	2	72	39.845	ppb	39.845	32.36	287	1000	
Nb	93	2	72	0.476	ppb	0.476	25.67	2090	200	
Mo	95	2	115	2.456	ppb	2.456	13.88	1834	2000	
Pd	105	2	115	0.006	ppb	0.006	282.98	17	100	
Ag	107	2	115	0.009	ppb	0.009	173.03	40	100	
Cd	111	2	115	0.031	ppb	0.031	110.45	17	2000	
Sn	120	2	115	18.808	ppb	18.808	3.95	17565	2000	
Sb	121	2	115	0.049	ppb	0.049	53.45	83	1000	
Ba	137	2	115	6.882	ppb	6.882	5.74	1980	5000	
W	182	2	165	2.078	ppb	2.078	11.75	9177	100	
Pt	195	2	165	0.006	ppb	0.006	166.39	73	100	
Tl	205	2	165	-0.004	ppb	-0.004	-34.45	143	2000	
Pb	208	2	165	0.107	ppb	0.107	27.61	1924	5000	
Th	232	2	165	0.011	ppb	0.011	32.98	487	2000	
U	238	2	165	0.039	ppb	0.039	9.54	720	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	500389	0.32	549626	91.04	60	120	
Sc (IS)	45	1	HMI H2	21439017	0.73	22416142	95.64	60	120	
Sc (IS)	45	2	HMI He	796574	0.36	833519	95.57	60	120	
Sc (IS)	45	3	No Gas	36184882	0.60	37013496	97.76	60	120	
Ge Internal Standard	72	1	HMI H2	8391695	0.18	8765589	95.73	60	120	
Ge Internal Standard	72	2	HMI He	920636	0.39	961800	95.72	60	120	
In Internal Standard	115	2	HMI He	3127685	1.59	3323973	94.09	60	120	
Ho-165	165	2	HMI He	16295729	0.72	16978678	95.98	60	120	

Sample Report

Sample Table

Sample Name	280-116135-A-14-A
Data File Name	254SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:36:35-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435141 6020 As
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-18.900	ppb	-18.900	-21.61	78022	500000	
Li	7	2	45	-13.782	ppb	-13.782	-151.70	4167	500000	
Li	7	3	45	-20.107	ppb	-20.107	-24.83	2396844	50000	
Be	9	1	6	-0.024	ppb	-0.024	-99.45	3	2000	
B	11	1	6	15.926	ppb	15.926	7.01	5248	2000	
Na	23	1	45	9494.559	ppb	9494.559	0.63	25131342	2000	
Na	23	2	45	9554.635	ppb	9554.635	1.00	1872631	400000	
Mg	24	2	45	32824.576	ppb	32824.576	0.83	2838894	400000	
Al	27	2	45	4.713	ppb	4.713	61.97	190	400000	
K	39	1	45	-598.383	ppb	-598.383	-4.17	5735706	400000	
K	39	2	45	645.529	ppb	645.529	1.71	39534	400000	
Ca	40	1	45	74026.980	ppb	74026.980	0.61	294841936	400000	
Ca	44	2	45	72569.469	ppb	72569.469	0.35	181779	400000	
Ti	47	2	45	0.630	ppb	0.630	114.43	13	4000	
V	51	2	72	-0.337	ppb	-0.337	-71.48	1200	2000	
Cr	52	2	72	0.746	ppb	0.746	7.96	1013	5000	
Mn	55	2	72	0.168	ppb	0.168	68.13	173	10000	
Fe	57	2	72	6.488	ppb	6.488	61.05	300	400000	
Co	59	2	72	0.017	ppb	0.017	111.86	80	2000	
Ni	60	2	72	0.331	ppb	0.331	42.58	347	5000	
Cu	63	2	72	0.292	ppb	0.292	64.60	1303	5000	
Zn	66	2	72	1.143	ppb	1.143	31.85	543	5000	
As	75	2	72	0.132	ppb	0.132	126.42	37	2000	
Se	78	1	72	0.741	ppb	0.741	17.54	168	2000	
Sr	88	2	72	141.851	ppb	141.851	1.94	70569	4000	
Zr	90	2	72	9.603	ppb	9.603	24.05	137	1000	
Nb	93	2	72	0.425	ppb	0.425	21.93	1994	200	
Mo	95	2	115	0.052	ppb	0.052	44.86	70	2000	
Pd	105	2	115	0.029	ppb	0.029	150.89	43	100	
Ag	107	2	115	0.000	ppb	0.000	3236.46	20	100	
Cd	111	2	115	0.001	ppb	0.001	2041.28	7	2000	
Sn	120	2	115	0.172	ppb	0.172	55.87	303	2000	
Sb	121	2	115	0.069	ppb	0.069	72.62	100	1000	
Ba	137	2	115	35.341	ppb	35.341	3.58	10178	5000	
W	182	2	165	2.593	ppb	2.593	12.23	11372	100	
Pt	195	2	165	0.003	ppb	0.003	741.53	63	100	
Tl	205	2	165	-0.007	ppb	-0.007	-101.76	123	2000	
Pb	208	2	165	0.105	ppb	0.105	6.00	1937	5000	
Th	232	2	165	0.010	ppb	0.010	38.62	483	2000	
U	238	2	165	0.779	ppb	0.779	1.36	10752	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	506554	0.61	549626	92.16	60	120	
Sc (IS)	45	1	HMI H2	21622545	1.26	22416142	96.46	60	120	
Sc (IS)	45	2	HMI He	812032	0.25	833519	97.42	60	120	
Sc (IS)	45	3	No Gas	35945354	0.52	37013496	97.11	60	120	
Ge Internal Standard	72	1	HMI H2	8484837	0.92	8765589	96.80	60	120	
Ge Internal Standard	72	2	HMI He	935639	0.58	961800	97.28	60	120	
In Internal Standard	115	2	HMI He	3152784	0.37	3323973	94.85	60	120	
Ho-165	165	2	HMI He	16565143	0.21	16978678	97.56	60	120	

Sample Report

Sample Table

Sample Name	280-116135-A-16-A
Data File Name	255SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:40:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435141 6020 As
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.979	ppb	-8.979	-85.69	80741	500000	
Li	7	2	45	-12.303	ppb	-12.303	-249.59	4144	500000	
Li	7	3	45	-24.941	ppb	-24.941	-31.30	2414666	50000	
Be	9	1	6	-0.011	ppb	-0.011	-215.70	7	2000	
B	11	1	6	13.023	ppb	13.023	7.13	4651	2000	
Na	23	1	45	6349.402	ppb	6349.402	0.11	17159753	2000	
Na	23	2	45	6517.754	ppb	6517.754	1.72	1279862	400000	
Mg	24	2	45	26811.933	ppb	26811.933	2.15	2297056	400000	
Al	27	2	45	11.864	ppb	11.864	25.68	357	400000	
K	39	1	45	-891.814	ppb	-891.814	-1.68	5008980	400000	
K	39	2	45	388.199	ppb	388.199	5.39	27787	400000	
Ca	40	1	45	57138.280	ppb	57138.280	0.42	229390043	400000	
Ca	44	2	45	57192.469	ppb	57192.469	2.24	141910	400000	
Ti	47	2	45	0.322	ppb	0.322	173.21	7	4000	
V	51	2	72	-0.091	ppb	-0.091	-267.18	1413	2000	
Cr	52	2	72	0.815	ppb	0.815	0.93	1093	5000	
Mn	55	2	72	0.753	ppb	0.753	41.07	440	10000	
Fe	57	2	72	9.261	ppb	9.261	63.73	360	400000	
Co	59	2	72	0.675	ppb	0.675	14.09	1330	2000	
Ni	60	2	72	0.848	ppb	0.848	5.90	623	5000	
Cu	63	2	72	0.646	ppb	0.646	23.98	1830	5000	
Zn	66	2	72	1.582	ppb	1.582	51.25	633	5000	
As	75	2	72	0.288	ppb	0.288	70.69	58	2000	
Se	78	1	72	1.086	ppb	1.086	12.32	239	2000	
Sr	88	2	72	182.582	ppb	182.582	2.88	91198	4000	
Zr	90	2	72	11.453	ppb	11.453	71.55	147	1000	
Nb	93	2	72	0.307	ppb	0.307	23.49	1690	200	
Mo	95	2	115	0.164	ppb	0.164	18.84	153	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-211.69	7	100	
Ag	107	2	115	0.008	ppb	0.008	127.13	40	100	
Cd	111	2	115	-0.019	ppb	-0.019	0.00	0	2000	
Sn	120	2	115	0.014	ppb	0.014	254.76	157	2000	
Sb	121	2	115	0.039	ppb	0.039	76.70	77	1000	
Ba	137	2	115	21.265	ppb	21.265	3.21	6158	5000	
W	182	2	165	0.093	ppb	0.093	38.71	1467	100	
Pt	195	2	165	0.000	ppb	0.000	2853.99	57	100	
Tl	205	2	165	-0.010	ppb	-0.010	-43.00	103	2000	
Pb	208	2	165	0.024	ppb	0.024	44.55	1110	5000	
Th	232	2	165	0.002	ppb	0.002	289.46	387	2000	
U	238	2	165	0.339	ppb	0.339	6.27	4781	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	515038	0.09	549626	93.71	60	120	
Sc (IS)	45	1	HMI H2	21791513	0.19	22416142	97.21	60	120	
Sc (IS)	45	2	HMI He	804428	1.08	833519	96.51	60	120	
Sc (IS)	45	3	No Gas	36683602	0.23	37013496	99.11	60	120	
Ge Internal Standard	72	1	HMI H2	8561650	0.38	8765589	97.67	60	120	
Ge Internal Standard	72	2	HMI He	939761	0.71	961800	97.71	60	120	
In Internal Standard	115	2	HMI He	3166077	1.07	3323973	95.25	60	120	
Ho-165	165	2	HMI He	16557639	0.27	16978678	97.52	60	120	

Sample Report

Sample Table

Sample Name	280-116135-A-18-A
Data File Name	256SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:44:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435141 6020 As
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.382	ppb	-10.382	-92.10	80998	500000	
Li	7	2	45	-26.642	ppb	-26.642	-28.95	4094	500000	
Li	7	3	45	-15.873	ppb	-15.873	-21.99	2434174	50000	
Be	9	1	6	0.016	ppb	0.016	385.10	13	2000	
B	11	1	6	12.372	ppb	12.372	12.71	4501	2000	
Na	23	1	45	4742.767	ppb	4742.767	1.33	13077313	2000	
Na	23	2	45	4483.388	ppb	4483.388	0.61	918247	400000	
Mg	24	2	45	51251.545	ppb	51251.545	0.55	4505887	400000	
Al	27	2	45	6.930	ppb	6.930	19.89	247	400000	
K	39	1	45	-327.387	ppb	-327.387	-8.64	6539512	400000	
K	39	2	45	939.976	ppb	939.976	3.95	53549	400000	
Ca	40	1	45	43618.988	ppb	43618.988	1.55	176359344	400000	
Ca	44	2	45	43058.629	ppb	43058.629	2.49	109688	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.725	ppb	-0.725	-16.73	887	2000	
Cr	52	2	72	0.728	ppb	0.728	23.56	1010	5000	
Mn	55	2	72	0.111	ppb	0.111	90.30	150	10000	
Fe	57	2	72	11.523	ppb	11.523	6.70	413	400000	
Co	59	2	72	0.012	ppb	0.012	86.94	73	2000	
Ni	60	2	72	0.933	ppb	0.933	4.49	677	5000	
Cu	63	2	72	0.381	ppb	0.381	16.00	1457	5000	
Zn	66	2	72	2.133	ppb	2.133	24.56	753	5000	
As	75	2	72	0.094	ppb	0.094	76.07	33	2000	
Se	78	1	72	0.362	ppb	0.362	26.14	93	2000	
Sr	88	2	72	109.687	ppb	109.687	2.20	55466	4000	
Zr	90	2	72	10.471	ppb	10.471	94.89	143	1000	
Nb	93	2	72	0.215	ppb	0.215	53.12	1467	200	
Mo	95	2	115	0.260	ppb	0.260	18.14	227	2000	
Pd	105	2	115	-0.008	ppb	-0.008	0.00	0	100	
Ag	107	2	115	0.004	ppb	0.004	248.56	30	100	
Cd	111	2	115	-0.019	ppb	-0.019	0.00	0	2000	
Sn	120	2	115	0.087	ppb	0.087	95.41	227	2000	
Sb	121	2	115	0.043	ppb	0.043	26.64	80	1000	
Ba	137	2	115	5.889	ppb	5.889	5.15	1727	5000	
W	182	2	165	2.104	ppb	2.104	10.49	9501	100	
Pt	195	2	165	-0.006	ppb	-0.006	-30.97	37	100	
Tl	205	2	165	-0.003	ppb	-0.003	-187.81	160	2000	
Pb	208	2	165	0.184	ppb	0.184	8.48	2767	5000	
Th	232	2	165	-0.001	ppb	-0.001	-234.53	347	2000	
U	238	2	165	0.690	ppb	0.690	0.79	9597	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	515612	0.55	549626	93.81	60	120	
Sc (IS)	45	1	HMI H2	21945535	1.07	22416142	97.90	60	120	
Sc (IS)	45	2	HMI He	825576	0.71	833519	99.05	60	120	
Sc (IS)	45	3	No Gas	36100588	0.93	37013496	97.53	60	120	
Ge Internal Standard	72	1	HMI H2	8528313	0.78	8765589	97.29	60	120	
Ge Internal Standard	72	2	HMI He	950873	0.40	961800	98.86	60	120	
In Internal Standard	115	2	HMI He	3181212	1.10	3323973	95.71	60	120	
Ho-165	165	2	HMI He	16673621	0.91	16978678	98.20	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	257_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:47:56-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	490.867	ppb	0.565	188172	500	98.2	90	110	
Li	7	2	45	511.126	ppb	11.109	10017	500	102.2	90	110	
Li	7	3	45	487.598	ppb	0.720	5701129	500	97.5	90	110	
Be	9	1	6	49.750	ppb	3.210	12232	50	99.5	90	110	
B	11	1	6	44.015	ppb	4.214	12099	50	88.0	90	110	>+\-10%
Na	23	1	45	5169.420	ppb	0.711	14174686	5000	103.4	90	110	
Na	23	2	45	4911.847	ppb	0.416	996867	5000	98.2	90	110	
Mg	24	2	45	5027.864	ppb	1.164	440885	5000	100.6	90	110	
Al	27	2	45	5021.795	ppb	0.583	120879	5000	100.4	90	110	
K	39	1	45	4986.820	ppb	1.392	20591939	5000	99.7	90	110	
K	39	2	45	5076.316	ppb	1.254	240028	5000	101.5	90	110	
Ca	40	1	45	5038.334	ppb	0.785	20440920	5000	100.8	90	110	
Ca	44	2	45	5131.100	ppb	2.767	13063	5000	102.6	90	110	
Ti	47	2	45	40.706	ppb	6.887	870	50	81.4	90	110	>+\-10%
V	51	2	72	50.103	ppb	3.498	44519	50	100.2	90	110	
Cr	52	2	72	50.698	ppb	1.167	56534	50	101.4	90	110	
Mn	55	2	72	51.109	ppb	0.841	23680	50	102.2	90	110	
Fe	57	2	72	4969.588	ppb	0.664	107515	5000	99.4	90	110	
Co	59	2	72	51.329	ppb	1.536	98725	50	102.7	90	110	
Ni	60	2	72	50.782	ppb	2.608	27537	50	101.6	90	110	
Cu	63	2	72	50.688	ppb	1.964	76670	50	101.4	90	110	
Zn	66	2	72	49.619	ppb	4.195	10411	50	99.2	90	110	
As	75	2	72	49.773	ppb	1.308	6726	50	99.5	90	110	
Se	78	1	72	50.677	ppb	5.034	10144	50	101.4	90	110	
Sr	88	2	72	52.560	ppb	5.408	26626	50	105.1	90	110	
Zr	90	2	72	36.151	ppb	41.030	277	50	72.3	90	110	>+\-10%
Nb	93	2	72	92.615	ppb	0.670	246164	100	92.6	90	110	
Mo	95	2	115	49.494	ppb	2.372	37768	50	99.0	90	110	
Pd	105	2	115	51.481	ppb	2.138	62199	50	103.0	90	110	
Ag	107	2	115	50.537	ppb	1.503	128728	50	101.1	90	110	
Cd	111	2	115	51.073	ppb	2.660	17575	50	102.1	90	110	
Sn	120	2	115	50.597	ppb	3.123	48793	50	101.2	90	110	
Sb	121	2	115	50.068	ppb	2.681	41767	50	100.1	90	110	
Ba	137	2	115	48.944	ppb	1.877	14505	50	97.9	90	110	
W	182	2	165	49.876	ppb	1.817	200213	50	99.8	90	110	
Pt	195	2	165	50.677	ppb	0.917	164368	50	101.4	90	110	
Tl	205	2	165	50.736	ppb	1.165	394228	50	101.5	90	110	
Pb	208	2	165	50.937	ppb	0.582	526778	50	101.9	90	110	
Th	232	2	165	50.306	ppb	0.369	632204	50	100.6	90	110	
U	238	2	165	50.101	ppb	0.828	683792	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	520398	0.57	549626	94.68	60	120	
Sc (IS)	45	1	HMI H2	21915612	0.68	22416142	97.77	60	120	
Sc (IS)	45	2	HMI He	821731	0.59	833519	98.59	60	120	
Sc (IS)	45	3	No Gas	36371313	0.37	37013496	98.27	60	120	
Ge Internal Standard	72	1	HMI H2	8524378	0.45	8765589	97.25	60	120	
Ge Internal Standard	72	2	HMI He	951198	0.77	961800	98.90	60	120	
In Internal Standard	115	2	HMI He	3245495	1.08	3323973	97.64	60	120	
Ho-165	165	2	HMI He	16692287	0.29	16978678	98.31	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	258_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:51:44-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.239	ppb	-44.9	2527076	10	
Be	9	1	6	0.014	ppb	635.9	13	0.5	
B	11	1	6	-0.412	ppb	-250.3	1533	0.5	
Na	23	1	45	59.230	ppb	5.2	826502	25	>RL
Na	23	2	45	56.124	ppb	2.8	57475	25	>RL
Mg	24	2	45	13.504	ppb	25.2	2197	25	
Al	27	2	45	5.590	ppb	29.1	213	15	
K	39	1	45	173.154	ppb	7.4	7857759	50	>RL
K	39	2	45	7.890	ppb	40.7	11208	50	
Ca	40	1	45	-3.838	ppb	-29.6	93377	50	
Ca	44	2	45	-0.816	ppb	-1253.4	60	25	
Ti	47	2	45	0.311	ppb	86.6	7	0.5	
V	51	2	72	0.109	ppb	126.4	1604	1	
Cr	52	2	72	0.011	ppb	179.1	213	1	
Mn	55	2	72	0.046	ppb	47.1	120	0.5	
Fe	57	2	72	0.865	ppb	80.6	183	25	
Co	59	2	72	-0.003	ppb	-333.5	43	0.5	
Ni	60	2	72	-0.101	ppb	-80.8	120	1	
Cu	63	2	72	0.100	ppb	89.6	1037	1	
Zn	66	2	72	-0.164	ppb	-424.4	287	5	
As	75	2	72	0.021	ppb	175.0	23	1	
Se	78	1	72	0.015	ppb	227.2	24	1	
Sr	88	2	72	-0.045	ppb	-110.3	43	0.5	
Zr	90	2	72	0.831	ppb	352.1	93	1	
Nb	93	2	72	3.459	ppb	8.8	10061	2	>RL
Mo	95	2	115	0.125	ppb	71.4	130	0.5	
Pd	105	2	115	0.060	ppb	63.0	83	1	
Ag	107	2	115	0.026	ppb	24.0	87	1	
Cd	111	2	115	-0.010	ppb	-171.2	3	0.5	
Sn	120	2	115	0.083	ppb	92.4	230	1	
Sb	121	2	115	0.304	ppb	28.6	303	0.6	
Ba	137	2	115	-0.066	ppb	0.0	0	0.5	
W	182	2	165	0.078	ppb	41.4	1420	1	
Pt	195	2	165	-0.010	ppb	-46.9	23	1	
Tl	205	2	165	0.003	ppb	152.1	207	0.1	
Pb	208	2	165	-0.004	ppb	-359.5	827	0.5	
Th	232	2	165	0.028	ppb	25.0	717	1	
U	238	2	165	0.045	ppb	4.4	820	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	534922	0.20	549626	97.32	60	120	
Sc (IS)	45	1	HMI H2	21922272	0.29	22416142	97.80	60	120	
Sc (IS)	45	2	HMI He	820901	0.78	833519	98.49	60	120	
Sc (IS)	45	3	No Gas	36456467	0.12	37013496	98.50	60	120	
Ge Internal Standard	72	1	HMI H2	8573550	0.66	8765589	97.81	60	120	
Ge Internal Standard	72	2	HMI He	951209	0.15	961800	98.90	60	120	
In Internal Standard	115	2	HMI He	3291699	1.21	3323973	99.03	60	120	
Ho-165	165	2	HMI He	16705745	0.43	16978678	98.39	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-5-a
Data File Name	259SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:55:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	280.583	ppb	280.583	2.68	132475	500000	
Li	7	2	45	283.772	ppb	283.772	9.36	7205	500000	
Li	7	3	45	244.156	ppb	244.156	2.38	3903880	50000	
Be	9	1	6	12.861	ppb	12.861	1.28	2694	2000	
B	11	1	6	70.772	ppb	70.772	1.09	15712	2000	
Na	23	1	45	1755.582	ppb	1755.582	1.30	4864748	2000	
Na	23	2	45	1610.391	ppb	1610.391	0.57	343970	400000	
Mg	24	2	45	165147.155	ppb	165147.155	0.52	13875238	400000	
Al	27	2	45	270351.386	ppb	270351.386	1.44	6244432	400000	
K	39	1	45	78642.901	ppb	78642.901	0.26	199396404	400000	
K	39	2	45	81708.593	ppb	81708.593	0.70	3552462	400000	
Ca	40	1	45	42891.196	ppb	42891.196	0.34	160266688	400000	
Ca	44	2	45	44210.158	ppb	44210.158	1.56	107630	400000	
Ti	47	2	45	10741.104	ppb	10741.104	1.34	220508	4000	
V	51	2	72	651.273	ppb	651.273	1.70	516322	2000	
Cr	52	2	72	1761.878	ppb	1761.878	1.48	1803421	5000	
Mn	55	2	72	10742.382	ppb	10742.382	1.89	4565138	10000	
Fe	57	2	72	468838.372	ppb	468838.372	0.94	9328119	400000	
Co	59	2	72	327.898	ppb	327.898	1.24	580685	2000	
Ni	60	2	72	1856.990	ppb	1856.990	1.19	921890	5000	
Cu	63	2	72	657.188	ppb	657.188	0.97	905883	5000	
Zn	66	2	72	826.179	ppb	826.179	1.09	155043	5000	
As	75	2	72	253.595	ppb	253.595	1.68	31489	2000	
Se	78	1	72	3.047	ppb	3.047	7.21	560	2000	
Sr	88	2	72	465.199	ppb	465.199	1.31	216558	4000	
Zr	90	2	72	14812.520	ppb	14812.520	2.92	71058	1000	>LDR
Nb	93	2	72	13.067	ppb	13.067	2.46	32702	200	
Mo	95	2	115	11.841	ppb	11.841	4.83	8323	2000	
Pd	105	2	115	0.218	ppb	0.218	19.50	250	100	
Ag	107	2	115	5.298	ppb	5.298	6.29	12409	100	
Cd	111	2	115	5.839	ppb	5.839	8.51	1850	2000	
Sn	120	2	115	3.614	ppb	3.614	0.52	3327	2000	
Sb	121	2	115	2.306	ppb	2.306	12.07	1810	1000	
Ba	137	2	115	2451.790	ppb	2451.790	2.27	666447	5000	
W	182	2	165	7.960	ppb	7.960	1.16	30790	100	
Pt	195	2	165	0.016	ppb	0.016	109.00	100	100	
Tl	205	2	165	5.281	ppb	5.281	2.13	38568	2000	
Pb	208	2	165	232.152	ppb	232.152	1.38	2244921	5000	
Th	232	2	165	101.181	ppb	101.181	1.36	1190130	2000	
U	238	2	165	11.696	ppb	11.696	1.22	149600	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	442345	0.35	549626	80.48	60	120	
Sc (IS)	45	1	HMI H2	20279272	0.68	22416142	90.47	60	120	
Sc (IS)	45	2	HMI He	789061	0.79	833519	94.67	60	120	
Sc (IS)	45	3	No Gas	34376554	0.36	37013496	92.88	60	120	
Ge Internal Standard	72	1	HMI H2	7584768	0.39	8765589	86.53	60	120	
Ge Internal Standard	72	2	HMI He	876113	0.22	961800	91.09	60	120	
In Internal Standard	115	2	HMI He	2981629	1.58	3323973	89.70	60	120	
Ho-165	165	2	HMI He	15628781	0.87	16978678	92.05	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-5-aSD@5
Data File Name	260SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T02:59:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	40.479	ppb	40.479	4.81	90891	500000	
Li	7	2	45	49.347	ppb	49.347	63.53	4874	500000	
Li	7	3	45	29.272	ppb	29.272	30.71	2739173	50000	
Be	9	1	6	2.907	ppb	2.907	12.96	687	2000	
B	11	1	6	12.980	ppb	12.980	4.57	4444	2000	
Na	23	1	45	354.554	ppb	354.554	1.41	1582043	2000	
Na	23	2	45	312.741	ppb	312.741	3.31	106281	400000	
Mg	24	2	45	34632.336	ppb	34632.336	1.41	3005720	400000	
Al	27	2	45	57384.396	ppb	57384.396	1.67	1368902	400000	
K	39	1	45	16087.168	ppb	16087.168	0.84	49474869	400000	
K	39	2	45	16272.804	ppb	16272.804	0.38	739292	400000	
Ca	40	1	45	8687.245	ppb	8687.245	0.82	34822939	400000	
Ca	44	2	45	9136.010	ppb	9136.010	1.40	23019	400000	
Ti	47	2	45	2126.564	ppb	2126.564	2.01	45087	4000	
V	51	2	72	129.093	ppb	129.093	1.98	109563	2000	
Cr	52	2	72	338.332	ppb	338.332	0.43	366907	5000	
Mn	55	2	72	2080.885	ppb	2080.885	0.46	936572	10000	
Fe	57	2	72	98028.049	ppb	98028.049	0.82	2065651	400000	
Co	59	2	72	66.628	ppb	66.628	0.92	124995	2000	
Ni	60	2	72	382.917	ppb	382.917	1.25	201448	5000	
Cu	63	2	72	137.127	ppb	137.127	1.18	200862	5000	
Zn	66	2	72	168.652	ppb	168.652	2.61	33767	5000	
As	75	2	72	50.612	ppb	50.612	0.80	6671	2000	
Se	78	1	72	0.469	ppb	0.469	19.18	112	2000	
Sr	88	2	72	91.295	ppb	91.295	1.08	45059	4000	
Zr	90	2	72	3118.790	ppb	3118.790	3.00	15913	1000	
Nb	93	2	72	2.929	ppb	2.929	5.76	8443	200	
Mo	95	2	115	2.682	ppb	2.682	14.61	2027	2000	
Pd	105	2	115	0.034	ppb	0.034	24.81	50	100	
Ag	107	2	115	1.151	ppb	1.151	4.12	2880	100	
Cd	111	2	115	1.351	ppb	1.351	13.66	460	2000	
Sn	120	2	115	0.750	ppb	0.750	22.50	847	2000	
Sb	121	2	115	0.343	ppb	0.343	29.14	323	1000	
Ba	137	2	115	485.006	ppb	485.006	0.72	140072	5000	
W	182	2	165	1.479	ppb	1.479	2.52	6965	100	
Pt	195	2	165	0.004	ppb	0.004	181.06	67	100	
Tl	205	2	165	1.116	ppb	1.116	3.87	8790	2000	
Pb	208	2	165	46.714	ppb	46.714	0.26	479974	5000	
Th	232	2	165	19.832	ppb	19.832	1.41	247790	2000	
U	238	2	165	2.315	ppb	2.315	1.34	31573	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	493352	1.20	549626	89.76	60	120	
Sc (IS)	45	1	HMI H2	21702243	1.00	22416142	96.82	60	120	
Sc (IS)	45	2	HMI He	814867	0.34	833519	97.76	60	120	
Sc (IS)	45	3	No Gas	36313614	1.00	37013496	98.11	60	120	
Ge Internal Standard	72	1	HMI H2	8344366	0.14	8765589	95.19	60	120	
Ge Internal Standard	72	2	HMI He	927816	0.21	961800	96.47	60	120	
In Internal Standard	115	2	HMI He	3167010	0.50	3323973	95.28	60	120	
Ho-165	165	2	HMI He	16581679	0.82	16978678	97.66	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-5-b ms
Data File Name	261SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:03:08-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	601.333	ppb	601.333	1.97	192737	500000	
Li	7	2	45	640.833	ppb	640.833	7.67	10798	500000	
Li	7	3	45	559.560	ppb	559.560	1.14	5682746	50000	
Be	9	1	6	215.327	ppb	215.327	0.87	42070	2000	
B	11	1	6	255.167	ppb	255.167	2.05	49693	2000	
Na	23	1	45	1951.074	ppb	1951.074	0.61	5248571	2000	
Na	23	2	45	1807.341	ppb	1807.341	0.70	373705	400000	
Mg	24	2	45	154542.438	ppb	154542.438	0.63	12750704	400000	
Al	27	2	45	276056.042	ppb	276056.042	0.65	6262153	400000	
K	39	1	45	81493.026	ppb	81493.026	0.58	202937550	400000	
K	39	2	45	83127.205	ppb	83127.205	0.80	3549040	400000	
Ca	40	1	45	44535.231	ppb	44535.231	0.85	163635458	400000	
Ca	44	2	45	46901.893	ppb	46901.893	0.24	112129	400000	
Ti	47	2	45	11341.347	ppb	11341.347	1.00	228643	4000	
V	51	2	72	923.732	ppb	923.732	0.45	712716	2000	
Cr	52	2	72	2249.320	ppb	2249.320	2.28	2242213	5000	
Mn	55	2	72	11188.208	ppb	11188.208	0.19	4631014	10000	
Fe	57	2	72	569091.171	ppb	569091.171	0.15	11028670	400000	
Co	59	2	72	559.609	ppb	559.609	0.59	965231	2000	
Ni	60	2	72	2586.060	ppb	2586.060	0.64	1250369	5000	
Cu	63	2	72	966.929	ppb	966.929	0.64	1297797	5000	
Zn	66	2	72	1068.751	ppb	1068.751	0.65	195275	5000	
As	75	2	72	495.160	ppb	495.160	0.51	59868	2000	
Se	78	1	72	148.449	ppb	148.449	3.18	25944	2000	
Sr	88	2	72	757.010	ppb	757.010	0.84	343226	4000	
Zr	90	2	72	59760.912	ppb	59760.912	1.05	278996	1000	>LDR
Nb	93	2	72	8.771	ppb	8.771	2.64	21648	200	
Mo	95	2	115	163.211	ppb	163.211	2.63	111382	2000	
Pd	105	2	115	0.187	ppb	0.187	14.79	210	100	
Ag	107	2	115	198.259	ppb	198.259	0.66	451906	100	
Cd	111	2	115	188.126	ppb	188.126	3.30	57914	2000	
Sn	120	2	115	91.904	ppb	91.904	2.13	79202	2000	
Sb	121	2	115	14.835	ppb	14.835	6.69	11098	1000	
Ba	137	2	115	2834.232	ppb	2834.232	0.82	750569	5000	
W	182	2	165	22.927	ppb	22.927	0.37	86550	100	
Pt	195	2	165	0.019	ppb	0.019	87.85	110	100	
Tl	205	2	165	184.960	ppb	184.960	0.35	1342353	2000	
Pb	208	2	165	450.032	ppb	450.032	0.56	4342029	5000	
Th	232	2	165	323.364	ppb	323.364	1.57	3794682	2000	
U	238	2	165	215.108	ppb	215.108	0.36	2742592	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	413794	0.80	549626	75.29	60	120	
Sc (IS)	45	1	HMI H2	19941975	0.56	22416142	88.96	60	120	
Sc (IS)	45	2	HMI He	774877	0.47	833519	92.96	60	120	
Sc (IS)	45	3	No Gas	33524584	0.75	37013496	90.57	60	120	
Ge Internal Standard	72	1	HMI H2	7452099	0.23	8765589	85.02	60	120	
Ge Internal Standard	72	2	HMI He	853349	0.96	961800	88.72	60	120	
In Internal Standard	115	2	HMI He	2904454	1.52	3323973	87.38	60	120	
Ho-165	165	2	HMI He	15596190	1.02	16978678	91.86	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-5-c msd
Data File Name	262SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:06:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	559.289	ppb	559.289	2.17	184567	500000	
Li	7	2	45	566.479	ppb	566.479	8.18	9774	500000	
Li	7	3	45	530.726	ppb	530.726	1.44	5559876	50000	
Be	9	1	6	204.167	ppb	204.167	1.63	39339	2000	
B	11	1	6	243.358	ppb	243.358	1.48	46801	2000	
Na	23	1	45	1456.877	ppb	1456.877	0.78	4074323	2000	
Na	23	2	45	1369.980	ppb	1369.980	0.70	286651	400000	
Mg	24	2	45	150147.400	ppb	150147.400	0.92	12081324	400000	
Al	27	2	45	249351.305	ppb	249351.305	0.80	5516154	400000	
K	39	1	45	70232.841	ppb	70232.841	0.63	175846004	400000	
K	39	2	45	74240.142	ppb	74240.142	1.26	3092126	400000	
Ca	40	1	45	39361.442	ppb	39361.442	0.16	144655511	400000	
Ca	44	2	45	41387.248	ppb	41387.248	1.43	96503	400000	
Ti	47	2	45	10204.546	ppb	10204.546	1.51	200636	4000	
V	51	2	72	799.669	ppb	799.669	0.21	609969	2000	
Cr	52	2	72	2281.473	ppb	2281.473	0.92	2247874	5000	
Mn	55	2	72	9959.669	ppb	9959.669	0.34	4074323	10000	
Fe	57	2	72	411201.884	ppb	411201.884	0.50	7875558	400000	
Co	59	2	72	481.246	ppb	481.246	0.09	820380	2000	
Ni	60	2	72	1892.395	ppb	1892.395	0.09	904354	5000	
Cu	63	2	72	756.591	ppb	756.591	0.41	1003793	5000	
Zn	66	2	72	913.325	ppb	913.325	0.43	164965	5000	
As	75	2	72	373.190	ppb	373.190	0.62	44597	2000	
Se	78	1	72	153.422	ppb	153.422	1.63	27034	2000	
Sr	88	2	72	633.235	ppb	633.235	1.28	283752	4000	
Zr	90	2	72	58469.329	ppb	58469.329	0.74	269768	1000	>LDR
Nb	93	2	72	9.523	ppb	9.523	3.88	23160	200	
Mo	95	2	115	161.758	ppb	161.758	0.79	108691	2000	
Pd	105	2	115	0.208	ppb	0.208	31.46	230	100	
Ag	107	2	115	197.373	ppb	197.373	0.64	442958	100	
Cd	111	2	115	188.909	ppb	188.909	0.39	57271	2000	
Sn	120	2	115	90.164	ppb	90.164	0.94	76520	2000	
Sb	121	2	115	11.083	ppb	11.083	5.51	8180	1000	
Ba	137	2	115	2453.108	ppb	2453.108	0.83	639624	5000	
W	182	2	165	25.251	ppb	25.251	1.57	93912	100	
Pt	195	2	165	0.010	ppb	0.010	61.39	80	100	
Tl	205	2	165	187.589	ppb	187.589	0.51	1342690	2000	
Pb	208	2	165	394.298	ppb	394.298	0.71	3752022	5000	
Th	232	2	165	318.478	ppb	318.478	0.68	3686254	2000	
U	238	2	165	216.254	ppb	216.254	0.19	2719139	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	408092	0.47	549626	74.25	60	120	
Sc (IS)	45	1	HMI H2	19944010	0.41	22416142	88.97	60	120	
Sc (IS)	45	2	HMI He	755729	1.20	833519	90.67	60	120	
Sc (IS)	45	3	No Gas	33819600	0.18	37013496	91.37	60	120	
Ge Internal Standard	72	1	HMI H2	7513003	0.41	8765589	85.71	60	120	
Ge Internal Standard	72	2	HMI He	843367	0.42	961800	87.69	60	120	
In Internal Standard	115	2	HMI He	2859535	0.18	3323973	86.03	60	120	
Ho-165	165	2	HMI He	15381354	0.55	16978678	90.59	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-5-a PDS
Data File Name	263SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:10:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	236.037	ppb	236.037	2.01	121369	500000	
Li	7	2	45	251.686	ppb	251.686	10.55	6592	500000	
Li	7	3	45	222.152	ppb	222.152	0.32	3677412	50000	
Be	9	1	6	223.673	ppb	223.673	2.71	43010	2000	
B	11	1	6	75.993	ppb	75.993	4.17	15442	2000	
Na	23	1	45	1601.093	ppb	1601.093	0.10	4408387	2000	
Na	23	2	45	1485.654	ppb	1485.654	1.26	307946	400000	
Mg	24	2	45	159151.380	ppb	159151.380	0.40	12836455	400000	
Al	27	2	45	262682.934	ppb	262682.934	0.59	5824965	400000	
K	39	1	45	76162.406	ppb	76162.406	0.52	189744051	400000	
K	39	2	45	78829.330	ppb	78829.330	0.42	3290606	400000	
Ca	40	1	45	41275.403	ppb	41275.403	0.39	151380788	400000	
Ca	44	2	45	42111.887	ppb	42111.887	1.57	98416	400000	
Ti	47	2	45	10433.726	ppb	10433.726	0.98	205646	4000	
V	51	2	72	851.974	ppb	851.974	0.27	646148	2000	
Cr	52	2	72	1941.373	ppb	1941.373	0.79	1902165	5000	
Mn	55	2	72	10692.670	ppb	10692.670	0.17	4349727	10000	
Fe	57	2	72	458364.253	ppb	458364.253	0.28	8730068	400000	
Co	59	2	72	522.944	ppb	522.944	0.55	886462	2000	
Ni	60	2	72	2020.418	ppb	2020.418	0.45	960113	5000	
Cu	63	2	72	849.307	ppb	849.307	0.20	1120429	5000	
Zn	66	2	72	1005.706	ppb	1005.706	0.70	180610	5000	
As	75	2	72	440.023	ppb	440.023	0.98	52285	2000	
Se	78	1	72	193.385	ppb	193.385	1.29	33718	2000	
Sr	88	2	72	448.001	ppb	448.001	1.49	199637	4000	
Zr	90	2	72	66739.095	ppb	66739.095	0.53	306190	1000	>LDR
Nb	93	2	72	10.053	ppb	10.053	1.71	24268	200	
Mo	95	2	115	218.568	ppb	218.568	1.31	146770	2000	
Pd	105	2	115	0.186	ppb	0.186	21.32	207	100	
Ag	107	2	115	50.082	ppb	50.082	1.99	112353	100	
Cd	111	2	115	203.461	ppb	203.461	0.41	61650	2000	
Sn	120	2	115	203.915	ppb	203.915	1.44	172797	2000	
Sb	121	2	115	204.097	ppb	204.097	0.77	149835	1000	
Ba	137	2	115	2623.898	ppb	2623.898	1.70	683767	5000	
W	182	2	165	207.831	ppb	207.831	0.50	761743	100	
Pt	195	2	165	0.082	ppb	0.082	12.28	293	100	
Tl	205	2	165	202.654	ppb	202.654	0.30	1443356	2000	
Pb	208	2	165	437.467	ppb	437.467	0.84	4142299	5000	
Th	232	2	165	113.358	ppb	113.358	0.22	1305803	2000	
U	238	2	165	229.360	ppb	229.360	0.62	2869734	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	407273	0.42	549626	74.10	60	120	
Sc (IS)	45	1	HMI H2	19904049	0.41	22416142	88.79	60	120	
Sc (IS)	45	2	HMI He	757504	0.97	833519	90.88	60	120	
Sc (IS)	45	3	No Gas	33535785	0.23	37013496	90.60	60	120	
Ge Internal Standard	72	1	HMI H2	7436144	0.73	8765589	84.83	60	120	
Ge Internal Standard	72	2	HMI He	838662	0.80	961800	87.20	60	120	
In Internal Standard	115	2	HMI He	2858082	0.74	3323973	85.98	60	120	
Ho-165	165	2	HMI He	15305492	0.32	16978678	90.15	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-6-a
Data File Name	264SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:14:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	210.657	ppb	210.657	0.87	113758	500000	
Li	7	2	45	263.868	ppb	263.868	9.06	6592	500000	
Li	7	3	45	177.714	ppb	177.714	4.23	3323901	50000	
Be	9	1	6	12.367	ppb	12.367	8.45	2340	2000	
B	11	1	6	56.283	ppb	56.283	5.19	11538	2000	
Na	23	1	45	1510.550	ppb	1510.550	1.19	4096965	2000	
Na	23	2	45	1409.976	ppb	1409.976	0.78	288946	400000	
Mg	24	2	45	135718.897	ppb	135718.897	1.47	10740790	400000	
Al	27	2	45	225070.874	ppb	225070.874	1.08	4897519	400000	
K	39	1	45	63461.329	ppb	63461.329	0.08	155556638	400000	
K	39	2	45	66022.990	ppb	66022.990	0.68	2705959	400000	
Ca	40	1	45	35120.059	ppb	35120.059	0.52	125853408	400000	
Ca	44	2	45	36360.678	ppb	36360.678	2.68	83384	400000	
Ti	47	2	45	8955.290	ppb	8955.290	1.73	173173	4000	
V	51	2	72	642.619	ppb	642.619	1.53	480704	2000	
Cr	52	2	72	1967.105	ppb	1967.105	0.35	1899741	5000	
Mn	55	2	72	10256.269	ppb	10256.269	0.92	4112518	10000	
Fe	57	2	72	509267.965	ppb	509267.965	0.68	9560160	400000	
Co	59	2	72	318.228	ppb	318.228	0.85	531742	2000	
Ni	60	2	72	1844.386	ppb	1844.386	0.47	863910	5000	
Cu	63	2	72	651.971	ppb	651.971	1.28	847911	5000	
Zn	66	2	72	709.008	ppb	709.008	1.02	125578	5000	
As	75	2	72	274.828	ppb	274.828	0.42	32196	2000	
Se	78	1	72	5.593	ppb	5.593	3.23	979	2000	
Sr	88	2	72	480.881	ppb	480.881	0.98	211210	4000	
Zr	90	2	72	12958.325	ppb	12958.325	2.22	58659	1000	>LDR
Nb	93	2	72	5.380	ppb	5.380	4.16	13163	200	
Mo	95	2	115	15.962	ppb	15.962	3.94	10668	2000	
Pd	105	2	115	0.109	ppb	0.109	13.67	123	100	
Ag	107	2	115	4.053	ppb	4.053	6.59	9040	100	
Cd	111	2	115	4.578	ppb	4.578	12.46	1383	2000	
Sn	120	2	115	2.972	ppb	2.972	7.85	2627	2000	
Sb	121	2	115	2.178	ppb	2.178	5.58	1627	1000	
Ba	137	2	115	2501.295	ppb	2501.295	1.64	647045	5000	
W	182	2	165	7.664	ppb	7.664	2.29	28846	100	
Pt	195	2	165	0.010	ppb	0.010	148.04	80	100	
Tl	205	2	165	4.531	ppb	4.531	0.78	32187	2000	
Pb	208	2	165	252.314	ppb	252.314	0.41	2371230	5000	
Th	232	2	165	112.187	ppb	112.187	0.12	1282468	2000	
U	238	2	165	11.892	ppb	11.892	0.98	147826	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	399657	0.36	549626	72.71	60	120	
Sc (IS)	45	1	HMI H2	19445663	0.18	22416142	86.75	60	120	
Sc (IS)	45	2	HMI He	743327	1.20	833519	89.18	60	120	
Sc (IS)	45	3	No Gas	32661305	0.51	37013496	88.24	60	120	
Ge Internal Standard	72	1	HMI H2	7329432	0.50	8765589	83.62	60	120	
Ge Internal Standard	72	2	HMI He	826632	0.48	961800	85.95	60	120	
In Internal Standard	115	2	HMI He	2837185	0.95	3323973	85.36	60	120	
Ho-165	165	2	HMI He	15188879	0.28	16978678	89.46	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-7-a
Data File Name	265SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:18:13-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	177.610	ppb	177.610	4.04	106751	500000	
Li	7	2	45	190.389	ppb	190.389	28.54	5801	500000	
Li	7	3	45	170.970	ppb	170.970	4.22	3230612	50000	
Be	9	1	6	11.204	ppb	11.204	1.59	2097	2000	
B	11	1	6	45.971	ppb	45.971	5.82	9537	2000	
Na	23	1	45	1451.815	ppb	1451.815	0.76	3933901	2000	
Na	23	2	45	1357.920	ppb	1357.920	0.78	277268	400000	
Mg	24	2	45	133219.168	ppb	133219.168	1.32	10446476	400000	
Al	27	2	45	224984.245	ppb	224984.245	1.61	4850493	400000	
K	39	1	45	64493.658	ppb	64493.658	0.83	156905138	400000	
K	39	2	45	68097.907	ppb	68097.907	1.19	2765004	400000	
Ca	40	1	45	31810.647	ppb	31810.647	0.18	113227758	400000	
Ca	44	2	45	32999.327	ppb	32999.327	1.40	75003	400000	
Ti	47	2	45	10275.415	ppb	10275.415	0.22	196894	4000	
V	51	2	72	539.666	ppb	539.666	0.40	401964	2000	
Cr	52	2	72	1092.809	ppb	1092.809	0.24	1050404	5000	
Mn	55	2	72	11314.382	ppb	11314.382	1.02	4514678	10000	
Fe	57	2	72	400008.503	ppb	400008.503	1.03	7472873	400000	
Co	59	2	72	275.889	ppb	275.889	0.93	458766	2000	
Ni	60	2	72	1422.897	ppb	1422.897	1.44	663285	5000	
Cu	63	2	72	506.416	ppb	506.416	0.18	655653	5000	
Zn	66	2	72	685.396	ppb	685.396	0.19	120828	5000	
As	75	2	72	191.449	ppb	191.449	1.73	22327	2000	
Se	78	1	72	2.489	ppb	2.489	13.74	444	2000	
Sr	88	2	72	446.301	ppb	446.301	1.74	195073	4000	
Zr	90	2	72	12895.223	ppb	12895.223	0.63	58096	1000	>LDR
Nb	93	2	72	5.239	ppb	5.239	2.95	12780	200	
Mo	95	2	115	9.309	ppb	9.309	3.50	6232	2000	
Pd	105	2	115	0.125	ppb	0.125	35.71	140	100	
Ag	107	2	115	3.760	ppb	3.760	2.20	8390	100	
Cd	111	2	115	3.040	ppb	3.040	3.42	920	2000	
Sn	120	2	115	2.680	ppb	2.680	6.03	2380	2000	
Sb	121	2	115	1.172	ppb	1.172	9.87	893	1000	
Ba	137	2	115	2400.344	ppb	2400.344	0.78	620968	5000	
W	182	2	165	8.361	ppb	8.361	3.02	31512	100	
Pt	195	2	165	0.010	ppb	0.010	90.67	80	100	
Tl	205	2	165	4.692	ppb	4.692	0.83	33460	2000	
Pb	208	2	165	177.318	ppb	177.318	1.04	1673691	5000	
Th	232	2	165	104.925	ppb	104.925	0.66	1204521	2000	
U	238	2	165	11.114	ppb	11.114	1.03	138746	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	395083	0.78	549626	71.88	60	120	
Sc (IS)	45	1	HMI H2	19313306	0.03	22416142	86.16	60	120	
Sc (IS)	45	2	HMI He	736485	0.72	833519	88.36	60	120	
Sc (IS)	45	3	No Gas	32121661	0.57	37013496	86.78	60	120	
Ge Internal Standard	72	1	HMI H2	7311329	0.66	8765589	83.41	60	120	
Ge Internal Standard	72	2	HMI He	822678	0.91	961800	85.54	60	120	
In Internal Standard	115	2	HMI He	2837175	1.02	3323973	85.35	60	120	
Ho-165	165	2	HMI He	15252769	0.09	16978678	89.83	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-8-a
Data File Name	266SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:22:00-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	187.999	ppb	187.999	2.22	106787	500000	
Li	7	2	45	191.851	ppb	191.851	13.59	5701	500000	
Li	7	3	45	162.858	ppb	162.858	1.72	3109165	50000	
Be	9	1	6	13.198	ppb	13.198	6.87	2370	2000	
B	11	1	6	35.037	ppb	35.037	2.62	7255	2000	
Na	23	1	45	1743.465	ppb	1743.465	0.67	4523793	2000	
Na	23	2	45	1664.908	ppb	1664.908	0.55	323959	400000	
Mg	24	2	45	160896.442	ppb	160896.442	0.62	12367384	400000	
Al	27	2	45	240917.669	ppb	240917.669	0.48	5091288	400000	
K	39	1	45	63648.839	ppb	63648.839	0.83	152193921	400000	
K	39	2	45	67111.841	ppb	67111.841	1.64	2671099	400000	
Ca	40	1	45	31921.525	ppb	31921.525	0.39	111612148	400000	
Ca	44	2	45	32914.477	ppb	32914.477	2.21	73317	400000	
Ti	47	2	45	9228.169	ppb	9228.169	0.98	173327	4000	
V	51	2	72	609.735	ppb	609.735	1.21	444409	2000	
Cr	52	2	72	1581.644	ppb	1581.644	0.47	1488111	5000	
Mn	55	2	72	12119.693	ppb	12119.693	0.71	4734193	10000	
Fe	57	2	72	510952.824	ppb	510952.824	0.54	9344489	400000	
Co	59	2	72	347.519	ppb	347.519	1.11	565693	2000	
Ni	60	2	72	2215.622	ppb	2215.622	0.54	1011010	5000	
Cu	63	2	72	596.681	ppb	596.681	0.59	756079	5000	
Zn	66	2	72	660.698	ppb	660.698	0.69	114024	5000	
As	75	2	72	233.287	ppb	233.287	1.13	26627	2000	
Se	78	1	72	2.584	ppb	2.584	4.59	451	2000	
Sr	88	2	72	431.609	ppb	431.609	0.35	184687	4000	
Zr	90	2	72	9373.502	ppb	9373.502	3.34	41358	1000	>LDR
Nb	93	2	72	3.700	ppb	3.700	3.62	9057	200	
Mo	95	2	115	11.855	ppb	11.855	1.77	7776	2000	
Pd	105	2	115	0.144	ppb	0.144	11.62	157	100	
Ag	107	2	115	2.753	ppb	2.753	5.72	6025	100	
Cd	111	2	115	3.657	ppb	3.657	9.70	1083	2000	
Sn	120	2	115	2.666	ppb	2.666	13.99	2327	2000	
Sb	121	2	115	0.969	ppb	0.969	19.12	733	1000	
Ba	137	2	115	2183.848	ppb	2183.848	1.48	553921	5000	
W	182	2	165	8.915	ppb	8.915	1.52	33410	100	
Pt	195	2	165	0.005	ppb	0.005	190.59	67	100	
Tl	205	2	165	4.746	ppb	4.746	3.85	33717	2000	
Pb	208	2	165	188.658	ppb	188.658	1.49	1774270	5000	
Th	232	2	165	104.122	ppb	104.122	1.45	1191012	2000	
U	238	2	165	11.119	ppb	11.119	1.95	138319	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	379287	0.31	549626	69.01	60	120	
Sc (IS)	45	1	HMI H2	18971858	0.42	22416142	84.63	60	120	
Sc (IS)	45	2	HMI He	721910	0.86	833519	86.61	60	120	
Sc (IS)	45	3	No Gas	31362479	0.57	37013496	84.73	60	120	
Ge Internal Standard	72	1	HMI H2	7154083	0.44	8765589	81.62	60	120	
Ge Internal Standard	72	2	HMI He	805304	0.17	961800	83.73	60	120	
In Internal Standard	115	2	HMI He	2782170	1.88	3323973	83.70	60	120	
Ho-165	165	2	HMI He	15199450	1.02	16978678	89.52	60	120	

Sample Report

Sample Table

Sample Name	280-116297-a-9-a
Data File Name	267SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:25:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020 DOD5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	179.793	ppb	179.793	2.11	101548	500000	
Li	7	2	45	189.418	ppb	189.418	31.82	5478	500000	
Li	7	3	45	150.421	ppb	150.421	4.63	2928437	50000	
Be	9	1	6	15.593	ppb	15.593	12.38	2677	2000	
B	11	1	6	48.232	ppb	48.232	3.57	9140	2000	
Na	23	1	45	2640.422	ppb	2640.422	0.85	6320568	2000	
Na	23	2	45	2493.916	ppb	2493.916	0.87	448753	400000	
Mg	24	2	45	140675.515	ppb	140675.515	1.00	10438822	400000	
Al	27	2	45	249543.956	ppb	249543.956	1.48	5090844	400000	
K	39	1	45	88062.586	ppb	88062.586	0.92	200759057	400000	
K	39	2	45	89839.839	ppb	89839.839	0.61	3449088	400000	
Ca	40	1	45	38088.750	ppb	38088.750	0.91	128451001	400000	
Ca	44	2	45	39914.146	ppb	39914.146	1.50	85831	400000	
Ti	47	2	45	10332.901	ppb	10332.901	2.25	187339	4000	
V	51	2	72	659.916	ppb	659.916	0.68	465802	2000	
Cr	52	2	72	1558.510	ppb	1558.510	1.13	1420356	5000	
Mn	55	2	72	9325.032	ppb	9325.032	1.01	3528398	10000	
Fe	57	2	72	570463.244	ppb	570463.244	0.42	10105622	400000	
Co	59	2	72	297.115	ppb	297.115	0.85	468481	2000	
Ni	60	2	72	1846.928	ppb	1846.928	0.16	816367	5000	
Cu	63	2	72	605.542	ppb	605.542	1.50	743209	5000	
Zn	66	2	72	716.445	ppb	716.445	0.94	119746	5000	
As	75	2	72	237.232	ppb	237.232	0.54	26228	2000	
Se	78	1	72	3.700	ppb	3.700	7.52	620	2000	
Sr	88	2	72	712.109	ppb	712.109	0.25	295124	4000	
Zr	90	2	72	10178.958	ppb	10178.958	1.86	43498	1000	>LDR
Nb	93	2	72	3.801	ppb	3.801	5.92	8993	200	
Mo	95	2	115	12.299	ppb	12.299	3.38	7779	2000	
Pd	105	2	115	0.155	ppb	0.155	25.84	163	100	
Ag	107	2	115	4.191	ppb	4.191	3.01	8843	100	
Cd	111	2	115	3.573	ppb	3.573	13.61	1023	2000	
Sn	120	2	115	2.780	ppb	2.780	7.13	2330	2000	
Sb	121	2	115	0.830	ppb	0.830	8.60	610	1000	
Ba	137	2	115	2747.231	ppb	2747.231	1.52	672168	5000	
W	182	2	165	5.617	ppb	5.617	3.61	20677	100	
Pt	195	2	165	0.026	ppb	0.026	28.50	123	100	
Tl	205	2	165	6.316	ppb	6.316	0.97	43255	2000	
Pb	208	2	165	166.447	ppb	166.447	0.84	1510360	5000	
Th	232	2	165	159.300	ppb	159.300	0.82	1757871	2000	
U	238	2	165	13.500	ppb	13.500	1.07	161978	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	362907	0.93	549626	66.03	60	120	
Sc (IS)	45	1	HMI H2	18301791	0.67	22416142	81.65	60	120	
Sc (IS)	45	2	HMI He	696942	0.99	833519	83.61	60	120	
Sc (IS)	45	3	No Gas	30212870	0.57	37013496	81.63	60	120	
Ge Internal Standard	72	1	HMI H2	6955590	0.58	8765589	79.35	60	120	
Ge Internal Standard	72	2	HMI He	780053	0.32	961800	81.10	60	120	
In Internal Standard	115	2	HMI He	2683597	1.67	3323973	80.73	60	120	
Ho-165	165	2	HMI He	14663501	0.85	16978678	86.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	268_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:29:29-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	407.588	ppb	3.596	153098	500	81.5	90	110	>+\-10%
Li	7	2	45	448.909	ppb	14.346	8309	500	89.8	90	110	>+\-10%
Li	7	3	45	403.385	ppb	2.811	4550659	500	80.7	90	110	>+\-10%
Be	9	1	6	49.732	ppb	5.809	9987	50	99.5	90	110	
B	11	1	6	43.586	ppb	3.860	9797	50	87.2	90	110	>+\-10%
Na	23	1	45	4900.564	ppb	1.144	12108352	5000	98.0	90	110	
Na	23	2	45	4664.868	ppb	0.459	845545	5000	93.3	90	110	
Mg	24	2	45	4911.387	ppb	0.711	383714	5000	98.2	90	110	
Al	27	2	45	5003.335	ppb	0.107	107297	5000	100.1	90	110	
K	39	1	45	5028.123	ppb	0.383	18605323	5000	100.6	90	110	
K	39	2	45	5081.268	ppb	1.164	214054	5000	101.6	90	110	
Ca	40	1	45	5070.137	ppb	1.226	18486670	5000	101.4	90	110	
Ca	44	2	45	5326.254	ppb	1.357	12079	5000	106.5	90	110	
Ti	47	2	45	50.771	ppb	8.308	967	50	101.5	90	110	
V	51	2	72	50.257	ppb	3.427	40230	50	100.5	90	110	
Cr	52	2	72	51.082	ppb	0.942	51328	50	102.2	90	110	
Mn	55	2	72	51.998	ppb	2.825	21707	50	104.0	90	110	
Fe	57	2	72	5023.717	ppb	0.542	97929	5000	100.5	90	110	
Co	59	2	72	51.110	ppb	1.291	88580	50	102.2	90	110	
Ni	60	2	72	51.940	ppb	4.328	25376	50	103.9	90	110	
Cu	63	2	72	51.741	ppb	0.785	70505	50	103.5	90	110	
Zn	66	2	72	50.989	ppb	7.042	9630	50	102.0	90	110	
As	75	2	72	49.728	ppb	1.034	6055	50	99.5	90	110	
Se	78	1	72	49.270	ppb	3.606	9008	50	98.5	90	110	
Sr	88	2	72	51.333	ppb	0.636	23430	50	102.7	90	110	
Zr	90	2	72	350.558	ppb	2.419	1724	50	701.1	90	110	>+\-10%
Nb	93	2	72	93.117	ppb	1.223	223004	100	93.1	90	110	
Mo	95	2	115	48.073	ppb	1.449	33882	50	96.1	90	110	
Pd	105	2	115	51.052	ppb	1.647	56977	50	102.1	90	110	
Ag	107	2	115	50.514	ppb	3.433	118831	50	101.0	90	110	
Cd	111	2	115	49.799	ppb	2.762	15836	50	99.6	90	110	
Sn	120	2	115	49.007	ppb	3.262	43660	50	98.0	90	110	
Sb	121	2	115	49.679	ppb	0.345	38290	50	99.4	90	110	
Ba	137	2	115	49.807	ppb	2.507	13631	50	99.6	90	110	
W	182	2	165	49.805	ppb	1.107	185220	50	99.6	90	110	
Pt	195	2	165	50.332	ppb	1.329	151217	50	100.7	90	110	
Tl	205	2	165	50.937	ppb	1.138	366625	50	101.9	90	110	
Pb	208	2	165	50.383	ppb	0.979	482680	50	100.8	90	110	
Th	232	2	165	50.083	ppb	1.088	583016	50	100.2	90	110	
U	238	2	165	50.032	ppb	0.441	632577	50	100.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	425013	0.26	549626	77.33	60	120	
Sc (IS)	45	1	HMI H2	19696513	0.29	22416142	87.87	60	120	
Sc (IS)	45	2	HMI He	732087	0.73	833519	87.83	60	120	
Sc (IS)	45	3	No Gas	32093145	0.89	37013496	86.71	60	120	
Ge Internal Standard	72	1	HMI H2	7784726	0.15	8765589	88.81	60	120	
Ge Internal Standard	72	2	HMI He	857073	0.44	961800	89.11	60	120	
In Internal Standard	115	2	HMI He	2997974	1.54	3323973	90.19	60	120	
Ho-165	165	2	HMI He	15463190	0.94	16978678	91.07	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	269_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:33:17-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-37.123	ppb	-3.1	2062621	10	
Be	9	1	6	0.090	ppb	61.1	27	0.5	
B	11	1	6	0.001	ppb	137243.0	1343	0.5	
Na	23	1	45	-26.963	ppb	-2.5	547001	25	
Na	23	2	45	-2.787	ppb	-168.9	42295	25	
Mg	24	2	45	9.148	ppb	11.0	1667	25	
Al	27	2	45	11.842	ppb	16.5	333	15	
K	39	1	45	181.230	ppb	15.1	7168039	50	>RL
K	39	2	45	22.040	ppb	19.5	10871	50	
Ca	40	1	45	-7.990	ppb	-1.5	69696	50	
Ca	44	2	45	-0.045	ppb	-24084.2	57	25	
Ti	47	2	45	1.531	ppb	66.5	30	0.5	>RL
V	51	2	72	0.102	ppb	154.7	1480	1	
Cr	52	2	72	0.071	ppb	74.8	260	1	
Mn	55	2	72	1.096	ppb	12.0	560	0.5	>RL
Fe	57	2	72	41.700	ppb	5.9	987	25	>RL
Co	59	2	72	0.038	ppb	87.7	113	0.5	
Ni	60	2	72	0.124	ppb	89.7	223	1	
Cu	63	2	72	0.377	ppb	35.0	1343	1	
Zn	66	2	72	-0.283	ppb	-52.2	243	5	
As	75	2	72	0.056	ppb	159.2	25	1	
Se	78	1	72	0.026	ppb	448.0	24	1	
Sr	88	2	72	-0.046	ppb	-93.4	40	0.5	
Zr	90	2	72	5.748	ppb	159.7	110	1	>RL
Nb	93	2	72	3.366	ppb	15.2	9093	2	>RL
Mo	95	2	115	0.159	ppb	40.8	147	0.5	
Pd	105	2	115	0.064	ppb	32.3	83	1	
Ag	107	2	115	0.013	ppb	97.0	50	1	
Cd	111	2	115	-0.019	ppb	0.0	0	0.5	
Sn	120	2	115	0.112	ppb	41.3	243	1	
Sb	121	2	115	0.362	ppb	30.8	333	0.6	
Ba	137	2	115	0.159	ppb	57.9	63	0.5	
W	182	2	165	0.075	ppb	65.8	1333	1	
Pt	195	2	165	-0.004	ppb	-135.8	40	1	
Tl	205	2	165	0.009	ppb	25.8	240	0.1	
Pb	208	2	165	0.018	ppb	41.6	1003	0.5	
Th	232	2	165	0.049	ppb	20.1	923	1	
U	238	2	165	0.053	ppb	26.8	870	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	439323	0.41	549626	79.93	60	120	
Sc (IS)	45	1	HMI H2	19943951	0.22	22416142	88.97	60	120	
Sc (IS)	45	2	HMI He	753252	0.44	833519	90.37	60	120	
Sc (IS)	45	3	No Gas	32399784	0.41	37013496	87.54	60	120	
Ge Internal Standard	72	1	HMI H2	7900055	0.12	8765589	90.13	60	120	
Ge Internal Standard	72	2	HMI He	881089	0.49	961800	91.61	60	120	
In Internal Standard	115	2	HMI He	3102990	1.58	3323973	93.35	60	120	
Ho-165	165	2	HMI He	15828967	0.19	16978678	93.23	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436761/1-A
Data File Name	270_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:37:07-07:00
Sample Type	Blank
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-15.979	ppb	-24.09185808	73141	0.5
Li	7	2	45	-25.401	ppb	-87.61238551	3821	0.5
Li	7	3	45	-16.446	ppb	-37.66542367	2258005	10
Be	9	1	6	0.083	ppb	31.47260352	27	0.5
B	11	1	6	8.978	ppb	12.09042357	3324	0.5
Na	23	1	45	97.126	ppb	1.797885609	848997	25
Na	23	2	45	95.286	ppb	13.43666981	60818	25
Mg	24	2	45	51.481	ppb	6.57438294	5158	25
Al	27	2	45	9.033	ppb	8.008753408	277	15
K	39	1	45	11062.118	ppb	0.890241229	33647149	50
K	39	2	45	70.079	ppb	14.16729685	13103	50
Ca	40	1	45	188.392	ppb	0.857588344	797495	50
Ca	44	2	45	206.459	ppb	27.43188938	547	25
Ti	47	2	45	1.005	ppb	132.6230141	20	0.5
V	51	2	72	5.138	ppb	4.967099961	5431	1
Cr	52	2	72	0.244	ppb	17.51757343	433	1
Mn	55	2	72	1.944	ppb	4.481988491	913	0.5
Fe	57	2	72	58.673	ppb	5.806826191	1313	25
Co	59	2	72	0.025	ppb	39.54572874	90	0.5
Ni	60	2	72	0.243	ppb	60.4706509	280	1
Cu	63	2	72	0.901	ppb	9.262975883	2050	1
Zn	66	2	72	1.680	ppb	32.52129779	607	5
As	75	2	72	0.264	ppb	24.34821983	51	1
Se	78	1	72	0.018	ppb	333.9908875	23	1
Sr	88	2	72	0.502	ppb	39.31541491	293	0.5
Zr	90	2	72	7.344	ppb	59.77454716	117	1
Nb	93	2	72	2.886	ppb	4.397153143	7836	2
Mo	95	2	115	0.031	ppb	112.1075279	53	0.5
Pd	105	2	115	0.087	ppb	60.11738044	110	1
Ag	107	2	115	0.013	ppb	84.81199921	50	1
Cd	111	2	115	-0.009	ppb	-197.7262895	3	0.5
Sn	120	2	115	0.760	ppb	15.50206346	837	1
Sb	121	2	115	0.280	ppb	9.197996399	267	0.6
Ba	137	2	115	1.068	ppb	23.52257846	320	0.5
W	182	2	165	-0.005	ppb	-496.6840576	1023	1
Pt	195	2	165	0.004	ppb	490.6350058	63	1
Tl	205	2	165	0.014	ppb	87.09004984	273	0.1
Pb	208	2	165	0.124	ppb	15.14729651	2027	0.5
Th	232	2	165	0.065	ppb	21.32279282	1107	1
U	238	2	165	0.019	ppb	14.28523631	437	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	463346	0.80	549626	84.30	60	120	
Sc (IS)	45	1	HMI H2	20110392	0.58	22416142	89.71	60	120	
Sc (IS)	45	2	HMI He	767661	0.53	833519	92.10	60	120	
Sc (IS)	45	3	No Gas	33538324	1.08	37013496	90.61	60	120	
Ge Internal Standard	72	1	HMI H2	7873022	0.69	8765589	89.82	60	120	
Ge Internal Standard	72	2	HMI He	872489	0.36	961800	90.71	60	120	
In Internal Standard	115	2	HMI He	3096400	0.26	3323973	93.15	60	120	
Ho-165	165	2	HMI He	15714908	1.07	16978678	92.56	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436761/2-A
Data File Name	271LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:40:57-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436761 hot Sb 6020
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	196.021	196.021	ppb	1.189	43213	200	98.0	80	120	
Na	23	2	45	83.957	83.957	ppb	6.303	59526	200	42.0	80	120	NewName Main CR1 Failed
Mg	24	2	45	57.863	57.863	ppb	4.672	5751	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	1989.818	1989.818	ppb	0.988	45357	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	71.651	71.651	ppb	11.754	13337	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	1206.482	1206.482	ppb	5.368	2950	200000	0.6	80	120	NewName Main CR1 Failed
V	51	2	72	201.838	201.838	ppb	0.921	163424	200	100.9	80	120	
Cr	52	2	72	202.228	202.228	ppb	0.584	210313	200	101.1	80	120	
(Cr)	53	2	72	216.956	216.956	ppb	3.591	28315	200	108.5	80	120	
Mn	55	2	72	205.140	205.140	ppb	0.469	88593	200	102.6	80	120	
Fe	57	2	72	2076.067	2076.067	ppb	1.114	42089	200000	1.0	80	120	NewName Main CR1 Failed
Co	59	2	72	203.463	203.463	ppb	0.847	365822	200	101.7	80	120	
Ni	60	2	72	201.745	201.745	ppb	2.396	101823	200	100.9	80	120	
Cu	63	2	72	209.706	209.706	ppb	1.096	294031	200	104.9	80	120	
Zn	66	2	72	201.493	201.493	ppb	2.769	38613	200	100.7	80	120	
As	75	2	72	193.870	193.870	ppb	0.499	24443	200	96.9	80	120	
Se	78	1	72	195.173	195.173	ppb	0.567	36489	200	97.6	80	120	
(Se)	82	1	72	173.717	173.717	ppb	2.351	16020	200	86.9	80	120	
Nb	93	2	72	3.537	3.537	ppb	6.831	9600	400	0.9	80	120	NewName Main CR1 Failed
Mo	95	2	115	193.596	193.596	ppb	0.897	142675	200	96.8	80	120	
Pd	105	2	115	0.089	0.089	ppb	31.124	113	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	212.861	212.861	ppb	0.891	523917	200	106.4	80	120	
Cd	111	2	115	198.344	198.344	ppb	1.129	65946	200	99.2	80	120	
(Cd)	114	2	115	196.699	196.699	ppb	0.628	169355	200	98.3	80	120	
Sn	120	2	115	193.584	193.584	ppb	1.076	180019	200	96.8	80	120	
Sb	121	2	115	199.955	199.955	ppb	1.086	161087	200	100.0	80	110	
Ba	137	2	115	198.689	198.689	ppb	0.506	56838	200	99.3	80	120	
W	182	2	165	194.189	194.189	ppb	1.197	735617	200	97.1	80	120	
Pt	195	2	165	0.007	0.007	ppb	228.850	73	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	206.295	206.295	ppb	2.133	1518482	200	103.1	80	120	
(Pb)	206	2	165	200.476	200.476	ppb	0.163	475468	200	100.2	80	120	
(Pb)	207	2	165	201.570	201.570	ppb	0.854	441547	200	100.8	80	120	
Pb	208	2	165	201.256	201.256	ppb	0.243	1969823	200	100.6	80	120	
Th	232	2	165	217.693	217.693	ppb	1.132	2591257	200	108.8	80	120	
U	238	2	165	216.950	216.950	ppb	0.497	2805208	200	108.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	466925	1.20	549626	84.95	60	120	
Sc (IS)	45	1	HMI H2	20473395	1.10	22416142	91.33	60	120	
Sc (IS)	45	2	HMI He	777389	0.69	833519	93.27	60	120	
Sc (IS)	45	3	No Gas	34109416	0.13	37013496	92.15	60	120	
Ge Internal Standard	72	1	HMI H2	7972887	0.56	8765589	90.96	60	120	
Ge Internal Standard	72	2	HMI He	889437	0.36	961800	92.48	60	120	
In Internal Standard	115	2	HMI He	3136257	0.92	3323973	94.35	60	120	
Ho-165	165	2	HMI He	15817374	0.28	16978678	93.16	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-436761/3-A
Data File Name	272SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:44:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	353.114	ppb	353.114	3.46	147317	500000	
Li	7	2	45	338.808	ppb	338.808	10.59	7686	500000	
Li	7	3	45	335.814	ppb	335.814	1.32	4412885	50000	
Be	9	1	6	195.944	ppb	195.944	1.68	42856	2000	
B	11	1	6	211.640	ppb	211.640	1.79	46383	2000	
Na	23	1	45	64.130	ppb	64.130	7.39	778905	2000	
Na	23	2	45	59.878	ppb	59.878	6.85	55177	400000	
Mg	24	2	45	55.534	ppb	55.534	4.70	5565	400000	
Al	27	2	45	1999.530	ppb	1999.530	2.18	45628	400000	
K	39	1	45	11937.273	ppb	11937.273	1.37	36191484	400000	
K	39	2	45	65.922	ppb	65.922	12.77	13106	400000	
Ca	40	1	45	203.945	ppb	203.945	1.22	865122	400000	
Ca	44	2	45	1211.863	ppb	1211.863	7.76	2967	400000	
Ti	47	2	45	6.598	ppb	6.598	37.86	133	4000	
V	51	2	72	199.586	ppb	199.586	1.19	161045	2000	
Cr	52	2	72	198.916	ppb	198.916	0.87	206144	5000	
Mn	55	2	72	202.588	ppb	202.588	2.19	87181	10000	
Fe	57	2	72	2060.506	ppb	2060.506	2.06	41624	400000	
Co	59	2	72	200.220	ppb	200.220	0.08	358727	2000	
Ni	60	2	72	195.172	ppb	195.172	0.78	98165	5000	
Cu	63	2	72	207.721	ppb	207.721	0.26	290229	5000	
Zn	66	2	72	204.595	ppb	204.595	2.83	39064	5000	
As	75	2	72	190.406	ppb	190.406	2.37	23922	2000	
Se	78	1	72	191.809	ppb	191.809	1.39	35404	2000	
Sr	88	2	72	203.223	ppb	203.223	1.41	95741	4000	
Zr	90	2	72	50097.135	ppb	50097.135	0.90	242924	1000	>LDR
Nb	93	2	72	2.055	ppb	2.055	13.26	5908	200	
Mo	95	2	115	194.466	ppb	194.466	0.47	141968	2000	
Pd	105	2	115	0.053	ppb	0.053	33.12	70	100	
Ag	107	2	115	209.804	ppb	209.804	0.66	511578	100	
Cd	111	2	115	193.554	ppb	193.554	0.49	63756	2000	
Sn	120	2	115	191.368	ppb	191.368	0.61	176297	2000	
Sb	121	2	115	200.229	ppb	200.229	0.04	159795	1000	
Ba	137	2	115	194.799	ppb	194.799	1.45	55202	5000	
W	182	2	165	190.773	ppb	190.773	0.39	722683	100	
Pt	195	2	165	0.003	ppb	0.003	236.74	63	100	
Tl	205	2	165	197.684	ppb	197.684	1.36	1454958	2000	
Pb	208	2	165	197.329	ppb	197.329	0.68	1931338	5000	
Th	232	2	165	212.304	ppb	212.304	1.85	2526883	2000	
U	238	2	165	211.670	ppb	211.670	1.29	2736808	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	463223	0.55	549626	84.28	60	120	
Sc (IS)	45	1	HMI H2	20347062	1.12	22416142	90.77	60	120	
Sc (IS)	45	2	HMI He	778283	0.78	833519	93.37	60	120	
Sc (IS)	45	3	No Gas	33991935	0.31	37013496	91.84	60	120	
Ge Internal Standard	72	1	HMI H2	7871816	0.48	8765589	89.80	60	120	
Ge Internal Standard	72	2	HMI He	886324	0.47	961800	92.15	60	120	
In Internal Standard	115	2	HMI He	3106894	0.47	3323973	93.47	60	120	
Ho-165	165	2	HMI He	15817271	0.69	16978678	93.16	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-1-D@5
Data File Name	273SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:48:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-19.430	ppb	-19.430	-6.96	68466	500000	
Li	7	2	45	-32.693	ppb	-32.693	-38.89	3624	500000	
Li	7	3	45	-24.031	ppb	-24.031	-18.19	2034436	50000	
Be	9	1	6	2.402	ppb	2.402	16.52	480	2000	
B	11	1	6	26.870	ppb	26.870	5.84	6402	2000	
Na	23	1	45	70.450	ppb	70.450	15.92	741764	2000	
Na	23	2	45	57.989	ppb	57.989	22.61	52334	400000	
Mg	24	2	45	83231.525	ppb	83231.525	5.73	6581666	400000	
Al	27	2	45	10851.050	ppb	10851.050	6.50	235935	400000	
K	39	1	45	5763.992	ppb	5763.992	0.70	19637274	400000	
K	39	2	45	2802.699	ppb	2802.699	4.70	124198	400000	
Ca	40	1	45	194899.477	ppb	194899.477	0.64	682044843	400000	
Ca	44	2	45	185885.154	ppb	185885.154	6.30	425677	400000	
Ti	47	2	45	98.239	ppb	98.239	11.38	1897	4000	
V	51	2	72	34.702	ppb	34.702	4.49	27357	2000	
Cr	52	2	72	64.659	ppb	64.659	5.15	62961	5000	
Mn	55	2	72	3654.437	ppb	3654.437	5.69	1473349	10000	
Fe	57	2	72	143197.285	ppb	143197.285	5.92	2702873	400000	
Co	59	2	72	76.933	ppb	76.933	4.73	129300	2000	
Ni	60	2	72	129.865	ppb	129.865	5.00	61311	5000	
Cu	63	2	72	674.842	ppb	674.842	4.63	882581	5000	
Zn	66	2	72	1014.994	ppb	1014.994	5.15	180652	5000	
As	75	2	72	75.291	ppb	75.291	5.63	8881	2000	
Se	78	1	72	0.882	ppb	0.882	11.66	167	2000	
Sr	88	2	72	650.963	ppb	650.963	5.62	287461	4000	
Zr	90	2	72	279.288	ppb	279.288	10.50	1347	1000	
Nb	93	2	72	0.482	ppb	0.482	26.23	1900	200	
Mo	95	2	115	8.783	ppb	8.783	5.87	5998	2000	
Pd	105	2	115	0.091	ppb	0.091	31.18	107	100	
Ag	107	2	115	67.920	ppb	67.920	4.54	154263	100	
Cd	111	2	115	24.521	ppb	24.521	6.20	7526	2000	
Sn	120	2	115	1.838	ppb	1.838	4.62	1707	2000	
Sb	121	2	115	283.886	ppb	283.886	5.96	210945	1000	
Ba	137	2	115	1009.876	ppb	1009.876	6.00	266409	5000	
W	182	2	165	379.764	ppb	379.764	1.45	1402975	100	
Pt	195	2	165	-0.003	ppb	-0.003	-246.44	43	100	
Tl	205	2	165	0.348	ppb	0.348	11.29	2664	2000	
Pb	208	2	165	1077.445	ppb	1077.445	4.54	10283427	5000	
Th	232	2	165	8.586	ppb	8.586	5.35	100001	2000	
U	238	2	165	4.488	ppb	4.488	8.13	56773	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	416300	0.90	549626	75.74	60	120	
Sc (IS)	45	1	HMI H2	19001666	0.29	22416142	84.77	60	120	
Sc (IS)	45	2	HMI He	743393	2.78	833519	89.19	60	120	
Sc (IS)	45	3	No Gas	30833781	0.54	37013496	83.30	60	120	
Ge Internal Standard	72	1	HMI H2	7214557	0.61	8765589	82.31	60	120	
Ge Internal Standard	72	2	HMI He	831804	2.10	961800	86.48	60	120	
In Internal Standard	115	2	HMI He	2895842	2.47	3323973	87.12	60	120	
Ho-165	165	2	HMI He	15439793	2.30	16978678	90.94	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-2-C@5
Data File Name	274SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:52:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.820	ppb	-31.820	-13.01	64901	500000	
Li	7	2	45	-30.874	ppb	-30.874	-100.97	3491	500000	
Li	7	3	45	-37.576	ppb	-37.576	-31.11	1945217	50000	
Be	9	1	6	2.818	ppb	2.818	17.58	550	2000	
B	11	1	6	20.737	ppb	20.737	5.65	5128	2000	
Na	23	1	45	53.250	ppb	53.250	8.14	689384	2000	
Na	23	2	45	59.669	ppb	59.669	7.91	50483	400000	
Mg	24	2	45	84526.170	ppb	84526.170	3.51	6411784	400000	
Al	27	2	45	10150.804	ppb	10150.804	3.13	211758	400000	
K	39	1	45	5159.357	ppb	5159.357	1.30	17900732	400000	
K	39	2	45	2464.167	ppb	2464.167	2.60	105873	400000	
Ca	40	1	45	185212.894	ppb	185212.894	0.12	635766084	400000	
Ca	44	2	45	182685.647	ppb	182685.647	2.73	401393	400000	
Ti	47	2	45	97.243	ppb	97.243	19.67	1804	4000	
V	51	2	72	33.548	ppb	33.548	8.28	25634	2000	
Cr	52	2	72	64.584	ppb	64.584	4.38	60883	5000	
Mn	55	2	72	3360.360	ppb	3360.360	2.89	1312196	10000	
Fe	57	2	72	135885.726	ppb	135885.726	2.94	2483594	400000	
Co	59	2	72	72.714	ppb	72.714	3.78	118310	2000	
Ni	60	2	72	132.534	ppb	132.534	2.95	60579	5000	
Cu	63	2	72	660.553	ppb	660.553	2.59	836389	5000	
Zn	66	2	72	1089.940	ppb	1089.940	1.76	187818	5000	
As	75	2	72	76.075	ppb	76.075	3.91	8688	2000	
Se	78	1	72	1.044	ppb	1.044	15.26	193	2000	
Sr	88	2	72	611.626	ppb	611.626	2.69	261531	4000	
Zr	90	2	72	132.057	ppb	132.057	16.70	657	1000	
Nb	93	2	72	0.294	ppb	0.294	9.21	1420	200	
Mo	95	2	115	8.059	ppb	8.059	7.13	5361	2000	
Pd	105	2	115	0.052	ppb	0.052	46.76	63	100	
Ag	107	2	115	72.933	ppb	72.933	4.63	161322	100	
Cd	111	2	115	25.860	ppb	25.860	7.29	7729	2000	
Sn	120	2	115	2.223	ppb	2.223	4.81	1984	2000	
Sb	121	2	115	279.881	ppb	279.881	4.31	202603	1000	
Ba	137	2	115	849.479	ppb	849.479	4.06	218325	5000	
W	182	2	165	423.426	ppb	423.426	3.48	1513722	100	
Pt	195	2	165	0.004	ppb	0.004	258.68	60	100	
Tl	205	2	165	0.278	ppb	0.278	11.90	2097	2000	
Pb	208	2	165	1091.480	ppb	1091.480	3.29	10086123	5000	
Th	232	2	165	7.492	ppb	7.492	2.26	84547	2000	
U	238	2	165	4.094	ppb	4.094	2.62	50183	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	407954	0.34	549626	74.22	60	120	
Sc (IS)	45	1	HMI H2	18638406	0.54	22416142	83.15	60	120	
Sc (IS)	45	2	HMI He	712657	1.80	833519	85.50	60	120	
Sc (IS)	45	3	No Gas	30593991	0.50	37013496	82.66	60	120	
Ge Internal Standard	72	1	HMI H2	7188638	0.12	8765589	82.01	60	120	
Ge Internal Standard	72	2	HMI He	804935	1.10	961800	83.69	60	120	
In Internal Standard	115	2	HMI He	2820648	2.90	3323973	84.86	60	120	
Ho-165	165	2	HMI He	14942249	1.12	16978678	88.01	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-3-C@5
Data File Name	275SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:56:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-30.036	ppb	-30.036	-9.58	64037	500000	
Li	7	2	45	-53.593	ppb	-53.593	-49.18	3247	500000	
Li	7	3	45	-33.376	ppb	-33.376	-37.31	1932342	50000	
Be	9	1	6	2.417	ppb	2.417	30.28	460	2000	
B	11	1	6	23.223	ppb	23.223	13.73	5438	2000	
Na	23	1	45	66.976	ppb	66.976	3.92	706757	2000	
Na	23	2	45	71.575	ppb	71.575	5.11	52052	400000	
Mg	24	2	45	82370.958	ppb	82370.958	0.81	6198592	400000	
Al	27	2	45	11634.008	ppb	11634.008	0.34	240763	400000	
K	39	1	45	5438.766	ppb	5438.766	1.12	18191796	400000	
K	39	2	45	2876.827	ppb	2876.827	0.91	121042	400000	
Ca	40	1	45	186033.439	ppb	186033.439	0.58	626931684	400000	
Ca	44	2	45	185143.880	ppb	185143.880	1.33	403504	400000	
Ti	47	2	45	93.169	ppb	93.169	3.84	1714	4000	
V	51	2	72	35.467	ppb	35.467	1.61	26659	2000	
Cr	52	2	72	67.046	ppb	67.046	0.95	62318	5000	
Mn	55	2	72	4024.031	ppb	4024.031	1.66	1548822	10000	
Fe	57	2	72	153244.212	ppb	153244.212	1.13	2761509	400000	
Co	59	2	72	82.351	ppb	82.351	0.31	132116	2000	
Ni	60	2	72	134.071	ppb	134.071	1.95	60414	5000	
Cu	63	2	72	668.910	ppb	668.910	1.23	835051	5000	
Zn	66	2	72	909.921	ppb	909.921	1.58	154625	5000	
As	75	2	72	72.703	ppb	72.703	1.51	8188	2000	
Se	78	1	72	0.841	ppb	0.841	3.84	155	2000	
Sr	88	2	72	704.204	ppb	704.204	0.61	296882	4000	
Zr	90	2	72	109.546	ppb	109.546	26.33	550	1000	
Nb	93	2	72	0.293	ppb	0.293	7.06	1397	200	
Mo	95	2	115	7.484	ppb	7.484	6.42	4941	2000	
Pd	105	2	115	0.043	ppb	0.043	33.56	53	100	
Ag	107	2	115	64.526	ppb	64.526	1.84	141539	100	
Cd	111	2	115	22.424	ppb	22.424	7.64	6649	2000	
Sn	120	2	115	1.833	ppb	1.833	13.52	1644	2000	
Sb	121	2	115	272.334	ppb	272.334	0.76	195478	1000	
Ba	137	2	115	978.801	ppb	978.801	0.26	249425	5000	
W	182	2	165	291.797	ppb	291.797	1.05	1034481	100	
Pt	195	2	165	0.005	ppb	0.005	228.67	63	100	
Tl	205	2	165	0.253	ppb	0.253	13.88	1900	2000	
Pb	208	2	165	955.902	ppb	955.902	0.06	8757656	5000	
Th	232	2	165	8.464	ppb	8.464	0.22	94643	2000	
U	238	2	165	4.414	ppb	4.414	0.98	53615	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	396672	0.48	549626	72.17	60	120	
Sc (IS)	45	1	HMI H2	18298332	0.14	22416142	81.63	60	120	
Sc (IS)	45	2	HMI He	706723	0.95	833519	84.79	60	120	
Sc (IS)	45	3	No Gas	30047789	1.16	37013496	81.18	60	120	
Ge Internal Standard	72	1	HMI H2	6982847	0.58	8765589	79.66	60	120	
Ge Internal Standard	72	2	HMI He	793500	0.49	961800	82.50	60	120	
In Internal Standard	115	2	HMI He	2794546	0.27	3323973	84.07	60	120	
Ho-165	165	2	HMI He	14810602	0.60	16978678	87.23	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-4-C@5
Data File Name	276SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T03:59:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-28.164	ppb	-28.164	-3.06	63481	500000	
Li	7	2	45	-23.031	ppb	-23.031	-91.81	3497	500000	
Li	7	3	45	-30.023	ppb	-30.023	-37.21	1911753	50000	
Be	9	1	6	2.169	ppb	2.169	23.87	407	2000	
B	11	1	6	21.072	ppb	21.072	4.83	4971	2000	
Na	23	1	45	59.061	ppb	59.061	3.49	679943	2000	
Na	23	2	45	62.150	ppb	62.150	8.72	49895	400000	
Mg	24	2	45	90550.997	ppb	90550.997	0.42	6734474	400000	
Al	27	2	45	10967.908	ppb	10967.908	0.92	224323	400000	
K	39	1	45	5286.923	ppb	5286.923	0.93	17609137	400000	
K	39	2	45	2748.598	ppb	2748.598	2.21	114711	400000	
Ca	40	1	45	199535.885	ppb	199535.885	1.12	663096857	400000	
Ca	44	2	45	196999.068	ppb	196999.068	0.44	424339	400000	
Ti	47	2	45	105.693	ppb	105.693	7.69	1920	4000	
V	51	2	72	35.051	ppb	35.051	2.43	26041	2000	
Cr	52	2	72	71.831	ppb	71.831	1.52	65936	5000	
Mn	55	2	72	3704.443	ppb	3704.443	0.48	1408530	10000	
Fe	57	2	72	142117.163	ppb	142117.163	1.86	2529762	400000	
Co	59	2	72	75.519	ppb	75.519	0.93	119687	2000	
Ni	60	2	72	141.602	ppb	141.602	0.88	63024	5000	
Cu	63	2	72	733.041	ppb	733.041	0.49	903917	5000	
Zn	66	2	72	1173.616	ppb	1173.616	1.22	196931	5000	
As	75	2	72	85.434	ppb	85.434	0.71	9502	2000	
Se	78	1	72	0.883	ppb	0.883	23.77	160	2000	
Sr	88	2	72	659.917	ppb	659.917	0.49	274830	4000	
Zr	90	2	72	112.034	ppb	112.034	14.81	553	1000	
Nb	93	2	72	0.166	ppb	0.166	62.31	1103	200	
Mo	95	2	115	8.802	ppb	8.802	2.51	5665	2000	
Pd	105	2	115	0.028	ppb	0.028	132.25	37	100	
Ag	107	2	115	83.741	ppb	83.741	1.77	179213	100	
Cd	111	2	115	29.234	ppb	29.234	2.63	8456	2000	
Sn	120	2	115	1.997	ppb	1.997	7.07	1737	2000	
Sb	121	2	115	326.100	ppb	326.100	0.75	228402	1000	
Ba	137	2	115	1181.968	ppb	1181.968	0.50	293910	5000	
W	182	2	165	395.451	ppb	395.451	0.17	1383803	100	
Pt	195	2	165	-0.002	ppb	-0.002	-474.10	43	100	
Tl	205	2	165	0.293	ppb	0.293	8.31	2154	2000	
Pb	208	2	165	1227.695	ppb	1227.695	0.95	11104127	5000	
Th	232	2	165	8.651	ppb	8.651	1.48	95492	2000	
U	238	2	165	4.242	ppb	4.242	2.78	50878	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	390822	1.06	549626	71.11	60	120	
Sc (IS)	45	1	HMI H2	18045158	0.64	22416142	80.50	60	120	
Sc (IS)	45	2	HMI He	698442	0.44	833519	83.79	60	120	
Sc (IS)	45	3	No Gas	29448473	0.19	37013496	79.56	60	120	
Ge Internal Standard	72	1	HMI H2	6910426	0.39	8765589	78.84	60	120	
Ge Internal Standard	72	2	HMI He	783837	0.60	961800	81.50	60	120	
In Internal Standard	115	2	HMI He	2727008	1.31	3323973	82.04	60	120	
Ho-165	165	2	HMI He	14621894	0.15	16978678	86.12	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-5-D@5
Data File Name	277SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:03:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	26.527	ppb	26.527	31.05	71889	500000	
Li	7	2	45	13.173	ppb	13.173	131.91	3771	500000	
Li	7	3	45	29.561	ppb	29.561	26.63	2188423	50000	
Be	9	1	6	3.631	ppb	3.631	10.09	657	2000	
B	11	1	6	23.151	ppb	23.151	3.85	5188	2000	
Na	23	1	45	527.921	ppb	527.921	1.35	1660038	2000	
Na	23	2	45	458.613	ppb	458.613	1.34	113084	400000	
Mg	24	2	45	89628.320	ppb	89628.320	0.78	6550289	400000	
Al	27	2	45	64045.615	ppb	64045.615	0.83	1286815	400000	
K	39	1	45	20318.392	ppb	20318.392	0.31	49512634	400000	
K	39	2	45	17503.930	ppb	17503.930	0.69	669098	400000	
Ca	40	1	45	124723.940	ppb	124723.940	0.66	407574474	400000	
Ca	44	2	45	123254.480	ppb	123254.480	1.04	260903	400000	
Ti	47	2	45	2582.656	ppb	2582.656	1.43	46117	4000	
V	51	2	72	219.721	ppb	219.721	1.37	154774	2000	
Cr	52	2	72	592.660	ppb	592.660	1.11	536281	5000	
Mn	55	2	72	4059.022	ppb	4059.022	1.41	1524686	10000	
Fe	57	2	72	184128.706	ppb	184128.706	0.45	3238208	400000	
Co	59	2	72	123.581	ppb	123.581	1.13	193459	2000	
Ni	60	2	72	758.669	ppb	758.669	0.33	332986	5000	
Cu	63	2	72	640.468	ppb	640.468	0.34	780340	5000	
Zn	66	2	72	605.767	ppb	605.767	0.67	100549	5000	
As	75	2	72	194.339	ppb	194.339	1.73	21332	2000	
Se	78	1	72	1.250	ppb	1.250	12.79	216	2000	
Sr	88	2	72	216.672	ppb	216.672	1.26	89182	4000	
Zr	90	2	72	1254.631	ppb	1254.631	7.37	5388	1000	
Nb	93	2	72	3.531	ppb	3.531	7.11	8346	200	
Mo	95	2	115	7.670	ppb	7.670	5.09	4904	2000	
Pd	105	2	115	0.051	ppb	0.051	48.72	60	100	
Ag	107	2	115	87.082	ppb	87.082	1.02	184902	100	
Cd	111	2	115	12.978	ppb	12.978	10.02	3727	2000	
Sn	120	2	115	5.485	ppb	5.485	3.63	4518	2000	
Sb	121	2	115	127.978	ppb	127.978	1.58	88947	1000	
Ba	137	2	115	1174.328	ppb	1174.328	0.27	289716	5000	
W	182	2	165	102.737	ppb	102.737	0.78	356667	100	
Pt	195	2	165	0.010	ppb	0.010	72.16	77	100	
Tl	205	2	165	1.895	ppb	1.895	2.37	12924	2000	
Pb	208	2	165	878.287	ppb	878.287	0.51	7865515	5000	
Th	232	2	165	18.203	ppb	18.203	1.05	198599	2000	
U	238	2	165	2.621	ppb	2.621	1.31	31185	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	379257	1.45	549626	69.00	60	120	
Sc (IS)	45	1	HMI H2	17742115	0.21	22416142	79.15	60	120	
Sc (IS)	45	2	HMI He	686339	0.66	833519	82.34	60	120	
Sc (IS)	45	3	No Gas	28988421	0.68	37013496	78.32	60	120	
Ge Internal Standard	72	1	HMI H2	6804846	0.38	8765589	77.63	60	120	
Ge Internal Standard	72	2	HMI He	774389	0.66	961800	80.51	60	120	
In Internal Standard	115	2	HMI He	2705602	1.76	3323973	81.40	60	120	
Ho-165	165	2	HMI He	14477344	0.38	16978678	85.27	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-6-D@5
Data File Name	278SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:07:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	28.406	ppb	28.406	15.88	71069	500000	
Li	7	2	45	11.794	ppb	11.794	167.62	3707	500000	
Li	7	3	45	8.973	ppb	8.973	155.93	2029943	50000	
Be	9	1	6	3.066	ppb	3.066	29.35	543	2000	
B	11	1	6	21.377	ppb	21.377	13.05	4771	2000	
Na	23	1	45	451.897	ppb	451.897	0.55	1475433	2000	
Na	23	2	45	395.099	ppb	395.099	6.54	101417	400000	
Mg	24	2	45	87117.799	ppb	87117.799	0.88	6279883	400000	
Al	27	2	45	53275.445	ppb	53275.445	0.49	1055824	400000	
K	39	1	45	18010.074	ppb	18010.074	0.35	43858941	400000	
K	39	2	45	15180.371	ppb	15180.371	1.16	573538	400000	
Ca	40	1	45	121978.974	ppb	121978.974	0.73	392262981	400000	
Ca	44	2	45	119998.060	ppb	119998.060	0.23	250546	400000	
Ti	47	2	45	2392.929	ppb	2392.929	1.81	42145	4000	
V	51	2	72	192.167	ppb	192.167	1.37	132890	2000	
Cr	52	2	72	479.359	ppb	479.359	1.30	425371	5000	
Mn	55	2	72	3570.030	ppb	3570.030	2.09	1315213	10000	
Fe	57	2	72	163998.845	ppb	163998.845	1.94	2828007	400000	
Co	59	2	72	108.456	ppb	108.456	2.50	166486	2000	
Ni	60	2	72	638.466	ppb	638.466	1.05	274808	5000	
Cu	63	2	72	658.268	ppb	658.268	0.83	786438	5000	
Zn	66	2	72	671.786	ppb	671.786	0.49	109320	5000	
As	75	2	72	179.421	ppb	179.421	0.73	19315	2000	
Se	78	1	72	1.307	ppb	1.307	29.81	221	2000	
Sr	88	2	72	212.466	ppb	212.466	1.44	85752	4000	
Zr	90	2	72	1010.482	ppb	1010.482	2.67	4268	1000	
Nb	93	2	72	3.693	ppb	3.693	2.50	8526	200	
Mo	95	2	115	6.685	ppb	6.685	4.26	4194	2000	
Pd	105	2	115	0.073	ppb	0.073	25.66	80	100	
Ag	107	2	115	86.423	ppb	86.423	2.33	180003	100	
Cd	111	2	115	15.508	ppb	15.508	3.17	4371	2000	
Sn	120	2	115	4.806	ppb	4.806	15.48	3894	2000	
Sb	121	2	115	147.580	ppb	147.580	1.08	100642	1000	
Ba	137	2	115	1151.370	ppb	1151.370	1.80	278626	5000	
W	182	2	165	120.843	ppb	120.843	0.72	414386	100	
Pt	195	2	165	0.009	ppb	0.009	88.59	73	100	
Tl	205	2	165	1.696	ppb	1.696	3.00	11446	2000	
Pb	208	2	165	891.390	ppb	891.390	0.25	7888490	5000	
Th	232	2	165	16.775	ppb	16.775	1.31	180868	2000	
U	238	2	165	2.568	ppb	2.568	2.68	30203	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	370868	0.37	549626	67.48	60	120	
Sc (IS)	45	1	HMI H2	17459965	0.22	22416142	77.89	60	120	
Sc (IS)	45	2	HMI He	676955	0.33	833519	81.22	60	120	
Sc (IS)	45	3	No Gas	28261006	0.62	37013496	76.35	60	120	
Ge Internal Standard	72	1	HMI H2	6689644	0.36	8765589	76.32	60	120	
Ge Internal Standard	72	2	HMI He	759382	0.89	961800	78.95	60	120	
In Internal Standard	115	2	HMI He	2654421	1.80	3323973	79.86	60	120	
Ho-165	165	2	HMI He	14306053	0.68	16978678	84.26	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	279_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:11:12-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	417.551	ppb	2.382	138659	500	83.5	90	110	>+\-10%
Li	7	2	45	355.549	ppb	6.151	6942	500	71.1	90	110	>+\-10%
Li	7	3	45	390.039	ppb	4.432	3950163	500	78.0	90	110	>+\-10%
Be	9	1	6	51.901	ppb	0.860	9223	50	103.8	90	110	
B	11	1	6	47.419	ppb	5.667	9333	50	94.8	90	110	
Na	23	1	45	4976.227	ppb	0.487	10989551	5000	99.5	90	110	
Na	23	2	45	4586.705	ppb	0.674	781339	5000	91.7	90	110	
Mg	24	2	45	4870.450	ppb	0.306	357327	5000	97.4	90	110	
Al	27	2	45	5093.901	ppb	1.695	102573	5000	101.9	90	110	
K	39	1	45	5483.053	ppb	1.309	17609442	5000	109.7	90	110	
K	39	2	45	5142.989	ppb	0.850	203331	5000	102.9	90	110	
Ca	40	1	45	5119.259	ppb	0.734	16695238	5000	102.4	90	110	
Ca	44	2	45	5221.977	ppb	1.338	11121	5000	104.4	90	110	
Ti	47	2	45	49.568	ppb	16.739	887	50	99.1	90	110	
V	51	2	72	49.266	ppb	0.740	36497	50	98.5	90	110	
Cr	52	2	72	49.784	ppb	1.511	46262	50	99.6	90	110	
Mn	55	2	72	51.461	ppb	4.441	19868	50	102.9	90	110	
Fe	57	2	72	4988.278	ppb	2.279	89921	5000	99.8	90	110	
Co	59	2	72	49.526	ppb	1.967	79381	50	99.1	90	110	
Ni	60	2	72	49.877	ppb	1.156	22542	50	99.8	90	110	
Cu	63	2	72	50.433	ppb	2.612	63571	50	100.9	90	110	
Zn	66	2	72	51.562	ppb	7.738	9003	50	103.1	90	110	
As	75	2	72	50.013	ppb	2.904	5631	50	100.0	90	110	
Se	78	1	72	48.334	ppb	1.439	7896	50	96.7	90	110	
Sr	88	2	72	52.663	ppb	3.568	22228	50	105.3	90	110	
Zr	90	2	72	478.957	ppb	3.839	2150	50	957.9	90	110	>+\-10%
Nb	93	2	72	91.912	ppb	0.585	203571	100	91.9	90	110	
Mo	95	2	115	46.657	ppb	1.295	31162	50	93.3	90	110	
Pd	105	2	115	49.293	ppb	2.083	52131	50	98.6	90	110	
Ag	107	2	115	49.255	ppb	1.783	109820	50	98.5	90	110	
Cd	111	2	115	49.016	ppb	2.604	14765	50	98.0	90	110	
Sn	120	2	115	48.484	ppb	0.583	40931	50	97.0	90	110	
Sb	121	2	115	48.253	ppb	2.692	35236	50	96.5	90	110	
Ba	137	2	115	50.722	ppb	1.125	13154	50	101.4	90	110	
W	182	2	165	49.413	ppb	0.955	171403	50	98.8	90	110	
Pt	195	2	165	48.879	ppb	1.121	136987	50	97.8	90	110	
Tl	205	2	165	51.008	ppb	0.698	342477	50	102.0	90	110	
Pb	208	2	165	51.187	ppb	0.346	457421	50	102.4	90	110	
Th	232	2	165	50.764	ppb	0.458	551249	50	101.5	90	110	
U	238	2	165	50.788	ppb	1.230	598969	50	101.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	376158	0.55	549626	68.44	60	120	
Sc (IS)	45	1	HMI H2	17617818	0.21	22416142	78.59	60	120	
Sc (IS)	45	2	HMI He	687437	0.22	833519	82.47	60	120	
Sc (IS)	45	3	No Gas	28334272	1.31	37013496	76.55	60	120	
Ge Internal Standard	72	1	HMI H2	6955898	1.04	8765589	79.35	60	120	
Ge Internal Standard	72	2	HMI He	792595	0.28	961800	82.41	60	120	
In Internal Standard	115	2	HMI He	2840471	0.22	3323973	85.45	60	120	
Ho-165	165	2	HMI He	14423775	0.44	16978678	84.95	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	280_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:15:00-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-36.205	ppb	-34.9	1787830	10	
Be	9	1	6	0.035	ppb	91.2	13	0.5	
B	11	1	6	-0.064	ppb	-1409.8	1167	0.5	
Na	23	1	45	-65.982	ppb	-1.5	406828	25	
Na	23	2	45	-54.384	ppb	-11.6	30700	25	
Mg	24	2	45	5.517	ppb	40.4	1273	25	
Al	27	2	45	5.697	ppb	10.0	183	15	
K	39	1	45	430.467	ppb	11.1	6957142	50	>RL
K	39	2	45	45.255	ppb	4.6	10958	50	
Ca	40	1	45	4.600	ppb	41.4	103823	50	
Ca	44	2	45	6.513	ppb	39.0	67	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.492	ppb	30.9	1637	1	
Cr	52	2	72	0.063	ppb	27.9	230	1	
Mn	55	2	72	0.750	ppb	23.1	377	0.5	>RL
Fe	57	2	72	29.729	ppb	17.5	683	25	>RL
Co	59	2	72	0.083	ppb	42.8	177	0.5	
Ni	60	2	72	0.049	ppb	179.2	170	1	
Cu	63	2	72	0.173	ppb	107.3	970	1	
Zn	66	2	72	0.033	ppb	378.8	277	5	
As	75	2	72	-0.029	ppb	-59.0	14	1	
Se	78	1	72	-0.080	ppb	-29.9	4	1	
Sr	88	2	72	-0.022	ppb	-395.9	47	0.5	
Zr	90	2	72	-4.244	ppb	-164.0	57	1	
Nb	93	2	72	3.639	ppb	13.4	8927	2	>RL
Mo	95	2	115	0.147	ppb	15.9	130	0.5	
Pd	105	2	115	0.023	ppb	100.9	33	1	
Ag	107	2	115	0.027	ppb	69.7	80	1	
Cd	111	2	115	0.035	ppb	142.5	17	0.5	
Sn	120	2	115	0.175	ppb	51.3	283	1	
Sb	121	2	115	0.355	ppb	29.5	307	0.6	
Ba	137	2	115	0.123	ppb	153.3	50	0.5	
W	182	2	165	0.346	ppb	3.3	2184	1	
Pt	195	2	165	0.003	ppb	191.9	57	1	
Tl	205	2	165	0.016	ppb	40.3	270	0.1	
Pb	208	2	165	0.092	ppb	37.6	1590	0.5	
Th	232	2	165	0.041	ppb	14.9	770	1	
U	238	2	165	0.044	ppb	4.8	703	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	385256	0.53	549626	70.09	60	120	
Sc (IS)	45	1	HMI H2	17861978	0.30	22416142	79.68	60	120	
Sc (IS)	45	2	HMI He	697628	0.55	833519	83.70	60	120	
Sc (IS)	45	3	No Gas	28015485	0.74	37013496	75.69	60	120	
Ge Internal Standard	72	1	HMI H2	7092679	0.40	8765589	80.92	60	120	
Ge Internal Standard	72	2	HMI He	805646	0.33	961800	83.76	60	120	
In Internal Standard	115	2	HMI He	2912554	0.98	3323973	87.62	60	120	
Ho-165	165	2	HMI He	14636394	0.75	16978678	86.20	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-7-D@5
Data File Name	281SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:18:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	18.735	ppb	18.735	24.95	67532	500000	
Li	7	2	45	10.080	ppb	10.080	379.14	3647	500000	
Li	7	3	45	12.536	ppb	12.536	63.96	1954227	50000	
Be	9	1	6	3.187	ppb	3.187	17.16	547	2000	
B	11	1	6	19.550	ppb	19.550	10.51	4314	2000	
Na	23	1	45	461.580	ppb	461.580	1.56	1455023	2000	
Na	23	2	45	398.614	ppb	398.614	2.26	100751	400000	
Mg	24	2	45	87075.385	ppb	87075.385	0.78	6201029	400000	
Al	27	2	45	53708.565	ppb	53708.565	0.30	1051549	400000	
K	39	1	45	17787.890	ppb	17787.890	0.83	42212575	400000	
K	39	2	45	14935.320	ppb	14935.320	0.54	557599	400000	
Ca	40	1	45	127245.524	ppb	127245.524	0.39	398088887	400000	
Ca	44	2	45	125985.497	ppb	125985.497	1.23	259863	400000	
Ti	47	2	45	2343.500	ppb	2343.500	3.12	40775	4000	
V	51	2	72	198.689	ppb	198.689	1.97	135241	2000	
Cr	52	2	72	501.331	ppb	501.331	0.26	437982	5000	
Mn	55	2	72	3499.845	ppb	3499.845	1.69	1269220	10000	
Fe	57	2	72	166034.294	ppb	166034.294	0.55	2818924	400000	
Co	59	2	72	109.275	ppb	109.275	0.86	165152	2000	
Ni	60	2	72	660.022	ppb	660.022	1.03	279678	5000	
Cu	63	2	72	979.018	ppb	979.018	0.17	1151190	5000	
Zn	66	2	72	769.365	ppb	769.365	0.97	123221	5000	
As	75	2	72	186.879	ppb	186.879	1.90	19804	2000	
Se	78	1	72	0.918	ppb	0.918	2.91	156	2000	
Sr	88	2	72	220.718	ppb	220.718	1.20	87704	4000	
Zr	90	2	72	979.263	ppb	979.263	3.48	4074	1000	
Nb	93	2	72	5.901	ppb	5.901	6.75	12986	200	
Mo	95	2	115	7.098	ppb	7.098	4.89	4428	2000	
Pd	105	2	115	0.057	ppb	0.057	21.31	63	100	
Ag	107	2	115	142.250	ppb	142.250	0.78	294745	100	
Cd	111	2	115	21.274	ppb	21.274	8.26	5958	2000	
Sn	120	2	115	11.148	ppb	11.148	0.79	8840	2000	
Sb	121	2	115	199.106	ppb	199.106	0.52	135028	1000	
Ba	137	2	115	1170.561	ppb	1170.561	1.00	281793	5000	
W	182	2	165	120.188	ppb	120.188	0.30	403732	100	
Pt	195	2	165	0.016	ppb	0.016	39.61	90	100	
Tl	205	2	165	1.675	ppb	1.675	4.56	11072	2000	
Pb	208	2	165	1288.668	ppb	1288.668	1.11	11170567	5000	
Th	232	2	165	16.621	ppb	16.621	1.25	175568	2000	
U	238	2	165	2.558	ppb	2.558	1.46	29472	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	358873	0.48	549626	65.29	60	120	
Sc (IS)	45	1	HMI H2	16985922	0.37	22416142	75.78	60	120	
Sc (IS)	45	2	HMI He	668776	0.33	833519	80.24	60	120	
Sc (IS)	45	3	No Gas	26965699	0.82	37013496	72.85	60	120	
Ge Internal Standard	72	1	HMI H2	6514572	0.25	8765589	74.32	60	120	
Ge Internal Standard	72	2	HMI He	747587	0.35	961800	77.73	60	120	
In Internal Standard	115	2	HMI He	2640110	0.57	3323973	79.43	60	120	
Ho-165	165	2	HMI He	14013919	0.57	16978678	82.54	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-8-D@5
Data File Name	282SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:22:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.880	ppb	12.880	89.77	63726	500000	
Li	7	2	45	9.292	ppb	9.292	254.38	3491	500000	
Li	7	3	45	12.600	ppb	12.600	66.56	1880228	50000	
Be	9	1	6	3.058	ppb	3.058	11.92	500	2000	
B	11	1	6	18.996	ppb	18.996	5.70	4024	2000	
Na	23	1	45	441.268	ppb	441.268	4.00	1353543	2000	
Na	23	2	45	372.554	ppb	372.554	2.84	92668	400000	
Mg	24	2	45	95328.098	ppb	95328.098	0.97	6509465	400000	
Al	27	2	45	49674.683	ppb	49674.683	0.34	932606	400000	
K	39	1	45	17134.191	ppb	17134.191	2.02	39131435	400000	
K	39	2	45	14180.271	ppb	14180.271	1.02	508072	400000	
Ca	40	1	45	154785.661	ppb	154785.661	2.63	463554806	400000	
Ca	44	2	45	154007.613	ppb	154007.613	0.52	304602	400000	
Ti	47	2	45	2118.530	ppb	2118.530	1.26	35347	4000	
V	51	2	72	173.377	ppb	173.377	0.81	113449	2000	
Cr	52	2	72	416.886	ppb	416.886	0.50	349713	5000	
Mn	55	2	72	3338.344	ppb	3338.344	0.24	1162330	10000	
Fe	57	2	72	154224.867	ppb	154224.867	1.12	2513980	400000	
Co	59	2	72	99.525	ppb	99.525	1.28	144422	2000	
Ni	60	2	72	571.128	ppb	571.128	0.76	232382	5000	
Cu	63	2	72	793.991	ppb	793.991	0.57	896509	5000	
Zn	66	2	72	870.995	ppb	870.995	0.79	133902	5000	
As	75	2	72	190.917	ppb	190.917	1.20	19425	2000	
Se	78	1	72	0.948	ppb	0.948	15.65	153	2000	
Sr	88	2	72	240.573	ppb	240.573	1.11	91775	4000	
Zr	90	2	72	947.520	ppb	947.520	7.49	3787	1000	
Nb	93	2	72	4.987	ppb	4.987	2.95	10645	200	
Mo	95	2	115	6.676	ppb	6.676	2.70	3991	2000	
Pd	105	2	115	0.034	ppb	0.034	29.48	40	100	
Ag	107	2	115	96.431	ppb	96.431	1.05	191419	100	
Cd	111	2	115	21.044	ppb	21.044	5.97	5645	2000	
Sn	120	2	115	7.082	ppb	7.082	11.60	5421	2000	
Sb	121	2	115	160.325	ppb	160.325	1.11	104158	1000	
Ba	137	2	115	1160.980	ppb	1160.980	0.45	267749	5000	
W	182	2	165	151.682	ppb	151.682	0.36	492106	100	
Pt	195	2	165	0.012	ppb	0.012	102.27	77	100	
Tl	205	2	165	1.668	ppb	1.668	2.61	10658	2000	
Pb	208	2	165	1167.756	ppb	1167.756	0.37	9781716	5000	
Th	232	2	165	15.974	ppb	15.974	0.52	163051	2000	
U	238	2	165	2.678	ppb	2.678	1.34	29809	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	341923	0.71	549626	62.21	60	120	
Sc (IS)	45	1	HMI H2	16266006	1.87	22416142	72.56	60	120	
Sc (IS)	45	2	HMI He	641294	0.52	833519	76.94	60	120	
Sc (IS)	45	3	No Gas	25938829	0.69	37013496	70.08	60	120	
Ge Internal Standard	72	1	HMI H2	6215699	0.47	8765589	70.91	60	120	
Ge Internal Standard	72	2	HMI He	717775	0.29	961800	74.63	60	120	
In Internal Standard	115	2	HMI He	2529237	1.31	3323973	76.09	60	120	
Ho-165	165	2	HMI He	13541354	0.47	16978678	79.76	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-12-D@10
Data File Name	283SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:26:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-20.057	ppb	-20.057	-26.98	57694	500000	
Li	7	2	45	-15.146	ppb	-15.146	-109.39	3241	500000	
Li	7	3	45	-19.103	ppb	-19.103	-44.71	1697834	50000	
Be	9	1	6	1.522	ppb	1.522	36.54	247	2000	
B	11	1	6	52.097	ppb	52.097	1.77	9043	2000	
Na	23	1	45	1307.566	ppb	1307.566	0.95	2991240	2000	
Na	23	2	45	1169.192	ppb	1169.192	0.81	210427	400000	
Mg	24	2	45	25053.432	ppb	25053.432	1.96	1691021	400000	
Al	27	2	45	31165.170	ppb	31165.170	0.76	578188	400000	
K	39	1	45	9882.837	ppb	9882.837	0.75	24551627	400000	
K	39	2	45	8227.709	ppb	8227.709	0.47	294833	400000	
Ca	40	1	45	37327.304	ppb	37327.304	0.71	110324815	400000	
Ca	44	2	45	36973.062	ppb	36973.062	2.24	72298	400000	
Ti	47	2	45	1374.021	ppb	1374.021	2.12	22655	4000	
V	51	2	72	132.475	ppb	132.475	2.25	87331	2000	
Cr	52	2	72	323.053	ppb	323.053	0.56	272231	5000	
Mn	55	2	72	1317.015	ppb	1317.015	0.62	460640	10000	
Fe	57	2	72	129636.830	ppb	129636.830	1.13	2122554	400000	
Co	59	2	72	50.143	ppb	50.143	0.97	73107	2000	
Ni	60	2	72	343.335	ppb	343.335	0.30	140369	5000	
Cu	63	2	72	965.449	ppb	965.449	0.97	1094777	5000	
Zn	66	2	72	719.238	ppb	719.238	1.16	111109	5000	
As	75	2	72	978.168	ppb	978.168	0.62	99905	2000	
Se	78	1	72	0.920	ppb	0.920	17.74	149	2000	
Sr	88	2	72	145.956	ppb	145.956	0.67	55948	4000	
Zr	90	2	72	1158.948	ppb	1158.948	4.46	4638	1000	
Nb	93	2	72	2.460	ppb	2.460	11.72	5621	200	
Mo	95	2	115	11.243	ppb	11.243	8.76	6749	2000	
Pd	105	2	115	0.020	ppb	0.020	78.93	27	100	
Ag	107	2	115	299.198	ppb	299.198	1.54	597859	100	
Cd	111	2	115	29.667	ppb	29.667	2.74	8013	2000	
Sn	120	2	115	14.074	ppb	14.074	2.51	10735	2000	
Sb	121	2	115	294.677	ppb	294.677	1.12	192711	1000	
Ba	137	2	115	466.335	ppb	466.335	0.91	108283	5000	
W	182	2	165	33.409	ppb	33.409	0.41	109028	100	
Pt	195	2	165	0.003	ppb	0.003	185.22	53	100	
Tl	205	2	165	1.034	ppb	1.034	1.76	6659	2000	
Pb	208	2	165	3776.968	ppb	3776.968	0.38	31616862	5000	
Th	232	2	165	9.077	ppb	9.077	2.00	92713	2000	
U	238	2	165	1.412	ppb	1.412	1.34	15784	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	335527	0.77	549626	61.05	60	120	
Sc (IS)	45	1	HMI H2	16039444	0.63	22416142	71.55	60	120	
Sc (IS)	45	2	HMI He	633706	0.64	833519	76.03	60	120	
Sc (IS)	45	3	No Gas	25396564	0.76	37013496	68.61	60	120	
Ge Internal Standard	72	1	HMI H2	6223390	0.47	8765589	71.00	60	120	
Ge Internal Standard	72	2	HMI He	720963	0.52	961800	74.96	60	120	
In Internal Standard	115	2	HMI He	2546393	1.29	3323973	76.61	60	120	
Ho-165	165	2	HMI He	13533073	0.45	16978678	79.71	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-13-C@10
Data File Name	284SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:30:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.456	ppb	-11.456	-38.34	57022	500000	
Li	7	2	45	-25.007	ppb	-25.007	-86.38	2987	500000	
Li	7	3	45	2.048	ppb	2.048	286.22	1709749	50000	
Be	9	1	6	1.453	ppb	1.453	29.31	230	2000	
B	11	1	6	50.081	ppb	50.081	4.06	8506	2000	
Na	23	1	45	1450.932	ppb	1450.932	1.11	3153698	2000	
Na	23	2	45	1369.555	ppb	1369.555	7.61	226737	400000	
Mg	24	2	45	26382.651	ppb	26382.651	7.45	1679825	400000	
Al	27	2	45	35715.334	ppb	35715.334	8.01	624919	400000	
K	39	1	45	10794.497	ppb	10794.497	0.49	25417683	400000	
K	39	2	45	9305.448	ppb	9305.448	5.34	313677	400000	
Ca	40	1	45	28445.821	ppb	28445.821	0.50	81220529	400000	
Ca	44	2	45	29655.891	ppb	29655.891	6.48	54721	400000	
Ti	47	2	45	1618.237	ppb	1618.237	6.03	25176	4000	
V	51	2	72	160.423	ppb	160.423	5.25	99405	2000	
Cr	52	2	72	397.512	ppb	397.512	6.28	315463	5000	
Mn	55	2	72	1307.255	ppb	1307.255	5.85	430660	10000	
Fe	57	2	72	162653.891	ppb	162653.891	5.39	2508748	400000	
Co	59	2	72	55.043	ppb	55.043	6.89	75570	2000	
Ni	60	2	72	364.961	ppb	364.961	5.85	140535	5000	
Cu	63	2	72	1156.570	ppb	1156.570	7.39	1234871	5000	
Zn	66	2	72	677.783	ppb	677.783	6.28	98624	5000	
As	75	2	72	1305.929	ppb	1305.929	5.43	125637	2000	
Se	78	1	72	0.790	ppb	0.790	12.45	125	2000	
Sr	88	2	72	156.625	ppb	156.625	4.79	56557	4000	
Zr	90	2	72	1418.048	ppb	1418.048	5.46	5331	1000	
Nb	93	2	72	2.565	ppb	2.565	19.13	5481	200	
Mo	95	2	115	5.854	ppb	5.854	9.96	3341	2000	
Pd	105	2	115	0.025	ppb	0.025	191.56	30	100	
Ag	107	2	115	381.798	ppb	381.798	4.35	723143	100	
Cd	111	2	115	38.979	ppb	38.979	10.16	9967	2000	
Sn	120	2	115	22.520	ppb	22.520	1.67	16220	2000	
Sb	121	2	115	425.721	ppb	425.721	5.51	263818	1000	
Ba	137	2	115	484.430	ppb	484.430	5.81	106592	5000	
W	182	2	165	43.594	ppb	43.594	7.18	132599	100	
Pt	195	2	165	0.000	ppb	0.000	1307.69	43	100	
Tl	205	2	165	1.239	ppb	1.239	9.86	7419	2000	
Pb	208	2	165	5350.307	ppb	5350.307	7.05	41825978	5000	
Th	232	2	165	10.265	ppb	10.265	8.31	97859	2000	
U	238	2	165	1.458	ppb	1.458	5.79	15223	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	326766	0.46	549626	59.45	60	120	IS Failed
Sc (IS)	45	1	HMI H2	15491084	0.34	22416142	69.11	60	120	
Sc (IS)	45	2	HMI He	598903	3.94	833519	71.85	60	120	
Sc (IS)	45	3	No Gas	24215720	1.05	37013496	65.42	60	120	
Ge Internal Standard	72	1	HMI H2	5977983	0.56	8765589	68.20	60	120	
Ge Internal Standard	72	2	HMI He	679808	2.76	961800	70.68	60	120	
In Internal Standard	115	2	HMI He	2415258	2.73	3323973	72.66	60	120	
Ho-165	165	2	HMI He	12663166	4.14	16978678	74.58	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-14-C@10
Data File Name	285SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:33:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.402	ppb	0.402	2214.54	54747	500000	
Li	7	2	45	-3.509	ppb	-3.509	-498.54	3040	500000	
Li	7	3	45	11.611	ppb	11.611	85.79	1799580	50000	
Be	9	1	6	1.651	ppb	1.651	31.68	247	2000	
B	11	1	6	45.364	ppb	45.364	6.46	7389	2000	
Na	23	1	45	1322.653	ppb	1322.653	0.57	2715315	2000	
Na	23	2	45	1152.989	ppb	1152.989	0.79	189388	400000	
Mg	24	2	45	28203.056	ppb	28203.056	0.90	1733216	400000	
Al	27	2	45	36230.200	ppb	36230.200	0.16	612004	400000	
K	39	1	45	10902.430	ppb	10902.430	1.65	23848238	400000	
K	39	2	45	9044.274	ppb	9044.274	0.66	294322	400000	
Ca	40	1	45	31937.418	ppb	31937.418	1.28	84877912	400000	
Ca	44	2	45	32226.611	ppb	32226.611	0.46	57384	400000	
Ti	47	2	45	1526.845	ppb	1526.845	1.35	22922	4000	
V	51	2	72	149.579	ppb	149.579	2.50	87213	2000	
Cr	52	2	72	368.275	ppb	368.275	1.00	274864	5000	
Mn	55	2	72	1511.791	ppb	1511.791	0.93	468331	10000	
Fe	57	2	72	128475.792	ppb	128475.792	1.40	1863238	400000	
Co	59	2	72	59.248	ppb	59.248	0.92	76505	2000	
Ni	60	2	72	385.726	ppb	385.726	0.70	139669	5000	
Cu	63	2	72	892.084	ppb	892.084	0.60	896085	5000	
Zn	66	2	72	558.759	ppb	558.759	1.90	76499	5000	
As	75	2	72	782.891	ppb	782.891	1.46	70826	2000	
Se	78	1	72	0.769	ppb	0.769	22.03	113	2000	
Sr	88	2	72	131.089	ppb	131.089	1.23	44511	4000	
Zr	90	2	72	1281.904	ppb	1281.904	7.51	4538	1000	
Nb	93	2	72	1.792	ppb	1.792	5.84	3791	200	
Mo	95	2	115	12.422	ppb	12.422	8.59	6679	2000	
Pd	105	2	115	0.043	ppb	0.043	56.82	43	100	
Ag	107	2	115	231.775	ppb	231.775	0.46	414852	100	
Cd	111	2	115	25.906	ppb	25.906	5.69	6268	2000	
Sn	120	2	115	10.880	ppb	10.880	4.27	7456	2000	
Sb	121	2	115	223.308	ppb	223.308	0.81	130814	1000	
Ba	137	2	115	560.783	ppb	560.783	1.64	116630	5000	
W	182	2	165	26.680	ppb	26.680	1.02	78282	100	
Pt	195	2	165	0.001	ppb	0.001	856.90	43	100	
Tl	205	2	165	1.124	ppb	1.124	5.21	6482	2000	
Pb	208	2	165	3156.680	ppb	3156.680	0.41	23708940	5000	
Th	232	2	165	10.398	ppb	10.398	1.23	95265	2000	
U	238	2	165	1.523	ppb	1.523	3.65	15263	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	309634	0.56	549626	56.34	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14421038	1.00	22416142	64.33	60	120	
Sc (IS)	45	2	HMI He	576989	0.71	833519	69.22	60	120	
Sc (IS)	45	3	No Gas	24888665	0.19	37013496	67.24	60	120	
Ge Internal Standard	72	1	HMI H2	5529612	1.26	8765589	63.08	60	120	
Ge Internal Standard	72	2	HMI He	638589	0.32	961800	66.40	60	120	
In Internal Standard	115	2	HMI He	2280628	0.33	3323973	68.61	60	120	
Ho-165	165	2	HMI He	12142527	0.31	16978678	71.52	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-F@50
Data File Name	286SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:37:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-12.875	ppb	-12.875	-34.53	55041	500000	
Li	7	2	45	-15.047	ppb	-15.047	-105.17	3037	500000	
Li	7	3	45	9.127	ppb	9.127	89.21	1702456	50000	
Be	9	1	6	0.243	ppb	0.243	52.02	47	2000	
B	11	1	6	5.112	ppb	5.112	19.41	1900	2000	
Na	23	1	45	189.443	ppb	189.443	3.23	798750	2000	
Na	23	2	45	176.537	ppb	176.537	4.60	58415	400000	
Mg	24	2	45	5083.075	ppb	5083.075	1.19	322170	400000	
Al	27	2	45	6847.162	ppb	6847.162	1.51	119102	400000	
K	39	1	45	2433.123	ppb	2433.123	0.49	9475034	400000	
K	39	2	45	1867.983	ppb	1867.983	2.03	68801	400000	
Ca	40	1	45	4455.946	ppb	4455.946	1.08	12389275	400000	
Ca	44	2	45	4677.291	ppb	4677.291	2.30	8613	400000	
Ti	47	2	45	291.018	ppb	291.018	4.11	4498	4000	
V	51	2	72	28.586	ppb	28.586	1.64	18336	2000	
Cr	52	2	72	70.959	ppb	70.959	3.36	55624	5000	
Mn	55	2	72	257.571	ppb	257.571	1.22	83708	10000	
Fe	57	2	72	27376.036	ppb	27376.036	1.08	416293	400000	
Co	59	2	72	11.255	ppb	11.255	4.74	15262	2000	
Ni	60	2	72	71.551	ppb	71.551	1.60	27260	5000	
Cu	63	2	72	171.133	ppb	171.133	0.46	180716	5000	
Zn	66	2	72	109.958	ppb	109.958	2.17	15963	5000	
As	75	2	72	195.348	ppb	195.348	1.34	18540	2000	
Se	78	1	72	0.074	ppb	0.074	138.75	24	2000	
Sr	88	2	72	21.627	ppb	21.627	3.72	7739	4000	
Zr	90	2	72	209.546	ppb	209.546	5.17	830	1000	
Nb	93	2	72	0.552	ppb	0.552	19.68	1664	200	
Mo	95	2	115	1.020	ppb	1.020	19.51	597	2000	
Pd	105	2	115	0.003	ppb	0.003	328.64	10	100	
Ag	107	2	115	79.782	ppb	79.782	1.02	149309	100	
Cd	111	2	115	5.942	ppb	5.942	2.90	1507	2000	
Sn	120	2	115	3.418	ppb	3.418	7.73	2520	2000	
Sb	121	2	115	92.386	ppb	92.386	1.90	56613	1000	
Ba	137	2	115	99.210	ppb	99.210	0.53	21588	5000	
W	182	2	165	18.393	ppb	18.393	0.80	55617	100	
Pt	195	2	165	-0.002	ppb	-0.002	-755.13	37	100	
Tl	205	2	165	0.212	ppb	0.212	6.93	1363	2000	
Pb	208	2	165	914.034	ppb	914.034	0.78	7042656	5000	
Th	232	2	165	2.174	ppb	2.174	2.79	20647	2000	
U	238	2	165	0.334	ppb	0.334	5.62	3551	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	351721	0.36	549626	63.99	60	120	
Sc (IS)	45	1	HMI H2	15008940	0.67	22416142	66.96	60	120	
Sc (IS)	45	2	HMI He	594003	1.75	833519	71.26	60	120	
Sc (IS)	45	3	No Gas	23691231	0.64	37013496	64.01	60	120	
Ge Internal Standard	72	1	HMI H2	5756822	0.97	8765589	65.68	60	120	
Ge Internal Standard	72	2	HMI He	669477	1.15	961800	69.61	60	120	
In Internal Standard	115	2	HMI He	2384704	1.94	3323973	71.74	60	120	
Ho-165	165	2	HMI He	12456119	0.68	16978678	73.36	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-Fsd@250
Data File Name	287SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:41:28-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.915	ppb	-2.915	-146.32	55547	500000	
Li	7	2	45	-34.794	ppb	-34.794	-79.85	2844	500000	
Li	7	3	45	0.467	ppb	0.467	1623.85	1652983	50000	
Be	9	1	6	0.043	ppb	0.043	163.88	13	2000	
B	11	1	6	-0.305	ppb	-0.305	-244.20	1013	2000	
Na	23	1	45	-0.397	ppb	-0.397	-606.96	451417	2000	
Na	23	2	45	-1.096	ppb	-1.096	-669.62	33155	400000	
Mg	24	2	45	1018.853	ppb	1018.853	1.73	64330	400000	
Al	27	2	45	1391.779	ppb	1391.779	3.42	23944	400000	
K	39	1	45	734.801	ppb	734.801	1.70	6289521	400000	
K	39	2	45	421.464	ppb	421.464	4.54	21330	400000	
Ca	40	1	45	909.339	ppb	909.339	0.20	2544054	400000	
Ca	44	2	45	888.528	ppb	888.528	10.47	1650	400000	
Ti	47	2	45	69.497	ppb	69.497	2.05	1060	4000	
V	51	2	72	6.230	ppb	6.230	7.37	4791	2000	
Cr	52	2	72	14.476	ppb	14.476	5.06	11378	5000	
Mn	55	2	72	51.907	ppb	51.907	4.32	16797	10000	
Fe	57	2	72	5452.661	ppb	5452.661	1.05	82400	400000	
Co	59	2	72	2.240	ppb	2.240	4.40	3044	2000	
Ni	60	2	72	15.190	ppb	15.190	4.48	5841	5000	
Cu	63	2	72	34.925	ppb	34.925	2.21	37099	5000	
Zn	66	2	72	24.382	ppb	24.382	2.12	3687	5000	
As	75	2	72	39.121	ppb	39.121	2.33	3697	2000	
Se	78	1	72	-0.045	ppb	-0.045	-114.74	8	2000	
Sr	88	2	72	4.353	ppb	4.353	11.33	1584	4000	
Zr	90	2	72	42.481	ppb	42.481	26.53	217	1000	
Nb	93	2	72	0.197	ppb	0.197	53.29	993	200	
Mo	95	2	115	0.349	ppb	0.349	14.21	220	2000	
Pd	105	2	115	0.007	ppb	0.007	243.30	13	100	
Ag	107	2	115	15.451	ppb	15.451	2.44	29051	100	
Cd	111	2	115	1.345	ppb	1.345	19.81	347	2000	
Sn	120	2	115	0.627	ppb	0.627	6.96	553	2000	
Sb	121	2	115	18.256	ppb	18.256	3.84	11258	1000	
Ba	137	2	115	17.388	ppb	17.388	3.88	3811	5000	
W	182	2	165	3.693	ppb	3.693	3.89	11669	100	
Pt	195	2	165	-0.014	ppb	-0.014	-17.00	7	100	
Tl	205	2	165	0.029	ppb	0.029	34.51	297	2000	
Pb	208	2	165	171.227	ppb	171.227	1.41	1301804	5000	
Th	232	2	165	0.454	ppb	0.454	5.14	4464	2000	
U	238	2	165	0.068	ppb	0.068	23.71	830	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	347220	0.87	549626	63.17	60	120	
Sc (IS)	45	1	HMI H2	14755448	0.17	22416142	65.83	60	120	
Sc (IS)	45	2	HMI He	586316	0.47	833519	70.34	60	120	
Sc (IS)	45	3	No Gas	23505915	0.90	37013496	63.51	60	120	
Ge Internal Standard	72	1	HMI H2	5708375	1.10	8765589	65.12	60	120	
Ge Internal Standard	72	2	HMI He	664514	0.66	961800	69.09	60	120	
In Internal Standard	115	2	HMI He	2394883	1.17	3323973	72.05	60	120	
Ho-165	165	2	HMI He	12286844	1.13	16978678	72.37	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-G MS@50
Data File Name	288SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:45:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.849	ppb	11.849	34.37	57895	500000	
Li	7	2	45	3.418	ppb	3.418	507.31	3161	500000	
Li	7	3	45	11.920	ppb	11.920	82.42	1762343	50000	
Be	9	1	6	4.328	ppb	4.328	26.61	727	2000	
B	11	1	6	8.100	ppb	8.100	4.92	2387	2000	
Na	23	1	45	204.314	ppb	204.314	1.95	814561	2000	
Na	23	2	45	195.979	ppb	195.979	5.77	60652	400000	
Mg	24	2	45	5182.217	ppb	5182.217	0.28	325844	400000	
Al	27	2	45	6963.429	ppb	6963.429	0.70	120170	400000	
K	39	1	45	2503.686	ppb	2503.686	1.43	9476779	400000	
K	39	2	45	1937.401	ppb	1937.401	2.48	70509	400000	
Ca	40	1	45	4533.524	ppb	4533.524	1.09	12438551	400000	
Ca	44	2	45	4452.916	ppb	4452.916	7.33	8136	400000	
Ti	47	2	45	294.714	ppb	294.714	4.62	4518	4000	
V	51	2	72	33.988	ppb	33.988	2.43	21503	2000	
Cr	52	2	72	76.672	ppb	76.672	1.57	59844	5000	
Mn	55	2	72	248.441	ppb	248.441	2.30	80389	10000	
Fe	57	2	72	27528.517	ppb	27528.517	0.66	416806	400000	
Co	59	2	72	14.358	ppb	14.358	3.47	19380	2000	
Ni	60	2	72	75.019	ppb	75.019	1.63	28452	5000	
Cu	63	2	72	183.452	ppb	183.452	1.00	192828	5000	
Zn	66	2	72	115.927	ppb	115.927	1.50	16744	5000	
As	75	2	72	206.852	ppb	206.852	0.85	19543	2000	
Se	78	1	72	3.649	ppb	3.649	12.39	499	2000	
Sr	88	2	72	25.919	ppb	25.919	1.77	9223	4000	
Zr	90	2	72	700.413	ppb	700.413	13.94	2617	1000	
Nb	93	2	72	0.443	ppb	0.443	10.31	1453	200	
Mo	95	2	115	5.222	ppb	5.222	7.03	2897	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-160.90	3	100	
Ag	107	2	115	79.931	ppb	79.931	1.17	146967	100	
Cd	111	2	115	9.378	ppb	9.378	3.07	2334	2000	
Sn	120	2	115	10.574	ppb	10.574	2.21	7446	2000	
Sb	121	2	115	88.692	ppb	88.692	0.71	53390	1000	
Ba	137	2	115	107.013	ppb	107.013	2.88	22873	5000	
W	182	2	165	16.869	ppb	16.869	2.56	50403	100	
Pt	195	2	165	-0.002	ppb	-0.002	-724.69	37	100	
Tl	205	2	165	4.216	ppb	4.216	2.05	24246	2000	
Pb	208	2	165	871.387	ppb	871.387	0.31	6625449	5000	
Th	232	2	165	5.895	ppb	5.895	3.07	54783	2000	
U	238	2	165	4.425	ppb	4.425	0.97	44605	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	352507	0.52	549626	64.14	60	120	
Sc (IS)	45	1	HMI H2	14811922	0.30	22416142	66.08	60	120	
Sc (IS)	45	2	HMI He	589245	0.60	833519	70.69	60	120	
Sc (IS)	45	3	No Gas	24357970	0.85	37013496	65.81	60	120	
Ge Internal Standard	72	1	HMI H2	5669185	0.44	8765589	64.68	60	120	
Ge Internal Standard	72	2	HMI He	666549	0.57	961800	69.30	60	120	
In Internal Standard	115	2	HMI He	2342663	0.32	3323973	70.48	60	120	
Ho-165	165	2	HMI He	12291280	0.15	16978678	72.39	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-H MSD@50
Data File Name	289SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:49:03-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.356	ppb	0.356	3322.05	57156	500000	
Li	7	2	45	-8.556	ppb	-8.556	-555.95	3114	500000	
Li	7	3	45	12.432	ppb	12.432	60.27	1713089	50000	
Be	9	1	6	4.437	ppb	4.437	23.50	743	2000	
B	11	1	6	7.363	ppb	7.363	25.29	2264	2000	
Na	23	1	45	176.474	ppb	176.474	1.42	778047	2000	
Na	23	2	45	171.504	ppb	171.504	0.74	58188	400000	
Mg	24	2	45	5076.557	ppb	5076.557	0.51	324372	400000	
Al	27	2	45	6894.087	ppb	6894.087	0.76	120898	400000	
K	39	1	45	2376.770	ppb	2376.770	0.68	9402757	400000	
K	39	2	45	1859.115	ppb	1859.115	3.42	69066	400000	
Ca	40	1	45	4468.734	ppb	4468.734	0.42	12464569	400000	
Ca	44	2	45	4447.857	ppb	4447.857	5.13	8259	400000	
Ti	47	2	45	297.007	ppb	297.007	3.38	4628	4000	
V	51	2	72	33.222	ppb	33.222	0.80	21370	2000	
Cr	52	2	72	76.336	ppb	76.336	0.68	60510	5000	
Mn	55	2	72	247.340	ppb	247.340	0.96	81280	10000	
Fe	57	2	72	26563.410	ppb	26563.410	0.95	408449	400000	
Co	59	2	72	14.275	ppb	14.275	1.21	19567	2000	
Ni	60	2	72	74.702	ppb	74.702	0.31	28773	5000	
Cu	63	2	72	174.757	ppb	174.757	0.42	186583	5000	
Zn	66	2	72	128.943	ppb	128.943	2.72	18887	5000	
As	75	2	72	211.078	ppb	211.078	0.94	20252	2000	
Se	78	1	72	3.636	ppb	3.636	2.98	509	2000	
Sr	88	2	72	24.753	ppb	24.753	5.66	8950	4000	
Zr	90	2	72	714.037	ppb	714.037	2.98	2707	1000	
Nb	93	2	72	0.393	ppb	0.393	31.25	1380	200	
Mo	95	2	115	4.433	ppb	4.433	5.87	2540	2000	
Pd	105	2	115	0.003	ppb	0.003	581.25	10	100	
Ag	107	2	115	71.821	ppb	71.821	0.27	136288	100	
Cd	111	2	115	10.573	ppb	10.573	3.90	2714	2000	
Sn	120	2	115	6.883	ppb	6.883	3.49	5041	2000	
Sb	121	2	115	92.155	ppb	92.155	1.83	57238	1000	
Ba	137	2	115	105.776	ppb	105.776	2.16	23327	5000	
W	182	2	165	17.646	ppb	17.646	0.64	53963	100	
Pt	195	2	165	0.011	ppb	0.011	36.36	70	100	
Tl	205	2	165	4.140	ppb	4.140	2.86	24387	2000	
Pb	208	2	165	854.698	ppb	854.698	0.54	6655990	5000	
Th	232	2	165	5.844	ppb	5.844	0.49	55627	2000	
U	238	2	165	4.297	ppb	4.297	2.19	44364	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	351779	0.55	549626	64.00	60	120	
Sc (IS)	45	1	HMI H2	15056656	0.43	22416142	67.17	60	120	
Sc (IS)	45	2	HMI He	598769	0.63	833519	71.84	60	120	
Sc (IS)	45	3	No Gas	23644825	0.56	37013496	63.88	60	120	
Ge Internal Standard	72	1	HMI H2	5810854	0.83	8765589	66.29	60	120	
Ge Internal Standard	72	2	HMI He	676925	0.68	961800	70.38	60	120	
In Internal Standard	115	2	HMI He	2417677	1.60	3323973	72.73	60	120	
Ho-165	165	2	HMI He	12589175	0.32	16978678	74.15	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-F pds@50
Data File Name	290SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:52:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.408	ppb	5.408	74.63	56273	500000	
Li	7	2	45	8.107	ppb	8.107	341.62	3134	500000	
Li	7	3	45	3.204	ppb	3.204	348.30	1654699	50000	
Be	9	1	6	201.903	ppb	201.903	1.15	32831	2000	
B	11	1	6	5.579	ppb	5.579	13.25	1934	2000	
Na	23	1	45	209.820	ppb	209.820	1.21	814302	2000	
Na	23	2	45	204.569	ppb	204.569	1.83	60621	400000	
Mg	24	2	45	5029.885	ppb	5029.885	0.78	309999	400000	
Al	27	2	45	8840.090	ppb	8840.090	1.38	149506	400000	
K	39	1	45	2348.287	ppb	2348.287	1.49	9087554	400000	
K	39	2	45	1881.074	ppb	1881.074	0.74	67322	400000	
Ca	40	1	45	4366.241	ppb	4366.241	0.86	11837316	400000	
Ca	44	2	45	4360.143	ppb	4360.143	7.54	7809	400000	
Ti	47	2	45	294.885	ppb	294.885	2.19	4431	4000	
V	51	2	72	238.356	ppb	238.356	0.87	140944	2000	
Cr	52	2	72	284.323	ppb	284.323	1.41	216175	5000	
Mn	55	2	72	468.020	ppb	468.020	2.06	147715	10000	
Fe	57	2	72	28595.445	ppb	28595.445	0.90	422485	400000	
Co	59	2	72	219.404	ppb	219.404	0.98	288467	2000	
Ni	60	2	72	282.144	ppb	282.144	2.53	104081	5000	
Cu	63	2	72	380.531	ppb	380.531	1.10	389662	5000	
Zn	66	2	72	333.601	ppb	333.601	2.59	46607	5000	
As	75	2	72	391.932	ppb	391.932	0.72	36122	2000	
Se	78	1	72	202.218	ppb	202.218	1.28	26720	2000	
Sr	88	2	72	20.971	ppb	20.971	5.39	7292	4000	
Zr	90	2	72	53057.527	ppb	53057.527	1.12	188810	1000	>LDR
Nb	93	2	72	7.255	ppb	7.255	7.52	13754	200	
Mo	95	2	115	194.168	ppb	194.168	1.30	105481	2000	
Pd	105	2	115	0.050	ppb	0.050	99.72	50	100	
Ag	107	2	115	119.243	ppb	119.243	0.93	216382	100	
Cd	111	2	115	210.886	ppb	210.886	1.97	51686	2000	
Sn	120	2	115	208.593	ppb	208.593	2.06	142975	2000	
Sb	121	2	115	293.155	ppb	293.155	1.57	174076	1000	
Ba	137	2	115	302.527	ppb	302.527	3.96	63772	5000	
W	182	2	165	224.568	ppb	224.568	0.68	653972	100	
Pt	195	2	165	0.076	ppb	0.076	5.58	220	100	
Tl	205	2	165	216.365	ppb	216.365	0.69	1224462	2000	
Pb	208	2	165	1122.004	ppb	1122.004	0.35	8440783	5000	
Th	232	2	165	18.709	ppb	18.709	1.60	171472	2000	
U	238	2	165	242.879	ppb	242.879	0.80	2414608	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	344388	0.64	549626	62.66	60	120	
Sc (IS)	45	1	HMI H2	14632745	0.42	22416142	65.28	60	120	
Sc (IS)	45	2	HMI He	577537	0.45	833519	69.29	60	120	
Sc (IS)	45	3	No Gas	23370438	1.09	37013496	63.14	60	120	
Ge Internal Standard	72	1	HMI H2	5635412	0.80	8765589	64.29	60	120	
Ge Internal Standard	72	2	HMI He	650437	0.49	961800	67.63	60	120	
In Internal Standard	115	2	HMI He	2312125	1.31	3323973	69.56	60	120	
Ho-165	165	2	HMI He	12161763	0.60	16978678	71.63	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	291_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T04:56:38-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	475.182	ppb	1.008	122377	500	95.0	90	110	
Li	7	2	45	471.167	ppb	5.851	6712	500	94.2	90	110	
Li	7	3	45	494.049	ppb	1.714	3699493	500	98.8	90	110	
Be	9	1	6	50.373	ppb	3.223	7996	50	100.7	90	110	
B	11	1	6	45.058	ppb	4.776	7976	50	90.1	90	110	
Na	23	1	45	5281.884	ppb	0.435	9580334	5000	105.6	90	110	
Na	23	2	45	4855.062	ppb	1.194	691066	5000	97.1	90	110	
Mg	24	2	45	5155.022	ppb	1.750	316835	5000	103.1	90	110	
Al	27	2	45	5223.072	ppb	1.583	88121	5000	104.5	90	110	
K	39	1	45	5542.686	ppb	0.685	14608606	5000	110.9	90	110	>+\-10%
K	39	2	45	5250.644	ppb	0.385	173787	5000	105.0	90	110	
Ca	40	1	45	5193.374	ppb	1.037	13949111	5000	103.9	90	110	
Ca	44	2	45	5307.210	ppb	3.349	9470	5000	106.1	90	110	
Ti	47	2	45	47.385	ppb	9.961	710	50	94.8	90	110	
V	51	2	72	51.832	ppb	2.834	31181	50	103.7	90	110	
Cr	52	2	72	51.431	ppb	3.038	38873	50	102.9	90	110	
Mn	55	2	72	53.482	ppb	1.746	16791	50	107.0	90	110	
Fe	57	2	72	5127.040	ppb	1.208	75171	5000	102.5	90	110	
Co	59	2	72	51.307	ppb	1.799	66884	50	102.6	90	110	
Ni	60	2	72	50.085	ppb	3.604	18409	50	100.2	90	110	
Cu	63	2	72	50.336	ppb	0.341	51610	50	100.7	90	110	
Zn	66	2	72	54.847	ppb	3.623	7776	50	109.7	90	110	
As	75	2	72	48.799	ppb	2.178	4469	50	97.6	90	110	
Se	78	1	72	50.353	ppb	1.192	6542	50	100.7	90	110	
Sr	88	2	72	53.673	ppb	3.450	18426	50	107.3	90	110	
Zr	90	2	72	86.846	ppb	27.490	367	50	173.7	90	110	>+\-10%
Nb	93	2	72	90.124	ppb	1.896	162362	100	90.1	90	110	
Mo	95	2	115	46.929	ppb	3.394	25804	50	93.9	90	110	
Pd	105	2	115	48.456	ppb	2.761	42184	50	96.9	90	110	
Ag	107	2	115	47.977	ppb	4.319	88036	50	96.0	90	110	
Cd	111	2	115	49.688	ppb	2.070	12326	50	99.4	90	110	
Sn	120	2	115	48.966	ppb	3.408	34026	50	97.9	90	110	
Sb	121	2	115	48.929	ppb	3.698	29412	50	97.9	90	110	
Ba	137	2	115	47.087	ppb	7.516	10051	50	94.2	90	110	
W	182	2	165	49.985	ppb	0.610	146279	50	100.0	90	110	
Pt	195	2	165	49.748	ppb	1.683	117630	50	99.5	90	110	
Tl	205	2	165	51.743	ppb	0.932	293119	50	103.5	90	110	
Pb	208	2	165	51.634	ppb	1.229	389280	50	103.3	90	110	
Th	232	2	165	51.617	ppb	0.791	472902	50	103.2	90	110	
U	238	2	165	52.275	ppb	0.714	520140	50	104.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	336063	1.28	549626	61.14	60	120	
Sc (IS)	45	1	HMI H2	14511199	0.59	22416142	64.74	60	120	
Sc (IS)	45	2	HMI He	576058	1.43	833519	69.11	60	120	
Sc (IS)	45	3	No Gas	23430494	0.25	37013496	63.30	60	120	
Ge Internal Standard	72	1	HMI H2	5531843	0.03	8765589	63.11	60	120	
Ge Internal Standard	72	2	HMI He	644670	0.45	961800	67.03	60	120	
In Internal Standard	115	2	HMI He	2339282	2.37	3323973	70.38	60	120	
Ho-165	165	2	HMI He	12169432	0.43	16978678	71.67	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	292_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:00:25-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	7.812	ppb	67.9	1641275	10	
Be	9	1	6	0.064	ppb	55.9	17	0.5	
B	11	1	6	-1.789	ppb	-28.7	773	0.5	
Na	23	1	45	-43.576	ppb	-7.2	372969	25	
Na	23	2	45	-32.931	ppb	-14.3	28418	25	
Mg	24	2	45	7.183	ppb	27.2	1160	25	
Al	27	2	45	4.979	ppb	21.4	140	15	
K	39	1	45	427.870	ppb	5.1	5704501	50	>RL
K	39	2	45	75.517	ppb	22.3	10061	50	>RL
Ca	40	1	45	-2.490	ppb	-12.6	66070	50	
Ca	44	2	45	3.482	ppb	274.5	50	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.420	ppb	10.1	1880	1	>RL
Cr	52	2	72	0.058	ppb	190.8	183	1	
Mn	55	2	72	0.551	ppb	17.0	243	0.5	>RL
Fe	57	2	72	27.520	ppb	22.1	523	25	>RL
Co	59	2	72	0.040	ppb	43.0	87	0.5	
Ni	60	2	72	0.162	ppb	35.4	180	1	
Cu	63	2	72	0.206	ppb	32.1	823	1	
Zn	66	2	72	-0.242	ppb	-162.1	187	5	
As	75	2	72	0.125	ppb	92.7	25	1	
Se	78	1	72	-0.043	ppb	-121.3	8	1	
Sr	88	2	72	0.022	ppb	72.5	53	0.5	
Zr	90	2	72	13.589	ppb	36.3	110	1	>RL
Nb	93	2	72	3.683	ppb	10.5	7342	2	>RL
Mo	95	2	115	0.179	ppb	45.5	123	0.5	
Pd	105	2	115	0.049	ppb	60.2	50	1	
Ag	107	2	115	0.023	ppb	92.3	57	1	
Cd	111	2	115	0.033	ppb	179.9	13	0.5	
Sn	120	2	115	0.186	ppb	27.3	237	1	
Sb	121	2	115	0.447	ppb	25.4	303	0.6	
Ba	137	2	115	0.011	ppb	862.7	17	0.5	
W	182	2	165	0.144	ppb	14.8	1230	1	
Pt	195	2	165	0.011	ppb	181.3	67	1	
Tl	205	2	165	0.016	ppb	92.9	220	0.1	
Pb	208	2	165	0.190	ppb	16.7	2070	0.5	
Th	232	2	165	0.038	ppb	30.7	613	1	
U	238	2	165	0.085	ppb	7.8	997	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	345972	0.41	549626	62.95	60	120	
Sc (IS)	45	1	HMI H2	14657410	0.41	22416142	65.39	60	120	
Sc (IS)	45	2	HMI He	579305	0.67	833519	69.50	60	120	
Sc (IS)	45	3	No Gas	22912941	0.29	37013496	61.90	60	120	
Ge Internal Standard	72	1	HMI H2	5606569	0.62	8765589	63.96	60	120	
Ge Internal Standard	72	2	HMI He	655486	0.74	961800	68.15	60	120	
In Internal Standard	115	2	HMI He	2361036	2.22	3323973	71.03	60	120	
Ho-165	165	2	HMI He	12191114	0.11	16978678	71.80	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436751/1-A
Data File Name	293_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:04:12-07:00
Sample Type	Blank
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	7.176	ppb	30.32192999	56062	0.5
Li	7	2	45	43.185	ppb	33.91821046	3294	0.5
Li	7	3	45	20.500	ppb	44.62030968	1752712	10
Be	9	1	6	0.157	ppb	86.1766396	33	0.5
B	11	1	6	7.984	ppb	12.37095015	2427	0.5
Na	23	1	45	86.398	ppb	5.045208525	594106	25
Na	23	2	45	102.834	ppb	3.703666129	45263	25
Mg	24	2	45	57.270	ppb	2.923281384	4101	25
Al	27	2	45	10.053	ppb	53.65708591	217	15
K	39	1	45	12857.703	ppb	0.38656931	27427645	50
K	39	2	45	134.358	ppb	11.10762468	11508	50
Ca	40	1	45	192.124	ppb	0.696963834	585504	50
Ca	44	2	45	188.268	ppb	20.18129905	367	25
Ti	47	2	45	0.933	ppb	86.62746731	13	0.5
V	51	2	72	10.271	ppb	2.404700029	6679	1
Cr	52	2	72	0.640	ppb	12.82111256	590	1
Mn	55	2	72	1.850	ppb	12.98199234	617	0.5
Fe	57	2	72	51.062	ppb	26.44122947	817	25
Co	59	2	72	0.047	ppb	15.26041625	90	0.5
Ni	60	2	72	0.156	ppb	34.94859072	167	1
Cu	63	2	72	1.297	ppb	1.440252065	1827	1
Zn	66	2	72	3.312	ppb	33.79621048	640	5
As	75	2	72	0.287	ppb	23.41930144	38	1
Se	78	1	72	0.000	ppb	-9330.922738	13	1
Sr	88	2	72	0.799	ppb	23.28297839	303	0.5
Zr	90	2	72	21.435	ppb	44.43355209	130	1
Nb	93	2	72	3.147	ppb	7.580684932	5965	2
Mo	95	2	115	0.134	ppb	32.28206619	93	0.5
Pd	105	2	115	0.060	ppb	75.41646654	57	1
Ag	107	2	115	0.055	ppb	4.556121119	110	1
Cd	111	2	115	-0.019	ppb	0	0	0.5
Sn	120	2	115	0.449	ppb	10.14232789	400	1
Sb	121	2	115	0.744	ppb	21.63722352	460	0.6
Ba	137	2	115	0.963	ppb	35.84635133	210	0.5
W	182	2	165	0.124	ppb	82.22065182	1127	1
Pt	195	2	165	-0.001	ppb	-670.9330249	37	1
Tl	205	2	165	0.022	ppb	58.78664875	247	0.1
Pb	208	2	165	0.566	ppb	30.96835149	4704	0.5
Th	232	2	165	0.075	ppb	32.52000431	913	1
U	238	2	165	0.045	ppb	28.72445497	570	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	361292	0.52	549626	65.73	60	120	
Sc (IS)	45	1	HMI H2	14512932	0.94	22416142	64.74	60	120	
Sc (IS)	45	2	HMI He	558847	3.20	833519	67.05	60	120	
Sc (IS)	45	3	No Gas	23725295	0.76	37013496	64.10	60	120	
Ge Internal Standard	72	1	HMI H2	5471506	0.96	8765589	62.42	60	120	
Ge Internal Standard	72	2	HMI He	614987	2.35	961800	63.94	60	120	
In Internal Standard	115	2	HMI He	2247795	3.98	3323973	67.62	60	120	
Ho-165	165	2	HMI He	11754565	2.57	16978678	69.23	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436751/2-A
Data File Name	294LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:08:01-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436751 hot Sb 6020
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	189.937	189.937	ppb	0.959	31240	200	95.0	80	120	
Na	23	2	45	97.255	97.255	ppb	11.042	44354	200	48.6	80	120	NewName Main CR1 Failed
Mg	24	2	45	62.538	62.538	ppb	5.667	4394	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	2088.375	2088.375	ppb	1.638	34074	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	133.069	133.069	ppb	19.694	11425	200000	0.1	80	120	NewName Main CR1 Failed
Ca	44	2	45	1026.543	1026.543	ppb	1.654	1804	200000	0.5	80	120	NewName Main CR1 Failed
V	51	2	72	207.528	207.528	ppb	1.299	114540	200	103.8	80	120	
Cr	52	2	72	205.384	205.384	ppb	0.096	145633	200	102.7	80	120	
(Cr)	53	2	72	225.127	225.127	ppb	4.055	20021	200	112.6	80	120	
Mn	55	2	72	205.665	205.665	ppb	1.159	60561	200	102.8	80	120	
Fe	57	2	72	2085.943	2085.943	ppb	3.096	28833	200000	1.0	80	120	NewName Main CR1 Failed
Co	59	2	72	203.656	203.656	ppb	1.123	249660	200	101.8	80	120	
Ni	60	2	72	198.775	198.775	ppb	1.128	68406	200	99.4	80	120	
Cu	63	2	72	209.210	209.210	ppb	0.757	200005	200	104.6	80	120	
Zn	66	2	72	210.874	210.874	ppb	3.337	27544	200	105.4	80	120	
As	75	2	72	190.236	190.236	ppb	0.972	16354	200	95.1	80	120	
Se	78	1	72	196.022	196.022	ppb	1.076	24596	200	98.0	80	120	
(Se)	82	1	72	172.656	172.656	ppb	3.973	10688	200	86.3	80	120	
Nb	93	2	72	3.146	3.146	ppb	10.839	5885	400	0.8	80	120	NewName Main CR1 Failed
Mo	95	2	115	189.145	189.145	ppb	1.734	96666	200	94.6	80	120	
Pd	105	2	115	0.038	0.038	ppb	52.234	37	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	208.849	208.849	ppb	2.321	356465	200	104.4	80	120	
Cd	111	2	115	193.199	193.199	ppb	2.061	44549	200	96.6	80	120	
(Cd)	114	2	115	195.631	195.631	ppb	1.833	116811	200	97.8	80	120	
Sn	120	2	115	193.412	193.412	ppb	1.538	124735	200	96.7	80	120	
Sb	121	2	115	199.160	199.160	ppb	2.823	111248	200	99.6	80	110	
Ba	137	2	115	194.099	194.099	ppb	3.766	38495	200	97.0	80	120	
W	182	2	165	190.003	190.003	ppb	0.282	525781	200	95.0	80	120	
Pt	195	2	165	-0.004	-0.004	ppb	-119.460	30	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	203.799	203.799	ppb	0.465	1095749	200	101.9	80	120	
(Pb)	206	2	165	205.237	205.237	ppb	0.693	355558	200	102.6	80	120	
(Pb)	207	2	165	205.499	205.499	ppb	0.200	328826	200	102.7	80	120	
Pb	208	2	165	205.800	205.800	ppb	0.472	1471373	200	102.9	80	120	
Th	232	2	165	226.266	226.266	ppb	1.490	1967297	200	113.1	80	120	
U	238	2	165	228.136	228.136	ppb	0.272	2154807	200	114.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	348337	0.28	549626	63.38	60	120	
Sc (IS)	45	1	HMI H2	14208944	0.45	22416142	63.39	60	120	
Sc (IS)	45	2	HMI He	556516	0.70	833519	66.77	60	120	
Sc (IS)	45	3	No Gas	23542272	0.66	37013496	63.60	60	120	
Ge Internal Standard	72	1	HMI H2	5350928	0.52	8765589	61.04	60	120	
Ge Internal Standard	72	2	HMI He	606450	0.18	961800	63.05	60	120	
In Internal Standard	115	2	HMI He	2175390	1.95	3323973	65.45	60	120	
Ho-165	165	2	HMI He	11554198	0.29	16978678	68.05	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-436751/3-A
Data File Name	295SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:11:49-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	406.080	ppb	406.080	1.97	109452	500000	
Li	7	2	45	422.521	ppb	422.521	4.62	6085	500000	
Li	7	3	45	443.984	ppb	443.984	4.87	3475186	50000	
Be	9	1	6	189.987	ppb	189.987	1.72	30976	2000	
B	11	1	6	203.646	ppb	203.646	1.79	33311	2000	
Na	23	1	45	81.284	ppb	81.284	3.46	568979	2000	
Na	23	2	45	85.129	ppb	85.129	5.38	42515	400000	
Mg	24	2	45	64.659	ppb	64.659	3.56	4494	400000	
Al	27	2	45	2153.640	ppb	2153.640	4.01	34932	400000	
K	39	1	45	13306.920	ppb	13306.920	1.53	27426853	400000	
K	39	2	45	112.070	ppb	112.070	5.87	10721	400000	
Ca	40	1	45	240.751	ppb	240.751	1.13	695486	400000	
Ca	44	2	45	962.366	ppb	962.366	4.11	1684	400000	
Ti	47	2	45	4.632	ppb	4.632	23.02	67	4000	
V	51	2	72	206.547	ppb	206.547	1.96	114289	2000	
Cr	52	2	72	203.320	ppb	203.320	1.87	144519	5000	
Mn	55	2	72	208.491	ppb	208.491	1.06	61544	10000	
Fe	57	2	72	2090.986	ppb	2090.986	0.84	28973	400000	
Co	59	2	72	200.976	ppb	200.976	0.14	246981	2000	
Ni	60	2	72	198.588	ppb	198.588	0.28	68509	5000	
Cu	63	2	72	209.133	ppb	209.133	0.92	200417	5000	
Zn	66	2	72	203.679	ppb	203.679	1.83	26679	5000	
As	75	2	72	190.074	ppb	190.074	1.37	16381	2000	
Se	78	1	72	199.137	ppb	199.137	0.80	24868	2000	
Sr	88	2	72	202.298	ppb	202.298	1.88	65368	4000	
Zr	90	2	72	49667.734	ppb	49667.734	0.54	165196	1000	>LDR
Nb	93	2	72	1.818	ppb	1.818	13.33	3651	200	
Mo	95	2	115	189.382	ppb	189.382	3.66	96333	2000	
Pd	105	2	115	0.029	ppb	0.029	112.39	30	100	
Ag	107	2	115	209.464	ppb	209.464	0.96	356014	100	
Cd	111	2	115	193.058	ppb	193.058	3.17	44314	2000	
Sn	120	2	115	193.198	ppb	193.198	0.71	124068	2000	
Sb	121	2	115	198.041	ppb	198.041	2.96	110143	1000	
Ba	137	2	115	194.686	ppb	194.686	4.31	38438	5000	
W	182	2	165	192.846	ppb	192.846	1.17	528035	100	
Pt	195	2	165	0.010	ppb	0.010	45.39	60	100	
Tl	205	2	165	206.244	ppb	206.244	0.58	1097266	2000	
Pb	208	2	165	206.941	ppb	206.941	0.70	1464021	5000	
Th	232	2	165	227.896	ppb	227.896	1.11	1960769	2000	
U	238	2	165	232.565	ppb	232.565	0.52	2173585	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	345275	0.66	549626	62.82	60	120	
Sc (IS)	45	1	HMI H2	14108443	0.88	22416142	62.94	60	120	
Sc (IS)	45	2	HMI He	553242	0.38	833519	66.37	60	120	
Sc (IS)	45	3	No Gas	23323875	0.50	37013496	63.01	60	120	
Ge Internal Standard	72	1	HMI H2	5325856	0.41	8765589	60.76	60	120	
Ge Internal Standard	72	2	HMI He	607936	0.48	961800	63.21	60	120	
In Internal Standard	115	2	HMI He	2165904	2.14	3323973	65.16	60	120	
Ho-165	165	2	HMI He	11433054	0.26	16978678	67.34	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-G
Data File Name	296SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:15:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	335.806	ppb	335.806	6.66	94409	500000	
Li	7	2	45	367.199	ppb	367.199	31.89	5448	500000	
Li	7	3	45	333.081	ppb	333.081	2.38	2894141	50000	
Be	9	1	6	22.509	ppb	22.509	8.25	3204	2000	
B	11	1	6	60.037	ppb	60.037	2.83	9210	2000	
Na	23	1	45	2733.103	ppb	2733.103	1.51	4758038	2000	
Na	23	2	45	2525.012	ppb	2525.012	1.02	346055	400000	
Mg	24	2	45	230494.960	ppb	230494.960	1.01	13041148	400000	
Al	27	2	45	325232.548	ppb	325232.548	0.59	5059311	400000	
K	39	1	45	127684.237	ppb	127684.237	1.16	210308997	400000	
K	39	2	45	116250.700	ppb	116250.700	0.92	3400920	400000	
Ca	40	1	45	60847.938	ppb	60847.938	0.75	149648724	400000	
Ca	44	2	45	61215.658	ppb	61215.658	0.89	100349	400000	
Ti	47	2	45	13578.905	ppb	13578.905	0.95	187733	4000	
V	51	2	72	1182.352	ppb	1182.352	1.14	580664	2000	
Cr	52	2	72	2791.683	ppb	2791.683	1.85	1772144	5000	
Mn	55	2	72	20006.646	ppb	20006.646	1.09	5273324	10000	
Fe	57	2	72	1053551.712	ppb	1053551.712	1.07	13000844	400000	
Co	59	2	72	684.224	ppb	684.224	1.38	751493	2000	
Ni	60	2	72	3612.526	ppb	3612.526	0.69	1112270	5000	
Cu	63	2	72	1283.743	ppb	1283.743	1.16	1097018	5000	
Zn	66	2	72	1313.550	ppb	1313.550	1.27	152779	5000	
As	75	2	72	599.862	ppb	599.862	0.57	46186	2000	
Se	78	1	72	7.339	ppb	7.339	10.33	827	2000	
Sr	88	2	72	893.157	ppb	893.157	2.00	257820	4000	
Zr	90	2	72	7524.891	ppb	7524.891	1.94	22415	1000	>LDR
Nb	93	2	72	8.236	ppb	8.236	11.54	12977	200	
Mo	95	2	115	33.696	ppb	33.696	2.74	15069	2000	
Pd	105	2	115	0.345	ppb	0.345	3.92	250	100	
Ag	107	2	115	8.353	ppb	8.353	5.68	12473	100	
Cd	111	2	115	7.984	ppb	7.984	5.80	1614	2000	
Sn	120	2	115	11.163	ppb	11.163	5.83	6375	2000	
Sb	121	2	115	33.915	ppb	33.915	3.07	16587	1000	
Ba	137	2	115	4117.657	ppb	4117.657	0.99	713896	5000	
W	182	2	165	34.761	ppb	34.761	1.47	89338	100	
Pt	195	2	165	0.009	ppb	0.009	83.88	53	100	
Tl	205	2	165	8.400	ppb	8.400	0.62	41791	2000	
Pb	208	2	165	475.420	ppb	475.420	0.66	3135749	5000	
Th	232	2	165	176.315	ppb	176.315	0.78	1414654	2000	
U	238	2	165	23.930	ppb	23.930	2.26	208665	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	301027	0.27	549626	54.77	60	120	IS Failed
Sc (IS)	45	1	HMI H2	13350164	0.38	22416142	59.56	60	120	IS Failed
Sc (IS)	45	2	HMI He	531399	0.62	833519	63.75	60	120	
Sc (IS)	45	3	No Gas	22378225	0.79	37013496	60.46	60	120	
Ge Internal Standard	72	1	HMI H2	4740250	0.42	8765589	54.08	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	543432	1.29	961800	56.50	60	120	IS Failed
In Internal Standard	115	2	HMI He	1901418	0.66	3323973	57.20	60	120	IS Failed
Ho-165	165	2	HMI He	10661982	0.80	16978678	62.80	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-Gsd@5
Data File Name	297SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:19:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	58.773	ppb	58.773	6.24	59000	500000	
Li	7	2	45	72.120	ppb	72.120	37.48	3321	500000	
Li	7	3	45	68.171	ppb	68.171	16.14	1803005	50000	
Be	9	1	6	4.117	ppb	4.117	25.39	603	2000	
B	11	1	6	10.978	ppb	10.978	16.38	2490	2000	
Na	23	1	45	541.485	ppb	541.485	1.48	1286095	2000	
Na	23	2	45	464.468	ppb	464.468	3.27	87765	400000	
Mg	24	2	45	49200.579	ppb	49200.579	0.44	2767960	400000	
Al	27	2	45	66783.479	ppb	66783.479	0.65	1032837	400000	
K	39	1	45	27238.981	ppb	27238.981	1.27	48992388	400000	
K	39	2	45	23586.265	ppb	23586.265	1.25	691524	400000	
Ca	40	1	45	12639.152	ppb	12639.152	0.60	31513592	400000	
Ca	44	2	45	13166.488	ppb	13166.488	2.06	21490	400000	
Ti	47	2	45	2822.359	ppb	2822.359	3.02	38793	4000	
V	51	2	72	232.622	ppb	232.622	0.53	120867	2000	
Cr	52	2	72	536.193	ppb	536.193	0.83	358051	5000	
Mn	55	2	72	3918.878	ppb	3918.878	0.51	1086258	10000	
Fe	57	2	72	220683.086	ppb	220683.086	0.37	2863876	400000	
Co	59	2	72	137.520	ppb	137.520	1.79	158858	2000	
Ni	60	2	72	742.370	ppb	742.370	0.89	240439	5000	
Cu	63	2	72	268.047	ppb	268.047	1.77	241306	5000	
Zn	66	2	72	276.329	ppb	276.329	1.77	33951	5000	
As	75	2	72	116.132	ppb	116.132	1.23	9412	2000	
Se	78	1	72	1.481	ppb	1.481	2.16	188	2000	
Sr	88	2	72	178.584	ppb	178.584	0.87	54247	4000	
Zr	90	2	72	1393.182	ppb	1393.182	3.89	4408	1000	
Nb	93	2	72	1.676	ppb	1.676	10.58	3207	200	
Mo	95	2	115	7.175	ppb	7.175	9.32	3417	2000	
Pd	105	2	115	0.045	ppb	0.045	133.81	40	100	
Ag	107	2	115	1.698	ppb	1.698	8.60	2697	100	
Cd	111	2	115	1.386	ppb	1.386	20.93	300	2000	
Sn	120	2	115	2.466	ppb	2.466	8.87	1564	2000	
Sb	121	2	115	6.636	ppb	6.636	1.53	3464	1000	
Ba	137	2	115	823.686	ppb	823.686	2.07	151398	5000	
W	182	2	165	7.147	ppb	7.147	2.87	19722	100	
Pt	195	2	165	0.011	ppb	0.011	200.43	60	100	
Tl	205	2	165	1.752	ppb	1.752	1.43	9177	2000	
Pb	208	2	165	93.625	ppb	93.625	1.09	643863	5000	
Th	232	2	165	35.935	ppb	35.935	0.77	300597	2000	
U	238	2	165	4.863	ppb	4.863	1.94	44290	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	307719	0.51	549626	55.99	60	120	IS Failed
Sc (IS)	45	1	HMI H2	13511498	0.97	22416142	60.28	60	120	
Sc (IS)	45	2	HMI He	528285	0.80	833519	63.38	60	120	
Sc (IS)	45	3	No Gas	21898993	0.65	37013496	59.16	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	5059765	0.12	8765589	57.72	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	571427	0.23	961800	59.41	60	120	IS Failed
In Internal Standard	115	2	HMI He	2015939	1.01	3323973	60.65	60	120	
Ho-165	165	2	HMI He	11109087	1.17	16978678	65.43	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-H MS
Data File Name	298SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:23:13-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	714.070	ppb	714.070	1.19	136448	500000	
Li	7	2	45	733.178	ppb	733.178	1.12	7439	500000	
Li	7	3	45	679.344	ppb	679.344	2.35	4065073	50000	
Be	9	1	6	223.423	ppb	223.423	2.30	29176	2000	
B	11	1	6	231.852	ppb	231.852	2.59	30255	2000	
Na	23	1	45	2694.415	ppb	2694.415	0.60	4458788	2000	
Na	23	2	45	2527.670	ppb	2527.670	0.80	319516	400000	
Mg	24	2	45	234617.790	ppb	234617.790	1.27	12244167	400000	
Al	27	2	45	330540.100	ppb	330540.100	1.08	4742731	400000	
K	39	1	45	126193.304	ppb	126193.304	0.21	197380990	400000	
K	39	2	45	114916.031	ppb	114916.031	1.09	3100970	400000	
Ca	40	1	45	63832.000	ppb	63832.000	0.63	149038764	400000	
Ca	44	2	45	66741.752	ppb	66741.752	1.33	100913	400000	
Ti	47	2	45	13310.648	ppb	13310.648	1.54	169743	4000	
V	51	2	72	1380.986	ppb	1380.986	0.46	630852	2000	
Cr	52	2	72	3050.640	ppb	3050.640	1.28	1801662	5000	
Mn	55	2	72	20251.216	ppb	20251.216	0.60	4965818	10000	
Fe	57	2	72	1025056.955	ppb	1025056.955	0.46	11768453	400000	
Co	59	2	72	904.839	ppb	904.839	0.38	924586	2000	
Ni	60	2	72	3966.252	ppb	3966.252	0.80	1136049	5000	
Cu	63	2	72	1465.492	ppb	1465.492	0.27	1165059	5000	
Zn	66	2	72	1487.105	ppb	1487.105	1.69	160894	5000	
As	75	2	72	752.910	ppb	752.910	0.96	53922	2000	
Se	78	1	72	176.749	ppb	176.749	0.51	18683	2000	
Sr	88	2	72	1103.916	ppb	1103.916	0.45	296480	4000	
Zr	90	2	72	26587.124	ppb	26587.124	0.92	73557	1000	>LDR
Nb	93	2	72	7.526	ppb	7.526	3.59	11072	200	
Mo	95	2	115	226.991	ppb	226.991	1.86	94769	2000	
Pd	105	2	115	0.365	ppb	0.365	21.20	247	100	
Ag	107	2	115	213.266	ppb	213.266	0.93	297401	100	
Cd	111	2	115	200.873	ppb	200.873	1.64	37842	2000	
Sn	120	2	115	201.608	ppb	201.608	1.15	106216	2000	
Sb	121	2	115	207.949	ppb	207.949	1.56	94906	1000	
Ba	137	2	115	4341.421	ppb	4341.421	0.56	703390	5000	
W	182	2	165	170.340	ppb	170.340	0.63	409732	100	
Pt	195	2	165	0.032	ppb	0.032	50.73	97	100	
Tl	205	2	165	202.912	ppb	202.912	0.44	948156	2000	
Pb	208	2	165	675.997	ppb	675.997	0.20	4199135	5000	
Th	232	2	165	396.185	ppb	396.185	0.39	2993620	2000	
U	238	2	165	251.041	ppb	251.041	0.72	2060681	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	276562	0.89	549626	50.32	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12674165	0.22	22416142	56.54	60	120	IS Failed
Sc (IS)	45	2	HMI He	490152	0.38	833519	58.81	60	120	IS Failed
Sc (IS)	45	3	No Gas	21309620	0.26	37013496	57.57	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4507675	0.50	8765589	51.42	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	505541	0.43	961800	52.56	60	120	IS Failed
In Internal Standard	115	2	HMI He	1776869	0.55	3323973	53.46	60	120	IS Failed
Ho-165	165	2	HMI He	10041482	0.21	16978678	59.14	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-1-I MSD
Data File Name	299SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:26:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	693.209	ppb	693.209	1.18	128924	500000	
Li	7	2	45	688.949	ppb	688.949	9.13	6849	500000	
Li	7	3	45	691.466	ppb	691.466	1.16	4014051	50000	
Be	9	1	6	227.487	ppb	227.487	1.91	28164	2000	
B	11	1	6	235.849	ppb	235.849	0.99	29173	2000	
Na	23	1	45	2925.434	ppb	2925.434	0.96	4630039	2000	
Na	23	2	45	2755.708	ppb	2755.708	1.59	331381	400000	
Mg	24	2	45	241910.770	ppb	241910.770	0.38	12097915	400000	
Al	27	2	45	347460.061	ppb	347460.061	1.23	4777526	400000	
K	39	1	45	130897.561	ppb	130897.561	0.85	197015930	400000	
K	39	2	45	120291.842	ppb	120291.842	0.81	3110266	400000	
Ca	40	1	45	62741.050	ppb	62741.050	0.55	141077668	400000	
Ca	44	2	45	65135.227	ppb	65135.227	1.82	94376	400000	
Ti	47	2	45	13808.713	ppb	13808.713	1.14	168745	4000	
V	51	2	72	1419.253	ppb	1419.253	1.31	617887	2000	
Cr	52	2	72	3230.177	ppb	3230.177	0.26	1818317	5000	
Mn	55	2	72	20961.118	ppb	20961.118	0.12	4899030	10000	
Fe	57	2	72	1079707.716	ppb	1079707.716	0.93	11814472	400000	
Co	59	2	72	902.760	ppb	902.760	0.61	879201	2000	
Ni	60	2	72	3945.711	ppb	3945.711	1.18	1077181	5000	
Cu	63	2	72	1515.710	ppb	1515.710	0.44	1148461	5000	
Zn	66	2	72	1542.994	ppb	1542.994	1.16	159106	5000	
As	75	2	72	783.202	ppb	783.202	1.31	53464	2000	
Se	78	1	72	179.974	ppb	179.974	1.07	18259	2000	
Sr	88	2	72	1141.406	ppb	1141.406	0.29	292183	4000	
Zr	90	2	72	26682.940	ppb	26682.940	2.01	70365	1000	>LDR
Nb	93	2	72	8.423	ppb	8.423	1.35	11755	200	
Mo	95	2	115	229.082	ppb	229.082	0.83	90935	2000	
Pd	105	2	115	0.183	ppb	0.183	53.13	120	100	
Ag	107	2	115	212.908	ppb	212.908	0.27	282302	100	
Cd	111	2	115	196.759	ppb	196.759	3.82	35239	2000	
Sn	120	2	115	202.271	ppb	202.271	1.63	101320	2000	
Sb	121	2	115	198.587	ppb	198.587	0.40	86180	1000	
Ba	137	2	115	4377.494	ppb	4377.494	1.46	674317	5000	
W	182	2	165	173.527	ppb	173.527	0.02	404651	100	
Pt	195	2	165	0.009	ppb	0.009	113.30	50	100	
Tl	205	2	165	200.391	ppb	200.391	0.69	907825	2000	
Pb	208	2	165	687.599	ppb	687.599	0.27	4140964	5000	
Th	232	2	165	393.500	ppb	393.500	1.23	2882589	2000	
U	238	2	165	249.559	ppb	249.559	1.30	1986041	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	262242	1.09	549626	47.71	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12205898	0.50	22416142	54.45	60	120	IS Failed
Sc (IS)	45	2	HMI He	469686	0.18	833519	56.35	60	120	IS Failed
Sc (IS)	45	3	No Gas	20807987	0.36	37013496	56.22	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4326143	0.84	8765589	49.35	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	481847	0.80	961800	50.10	60	120	IS Failed
In Internal Standard	115	2	HMI He	1689447	0.43	3323973	50.83	60	120	IS Failed
Ho-165	165	2	HMI He	9735248	0.20	16978678	57.34	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-1-G pds
Data File Name	300SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:30:46-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	292.583	ppb	292.583	6.65	78197	500000	
Li	7	2	45	295.282	ppb	295.282	18.35	4174	500000	
Li	7	3	45	306.402	ppb	306.402	2.36	2525500	50000	
Be	9	1	6	231.945	ppb	231.945	2.98	27673	2000	
B	11	1	6	60.216	ppb	60.216	3.45	7752	2000	
Na	23	1	45	2657.941	ppb	2657.941	0.88	4085901	2000	
Na	23	2	45	2490.615	ppb	2490.615	0.62	288978	400000	
Mg	24	2	45	225165.724	ppb	225165.724	0.73	10772464	400000	
Al	27	2	45	318594.337	ppb	318594.337	0.67	4190685	400000	
K	39	1	45	122095.478	ppb	122095.478	0.60	177321997	400000	
K	39	2	45	112449.534	ppb	112449.534	0.57	2781876	400000	
Ca	40	1	45	58513.562	ppb	58513.562	0.98	126767708	400000	
Ca	44	2	45	60668.472	ppb	60668.472	0.74	84094	400000	
Ti	47	2	45	13336.393	ppb	13336.393	0.42	155911	4000	
V	51	2	72	1362.983	ppb	1362.983	0.88	574589	2000	
Cr	52	2	72	2977.335	ppb	2977.335	1.48	1622744	5000	
Mn	55	2	72	19581.345	ppb	19581.345	1.26	4431062	10000	
Fe	57	2	72	1031498.740	ppb	1031498.740	0.62	10928528	400000	
Co	59	2	72	874.162	ppb	874.162	0.60	824322	2000	
Ni	60	2	72	3747.460	ppb	3747.460	0.30	990588	5000	
Cu	63	2	72	1472.725	ppb	1472.725	1.01	1080443	5000	
Zn	66	2	72	1513.047	ppb	1513.047	0.74	151075	5000	
As	75	2	72	781.632	ppb	781.632	1.63	51659	2000	
Se	78	1	72	202.421	ppb	202.421	2.12	20146	2000	
Sr	88	2	72	866.288	ppb	866.288	0.85	214723	4000	
Zr	90	2	72	61209.840	ppb	61209.840	0.85	156229	1000	>LDR
Nb	93	2	72	8.405	ppb	8.405	2.97	11358	200	
Mo	95	2	115	239.368	ppb	239.368	1.24	92146	2000	
Pd	105	2	115	0.255	ppb	0.255	40.05	160	100	
Ag	107	2	115	55.709	ppb	55.709	0.69	71640	100	
Cd	111	2	115	210.254	ppb	210.254	1.43	36518	2000	
Sn	120	2	115	210.557	ppb	210.557	0.91	102280	2000	
Sb	121	2	115	243.695	ppb	243.695	1.47	102546	1000	
Ba	137	2	115	4215.458	ppb	4215.458	1.03	629756	5000	
W	182	2	165	239.316	ppb	239.316	0.50	543974	100	
Pt	195	2	165	0.097	ppb	0.097	28.32	210	100	
Tl	205	2	165	213.663	ppb	213.663	0.54	943887	2000	
Pb	208	2	165	676.015	ppb	676.015	0.49	3970077	5000	
Th	232	2	165	189.659	ppb	189.659	0.44	1354985	2000	
U	238	2	165	266.590	ppb	266.590	0.85	2068871	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	252691	0.20	549626	45.98	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11760014	0.74	22416142	52.46	60	120	IS Failed
Sc (IS)	45	2	HMI He	449334	0.64	833519	53.91	60	120	IS Failed
Sc (IS)	45	3	No Gas	20269394	0.67	37013496	54.76	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4244924	0.67	8765589	48.43	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	466539	0.45	961800	48.51	60	120	IS Failed
In Internal Standard	115	2	HMI He	1638439	1.21	3323973	49.29	60	120	IS Failed
Ho-165	165	2	HMI He	9493480	0.29	16978678	55.91	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	301_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:34:30-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	425.090	ppb	1.818	98501	500	85.0	90	110	>+\-10%
Li	7	2	45	469.467	ppb	5.753	5588	500	93.9	90	110	
Li	7	3	45	439.321	ppb	2.781	3097544	500	87.9	90	110	>+\-10%
Be	9	1	6	49.976	ppb	2.692	6365	50	100.0	90	110	
B	11	1	6	48.532	ppb	3.494	6825	50	97.1	90	110	
Na	23	1	45	5077.488	ppb	1.482	7883640	5000	101.5	90	110	
Na	23	2	45	4820.674	ppb	0.450	572485	5000	96.4	90	110	
Mg	24	2	45	5173.335	ppb	1.634	265197	5000	103.5	90	110	
Al	27	2	45	5254.245	ppb	1.999	73938	5000	105.1	90	110	
K	39	1	45	5743.238	ppb	1.359	12782374	5000	114.9	90	110	>+\-10%
K	39	2	45	5234.389	ppb	2.207	144495	5000	104.7	90	110	
Ca	40	1	45	5107.003	ppb	0.429	11721794	5000	102.1	90	110	
Ca	44	2	45	4971.680	ppb	4.694	7402	5000	99.4	90	110	
Ti	47	2	45	57.121	ppb	14.263	713	50	114.2	90	110	>+\-10%
V	51	2	72	52.621	ppb	3.277	26392	50	105.2	90	110	
Cr	52	2	72	52.625	ppb	1.429	33175	50	105.2	90	110	
Mn	55	2	72	54.306	ppb	4.109	14224	50	108.6	90	110	
Fe	57	2	72	5255.947	ppb	0.340	64286	5000	105.1	90	110	
Co	59	2	72	50.398	ppb	0.933	54815	50	100.8	90	110	
Ni	60	2	72	53.516	ppb	3.188	16407	50	107.0	90	110	
Cu	63	2	72	53.028	ppb	1.297	45332	50	106.1	90	110	
Zn	66	2	72	54.570	ppb	3.137	6455	50	109.1	90	110	
As	75	2	72	50.602	ppb	2.698	3866	50	101.2	90	110	
Se	78	1	72	49.554	ppb	3.581	5591	50	99.1	90	110	
Sr	88	2	72	52.653	ppb	7.579	15082	50	105.3	90	110	
Zr	90	2	72	364.996	ppb	11.866	1123	50	730.0	90	110	>+\-10%
Nb	93	2	72	90.559	ppb	0.672	136104	100	90.6	90	110	
Mo	95	2	115	47.042	ppb	4.324	21671	50	94.1	90	110	
Pd	105	2	115	49.844	ppb	2.607	36348	50	99.7	90	110	
Ag	107	2	115	49.664	ppb	2.332	76355	50	99.3	90	110	
Cd	111	2	115	48.583	ppb	6.300	10091	50	97.2	90	110	
Sn	120	2	115	48.057	ppb	4.854	27979	50	96.1	90	110	
Sb	121	2	115	49.800	ppb	6.559	25074	50	99.6	90	110	
Ba	137	2	115	50.802	ppb	5.601	9087	50	101.6	90	110	
W	182	2	165	51.645	ppb	0.289	131587	50	103.3	90	110	
Pt	195	2	165	51.551	ppb	0.931	106152	50	103.1	90	110	
Tl	205	2	165	52.604	ppb	0.800	259485	50	105.2	90	110	
Pb	208	2	165	52.629	ppb	1.030	345503	50	105.3	90	110	
Th	232	2	165	52.709	ppb	1.323	420485	50	105.4	90	110	
U	238	2	165	53.136	ppb	0.763	460395	50	106.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	269561	0.29	549626	49.04	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12399116	0.55	22416142	55.31	60	120	IS Failed
Sc (IS)	45	2	HMI He	480409	0.86	833519	57.64	60	120	IS Failed
Sc (IS)	45	3	No Gas	20904854	0.60	37013496	56.48	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4804255	0.73	8765589	54.81	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	537816	0.60	961800	55.92	60	120	IS Failed
In Internal Standard	115	2	HMI He	1958876	0.58	3323973	58.93	60	120	IS Failed
Ho-165	165	2	HMI He	10597251	0.99	16978678	62.42	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	302_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:38:18-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-25.996	ppb	-26.2	1375358	10	
Be	9	1	6	0.454	ppb	33.4	67	0.5	
B	11	1	6	0.329	ppb	521.0	920	0.5	
Na	23	1	45	-71.947	ppb	-17.4	285168	25	
Na	23	2	45	-67.605	ppb	-19.3	21253	25	
Mg	24	2	45	10.437	ppb	31.0	1220	25	
Al	27	2	45	11.233	ppb	43.9	220	15	
K	39	1	45	650.199	ppb	3.2	5377292	50	>RL
K	39	2	45	87.398	ppb	20.0	9377	50	>RL
Ca	40	1	45	-1.755	ppb	-9.9	60007	50	
Ca	44	2	45	6.821	ppb	167.5	50	25	
Ti	47	2	45	0.251	ppb	173.2	3	0.5	
V	51	2	72	1.535	ppb	8.5	1750	1	>RL
Cr	52	2	72	0.041	ppb	43.9	153	1	
Mn	55	2	72	1.935	ppb	4.7	613	0.5	>RL
Fe	57	2	72	68.924	ppb	3.1	1023	25	>RL
Co	59	2	72	0.131	ppb	3.1	187	0.5	
Ni	60	2	72	0.617	ppb	22.8	313	1	
Cu	63	2	72	0.232	ppb	27.2	763	1	
Zn	66	2	72	-0.137	ppb	-397.3	180	5	
As	75	2	72	-0.006	ppb	-1868.5	12	1	
Se	78	1	72	0.064	ppb	53.5	20	1	
Sr	88	2	72	-0.077	ppb	-48.7	17	0.5	
Zr	90	2	72	14.941	ppb	40.8	103	1	>RL
Nb	93	2	72	4.023	ppb	5.5	7152	2	>RL
Mo	95	2	115	0.159	ppb	19.0	103	0.5	
Pd	105	2	115	0.050	ppb	52.7	47	1	
Ag	107	2	115	0.037	ppb	11.3	77	1	
Cd	111	2	115	0.024	ppb	179.3	10	0.5	
Sn	120	2	115	0.132	ppb	39.2	183	1	
Sb	121	2	115	0.349	ppb	12.5	227	0.6	
Ba	137	2	115	0.086	ppb	119.7	30	0.5	
W	182	2	165	0.207	ppb	12.3	1310	1	
Pt	195	2	165	0.006	ppb	217.1	50	1	
Tl	205	2	165	0.032	ppb	38.5	290	0.1	
Pb	208	2	165	0.096	ppb	26.4	1257	0.5	
Th	232	2	165	0.057	ppb	24.0	733	1	
U	238	2	165	0.071	ppb	9.2	790	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	286699	0.44	549626	52.16	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12924931	0.45	22416142	57.66	60	120	IS Failed
Sc (IS)	45	2	HMI He	520560	3.42	833519	62.45	60	120	
Sc (IS)	45	3	No Gas	20955059	0.23	37013496	56.61	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	5068634	0.44	8765589	57.82	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	588706	1.96	961800	61.21	60	120	
In Internal Standard	115	2	HMI He	2182327	1.96	3323973	65.65	60	120	
Ho-165	165	2	HMI He	11318399	3.38	16978678	66.66	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-2-D
Data File Name	303SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:42:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	326.742	ppb	326.742	6.39	82737	500000	
Li	7	2	45	346.882	ppb	346.882	9.23	4664	500000	
Li	7	3	45	333.293	ppb	333.293	2.21	2633120	50000	
Be	9	1	6	23.264	ppb	23.264	9.97	2864	2000	
B	11	1	6	82.783	ppb	82.783	1.47	10684	2000	
Na	23	1	45	2657.219	ppb	2657.219	0.81	4115871	2000	
Na	23	2	45	2437.337	ppb	2437.337	1.93	294607	400000	
Mg	24	2	45	228927.138	ppb	228927.138	0.88	11388077	400000	
Al	27	2	45	322389.243	ppb	322389.243	0.86	4409305	400000	
K	39	1	45	136385.183	ppb	136385.183	1.43	199094350	400000	
K	39	2	45	124155.004	ppb	124155.004	0.50	3193044	400000	
Ca	40	1	45	75669.243	ppb	75669.243	0.35	165155838	400000	
Ca	44	2	45	77611.695	ppb	77611.695	1.34	111847	400000	
Ti	47	2	45	13818.509	ppb	13818.509	0.86	167972	4000	
V	51	2	72	1109.499	ppb	1109.499	0.47	490404	2000	
Cr	52	2	72	2720.550	ppb	2720.550	0.72	1554232	5000	
Mn	55	2	72	19875.347	ppb	19875.347	0.14	4714301	10000	
Fe	57	2	72	940671.601	ppb	940671.601	0.44	10446202	400000	
Co	59	2	72	603.418	ppb	603.418	0.46	596426	2000	
Ni	60	2	72	3252.111	ppb	3252.111	0.27	901063	5000	
Cu	63	2	72	1176.599	ppb	1176.599	0.17	904884	5000	
Zn	66	2	72	1437.944	ppb	1437.944	0.18	150496	5000	
As	75	2	72	545.199	ppb	545.199	1.62	37772	2000	
Se	78	1	72	6.075	ppb	6.075	15.45	629	2000	
Sr	88	2	72	932.367	ppb	932.367	1.06	242218	4000	
Zr	90	2	72	6938.755	ppb	6938.755	1.71	18603	1000	>LDR
Nb	93	2	72	16.685	ppb	16.685	4.12	23177	200	
Mo	95	2	115	30.205	ppb	30.205	5.54	12496	2000	
Pd	105	2	115	0.379	ppb	0.379	22.70	253	100	
Ag	107	2	115	12.348	ppb	12.348	2.92	17058	100	
Cd	111	2	115	9.604	ppb	9.604	3.72	1794	2000	
Sn	120	2	115	11.336	ppb	11.336	2.23	5985	2000	
Sb	121	2	115	37.450	ppb	37.450	4.53	16931	1000	
Ba	137	2	115	4129.472	ppb	4129.472	1.54	662119	5000	
W	182	2	165	34.622	ppb	34.622	0.27	81968	100	
Pt	195	2	165	0.018	ppb	0.018	122.65	67	100	
Tl	205	2	165	8.414	ppb	8.414	1.26	38554	2000	
Pb	208	2	165	532.661	ppb	532.661	0.46	3236223	5000	
Th	232	2	165	163.204	ppb	163.204	0.85	1206207	2000	
U	238	2	165	22.912	ppb	22.912	1.37	184054	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	260433	1.34	549626	47.38	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11848700	0.71	22416142	52.86	60	120	IS Failed
Sc (IS)	45	2	HMI He	467219	0.72	833519	56.05	60	120	IS Failed
Sc (IS)	45	3	No Gas	20353315	0.27	37013496	54.99	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4346509	0.33	8765589	49.59	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	489005	0.26	961800	50.84	60	120	IS Failed
In Internal Standard	115	2	HMI He	1758700	1.41	3323973	52.91	60	120	IS Failed
Ho-165	165	2	HMI He	9820929	0.16	16978678	57.84	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-3-D
Data File Name	304SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:45:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	286.202	ppb	286.202	2.61	76343	500000	
Li	7	2	45	337.121	ppb	337.121	11.18	4364	500000	
Li	7	3	45	318.384	ppb	318.384	3.80	2535722	50000	
Be	9	1	6	23.636	ppb	23.636	4.98	2764	2000	
B	11	1	6	57.920	ppb	57.920	5.43	7329	2000	
Na	23	1	45	2756.978	ppb	2756.978	1.43	4163186	2000	
Na	23	2	45	2576.373	ppb	2576.373	1.51	293894	400000	
Mg	24	2	45	223283.906	ppb	223283.906	1.02	10533885	400000	
Al	27	2	45	317526.912	ppb	317526.912	0.49	4118734	400000	
K	39	1	45	125553.211	ppb	125553.211	0.65	179579091	400000	
K	39	2	45	115323.765	ppb	115323.765	0.78	2813123	400000	
Ca	40	1	45	59022.298	ppb	59022.298	0.52	126010988	400000	
Ca	44	2	45	60654.149	ppb	60654.149	0.90	82912	400000	
Ti	47	2	45	13840.068	ppb	13840.068	0.50	159548	4000	
V	51	2	72	1157.829	ppb	1157.829	0.33	481981	2000	
Cr	52	2	72	2661.999	ppb	2661.999	1.59	1432246	5000	
Mn	55	2	72	19673.901	ppb	19673.901	1.20	4395040	10000	
Fe	57	2	72	1046593.869	ppb	1046593.869	0.12	10946969	400000	
Co	59	2	72	592.809	ppb	592.809	1.50	551834	2000	
Ni	60	2	72	3233.101	ppb	3233.101	0.52	843702	5000	
Cu	63	2	72	1216.701	ppb	1216.701	0.67	881288	5000	
Zn	66	2	72	1354.877	ppb	1354.877	0.97	133562	5000	
As	75	2	72	562.032	ppb	562.032	0.72	36675	2000	
Se	78	1	72	7.696	ppb	7.696	2.75	764	2000	
Sr	88	2	72	929.877	ppb	929.877	0.48	227532	4000	
Zr	90	2	72	8215.726	ppb	8215.726	2.69	20736	1000	>LDR
Nb	93	2	72	12.175	ppb	12.175	4.23	16050	200	
Mo	95	2	115	33.952	ppb	33.952	2.82	13183	2000	
Pd	105	2	115	0.269	ppb	0.269	5.68	170	100	
Ag	107	2	115	8.628	ppb	8.628	1.90	11188	100	
Cd	111	2	115	8.476	ppb	8.476	3.14	1487	2000	
Sn	120	2	115	13.370	ppb	13.370	7.40	6615	2000	
Sb	121	2	115	40.325	ppb	40.325	5.03	17115	1000	
Ba	137	2	115	4115.256	ppb	4115.256	1.33	619422	5000	
W	182	2	165	33.586	ppb	33.586	1.66	76559	100	
Pt	195	2	165	0.028	ppb	0.028	99.30	83	100	
Tl	205	2	165	8.308	ppb	8.308	1.90	36645	2000	
Pb	208	2	165	537.134	ppb	537.134	0.42	3141192	5000	
Th	232	2	165	176.724	ppb	176.724	0.90	1257214	2000	
U	238	2	165	23.570	ppb	23.570	1.68	182243	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	247381	1.14	549626	45.01	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11588985	0.84	22416142	51.70	60	120	IS Failed
Sc (IS)	45	2	HMI He	443090	0.84	833519	53.16	60	120	IS Failed
Sc (IS)	45	3	No Gas	20010375	0.56	37013496	54.06	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4179581	0.91	8765589	47.68	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	460580	0.88	961800	47.89	60	120	IS Failed
In Internal Standard	115	2	HMI He	1650816	0.59	3323973	49.66	60	120	IS Failed
Ho-165	165	2	HMI He	9453276	0.27	16978678	55.68	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-4-D
Data File Name	305SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:49:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	305.392	ppb	305.392	4.67	75423	500000	
Li	7	2	45	340.354	ppb	340.354	15.35	4181	500000	
Li	7	3	45	300.667	ppb	300.667	4.58	2376546	50000	
Be	9	1	6	23.385	ppb	23.385	7.41	2587	2000	
B	11	1	6	56.766	ppb	56.766	7.56	6802	2000	
Na	23	1	45	2870.144	ppb	2870.144	0.89	4149445	2000	
Na	23	2	45	2696.158	ppb	2696.158	0.82	292245	400000	
Mg	24	2	45	234867.027	ppb	234867.027	0.79	10568093	400000	
Al	27	2	45	330856.684	ppb	330856.684	0.75	4093069	400000	
K	39	1	45	130024.824	ppb	130024.824	0.54	178515877	400000	
K	39	2	45	119121.013	ppb	119121.013	0.62	2771309	400000	
Ca	40	1	45	61104.075	ppb	61104.075	0.25	125311661	400000	
Ca	44	2	45	62910.402	ppb	62910.402	2.22	82019	400000	
Ti	47	2	45	13964.893	ppb	13964.893	1.74	153547	4000	
V	51	2	72	1184.496	ppb	1184.496	1.35	476196	2000	
Cr	52	2	72	2830.316	ppb	2830.316	0.41	1470909	5000	
Mn	55	2	72	19902.773	ppb	19902.773	0.85	4294343	10000	
Fe	57	2	72	1030054.201	ppb	1030054.201	1.48	10405064	400000	
Co	59	2	72	642.649	ppb	642.649	1.44	577797	2000	
Ni	60	2	72	3533.862	ppb	3533.862	1.19	890651	5000	
Cu	63	2	72	1275.800	ppb	1275.800	1.22	892480	5000	
Zn	66	2	72	1357.536	ppb	1357.536	2.57	129240	5000	
As	75	2	72	587.965	ppb	587.965	1.27	37055	2000	
Se	78	1	72	5.989	ppb	5.989	15.30	579	2000	
Sr	88	2	72	914.617	ppb	914.617	0.29	216156	4000	
Zr	90	2	72	7543.116	ppb	7543.116	1.64	18396	1000	>LDR
Nb	93	2	72	11.698	ppb	11.698	0.75	14908	200	
Mo	95	2	115	32.405	ppb	32.405	3.67	12196	2000	
Pd	105	2	115	0.362	ppb	0.362	8.74	220	100	
Ag	107	2	115	8.316	ppb	8.316	5.61	10451	100	
Cd	111	2	115	7.819	ppb	7.819	7.79	1330	2000	
Sn	120	2	115	11.008	ppb	11.008	3.16	5291	2000	
Sb	121	2	115	31.062	ppb	31.062	1.48	12787	1000	
Ba	137	2	115	4223.971	ppb	4223.971	0.21	616329	5000	
W	182	2	165	32.524	ppb	32.524	0.80	73019	100	
Pt	195	2	165	0.027	ppb	0.027	73.24	80	100	
Tl	205	2	165	8.937	ppb	8.937	2.72	38805	2000	
Pb	208	2	165	456.900	ppb	456.900	0.55	2630991	5000	
Th	232	2	165	183.072	ppb	183.072	0.26	1282383	2000	
U	238	2	165	24.663	ppb	24.663	0.40	187766	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	233855	1.02	549626	42.55	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11132053	0.21	22416142	49.66	60	120	IS Failed
Sc (IS)	45	2	HMI He	422604	0.42	833519	50.70	60	120	IS Failed
Sc (IS)	45	3	No Gas	19230738	0.26	37013496	51.96	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4050504	0.78	8765589	46.21	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	444856	1.05	961800	46.25	60	120	IS Failed
In Internal Standard	115	2	HMI He	1600234	0.91	3323973	48.14	60	120	IS Failed
Ho-165	165	2	HMI He	9308031	0.32	16978678	54.82	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-15-D@10
Data File Name	306SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:53:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-22.167	ppb	-22.167	-19.06	40612	500000	
Li	7	2	45	5.318	ppb	5.318	932.62	2347	500000	
Li	7	3	45	-10.076	ppb	-10.076	-56.48	1281842	50000	
Be	9	1	6	1.195	ppb	1.195	4.96	140	2000	
B	11	1	6	6.345	ppb	6.345	27.27	1433	2000	
Na	23	1	45	127.098	ppb	127.098	9.01	519725	2000	
Na	23	2	45	144.275	ppb	144.275	6.20	39534	400000	
Mg	24	2	45	55745.288	ppb	55745.288	0.58	2585582	400000	
Al	27	2	45	25221.991	ppb	25221.991	1.67	321615	400000	
K	39	1	45	10366.847	ppb	10366.847	3.36	18038117	400000	
K	39	2	45	8873.645	ppb	8873.645	1.42	218090	400000	
Ca	40	1	45	104475.999	ppb	104475.999	4.25	218382923	400000	
Ca	44	2	45	107481.634	ppb	107481.634	1.98	144383	400000	
Ti	47	2	45	1233.767	ppb	1233.767	1.33	13981	4000	
V	51	2	72	87.019	ppb	87.019	3.05	38709	2000	
Cr	52	2	72	118.327	ppb	118.327	1.11	66887	5000	
Mn	55	2	72	1301.256	ppb	1301.256	0.98	305010	10000	
Fe	57	2	72	75368.002	ppb	75368.002	0.60	827041	400000	
Co	59	2	72	32.265	ppb	32.265	1.17	31532	2000	
Ni	60	2	72	117.582	ppb	117.582	0.77	32274	5000	
Cu	63	2	72	1636.902	ppb	1636.902	0.87	1243618	5000	
Zn	66	2	72	987.807	ppb	987.807	0.71	102204	5000	
As	75	2	72	232.980	ppb	232.980	2.41	15953	2000	
Se	78	1	72	0.648	ppb	0.648	11.47	76	2000	
Sr	88	2	72	165.714	ppb	165.714	1.43	42568	4000	
Zr	90	2	72	582.210	ppb	582.210	3.29	1583	1000	
Nb	93	2	72	1.757	ppb	1.757	5.39	2820	200	
Mo	95	2	115	3.744	ppb	3.744	12.37	1567	2000	
Pd	105	2	115	-0.008	ppb	-0.008	0.00	0	100	
Ag	107	2	115	133.498	ppb	133.498	0.69	184446	100	
Cd	111	2	115	19.436	ppb	19.436	3.74	3631	2000	
Sn	120	2	115	21.209	ppb	21.209	1.34	11142	2000	
Sb	121	2	115	281.306	ppb	281.306	1.22	127189	1000	
Ba	137	2	115	347.419	ppb	347.419	2.45	55774	5000	
W	182	2	165	230.332	ppb	230.332	0.58	545528	100	
Pt	195	2	165	0.000	ppb	0.000	1432.19	33	100	
Tl	205	2	165	0.532	ppb	0.532	6.43	2557	2000	
Pb	208	2	165	2309.016	ppb	2309.016	0.58	14127787	5000	
Th	232	2	165	8.214	ppb	8.214	0.94	61356	2000	
U	238	2	165	1.314	ppb	1.314	4.65	10742	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	240333	2.94	549626	43.73	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11354223	1.81	22416142	50.65	60	120	IS Failed
Sc (IS)	45	2	HMI He	435547	0.32	833519	52.25	60	120	IS Failed
Sc (IS)	45	3	No Gas	18723175	0.77	37013496	50.58	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4314434	1.64	8765589	49.22	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	483166	0.80	961800	50.24	60	120	IS Failed
In Internal Standard	115	2	HMI He	1760446	0.86	3323973	52.96	60	120	IS Failed
Ho-165	165	2	HMI He	9891909	0.80	16978678	58.26	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-B-16-D@10
Data File Name	307SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T05:57:08-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-18.529	ppb	-18.529	-29.43	40723	500000	
Li	7	2	45	-4.003	ppb	-4.003	-1349.89	2337	500000	
Li	7	3	45	-5.672	ppb	-5.672	-224.20	1280021	50000	
Be	9	1	6	0.954	ppb	0.954	45.49	113	2000	
B	11	1	6	4.915	ppb	4.915	36.80	1287	2000	
Na	23	1	45	116.113	ppb	116.113	2.06	501504	2000	
Na	23	2	45	118.185	ppb	118.185	8.25	37565	400000	
Mg	24	2	45	52753.795	ppb	52753.795	4.64	2493053	400000	
Al	27	2	45	22185.838	ppb	22185.838	4.15	288276	400000	
K	39	1	45	9444.959	ppb	9444.959	0.42	16662478	400000	
K	39	2	45	7719.541	ppb	7719.541	3.49	194113	400000	
Ca	40	1	45	102946.615	ppb	102946.615	0.21	213788623	400000	
Ca	44	2	45	103132.737	ppb	103132.737	4.49	141166	400000	
Ti	47	2	45	1056.640	ppb	1056.640	3.33	12202	4000	
V	51	2	72	76.442	ppb	76.442	3.15	35027	2000	
Cr	52	2	72	122.108	ppb	122.108	2.69	70905	5000	
Mn	55	2	72	1192.372	ppb	1192.372	3.38	287091	10000	
Fe	57	2	72	68781.337	ppb	68781.337	3.47	775277	400000	
Co	59	2	72	29.713	ppb	29.713	4.49	29829	2000	
Ni	60	2	72	103.975	ppb	103.975	2.15	29335	5000	
Cu	63	2	72	1388.757	ppb	1388.757	5.91	1083570	5000	
Zn	66	2	72	822.141	ppb	822.141	3.07	87404	5000	
As	75	2	72	231.229	ppb	231.229	2.94	16267	2000	
Se	78	1	72	0.692	ppb	0.692	9.34	81	2000	
Sr	88	2	72	155.196	ppb	155.196	7.32	40931	4000	
Zr	90	2	72	518.275	ppb	518.275	2.02	1453	1000	
Nb	93	2	72	1.368	ppb	1.368	14.63	2360	200	
Mo	95	2	115	4.730	ppb	4.730	0.93	2027	2000	
Pd	105	2	115	0.011	ppb	0.011	193.72	13	100	
Ag	107	2	115	122.450	ppb	122.450	5.59	173472	100	
Cd	111	2	115	19.706	ppb	19.706	3.90	3777	2000	
Sn	120	2	115	20.324	ppb	20.324	7.86	10948	2000	
Sb	121	2	115	290.227	ppb	290.227	5.75	134549	1000	
Ba	137	2	115	279.011	ppb	279.011	5.06	45938	5000	
W	182	2	165	197.377	ppb	197.377	3.13	472610	100	
Pt	195	2	165	-0.007	ppb	-0.007	-3.53	20	100	
Tl	205	2	165	0.486	ppb	0.486	4.62	2370	2000	
Pb	208	2	165	2796.784	ppb	2796.784	3.23	17296098	5000	
Th	232	2	165	7.277	ppb	7.277	6.22	54952	2000	
U	238	2	165	1.313	ppb	1.313	5.67	10845	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	242109	0.71	549626	44.05	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11274669	0.31	22416142	50.30	60	120	IS Failed
Sc (IS)	45	2	HMI He	444074	2.25	833519	53.28	60	120	IS Failed
Sc (IS)	45	3	No Gas	18486178	0.33	37013496	49.94	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4360276	0.82	8765589	49.74	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	496475	1.66	961800	51.62	60	120	IS Failed
In Internal Standard	115	2	HMI He	1807556	3.77	3323973	54.38	60	120	IS Failed
Ho-165	165	2	HMI He	10002905	2.32	16978678	58.91	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-17-D@10
Data File Name	308SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:00:56-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-18.583	ppb	-18.583	-38.97	40526	500000	
Li	7	2	45	10.858	ppb	10.858	511.64	2520	500000	
Li	7	3	45	-13.529	ppb	-13.529	-50.15	1286621	50000	
Be	9	1	6	1.338	ppb	1.338	29.07	157	2000	
B	11	1	6	6.619	ppb	6.619	19.26	1467	2000	
Na	23	1	45	116.700	ppb	116.700	0.49	499924	2000	
Na	23	2	45	107.091	ppb	107.091	5.95	37819	400000	
Mg	24	2	45	54714.603	ppb	54714.603	1.40	2686843	400000	
Al	27	2	45	21986.671	ppb	21986.671	0.22	296854	400000	
K	39	1	45	9674.723	ppb	9674.723	0.52	16895111	400000	
K	39	2	45	7848.328	ppb	7848.328	1.02	204932	400000	
Ca	40	1	45	113115.925	ppb	113115.925	0.62	233792937	400000	
Ca	44	2	45	110975.812	ppb	110975.812	1.02	157839	400000	
Ti	47	2	45	1009.711	ppb	1009.711	3.14	12116	4000	
V	51	2	72	73.498	ppb	73.498	1.38	34739	2000	
Cr	52	2	72	114.091	ppb	114.091	1.54	68277	5000	
Mn	55	2	72	1241.512	ppb	1241.512	0.43	308065	10000	
Fe	57	2	72	66677.406	ppb	66677.406	0.67	774581	400000	
Co	59	2	72	29.938	ppb	29.938	1.03	30977	2000	
Ni	60	2	72	106.312	ppb	106.312	2.08	30901	5000	
Cu	63	2	72	1311.629	ppb	1311.629	0.79	1055042	5000	
Zn	66	2	72	1094.685	ppb	1094.685	1.49	119877	5000	
As	75	2	72	240.485	ppb	240.485	1.23	17434	2000	
Se	78	1	72	0.677	ppb	0.677	27.85	79	2000	
Sr	88	2	72	173.897	ppb	173.897	4.16	47280	4000	
Zr	90	2	72	370.219	ppb	370.219	4.25	1083	1000	
Nb	93	2	72	1.177	ppb	1.177	5.92	2160	200	
Mo	95	2	115	5.703	ppb	5.703	5.64	2517	2000	
Pd	105	2	115	0.031	ppb	0.031	54.73	27	100	
Ag	107	2	115	117.421	ppb	117.421	2.27	171843	100	
Cd	111	2	115	25.600	ppb	25.600	2.00	5064	2000	
Sn	120	2	115	9.908	ppb	9.908	2.49	5558	2000	
Sb	121	2	115	246.070	ppb	246.070	0.07	117861	1000	
Ba	137	2	115	294.196	ppb	294.196	1.53	50032	5000	
W	182	2	165	226.299	ppb	226.299	0.13	554553	100	
Pt	195	2	165	0.016	ppb	0.016	46.59	67	100	
Tl	205	2	165	0.463	ppb	0.463	4.53	2314	2000	
Pb	208	2	165	2771.717	ppb	2771.717	0.31	17546218	5000	
Th	232	2	165	6.990	ppb	6.990	0.71	54047	2000	
U	238	2	165	1.417	ppb	1.417	3.87	11973	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	240844	0.89	549626	43.82	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11221417	0.04	22416142	50.06	60	120	IS Failed
Sc (IS)	45	2	HMI He	461143	0.44	833519	55.32	60	120	IS Failed
Sc (IS)	45	3	No Gas	18964265	0.29	37013496	51.24	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4297361	0.78	8765589	49.03	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	511489	0.40	961800	53.18	60	120	IS Failed
In Internal Standard	115	2	HMI He	1864759	0.49	3323973	56.10	60	120	IS Failed
Ho-165	165	2	HMI He	10234289	0.72	16978678	60.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	309_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:04:43-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	416.843	ppb	1.234	94012	500	83.4	90	110	>+\-10%
Li	7	2	45	404.046	ppb	5.625	5211	500	80.8	90	110	>+\-10%
Li	7	3	45	459.581	ppb	2.734	2966091	500	91.9	90	110	
Be	9	1	6	51.646	ppb	5.975	6292	50	103.3	90	110	
B	11	1	6	45.257	ppb	3.466	6142	50	90.5	90	110	
Na	23	1	45	5138.911	ppb	1.185	7689497	5000	102.8	90	110	
Na	23	2	45	4703.373	ppb	1.203	564210	5000	94.1	90	110	
Mg	24	2	45	5045.658	ppb	1.139	260985	5000	100.9	90	110	
Al	27	2	45	5285.772	ppb	0.769	75047	5000	105.7	90	110	
K	39	1	45	5684.672	ppb	0.442	12240871	5000	113.7	90	110	>+\-10%
K	39	2	45	5275.595	ppb	2.170	146883	5000	105.5	90	110	
Ca	40	1	45	5197.342	ppb	0.239	11501441	5000	103.9	90	110	
Ca	44	2	45	5134.591	ppb	5.702	7712	5000	102.7	90	110	
Ti	47	2	45	46.727	ppb	23.165	590	50	93.5	90	110	
V	51	2	72	49.903	ppb	2.136	25467	50	99.8	90	110	
Cr	52	2	72	50.108	ppb	1.836	32090	50	100.2	90	110	
Mn	55	2	72	54.810	ppb	4.276	14578	50	109.6	90	110	
Fe	57	2	72	5048.904	ppb	2.481	62723	5000	101.0	90	110	
Co	59	2	72	49.983	ppb	1.632	55213	50	100.0	90	110	
Ni	60	2	72	50.685	ppb	1.612	15786	50	101.4	90	110	
Cu	63	2	72	49.749	ppb	1.013	43226	50	99.5	90	110	
Zn	66	2	72	53.357	ppb	4.054	6415	50	106.7	90	110	
As	75	2	72	48.872	ppb	5.469	3793	50	97.7	90	110	
Se	78	1	72	50.028	ppb	2.882	5461	50	100.1	90	110	
Sr	88	2	72	52.606	ppb	3.313	15302	50	105.2	90	110	
Zr	90	2	72	159.289	ppb	35.591	527	50	318.6	90	110	>+\-10%
Nb	93	2	72	90.248	ppb	2.034	137763	100	90.2	90	110	
Mo	95	2	115	46.041	ppb	1.785	22078	50	92.1	90	110	
Pd	105	2	115	47.912	ppb	0.287	36378	50	95.8	90	110	
Ag	107	2	115	47.701	ppb	2.324	76357	50	95.4	90	110	
Cd	111	2	115	49.005	ppb	3.740	10598	50	98.0	90	110	
Sn	120	2	115	47.951	ppb	1.020	29065	50	95.9	90	110	
Sb	121	2	115	49.458	ppb	3.992	25929	50	98.9	90	110	
Ba	137	2	115	47.868	ppb	2.792	8913	50	95.7	90	110	
W	182	2	165	49.743	ppb	1.262	128446	50	99.5	90	110	
Pt	195	2	165	48.848	ppb	1.696	101912	50	97.7	90	110	
Tl	205	2	165	51.439	ppb	1.558	257101	50	102.9	90	110	
Pb	208	2	165	51.953	ppb	1.312	345600	50	103.9	90	110	
Th	232	2	165	51.726	ppb	1.007	418140	50	103.5	90	110	
U	238	2	165	52.264	ppb	0.923	458847	50	104.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	257882	0.24	549626	46.92	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11955574	0.49	22416142	53.33	60	120	IS Failed
Sc (IS)	45	2	HMI He	484720	0.87	833519	58.15	60	120	IS Failed
Sc (IS)	45	3	No Gas	19543243	0.37	37013496	52.80	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4648464	0.54	8765589	53.03	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	546244	0.26	961800	56.79	60	120	IS Failed
In Internal Standard	115	2	HMI He	2039317	0.33	3323973	61.35	60	120	
Ho-165	165	2	HMI He	10737802	0.56	16978678	63.24	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	310_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:08:30-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-29.701	ppb	-22.1	1300266	10	
Be	9	1	6	0.093	ppb	98.0	17	0.5	
B	11	1	6	-0.947	ppb	-198.6	703	0.5	
Na	23	1	45	-90.206	ppb	-0.7	243601	25	
Na	23	2	45	-78.903	ppb	-10.7	18809	25	
Mg	24	2	45	9.747	ppb	25.9	1120	25	
Al	27	2	45	8.750	ppb	16.1	173	15	
K	39	1	45	603.238	ppb	7.5	5026191	50	>RL
K	39	2	45	104.698	ppb	11.3	9337	50	>RL
Ca	40	1	45	1.192	ppb	13.7	63512	50	
Ca	44	2	45	10.694	ppb	198.8	53	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.112	ppb	17.4	1430	1	>RL
Cr	52	2	72	0.113	ppb	47.2	190	1	
Mn	55	2	72	2.298	ppb	23.7	673	0.5	>RL
Fe	57	2	72	58.327	ppb	4.5	827	25	>RL
Co	59	2	72	0.127	ppb	19.1	170	0.5	
Ni	60	2	72	0.348	ppb	32.6	210	1	
Cu	63	2	72	0.332	ppb	36.8	803	1	
Zn	66	2	72	0.290	ppb	202.1	220	5	
As	75	2	72	0.110	ppb	93.3	20	1	
Se	78	1	72	-0.021	ppb	-360.0	9	1	
Sr	88	2	72	0.073	ppb	121.6	60	0.5	
Zr	90	2	72	2.733	ppb	237.2	60	1	>RL
Nb	93	2	72	4.417	ppb	12.3	7306	2	>RL
Mo	95	2	115	0.100	ppb	39.9	70	0.5	
Pd	105	2	115	0.065	ppb	28.9	57	1	
Ag	107	2	115	0.013	ppb	154.9	33	1	
Cd	111	2	115	-0.019	ppb	0.0	0	0.5	
Sn	120	2	115	0.138	ppb	75.0	180	1	
Sb	121	2	115	0.576	ppb	33.9	340	0.6	
Ba	137	2	115	0.197	ppb	48.8	50	0.5	
W	182	2	165	0.353	ppb	3.3	1617	1	
Pt	195	2	165	-0.004	ppb	-123.1	27	1	
Tl	205	2	165	0.010	ppb	53.6	167	0.1	
Pb	208	2	165	0.182	ppb	29.3	1760	0.5	
Th	232	2	165	0.049	ppb	13.3	633	1	
U	238	2	165	0.061	ppb	13.9	667	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	268392	0.29	549626	48.83	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12248148	0.06	22416142	54.64	60	120	IS Failed
Sc (IS)	45	2	HMI He	492055	0.73	833519	59.03	60	120	IS Failed
Sc (IS)	45	3	No Gas	20010655	0.85	37013496	54.06	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4755139	0.65	8765589	54.25	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	551878	0.98	961800	57.38	60	120	IS Failed
In Internal Standard	115	2	HMI He	2090163	1.72	3323973	62.88	60	120	
Ho-165	165	2	HMI He	10725535	2.45	16978678	63.17	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-18-D@50
Data File Name	311SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:12:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-29.065	ppb	-29.065	-11.68	42758	500000	
Li	7	2	45	-29.856	ppb	-29.856	-13.90	2430	500000	
Li	7	3	45	-18.099	ppb	-18.099	-83.10	1321070	50000	
Be	9	1	6	0.462	ppb	0.462	51.14	63	2000	
B	11	1	6	-1.209	ppb	-1.209	-113.22	667	2000	
Na	23	1	45	-39.366	ppb	-39.366	-3.43	316189	2000	
Na	23	2	45	-36.925	ppb	-36.925	-9.30	23783	400000	
Mg	24	2	45	9882.638	ppb	9882.638	0.31	520772	400000	
Al	27	2	45	4475.264	ppb	4475.264	1.20	64812	400000	
K	39	1	45	2232.892	ppb	2232.892	0.66	7397955	400000	
K	39	2	45	1636.347	ppb	1636.347	3.15	50976	400000	
Ca	40	1	45	20676.284	ppb	20676.284	0.45	46454424	400000	
Ca	44	2	45	20597.767	ppb	20597.767	2.76	31438	400000	
Ti	47	2	45	227.306	ppb	227.306	4.89	2924	4000	
V	51	2	72	16.055	ppb	16.055	3.62	9037	2000	
Cr	52	2	72	23.051	ppb	23.051	3.05	15255	5000	
Mn	55	2	72	245.041	ppb	245.041	0.65	66874	10000	
Fe	57	2	72	14382.845	ppb	14382.845	0.31	183708	400000	
Co	59	2	72	6.502	ppb	6.502	5.26	7416	2000	
Ni	60	2	72	21.523	ppb	21.523	4.88	6959	5000	
Cu	63	2	72	365.284	ppb	365.284	0.87	323300	5000	
Zn	66	2	72	186.750	ppb	186.750	3.25	22632	5000	
As	75	2	72	47.589	ppb	47.589	2.07	3801	2000	
Se	78	1	72	0.041	ppb	0.041	177.72	16	2000	
Sr	88	2	72	33.890	ppb	33.890	5.17	10157	4000	
Zr	90	2	72	128.156	ppb	128.156	14.17	447	1000	
Nb	93	2	72	2.440	ppb	2.440	7.29	4351	200	
Mo	95	2	115	1.859	ppb	1.859	6.86	927	2000	
Pd	105	2	115	0.035	ppb	0.035	85.55	33	100	
Ag	107	2	115	25.156	ppb	25.156	1.46	40981	100	
Cd	111	2	115	4.503	ppb	4.503	18.89	993	2000	
Sn	120	2	115	2.690	ppb	2.690	10.31	1747	2000	
Sb	121	2	115	60.196	ppb	60.196	1.77	32111	1000	
Ba	137	2	115	65.062	ppb	65.062	1.77	12323	5000	
W	182	2	165	57.410	ppb	57.410	2.15	151877	100	
Pt	195	2	165	-0.012	ppb	-0.012	-65.30	10	100	
Tl	205	2	165	0.100	ppb	0.100	11.79	630	2000	
Pb	208	2	165	612.565	ppb	612.565	0.65	4171837	5000	
Th	232	2	165	1.586	ppb	1.586	4.18	13374	2000	
U	238	2	165	0.365	ppb	0.365	2.60	3417	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	266795	1.42	549626	48.54	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12185408	0.60	22416142	54.36	60	120	IS Failed
Sc (IS)	45	2	HMI He	494356	0.57	833519	59.31	60	120	IS Failed
Sc (IS)	45	3	No Gas	19707854	0.37	37013496	53.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4711744	0.91	8765589	53.75	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	562142	0.44	961800	58.45	60	120	IS Failed
In Internal Standard	115	2	HMI He	2075402	1.24	3323973	62.44	60	120	
Ho-165	165	2	HMI He	11009139	0.35	16978678	64.84	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-19-C@50
Data File Name	312SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:16:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-40.349	ppb	-40.349	-2.88	41261	500000	
Li	7	2	45	-55.664	ppb	-55.664	-44.97	2280	500000	
Li	7	3	45	-21.586	ppb	-21.586	-64.87	1324433	50000	
Be	9	1	6	0.410	ppb	0.410	67.94	57	2000	
B	11	1	6	-1.963	ppb	-1.963	-5.28	577	2000	
Na	23	1	45	-69.493	ppb	-69.493	-1.69	271420	2000	
Na	23	2	45	-67.702	ppb	-67.702	-10.81	20388	400000	
Mg	24	2	45	12748.825	ppb	12748.825	0.56	677809	400000	
Al	27	2	45	1402.431	ppb	1402.431	2.15	20532	400000	
K	39	1	45	1095.932	ppb	1095.932	3.44	5703598	400000	
K	39	2	45	508.376	ppb	508.376	4.01	20529	400000	
Ca	40	1	45	24670.150	ppb	24670.150	0.59	55207279	400000	
Ca	44	2	45	24499.012	ppb	24499.012	2.96	37730	400000	
Ti	47	2	45	51.605	ppb	51.605	12.70	670	4000	
V	51	2	72	5.407	ppb	5.407	5.38	3644	2000	
Cr	52	2	72	5.000	ppb	5.000	3.87	3411	5000	
Mn	55	2	72	95.765	ppb	95.765	1.61	26231	10000	
Fe	57	2	72	3584.776	ppb	3584.776	0.84	45967	400000	
Co	59	2	72	1.426	ppb	1.426	7.58	1654	2000	
Ni	60	2	72	4.272	ppb	4.272	16.56	1467	5000	
Cu	63	2	72	455.371	ppb	455.371	1.18	403847	5000	
Zn	66	2	72	162.800	ppb	162.800	1.09	19801	5000	
As	75	2	72	70.705	ppb	70.705	3.28	5655	2000	
Se	78	1	72	-0.032	ppb	-0.032	-197.73	8	2000	
Sr	88	2	72	24.356	ppb	24.356	4.62	7329	4000	
Zr	90	2	72	21.823	ppb	21.823	92.76	120	1000	
Nb	93	2	72	1.337	ppb	1.337	11.89	2630	200	
Mo	95	2	115	0.592	ppb	0.592	33.40	313	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-198.25	3	100	
Ag	107	2	115	36.831	ppb	36.831	2.28	60783	100	
Cd	111	2	115	7.445	ppb	7.445	12.45	1664	2000	
Sn	120	2	115	0.265	ppb	0.265	27.15	260	2000	
Sb	121	2	115	138.258	ppb	138.258	0.44	74670	1000	
Ba	137	2	115	36.796	ppb	36.796	2.80	7065	5000	
W	182	2	165	99.375	ppb	99.375	0.34	262984	100	
Pt	195	2	165	0.005	ppb	0.005	154.33	47	100	
Tl	205	2	165	0.035	ppb	0.035	31.59	297	2000	
Pb	208	2	165	363.187	ppb	363.187	0.05	2479479	5000	
Th	232	2	165	0.646	ppb	0.646	5.01	5608	2000	
U	238	2	165	0.236	ppb	0.236	10.65	2260	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	267473	0.59	549626	48.66	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12139571	0.69	22416142	54.16	60	120	IS Failed
Sc (IS)	45	2	HMI He	498911	0.66	833519	59.86	60	120	IS Failed
Sc (IS)	45	3	No Gas	19942975	0.56	37013496	53.88	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4706543	1.00	8765589	53.69	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	563453	0.07	961800	58.58	60	120	IS Failed
In Internal Standard	115	2	HMI He	2102259	0.60	3323973	63.25	60	120	
Ho-165	165	2	HMI He	11034812	0.26	16978678	64.99	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-20-C@50
Data File Name	313SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:19:53-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.094	ppb	-31.094	-17.88	42561	500000	
Li	7	2	45	-36.982	ppb	-36.982	-44.65	2414	500000	
Li	7	3	45	-16.778	ppb	-16.778	-37.79	1329570	50000	
Be	9	1	6	0.171	ppb	0.171	70.10	27	2000	
B	11	1	6	-2.332	ppb	-2.332	-11.28	537	2000	
Na	23	1	45	-72.519	ppb	-72.519	-2.80	268321	2000	
Na	23	2	45	-67.445	ppb	-67.445	-11.91	20492	400000	
Mg	24	2	45	12136.143	ppb	12136.143	0.27	647573	400000	
Al	27	2	45	1168.710	ppb	1168.710	0.79	17177	400000	
K	39	1	45	1046.734	ppb	1046.734	3.26	5658755	400000	
K	39	2	45	426.343	ppb	426.343	4.41	18345	400000	
Ca	40	1	45	23446.799	ppb	23446.799	0.39	52726548	400000	
Ca	44	2	45	23181.997	ppb	23181.997	3.38	35831	400000	
Ti	47	2	45	43.761	ppb	43.761	1.90	570	4000	
V	51	2	72	4.698	ppb	4.698	9.09	3331	2000	
Cr	52	2	72	4.286	ppb	4.286	0.64	2984	5000	
Mn	55	2	72	84.007	ppb	84.007	4.05	23353	10000	
Fe	57	2	72	3040.973	ppb	3040.973	1.26	39579	400000	
Co	59	2	72	0.961	ppb	0.961	13.01	1140	2000	
Ni	60	2	72	3.453	ppb	3.453	12.67	1223	5000	
Cu	63	2	72	414.700	ppb	414.700	0.64	373206	5000	
Zn	66	2	72	145.267	ppb	145.267	1.32	17949	5000	
As	75	2	72	64.595	ppb	64.595	3.07	5243	2000	
Se	78	1	72	-0.009	ppb	-0.009	-836.21	11	2000	
Sr	88	2	72	21.950	ppb	21.950	2.97	6705	4000	
Zr	90	2	72	9.540	ppb	9.540	107.78	83	1000	
Nb	93	2	72	1.028	ppb	1.028	10.46	2177	200	
Mo	95	2	115	0.532	ppb	0.532	13.71	287	2000	
Pd	105	2	115	0.001	ppb	0.001	1344.98	7	100	
Ag	107	2	115	35.506	ppb	35.506	2.55	59172	100	
Cd	111	2	115	7.688	ppb	7.688	16.50	1737	2000	
Sn	120	2	115	0.218	ppb	0.218	22.43	233	2000	
Sb	121	2	115	135.196	ppb	135.196	2.65	73738	1000	
Ba	137	2	115	35.838	ppb	35.838	3.44	6952	5000	
W	182	2	165	81.420	ppb	81.420	0.12	217517	100	
Pt	195	2	165	0.011	ppb	0.011	114.58	60	100	
Tl	205	2	165	0.035	ppb	0.035	4.09	303	2000	
Pb	208	2	165	347.217	ppb	347.217	0.67	2391503	5000	
Th	232	2	165	0.563	ppb	0.563	5.84	4961	2000	
U	238	2	165	0.187	ppb	0.187	14.43	1837	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	270062	0.56	549626	49.14	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12198156	0.36	22416142	54.42	60	120	IS Failed
Sc (IS)	45	2	HMI He	500680	0.44	833519	60.07	60	120	
Sc (IS)	45	3	No Gas	19764136	0.33	37013496	53.40	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4772512	0.20	8765589	54.45	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	571707	0.56	961800	59.44	60	120	IS Failed
In Internal Standard	115	2	HMI He	2123536	1.42	3323973	63.89	60	120	
Ho-165	165	2	HMI He	11133013	0.62	16978678	65.57	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-21-C@50
Data File Name	314SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:23:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.269	ppb	-37.269	-15.14	43548	500000	
Li	7	2	45	-25.315	ppb	-25.315	-160.58	2484	500000	
Li	7	3	45	-10.024	ppb	-10.024	-141.77	1345178	50000	
Be	9	1	6	0.317	ppb	0.317	12.64	47	2000	
B	11	1	6	-2.331	ppb	-2.331	-9.15	553	2000	
Na	23	1	45	-78.786	ppb	-78.786	-14.19	269141	2000	
Na	23	2	45	-69.120	ppb	-69.120	-1.88	20225	400000	
Mg	24	2	45	13040.243	ppb	13040.243	0.46	693419	400000	
Al	27	2	45	1363.440	ppb	1363.440	0.58	19964	400000	
K	39	1	45	872.443	ppb	872.443	26.99	5608859	400000	
K	39	2	45	458.100	ppb	458.100	4.76	19153	400000	
Ca	40	1	45	23423.959	ppb	23423.959	11.55	54579421	400000	
Ca	44	2	45	25220.529	ppb	25220.529	0.66	38846	400000	
Ti	47	2	45	54.687	ppb	54.687	3.30	710	4000	
V	51	2	72	4.936	ppb	4.936	10.19	3431	2000	
Cr	52	2	72	4.803	ppb	4.803	8.49	3307	5000	
Mn	55	2	72	95.251	ppb	95.251	2.67	26295	10000	
Fe	57	2	72	3467.712	ppb	3467.712	2.02	44817	400000	
Co	59	2	72	1.310	ppb	1.310	19.18	1533	2000	
Ni	60	2	72	4.039	ppb	4.039	6.50	1403	5000	
Cu	63	2	72	465.712	ppb	465.712	0.82	416246	5000	
Zn	66	2	72	165.593	ppb	165.593	2.25	20295	5000	
As	75	2	72	73.056	ppb	73.056	0.51	5888	2000	
Se	78	1	72	0.051	ppb	0.051	410.74	17	2000	
Sr	88	2	72	23.503	ppb	23.503	4.32	7129	4000	
Zr	90	2	72	19.391	ppb	19.391	19.64	113	1000	
Nb	93	2	72	0.742	ppb	0.742	14.14	1710	200	
Mo	95	2	115	0.585	ppb	0.585	14.41	313	2000	
Pd	105	2	115	0.013	ppb	0.013	56.60	17	100	
Ag	107	2	115	38.639	ppb	38.639	2.32	64452	100	
Cd	111	2	115	8.981	ppb	8.981	7.35	2027	2000	
Sn	120	2	115	0.298	ppb	0.298	33.98	283	2000	
Sb	121	2	115	146.365	ppb	146.365	2.93	79886	1000	
Ba	137	2	115	37.941	ppb	37.941	5.34	7366	5000	
W	182	2	165	91.881	ppb	91.881	0.76	242685	100	
Pt	195	2	165	0.006	ppb	0.006	454.69	50	100	
Tl	205	2	165	0.061	ppb	0.061	24.72	430	2000	
Pb	208	2	165	379.849	ppb	379.849	0.78	2587655	5000	
Th	232	2	165	0.672	ppb	0.672	3.16	5808	2000	
U	238	2	165	0.204	ppb	0.204	3.73	1970	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	278225	4.15	549626	50.62	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12696923	5.93	22416142	56.64	60	120	IS Failed
Sc (IS)	45	2	HMI He	499002	0.79	833519	59.87	60	120	IS Failed
Sc (IS)	45	3	No Gas	19643511	0.67	37013496	53.07	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4881634	4.88	8765589	55.69	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	567867	0.30	961800	59.04	60	120	IS Failed
In Internal Standard	115	2	HMI He	2125060	1.15	3323973	63.93	60	120	
Ho-165	165	2	HMI He	11011486	0.56	16978678	64.85	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-22-D@50
Data File Name	315SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:27:29-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-22.185	ppb	-22.185	-38.48	42237	500000	
Li	7	2	45	-59.794	ppb	-59.794	-40.85	2260	500000	
Li	7	3	45	-26.045	ppb	-26.045	-39.50	1481783	50000	
Be	9	1	6	0.308	ppb	0.308	15.58	43	2000	
B	11	1	6	-0.843	ppb	-0.843	-91.07	707	2000	
Na	23	1	45	-68.357	ppb	-68.357	-6.24	265642	2000	
Na	23	2	45	-70.944	ppb	-70.944	-5.29	20071	400000	
Mg	24	2	45	12255.337	ppb	12255.337	2.36	653673	400000	
Al	27	2	45	1322.761	ppb	1322.761	3.59	19427	400000	
K	39	1	45	1170.729	ppb	1170.729	4.91	5655843	400000	
K	39	2	45	473.789	ppb	473.789	5.16	19644	400000	
Ca	40	1	45	24746.924	ppb	24746.924	2.65	53874858	400000	
Ca	44	2	45	23373.820	ppb	23373.820	4.73	36106	400000	
Ti	47	2	45	43.533	ppb	43.533	6.44	567	4000	
V	51	2	72	4.883	ppb	4.883	4.22	3407	2000	
Cr	52	2	72	4.990	ppb	4.990	5.31	3434	5000	
Mn	55	2	72	89.356	ppb	89.356	2.78	24695	10000	
Fe	57	2	72	3361.499	ppb	3361.499	1.90	43493	400000	
Co	59	2	72	1.167	ppb	1.167	7.80	1370	2000	
Ni	60	2	72	3.999	ppb	3.999	23.29	1393	5000	
Cu	63	2	72	384.299	ppb	384.299	2.32	343920	5000	
Zn	66	2	72	142.271	ppb	142.271	6.13	17478	5000	
As	75	2	72	63.161	ppb	63.161	0.98	5098	2000	
Se	78	1	72	-0.030	ppb	-0.030	-335.39	8	2000	
Sr	88	2	72	23.146	ppb	23.146	5.34	7029	4000	
Zr	90	2	72	5.363	ppb	5.363	177.04	70	1000	
Nb	93	2	72	0.610	ppb	0.610	3.06	1503	200	
Mo	95	2	115	0.481	ppb	0.481	24.13	263	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-196.44	3	100	
Ag	107	2	115	31.368	ppb	31.368	1.47	52683	100	
Cd	111	2	115	6.624	ppb	6.624	1.81	1507	2000	
Sn	120	2	115	0.268	ppb	0.268	28.18	267	2000	
Sb	121	2	115	129.644	ppb	129.644	2.30	71260	1000	
Ba	137	2	115	30.200	ppb	30.200	1.69	5905	5000	
W	182	2	165	96.716	ppb	96.716	2.17	258477	100	
Pt	195	2	165	-0.013	ppb	-0.013	-63.32	10	100	
Tl	205	2	165	0.027	ppb	0.027	23.45	263	2000	
Pb	208	2	165	315.949	ppb	315.949	2.89	2178011	5000	
Th	232	2	165	0.546	ppb	0.546	4.73	4821	2000	
U	238	2	165	0.188	ppb	0.188	5.45	1847	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	264844	0.53	549626	48.19	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11811821	1.12	22416142	52.69	60	120	IS Failed
Sc (IS)	45	2	HMI He	500570	1.03	833519	60.05	60	120	
Sc (IS)	45	3	No Gas	22582635	1.92	37013496	61.01	60	120	
Ge Internal Standard	72	1	HMI H2	4588267	1.42	8765589	52.34	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	568486	0.68	961800	59.11	60	120	IS Failed
In Internal Standard	115	2	HMI He	2139702	0.79	3323973	64.37	60	120	
Ho-165	165	2	HMI He	11146249	1.97	16978678	65.65	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-23-F@50
Data File Name	316SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:31:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-20.969	ppb	-20.969	-44.77	43287	500000	
Li	7	2	45	-27.892	ppb	-27.892	-65.77	2444	500000	
Li	7	3	45	-18.921	ppb	-18.921	-51.56	1321024	50000	
Be	9	1	6	0.357	ppb	0.357	1.62	50	2000	
B	11	1	6	-0.442	ppb	-0.442	-433.41	763	2000	
Na	23	1	45	-43.913	ppb	-43.913	-11.95	306506	2000	
Na	23	2	45	-38.365	ppb	-38.365	-1.14	23630	400000	
Mg	24	2	45	9816.683	ppb	9816.683	1.32	517540	400000	
Al	27	2	45	5028.063	ppb	5028.063	2.29	72839	400000	
K	39	1	45	2462.392	ppb	2462.392	3.96	7659194	400000	
K	39	2	45	1853.011	ppb	1853.011	2.73	56884	400000	
Ca	40	1	45	22534.874	ppb	22534.874	2.67	50119606	400000	
Ca	44	2	45	22297.041	ppb	22297.041	0.87	34045	400000	
Ti	47	2	45	230.124	ppb	230.124	6.81	2960	4000	
V	51	2	72	15.569	ppb	15.569	1.27	8800	2000	
Cr	52	2	72	15.956	ppb	15.956	4.80	10608	5000	
Mn	55	2	72	240.763	ppb	240.763	0.85	65776	10000	
Fe	57	2	72	12378.989	ppb	12378.989	2.21	158282	400000	
Co	59	2	72	6.058	ppb	6.058	13.32	6915	2000	
Ni	60	2	72	19.318	ppb	19.318	2.35	6262	5000	
Cu	63	2	72	77.086	ppb	77.086	3.28	68704	5000	
Zn	66	2	72	96.948	ppb	96.948	2.60	11852	5000	
As	75	2	72	21.679	ppb	21.679	1.84	1740	2000	
Se	78	1	72	0.114	ppb	0.114	83.86	24	2000	
Sr	88	2	72	36.560	ppb	36.560	1.72	10968	4000	
Zr	90	2	72	60.861	ppb	60.861	33.33	240	1000	
Nb	93	2	72	0.581	ppb	0.581	5.17	1443	200	
Mo	95	2	115	0.586	ppb	0.586	21.63	310	2000	
Pd	105	2	115	0.001	ppb	0.001	1259.61	7	100	
Ag	107	2	115	6.750	ppb	6.750	2.14	11142	100	
Cd	111	2	115	1.417	ppb	1.417	30.03	320	2000	
Sn	120	2	115	0.254	ppb	0.254	18.94	253	2000	
Sb	121	2	115	13.782	ppb	13.782	4.21	7466	1000	
Ba	137	2	115	45.937	ppb	45.937	3.59	8813	5000	
W	182	2	165	20.345	ppb	20.345	5.18	54051	100	
Pt	195	2	165	0.000	ppb	0.000	24535.31	37	100	
Tl	205	2	165	0.089	ppb	0.089	18.29	573	2000	
Pb	208	2	165	550.301	ppb	550.301	0.98	3731309	5000	
Th	232	2	165	1.495	ppb	1.495	3.51	12567	2000	
U	238	2	165	0.237	ppb	0.237	18.43	2254	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	268075	1.47	549626	48.77	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12068089	2.11	22416142	53.84	60	120	IS Failed
Sc (IS)	45	2	HMI He	494636	1.31	833519	59.34	60	120	IS Failed
Sc (IS)	45	3	No Gas	19750638	0.44	37013496	53.36	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4700237	0.71	8765589	53.62	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	562764	0.85	961800	58.51	60	120	IS Failed
In Internal Standard	115	2	HMI He	2100992	0.27	3323973	63.21	60	120	
Ho-165	165	2	HMI He	10960738	0.37	16978678	64.56	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-24-F@5
Data File Name	317SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:35:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.457	ppb	15.457	26.02	45032	500000	
Li	7	2	45	25.858	ppb	25.858	70.04	2664	500000	
Li	7	3	45	36.301	ppb	36.301	42.15	1433259	50000	
Be	9	1	6	2.698	ppb	2.698	11.09	323	2000	
B	11	1	6	15.073	ppb	15.073	9.39	2497	2000	
Na	23	1	45	407.057	ppb	407.057	1.76	903821	2000	
Na	23	2	45	367.069	ppb	367.069	2.15	67346	400000	
Mg	24	2	45	98390.549	ppb	98390.549	0.76	4926418	400000	
Al	27	2	45	50625.962	ppb	50625.962	0.69	696914	400000	
K	39	1	45	21050.686	ppb	21050.686	1.18	32872615	400000	
K	39	2	45	17696.611	ppb	17696.611	0.72	463388	400000	
Ca	40	1	45	226691.013	ppb	226691.013	0.82	476680873	400000	
Ca	44	2	45	223557.030	ppb	223557.030	1.78	324180	400000	
Ti	47	2	45	2246.466	ppb	2246.466	1.46	27483	4000	
V	51	2	72	155.203	ppb	155.203	1.56	74018	2000	
Cr	52	2	72	157.902	ppb	157.902	1.95	96509	5000	
Mn	55	2	72	2410.984	ppb	2410.984	0.69	611148	10000	
Fe	57	2	72	135092.410	ppb	135092.410	0.80	1603203	400000	
Co	59	2	72	60.873	ppb	60.873	1.25	64320	2000	
Ni	60	2	72	177.253	ppb	177.253	0.99	52573	5000	
Cu	63	2	72	741.024	ppb	741.024	0.76	609166	5000	
Zn	66	2	72	1165.409	ppb	1165.409	0.61	130378	5000	
As	75	2	72	214.049	ppb	214.049	1.16	15854	2000	
Se	78	1	72	1.299	ppb	1.299	12.68	143	2000	
Sr	88	2	72	376.777	ppb	376.777	0.89	104620	4000	
Zr	90	2	72	595.223	ppb	595.223	6.36	1750	1000	
Nb	93	2	72	2.930	ppb	2.930	14.05	4758	200	
Mo	95	2	115	3.136	ppb	3.136	8.94	1430	2000	
Pd	105	2	115	0.067	ppb	0.067	64.05	53	100	
Ag	107	2	115	65.895	ppb	65.895	0.94	99051	100	
Cd	111	2	115	15.486	ppb	15.486	6.92	3147	2000	
Sn	120	2	115	2.209	ppb	2.209	3.17	1340	2000	
Sb	121	2	115	139.943	ppb	139.943	1.69	68848	1000	
Ba	137	2	115	465.848	ppb	465.848	1.97	81353	5000	
W	182	2	165	228.895	ppb	228.895	0.36	578078	100	
Pt	195	2	165	0.014	ppb	0.014	54.18	63	100	
Tl	205	2	165	1.005	ppb	1.005	4.38	5048	2000	
Pb	208	2	165	4916.736	ppb	4916.736	0.82	32076955	5000	
Th	232	2	165	15.651	ppb	15.651	1.90	124434	2000	
U	238	2	165	2.414	ppb	2.414	2.23	20934	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	250607	1.55	549626	45.60	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11418494	1.00	22416142	50.94	60	120	IS Failed
Sc (IS)	45	2	HMI He	470223	0.42	833519	56.41	60	120	IS Failed
Sc (IS)	45	3	No Gas	18689356	0.20	37013496	50.49	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4340947	0.58	8765589	49.52	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	522560	0.52	961800	54.33	60	120	IS Failed
In Internal Standard	115	2	HMI He	1915074	0.41	3323973	57.61	60	120	IS Failed
Ho-165	165	2	HMI He	10547596	0.39	16978678	62.12	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-25-F@5
Data File Name	318SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:38:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.233	ppb	15.233	92.93	43818	500000	
Li	7	2	45	-36.500	ppb	-36.500	-19.96	2217	500000	
Li	7	3	45	30.888	ppb	30.888	22.49	1432548	50000	
Be	9	1	6	1.953	ppb	1.953	25.93	233	2000	
B	11	1	6	11.934	ppb	11.934	12.12	2114	2000	
Na	23	1	45	294.928	ppb	294.928	2.20	731384	2000	
Na	23	2	45	270.046	ppb	270.046	3.13	55291	400000	
Mg	24	2	45	101348.000	ppb	101348.000	0.76	4956524	400000	
Al	27	2	45	39075.210	ppb	39075.210	0.73	525431	400000	
K	39	1	45	16913.401	ppb	16913.401	0.72	26452012	400000	
K	39	2	45	13520.526	ppb	13520.526	0.60	347242	400000	
Ca	40	1	45	214388.173	ppb	214388.173	0.67	438904793	400000	
Ca	44	2	45	208905.281	ppb	208905.281	0.40	295911	400000	
Ti	47	2	45	1784.679	ppb	1784.679	2.98	21330	4000	
V	51	2	72	124.965	ppb	124.965	0.96	57966	2000	
Cr	52	2	72	132.003	ppb	132.003	0.77	78277	5000	
Mn	55	2	72	1988.514	ppb	1988.514	0.56	488941	10000	
Fe	57	2	72	99671.405	ppb	99671.405	0.70	1147372	400000	
Co	59	2	72	47.676	ppb	47.676	0.78	48870	2000	
Ni	60	2	72	142.686	ppb	142.686	1.53	41066	5000	
Cu	63	2	72	1900.109	ppb	1900.109	0.62	1514443	5000	
Zn	66	2	72	1172.167	ppb	1172.167	2.83	127172	5000	
As	75	2	72	357.583	ppb	357.583	0.98	25686	2000	
Se	78	1	72	0.962	ppb	0.962	13.31	105	2000	
Sr	88	2	72	320.757	ppb	320.757	0.08	86401	4000	
Zr	90	2	72	472.784	ppb	472.784	16.01	1357	1000	
Nb	93	2	72	2.538	ppb	2.538	1.22	4061	200	
Mo	95	2	115	3.888	ppb	3.888	5.35	1714	2000	
Pd	105	2	115	0.016	ppb	0.016	102.43	17	100	
Ag	107	2	115	159.556	ppb	159.556	0.87	232379	100	
Cd	111	2	115	33.235	ppb	33.235	5.18	6542	2000	
Sn	120	2	115	2.400	ppb	2.400	5.53	1403	2000	
Sb	121	2	115	392.605	ppb	392.605	1.49	187103	1000	
Ba	137	2	115	454.790	ppb	454.790	1.24	76966	5000	
W	182	2	165	553.070	ppb	553.070	0.27	1372474	100	>LDR
Pt	195	2	165	0.003	ppb	0.003	818.34	40	100	
Tl	205	2	165	0.805	ppb	0.805	4.60	3997	2000	
Pb	208	2	165	6130.971	ppb	6130.971	0.22	39330747	5000	
Th	232	2	165	12.428	ppb	12.428	2.00	97205	2000	
U	238	2	165	2.286	ppb	2.286	3.85	19502	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	247818	1.01	549626	45.09	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11116362	0.20	22416142	49.59	60	120	IS Failed
Sc (IS)	45	2	HMI He	459304	0.89	833519	55.10	60	120	IS Failed
Sc (IS)	45	3	No Gas	18918611	0.62	37013496	51.11	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4213639	0.19	8765589	48.07	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	506887	1.14	961800	52.70	60	120	IS Failed
In Internal Standard	115	2	HMI He	1855747	1.47	3323973	55.83	60	120	IS Failed
Ho-165	165	2	HMI He	10371196	0.59	16978678	61.08	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-26-F@10
Data File Name	319SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:42:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436751 hot Sb 6020
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-13.784	ppb	-13.784	-21.72	41769	500000	
Li	7	2	45	26.125	ppb	26.125	4.33	2687	500000	
Li	7	3	45	-3.609	ppb	-3.609	-234.28	1338728	50000	
Be	9	1	6	1.168	ppb	1.168	49.79	143	2000	
B	11	1	6	6.652	ppb	6.652	16.14	1540	2000	
Na	23	1	45	107.483	ppb	107.483	1.17	496120	2000	
Na	23	2	45	89.600	ppb	89.600	15.51	36880	400000	
Mg	24	2	45	50529.984	ppb	50529.984	8.16	2544854	400000	
Al	27	2	45	20186.972	ppb	20186.972	7.66	279556	400000	
K	39	1	45	8901.627	ppb	8901.627	0.20	16124756	400000	
K	39	2	45	6942.759	ppb	6942.759	4.12	186880	400000	
Ca	40	1	45	106466.874	ppb	106466.874	0.24	223900557	400000	
Ca	44	2	45	103539.321	ppb	103539.321	5.97	151119	400000	
Ti	47	2	45	990.958	ppb	990.958	8.52	12192	4000	
V	51	2	72	62.695	ppb	62.695	8.09	30878	2000	
Cr	52	2	72	65.441	ppb	65.441	6.48	40709	5000	
Mn	55	2	72	978.535	ppb	978.535	6.07	252107	10000	
Fe	57	2	72	49110.444	ppb	49110.444	7.21	592205	400000	
Co	59	2	72	23.934	ppb	23.934	9.37	25701	2000	
Ni	60	2	72	69.610	ppb	69.610	8.76	21030	5000	
Cu	63	2	72	804.640	ppb	804.640	6.49	672117	5000	
Zn	66	2	72	600.979	ppb	600.979	4.69	68431	5000	
As	75	2	72	155.990	ppb	155.990	3.55	11751	2000	
Se	78	1	72	0.389	ppb	0.389	91.25	51	2000	
Sr	88	2	72	161.472	ppb	161.472	4.78	45599	4000	
Zr	90	2	72	278.663	ppb	278.663	29.87	857	1000	
Nb	93	2	72	1.624	ppb	1.624	9.93	2910	200	
Mo	95	2	115	1.798	ppb	1.798	0.75	850	2000	
Pd	105	2	115	0.019	ppb	0.019	137.97	20	100	
Ag	107	2	115	71.723	ppb	71.723	5.61	110484	100	
Cd	111	2	115	13.169	ppb	13.169	7.14	2744	2000	
Sn	120	2	115	1.274	ppb	1.274	15.63	830	2000	
Sb	121	2	115	174.183	ppb	174.183	6.95	87786	1000	
Ba	137	2	115	209.551	ppb	209.551	5.78	37510	5000	
W	182	2	165	208.434	ppb	208.434	7.18	532974	100	
Pt	195	2	165	-0.001	ppb	-0.001	-2053.35	33	100	
Tl	205	2	165	0.408	ppb	0.408	19.76	2134	2000	
Pb	208	2	165	2663.003	ppb	2663.003	6.08	17594166	5000	
Th	232	2	165	6.417	ppb	6.417	5.32	51816	2000	
U	238	2	165	1.165	ppb	1.165	6.25	10301	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	252169	0.66	549626	45.88	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11417595	0.04	22416142	50.93	60	120	IS Failed
Sc (IS)	45	2	HMI He	473971	4.09	833519	56.86	60	120	IS Failed
Sc (IS)	45	3	No Gas	19232528	0.42	37013496	51.96	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4392313	0.36	8765589	50.11	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	531722	3.16	961800	55.28	60	120	IS Failed
In Internal Standard	115	2	HMI He	1965531	4.00	3323973	59.13	60	120	IS Failed
Ho-165	165	2	HMI He	10698816	4.09	16978678	63.01	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	320_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:46:24-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	433.811	ppb	0.825	95831	500	86.8	90	110	>+\-10%
Li	7	2	45	449.191	ppb	10.571	5555	500	89.8	90	110	>+\-10%
Li	7	3	45	464.307	ppb	3.694	2967406	500	92.9	90	110	
Be	9	1	6	54.064	ppb	3.724	6749	50	108.1	90	110	
B	11	1	6	45.440	ppb	3.287	6315	50	90.9	90	110	
Na	23	1	45	5096.893	ppb	0.759	7616732	5000	101.9	90	110	
Na	23	2	45	4617.850	ppb	1.109	559666	5000	92.4	90	110	
Mg	24	2	45	5000.518	ppb	0.553	261096	5000	100.0	90	110	
Al	27	2	45	5236.913	ppb	0.339	75057	5000	104.7	90	110	
K	39	1	45	5652.525	ppb	0.496	12173719	5000	113.1	90	110	>+\-10%
K	39	2	45	5199.347	ppb	0.989	146233	5000	104.0	90	110	
Ca	40	1	45	5161.082	ppb	0.705	11402064	5000	103.2	90	110	
Ca	44	2	45	5511.654	ppb	0.722	8353	5000	110.2	90	110	>+\-10%
Ti	47	2	45	54.446	ppb	5.368	693	50	108.9	90	110	
V	51	2	72	48.725	ppb	0.653	25330	50	97.5	90	110	
Cr	52	2	72	49.508	ppb	1.967	32270	50	99.0	90	110	
Mn	55	2	72	52.601	ppb	3.295	14244	50	105.2	90	110	
Fe	57	2	72	4885.909	ppb	1.144	61782	5000	97.7	90	110	
Co	59	2	72	48.460	ppb	2.066	54480	50	96.9	90	110	
Ni	60	2	72	48.339	ppb	4.527	15326	50	96.7	90	110	
Cu	63	2	72	49.182	ppb	0.574	43500	50	98.4	90	110	
Zn	66	2	72	54.235	ppb	6.603	6635	50	108.5	90	110	
As	75	2	72	49.513	ppb	2.883	3911	50	99.0	90	110	
Se	78	1	72	48.152	ppb	0.849	5254	50	96.3	90	110	
Sr	88	2	72	53.840	ppb	3.543	15936	50	107.7	90	110	
Zr	90	2	72	78.363	ppb	24.237	290	50	156.7	90	110	>+\-10%
Nb	93	2	72	90.643	ppb	2.013	140819	100	90.6	90	110	
Mo	95	2	115	45.720	ppb	3.478	22469	50	91.4	90	110	
Pd	105	2	115	46.091	ppb	2.920	35860	50	92.2	90	110	
Ag	107	2	115	45.648	ppb	1.283	74872	50	91.3	90	110	
Cd	111	2	115	47.606	ppb	3.135	10551	50	95.2	90	110	
Sn	120	2	115	48.221	ppb	4.517	29953	50	96.4	90	110	
Sb	121	2	115	50.721	ppb	1.757	27248	50	101.4	90	110	
Ba	137	2	115	49.988	ppb	2.411	9537	50	100.0	90	110	
W	182	2	165	49.549	ppb	0.612	130759	50	99.1	90	110	
Pt	195	2	165	47.802	ppb	1.964	101926	50	95.6	90	110	
Tl	205	2	165	51.355	ppb	1.311	262311	50	102.7	90	110	
Pb	208	2	165	51.918	ppb	0.379	352957	50	103.8	90	110	
Th	232	2	165	51.825	ppb	0.172	428139	50	103.6	90	110	
U	238	2	165	52.226	ppb	0.364	468595	50	104.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	264268	0.99	549626	48.08	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11935244	0.49	22416142	53.24	60	120	IS Failed
Sc (IS)	45	2	HMI He	489288	1.20	833519	58.70	60	120	IS Failed
Sc (IS)	45	3	No Gas	19445697	0.74	37013496	52.54	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4645938	0.53	8765589	53.00	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	555970	0.75	961800	57.81	60	120	IS Failed
In Internal Standard	115	2	HMI He	2089722	0.61	3323973	62.87	60	120	
Ho-165	165	2	HMI He	10973414	1.01	16978678	64.63	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	321_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:50:10-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-2.445	ppb	-417.1	1366751	10	
Be	9	1	6	0.013	ppb	335.5	7	0.5	
B	11	1	6	-1.251	ppb	-7.2	673	0.5	
Na	23	1	45	-96.579	ppb	-0.9	228472	25	
Na	23	2	45	-91.957	ppb	-1.5	17314	25	
Mg	24	2	45	5.780	ppb	22.6	913	25	
Al	27	2	45	7.126	ppb	10.6	150	15	
K	39	1	45	587.499	ppb	6.2	4878460	50	>RL
K	39	2	45	81.297	ppb	24.9	8710	50	>RL
Ca	40	1	45	2.593	ppb	40.2	65008	50	
Ca	44	2	45	-2.535	ppb	-297.9	33	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.650	ppb	15.7	1217	1	
Cr	52	2	72	0.114	ppb	56.6	193	1	
Mn	55	2	72	1.432	ppb	13.3	447	0.5	>RL
Fe	57	2	72	52.947	ppb	24.7	770	25	>RL
Co	59	2	72	0.083	ppb	85.7	123	0.5	
Ni	60	2	72	0.203	ppb	100.0	167	1	
Cu	63	2	72	0.459	ppb	36.1	927	1	
Zn	66	2	72	-0.125	ppb	-510.3	173	5	
As	75	2	72	0.049	ppb	134.7	16	1	
Se	78	1	72	-0.043	ppb	-250.8	7	1	
Sr	88	2	72	-0.030	ppb	-189.3	30	0.5	
Zr	90	2	72	7.936	ppb	48.1	77	1	>RL
Nb	93	2	72	4.180	ppb	10.9	7045	2	>RL
Mo	95	2	115	0.083	ppb	116.2	63	0.5	
Pd	105	2	115	0.034	ppb	92.1	33	1	
Ag	107	2	115	0.018	ppb	39.2	43	1	
Cd	111	2	115	0.054	ppb	168.1	17	0.5	
Sn	120	2	115	0.189	ppb	24.9	217	1	
Sb	121	2	115	0.473	ppb	16.7	290	0.6	
Ba	137	2	115	0.088	ppb	154.7	30	0.5	
W	182	2	165	0.365	ppb	19.0	1687	1	
Pt	195	2	165	0.000	ppb	9270.2	37	1	
Tl	205	2	165	0.002	ppb	230.8	130	0.1	
Pb	208	2	165	0.253	ppb	18.4	2290	0.5	
Th	232	2	165	0.036	ppb	2.9	540	1	
U	238	2	165	0.048	ppb	37.0	563	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	271247	0.80	549626	49.35	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11943876	0.56	22416142	53.28	60	120	IS Failed
Sc (IS)	45	2	HMI He	492507	0.68	833519	59.09	60	120	IS Failed
Sc (IS)	45	3	No Gas	19580721	1.01	37013496	52.90	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4620464	0.18	8765589	52.71	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	559804	0.55	961800	58.20	60	120	IS Failed
In Internal Standard	115	2	HMI He	2137706	1.17	3323973	64.31	60	120	
Ho-165	165	2	HMI He	10977906	0.25	16978678	64.66	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436750/1-A
Data File Name	322_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:53:58-07:00
Sample Type	Blank
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-20.195	ppb	-27.53741557	43123	0.5
Li	7	2	45	4.607	ppb	466.5942054	2670	0.5
Li	7	3	45	-10.532	ppb	-48.55086295	1353026	10
Be	9	1	6	0.118	ppb	132.8769602	20	0.5
B	11	1	6	6.979	ppb	9.223722502	1697	0.5
Na	23	1	45	-66.144	ppb	-4.577342364	272912	25
Na	23	2	45	-68.040	ppb	-4.9380561	20255	25
Mg	24	2	45	30.836	ppb	15.20038525	2247	25
Al	27	2	45	9.804	ppb	43.45493267	190	15
K	39	1	45	-926.120	ppb	-2.16909819	2707064	50
K	39	2	45	93.074	ppb	5.164015841	9103	50
Ca	40	1	45	82.562	ppb	1.130015346	241899	50
Ca	44	2	45	71.201	ppb	26.60294549	147	25
Ti	47	2	45	0.260	ppb	173.2050808	3	0.5
V	51	2	72	0.198	ppb	86.18557014	1003	1
Cr	52	2	72	0.276	ppb	11.8373243	303	1
Mn	55	2	72	1.829	ppb	29.39557184	563	0.5
Fe	57	2	72	75.820	ppb	8.210362145	1077	25
Co	59	2	72	0.122	ppb	25.59537649	170	0.5
Ni	60	2	72	0.256	ppb	73.51627586	187	1
Cu	63	2	72	0.507	ppb	28.5068494	983	1
Zn	66	2	72	1.500	ppb	14.46384835	373	5
As	75	2	72	0.022	ppb	193.8506592	14	1
Se	78	1	72	-0.007	ppb	-1660.411332	11	1
Sr	88	2	72	0.090	ppb	153.3957473	67	0.5
Zr	90	2	72	25.806	ppb	14.6295329	133	1
Nb	93	2	72	2.511	ppb	13.35679809	4508	2
Mo	95	2	115	0.010	ppb	109.9562166	27	0.5
Pd	105	2	115	0.009	ppb	164.6906488	13	1
Ag	107	2	115	0.030	ppb	101.7029299	63	1
Cd	111	2	115	-0.019	ppb	0	0	0.5
Sn	120	2	115	0.162	ppb	53.40995035	200	1
Sb	121	2	115	0.242	ppb	49.73281546	163	0.6
Ba	137	2	115	0.395	ppb	22.41790154	90	0.5
W	182	2	165	0.158	ppb	48.81069867	1150	1
Pt	195	2	165	-0.002	ppb	-615.0891582	33	1
Tl	205	2	165	-0.001	ppb	-549.283878	113	0.1
Pb	208	2	165	0.654	ppb	7.122643862	5037	0.5
Th	232	2	165	0.022	ppb	22.63020272	423	1
U	238	2	165	0.008	ppb	91.45804868	200	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	271141	0.31	549626	49.33	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11993575	0.85	22416142	53.50	60	120	IS Failed
Sc (IS)	45	2	HMI He	496557	1.02	833519	59.57	60	120	IS Failed
Sc (IS)	45	3	No Gas	19788180	0.71	37013496	53.46	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4672152	0.89	8765589	53.30	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	568158	0.35	961800	59.07	60	120	IS Failed
In Internal Standard	115	2	HMI He	2143255	0.33	3323973	64.48	60	120	
Ho-165	165	2	HMI He	11034962	0.96	16978678	64.99	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436750/2-A
Data File Name	323LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T06:57:47-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436750 soil 6020 dod5
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	175.948	175.948	ppb	5.117	22030	200	88.0	80	120	
Na	23	2	45	-45.010	-45.010	ppb	-6.459	23099	200	-22.5	80	120	NewName Main CR1 Failed
Mg	24	2	45	26.634	26.634	ppb	17.142	2037	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	1907.715	1907.715	ppb	3.010	27964	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	86.325	86.325	ppb	8.577	8980	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	697.850	697.850	ppb	3.905	1113	200000	0.3	80	120	NewName Main CR1 Failed
V	51	2	72	170.687	170.687	ppb	1.464	88404	200	85.3	80	120	
Cr	52	2	72	174.991	174.991	ppb	0.459	116250	200	87.5	80	120	
(Cr)	53	2	72	176.212	176.212	ppb	3.833	14758	200	88.1	80	120	
Mn	55	2	72	182.077	182.077	ppb	1.274	50231	200	91.0	80	120	
Fe	57	2	72	1806.920	1806.920	ppb	1.709	23410	200000	0.9	80	120	NewName Main CR1 Failed
Co	59	2	72	172.262	172.262	ppb	0.619	197825	200	86.1	80	120	
Ni	60	2	72	172.068	172.068	ppb	2.046	55480	200	86.0	80	120	
Cu	63	2	72	171.799	171.799	ppb	0.826	153940	200	85.9	80	120	
Zn	66	2	72	173.349	173.349	ppb	5.045	21247	200	86.7	80	120	
As	75	2	72	165.128	165.128	ppb	1.653	13300	200	82.6	80	120	
Se	78	1	72	169.713	169.713	ppb	2.281	18412	200	84.9	80	120	
(Se)	82	1	72	155.224	155.224	ppb	5.029	8360	200	77.6	80	120	NewName Main CR1 Failed
Nb	93	2	72	3.418	3.418	ppb	11.396	5945	400	0.9	80	120	NewName Main CR1 Failed
Mo	95	2	115	158.139	158.139	ppb	1.032	80988	200	79.1	80	120	NewName Main CR1 Failed
Pd	105	2	115	0.013	0.013	ppb	56.764	17	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	151.285	151.285	ppb	0.147	258783	200	75.6	80	120	NewName Main CR1 Failed
Cd	111	2	115	164.142	164.142	ppb	1.229	37930	200	82.1	80	120	
(Cd)	114	2	115	166.935	166.935	ppb	1.316	99882	200	83.5	80	120	
Sn	120	2	115	166.713	166.713	ppb	1.793	107751	200	83.4	80	120	
Sb	121	2	115	175.142	175.142	ppb	0.714	98057	200	87.6	80	110	
Ba	137	2	115	172.922	172.922	ppb	2.673	34377	200	86.5	80	120	
W	182	2	165	168.523	168.523	ppb	0.981	450174	200	84.3	80	120	
Pt	195	2	165	-0.006	-0.006	ppb	-149.685	23	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	186.048	186.048	ppb	1.057	965448	200	93.0	80	120	
(Pb)	206	2	165	187.595	187.595	ppb	0.712	313682	200	93.8	80	120	
(Pb)	207	2	165	186.877	186.877	ppb	0.959	288610	200	93.4	80	120	
Pb	208	2	165	187.402	187.402	ppb	0.824	1293195	200	93.7	80	120	
Th	232	2	165	207.815	207.815	ppb	0.772	1744003	200	103.9	80	120	
U	238	2	165	207.742	207.742	ppb	0.777	1893870	200	103.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	265182	1.15	549626	48.25	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11896555	0.73	22416142	53.07	60	120	IS Failed
Sc (IS)	45	2	HMI He	499888	0.16	833519	59.97	60	120	IS Failed
Sc (IS)	45	3	No Gas	20096941	0.98	37013496	54.30	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4626830	1.68	8765589	52.78	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	568081	0.50	961800	59.06	60	120	IS Failed
In Internal Standard	115	2	HMI He	2179492	0.34	3323973	65.57	60	120	
Ho-165	165	2	HMI He	11151788	0.58	16978678	65.68	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-436750/3-A
Data File Name	324SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:01:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	339.404	ppb	339.404	2.83	87038	500000	
Li	7	2	45	372.977	ppb	372.977	3.75	5265	500000	
Li	7	3	45	356.413	ppb	356.413	2.81	2705099	50000	
Be	9	1	6	189.911	ppb	189.911	1.85	24407	2000	
B	11	1	6	193.673	ppb	193.673	2.11	25009	2000	
Na	23	1	45	-64.391	ppb	-64.391	-3.64	281250	2000	
Na	23	2	45	-63.579	ppb	-63.579	-9.17	21313	400000	
Mg	24	2	45	25.240	ppb	25.240	12.44	2000	400000	
Al	27	2	45	2031.942	ppb	2031.942	3.36	30355	400000	
K	39	1	45	-982.881	ppb	-982.881	-2.22	2680294	400000	
K	39	2	45	80.209	ppb	80.209	17.75	8980	400000	
Ca	40	1	45	80.224	ppb	80.224	1.93	241735	400000	
Ca	44	2	45	879.877	ppb	879.877	20.37	1420	400000	
Ti	47	2	45	5.540	ppb	5.540	32.29	73	4000	
V	51	2	72	191.419	ppb	191.419	0.76	101475	2000	
Cr	52	2	72	196.613	ppb	196.613	0.73	133805	5000	
Mn	55	2	72	206.631	ppb	206.631	0.59	58398	10000	
Fe	57	2	72	2029.053	ppb	2029.053	2.19	26923	400000	
Co	59	2	72	194.266	ppb	194.266	1.12	228559	2000	
Ni	60	2	72	189.350	ppb	189.350	0.17	62546	5000	
Cu	63	2	72	190.472	ppb	190.472	1.17	174802	5000	
Zn	66	2	72	196.837	ppb	196.837	1.80	24689	5000	
As	75	2	72	183.701	ppb	183.701	0.98	15158	2000	
Se	78	1	72	187.502	ppb	187.502	0.97	20921	2000	
Sr	88	2	72	215.056	ppb	215.056	1.63	66527	4000	
Zr	90	2	72	49718.533	ppb	49718.533	0.63	158331	1000	>LDR
Nb	93	2	72	2.145	ppb	2.145	7.99	4027	200	
Mo	95	2	115	176.417	ppb	176.417	1.59	91300	2000	
Pd	105	2	115	0.012	ppb	0.012	150.05	17	100	
Ag	107	2	115	174.248	ppb	174.248	1.16	301193	100	
Cd	111	2	115	185.201	ppb	185.201	3.88	43241	2000	
Sn	120	2	115	191.190	ppb	191.190	1.68	124862	2000	
Sb	121	2	115	193.672	ppb	193.672	0.64	109569	1000	
Ba	137	2	115	192.905	ppb	192.905	2.74	38756	5000	
W	182	2	165	187.713	ppb	187.713	0.28	511683	100	
Pt	195	2	165	-0.007	ppb	-0.007	-143.61	23	100	
Tl	205	2	165	205.150	ppb	205.150	0.63	1086500	2000	
Pb	208	2	165	207.011	ppb	207.011	0.82	1457862	5000	
Th	232	2	165	231.784	ppb	231.784	0.88	1985124	2000	
U	238	2	165	229.298	ppb	229.298	2.26	2133217	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	272192	1.46	549626	49.52	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12247169	0.85	22416142	54.64	60	120	IS Failed
Sc (IS)	45	2	HMI He	509538	0.94	833519	61.13	60	120	
Sc (IS)	45	3	No Gas	20266606	0.14	37013496	54.75	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4758049	0.49	8765589	54.28	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	582051	0.85	961800	60.52	60	120	
In Internal Standard	115	2	HMI He	2202456	0.40	3323973	66.26	60	120	
Ho-165	165	2	HMI He	11381430	0.64	16978678	67.03	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-D
Data File Name	325SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:05:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	505.769	ppb	505.769	1.91	103353	500000	
Li	7	2	45	500.132	ppb	500.132	8.00	5888	500000	
Li	7	3	45	492.834	ppb	492.834	2.15	3104387	50000	
Be	9	1	6	26.919	ppb	26.919	4.32	2984	2000	
B	11	1	6	110.592	ppb	110.592	3.10	12616	2000	
Na	23	1	45	4118.421	ppb	4118.421	0.69	6172759	2000	
Na	23	2	45	3654.523	ppb	3654.523	5.92	448260	400000	
Mg	24	2	45	289474.156	ppb	289474.156	4.72	15066584	400000	
Al	27	2	45	538923.342	ppb	538923.342	4.63	7712143	400000	
K	39	1	45	137654.267	ppb	137654.267	0.52	200703930	400000	
K	39	2	45	140465.720	ppb	140465.720	3.64	3779645	400000	
Ca	40	1	45	75905.491	ppb	75905.491	0.99	165491678	400000	
Ca	44	2	45	78301.579	ppb	78301.579	4.72	118070	400000	
Ti	47	2	45	21662.883	ppb	21662.883	6.51	275424	4000	>LDR
V	51	2	72	1274.685	ppb	1274.685	3.60	602063	2000	
Cr	52	2	72	3779.925	ppb	3779.925	3.81	2307933	5000	
Mn	55	2	72	20430.578	ppb	20430.578	4.22	5178973	10000	
Fe	57	2	72	1028609.564	ppb	1028609.564	3.82	12208355	400000	
Co	59	2	72	626.535	ppb	626.535	4.14	661835	2000	
Ni	60	2	72	3832.045	ppb	3832.045	4.44	1134654	5000	
Cu	63	2	72	1234.593	ppb	1234.593	3.74	1014765	5000	
Zn	66	2	72	1421.324	ppb	1421.324	4.51	158975	5000	
As	75	2	72	550.078	ppb	550.078	3.36	40734	2000	
Se	78	1	72	7.583	ppb	7.583	5.83	771	2000	
Sr	88	2	72	1122.757	ppb	1122.757	3.20	311763	4000	
Zr	90	2	72	27578.295	ppb	27578.295	3.14	78886	1000	>LDR
Nb	93	2	72	5.781	ppb	5.781	10.67	8907	200	
Mo	95	2	115	22.590	ppb	22.590	4.93	10218	2000	
Pd	105	2	115	0.313	ppb	0.313	2.99	230	100	
Ag	107	2	115	7.121	ppb	7.121	4.74	10751	100	
Cd	111	2	115	7.269	ppb	7.269	12.13	1483	2000	
Sn	120	2	115	7.289	ppb	7.289	11.57	4234	2000	
Sb	121	2	115	1.808	ppb	1.808	3.19	920	1000	
Ba	137	2	115	4684.434	ppb	4684.434	3.85	820897	5000	
W	182	2	165	11.611	ppb	11.611	6.57	29694	100	
Pt	195	2	165	0.044	ppb	0.044	9.45	123	100	
Tl	205	2	165	10.361	ppb	10.361	4.01	50484	2000	
Pb	208	2	165	503.079	ppb	503.079	4.31	3251687	5000	
Th	232	2	165	242.228	ppb	242.228	3.52	1904738	2000	
U	238	2	165	25.412	ppb	25.412	3.43	217189	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	234554	1.67	549626	42.68	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11836172	0.78	22416142	52.80	60	120	IS Failed
Sc (IS)	45	2	HMI He	489264	2.82	833519	58.70	60	120	IS Failed
Sc (IS)	45	3	No Gas	19689371	0.92	37013496	53.20	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4278739	0.42	8765589	48.81	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	522895	1.97	961800	54.37	60	120	IS Failed
In Internal Standard	115	2	HMI He	1922979	2.32	3323973	57.85	60	120	IS Failed
Ho-165	165	2	HMI He	10455266	2.43	16978678	61.58	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-Dsd@5
Data File Name	326SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:09:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	79.426	ppb	79.426	12.65	55527	500000	
Li	7	2	45	80.929	ppb	80.929	18.25	3157	500000	
Li	7	3	45	91.280	ppb	91.280	12.55	1782209	50000	
Be	9	1	6	5.246	ppb	5.246	15.36	647	2000	
B	11	1	6	21.342	ppb	21.342	7.80	3331	2000	
Na	23	1	45	820.596	ppb	820.596	1.75	1561211	2000	
Na	23	2	45	702.418	ppb	702.418	1.58	109471	400000	
Mg	24	2	45	64825.039	ppb	64825.039	1.06	3401564	400000	
Al	27	2	45	121654.408	ppb	121654.408	2.01	1754772	400000	
K	39	1	45	29638.940	ppb	29638.940	0.61	47596319	400000	
K	39	2	45	29642.266	ppb	29642.266	0.94	808976	400000	
Ca	40	1	45	16428.293	ppb	16428.293	0.58	36829234	400000	
Ca	44	2	45	17216.734	ppb	17216.734	2.44	26198	400000	
Ti	47	2	45	4581.299	ppb	4581.299	0.43	58735	4000	
V	51	2	72	261.759	ppb	261.759	0.74	131077	2000	
Cr	52	2	72	766.255	ppb	766.255	0.98	493479	5000	
Mn	55	2	72	4160.835	ppb	4160.835	0.98	1112412	10000	
Fe	57	2	72	222176.705	ppb	222176.705	0.92	2780999	400000	
Co	59	2	72	135.400	ppb	135.400	0.83	150866	2000	
Ni	60	2	72	839.346	ppb	839.346	0.77	262195	5000	
Cu	63	2	72	271.618	ppb	271.618	0.40	235847	5000	
Zn	66	2	72	316.682	ppb	316.682	1.93	37503	5000	
As	75	2	72	118.328	ppb	118.328	0.90	9249	2000	
Se	78	1	72	1.566	ppb	1.566	31.66	181	2000	
Sr	88	2	72	236.655	ppb	236.655	2.13	69323	4000	
Zr	90	2	72	5470.808	ppb	5470.808	0.86	16544	1000	>LDR
Nb	93	2	72	1.322	ppb	1.322	9.78	2550	200	
Mo	95	2	115	4.738	ppb	4.738	2.07	2297	2000	
Pd	105	2	115	0.080	ppb	0.080	18.81	67	100	
Ag	107	2	115	1.621	ppb	1.621	7.25	2614	100	
Cd	111	2	115	1.641	ppb	1.641	31.87	360	2000	
Sn	120	2	115	1.448	ppb	1.448	10.05	970	2000	
Sb	121	2	115	0.491	ppb	0.491	19.47	287	1000	
Ba	137	2	115	966.708	ppb	966.708	1.16	180286	5000	
W	182	2	165	2.248	ppb	2.248	2.74	6652	100	
Pt	195	2	165	-0.005	ppb	-0.005	-373.13	27	100	
Tl	205	2	165	2.094	ppb	2.094	2.38	10852	2000	
Pb	208	2	165	100.823	ppb	100.823	0.38	687484	5000	
Th	232	2	165	45.460	ppb	45.460	0.68	377005	2000	
U	238	2	165	5.425	ppb	5.425	2.35	48974	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	259255	0.55	549626	47.17	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12154468	0.33	22416142	54.22	60	120	IS Failed
Sc (IS)	45	2	HMI He	492773	0.88	833519	59.12	60	120	IS Failed
Sc (IS)	45	3	No Gas	20619427	1.07	37013496	55.71	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4633748	0.40	8765589	52.86	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	551178	0.52	961800	57.31	60	120	IS Failed
In Internal Standard	115	2	HMI He	2045150	0.22	3323973	61.53	60	120	
Ho-165	165	2	HMI He	11014855	0.41	16978678	64.87	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-E MS
Data File Name	327SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:12:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	810.770	ppb	810.770	0.77	132024	500000	
Li	7	2	45	832.042	ppb	832.042	5.31	7532	500000	
Li	7	3	45	797.044	ppb	797.044	1.18	4089488	50000	
Be	9	1	6	242.613	ppb	242.613	1.55	24497	2000	
B	11	1	6	298.895	ppb	298.895	0.64	29974	2000	
Na	23	1	45	4157.445	ppb	4157.445	0.81	5932232	2000	
Na	23	2	45	3813.391	ppb	3813.391	1.67	435552	400000	
Mg	24	2	45	290187.040	ppb	290187.040	0.32	14098574	400000	
Al	27	2	45	553256.880	ppb	553256.880	0.23	7390388	400000	
K	39	1	45	140141.877	ppb	140141.877	0.75	194565210	400000	
K	39	2	45	144304.515	ppb	144304.515	0.77	3623593	400000	
Ca	40	1	45	77351.568	ppb	77351.568	0.63	160642144	400000	
Ca	44	2	45	80847.316	ppb	80847.316	1.10	113791	400000	
Ti	47	2	45	22934.409	ppb	22934.409	0.71	272274	4000	>LDR
V	51	2	72	1463.661	ppb	1463.661	0.28	651673	2000	
Cr	52	2	72	3920.198	ppb	3920.198	0.37	2256788	5000	
Mn	55	2	72	20773.068	ppb	20773.068	0.79	4964983	10000	
Fe	57	2	72	1035675.101	ppb	1035675.101	0.37	11589606	400000	
Co	59	2	72	805.879	ppb	805.879	0.72	802641	2000	
Ni	60	2	72	3962.134	ppb	3962.134	0.73	1106194	5000	
Cu	63	2	72	1388.193	ppb	1388.193	0.25	1075731	5000	
Zn	66	2	72	1642.710	ppb	1642.710	0.73	173222	5000	
As	75	2	72	715.882	ppb	715.882	0.98	49978	2000	
Se	78	1	72	156.984	ppb	156.984	2.36	15117	2000	
Sr	88	2	72	1369.623	ppb	1369.623	0.23	358538	4000	
Zr	90	2	72	73427.392	ppb	73427.392	0.55	197934	1000	>LDR
Nb	93	2	72	6.131	ppb	6.131	1.45	8877	200	
Mo	95	2	115	165.215	ppb	165.215	1.03	70342	2000	
Pd	105	2	115	0.348	ppb	0.348	18.63	240	100	
Ag	107	2	115	187.361	ppb	187.361	0.71	266436	100	
Cd	111	2	115	186.787	ppb	186.787	2.84	35880	2000	
Sn	120	2	115	94.461	ppb	94.461	0.79	50797	2000	
Sb	121	2	115	4.750	ppb	4.750	9.78	2237	1000	
Ba	137	2	115	4952.658	ppb	4952.658	0.73	818245	5000	
W	182	2	165	41.950	ppb	41.950	1.12	101906	100	
Pt	195	2	165	0.027	ppb	0.027	86.60	87	100	
Tl	205	2	165	201.721	ppb	201.721	0.30	947235	2000	
Pb	208	2	165	694.806	ppb	694.806	0.32	4337247	5000	
Th	232	2	165	465.779	ppb	465.779	0.43	3536752	2000	
U	238	2	165	254.933	ppb	254.933	1.26	2102913	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	213854	0.15	549626	38.91	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11274410	0.60	22416142	50.30	60	120	IS Failed
Sc (IS)	45	2	HMI He	456305	0.46	833519	54.74	60	120	IS Failed
Sc (IS)	45	3	No Gas	19323447	0.89	37013496	52.21	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4106277	0.13	8765589	46.85	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	492767	0.58	961800	51.23	60	120	IS Failed
In Internal Standard	115	2	HMI He	1811980	0.98	3323973	54.51	60	120	IS Failed
Ho-165	165	2	HMI He	10091018	0.29	16978678	59.43	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-1-F MSD
Data File Name	328SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:16:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	674.458	ppb	674.458	0.79	116357	500000	
Li	7	2	45	678.418	ppb	678.418	1.77	6435	500000	
Li	7	3	45	653.486	ppb	653.486	1.20	3543516	50000	
Be	9	1	6	203.081	ppb	203.081	2.22	20355	2000	
B	11	1	6	251.275	ppb	251.275	3.84	25102	2000	
Na	23	1	45	3665.267	ppb	3665.267	1.83	5241096	2000	
Na	23	2	45	3353.263	ppb	3353.263	1.90	377049	400000	
Mg	24	2	45	250450.355	ppb	250450.355	1.50	11882020	400000	
Al	27	2	45	474805.867	ppb	474805.867	1.97	6193049	400000	
K	39	1	45	120915.611	ppb	120915.611	0.60	167445334	400000	
K	39	2	45	123766.697	ppb	123766.697	2.53	3035490	400000	
Ca	40	1	45	66003.176	ppb	66003.176	0.72	136309945	400000	
Ca	44	2	45	68550.905	ppb	68550.905	2.72	94215	400000	
Ti	47	2	45	19760.434	ppb	19760.434	1.34	229085	4000	
V	51	2	72	1277.650	ppb	1277.650	2.02	562371	2000	
Cr	52	2	72	3430.195	ppb	3430.195	2.23	1951805	5000	
Mn	55	2	72	17714.030	ppb	17714.030	1.70	4185052	10000	
Fe	57	2	72	919966.206	ppb	919966.206	1.98	10175760	400000	
Co	59	2	72	701.624	ppb	701.624	1.26	690769	2000	
Ni	60	2	72	3479.756	ppb	3479.756	0.98	960369	5000	
Cu	63	2	72	1237.034	ppb	1237.034	2.16	947551	5000	
Zn	66	2	72	1417.582	ppb	1417.582	1.74	147785	5000	
As	75	2	72	653.023	ppb	653.023	2.30	45061	2000	
Se	78	1	72	133.328	ppb	133.328	1.61	13030	2000	
Sr	88	2	72	1170.242	ppb	1170.242	2.23	302802	4000	
Zr	90	2	72	62772.249	ppb	62772.249	1.95	167263	1000	>LDR
Nb	93	2	72	5.262	ppb	5.262	6.34	7596	200	
Mo	95	2	115	139.573	ppb	139.573	4.02	58776	2000	
Pd	105	2	115	0.317	ppb	0.317	7.77	217	100	
Ag	107	2	115	153.442	ppb	153.442	2.78	215854	100	
Cd	111	2	115	163.032	ppb	163.032	2.56	30985	2000	
Sn	120	2	115	82.726	ppb	82.726	3.93	44007	2000	
Sb	121	2	115	3.838	ppb	3.838	9.42	1794	1000	
Ba	137	2	115	4324.078	ppb	4324.078	4.07	706560	5000	
W	182	2	165	37.265	ppb	37.265	3.01	90750	100	
Pt	195	2	165	0.042	ppb	0.042	19.45	117	100	
Tl	205	2	165	171.137	ppb	171.137	1.78	805036	2000	
Pb	208	2	165	600.036	ppb	600.036	2.23	3752042	5000	
Th	232	2	165	406.714	ppb	406.714	2.74	3093401	2000	
U	238	2	165	214.734	ppb	214.734	2.60	1774303	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	212225	1.48	549626	38.61	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11210737	0.32	22416142	50.01	60	120	IS Failed
Sc (IS)	45	2	HMI He	445618	1.00	833519	53.46	60	120	IS Failed
Sc (IS)	45	3	No Gas	19033899	0.69	37013496	51.42	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4167115	1.07	8765589	47.54	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	487118	0.87	961800	50.65	60	120	IS Failed
In Internal Standard	115	2	HMI He	1793136	2.29	3323973	53.95	60	120	IS Failed
Ho-165	165	2	HMI He	10110078	1.39	16978678	59.55	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-A-1-D pds
Data File Name	329SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:20:29-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	379.376	ppb	379.376	12.50	85580	500000	
Li	7	2	45	388.416	ppb	388.416	5.75	5111	500000	
Li	7	3	45	339.712	ppb	339.712	1.80	2709028	50000	
Be	9	1	6	201.282	ppb	201.282	8.22	20368	2000	
B	11	1	6	90.062	ppb	90.062	9.70	9503	2000	
Na	23	1	45	3401.164	ppb	3401.164	9.08	4973675	2000	
Na	23	2	45	2651.809	ppb	2651.809	2.90	330261	400000	
Mg	24	2	45	213869.454	ppb	213869.454	2.48	11042296	400000	
Al	27	2	45	402483.643	ppb	402483.643	3.14	5713090	400000	
K	39	1	45	115727.158	ppb	115727.158	8.50	163230058	400000	
K	39	2	45	103415.792	ppb	103415.792	3.67	2761294	400000	
Ca	40	1	45	64198.195	ppb	64198.195	8.10	134911588	400000	
Ca	44	2	45	58343.782	ppb	58343.782	3.74	87270	400000	
Ti	47	2	45	16114.539	ppb	16114.539	3.91	203284	4000	
V	51	2	72	1080.292	ppb	1080.292	3.28	524687	2000	
Cr	52	2	72	2952.109	ppb	2952.109	3.63	1853048	5000	
Mn	55	2	72	15332.419	ppb	15332.419	3.22	3996020	10000	
Fe	57	2	72	759173.235	ppb	759173.235	2.67	9264018	400000	
Co	59	2	72	612.487	ppb	612.487	3.37	665182	2000	
Ni	60	2	72	2997.159	ppb	2997.159	3.49	912441	5000	
Cu	63	2	72	1066.733	ppb	1066.733	3.36	901462	5000	
Zn	66	2	72	1226.219	ppb	1226.219	4.25	141027	5000	
As	75	2	72	545.055	ppb	545.055	3.02	41495	2000	
Se	78	1	72	160.222	ppb	160.222	8.93	15921	2000	
Sr	88	2	72	816.252	ppb	816.252	3.09	233012	4000	
Zr	90	2	72	60718.326	ppb	60718.326	3.08	178487	1000	>LDR
Nb	93	2	72	4.086	ppb	4.086	6.65	6619	200	
Mo	95	2	115	162.526	ppb	162.526	3.46	75200	2000	
Pd	105	2	115	0.282	ppb	0.282	39.24	213	100	
Ag	107	2	115	39.304	ppb	39.304	3.18	60749	100	
Cd	111	2	115	147.439	ppb	147.439	4.31	30775	2000	
Sn	120	2	115	155.925	ppb	155.925	3.33	91046	2000	
Sb	121	2	115	152.022	ppb	152.022	3.82	76893	1000	
Ba	137	2	115	3679.544	ppb	3679.544	3.07	660605	5000	
W	182	2	165	155.215	ppb	155.215	2.76	415386	100	
Pt	195	2	165	0.074	ppb	0.074	60.33	197	100	
Tl	205	2	165	156.139	ppb	156.139	2.68	811656	2000	
Pb	208	2	165	525.553	ppb	525.553	2.94	3631696	5000	
Th	232	2	165	188.241	ppb	188.241	9.42	1581293	2000	
U	238	2	165	193.806	ppb	193.806	2.33	1769842	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	214718	4.07	549626	39.07	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11431640	3.92	22416142	51.00	60	120	IS Failed
Sc (IS)	45	2	HMI He	484994	1.10	833519	58.19	60	120	IS Failed
Sc (IS)	45	3	No Gas	20757808	1.02	37013496	56.08	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4247244	4.01	8765589	48.45	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	537479	1.48	961800	55.88	60	120	IS Failed
In Internal Standard	115	2	HMI He	1969361	1.23	3323973	59.25	60	120	IS Failed
Ho-165	165	2	HMI He	11173636	1.60	16978678	65.81	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	330_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:24:13-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	360.416	ppb	3.481	90612	500	72.1	90	110	>+\-10%
Li	7	2	45	374.276	ppb	11.427	5101	500	74.9	90	110	>+\-10%
Li	7	3	45	335.121	ppb	6.293	2759504	500	67.0	90	110	>+\-10%
Be	9	1	6	43.572	ppb	5.258	5461	50	87.1	90	110	>+\-10%
B	11	1	6	41.585	ppb	4.774	5871	50	83.2	90	110	>+\-10%
Na	23	1	45	4348.925	ppb	0.674	6803032	5000	87.0	90	110	>+\-10%
Na	23	2	45	3904.662	ppb	0.524	481109	5000	78.1	90	110	>+\-10%
Mg	24	2	45	4320.166	ppb	1.002	227345	5000	86.4	90	110	>+\-10%
Al	27	2	45	4543.488	ppb	1.820	65606	5000	90.9	90	110	
K	39	1	45	4655.777	ppb	0.913	11147972	5000	93.1	90	110	
K	39	2	45	4531.975	ppb	0.961	129249	5000	90.6	90	110	
Ca	40	1	45	4524.570	ppb	0.431	10385672	5000	90.5	90	110	
Ca	44	2	45	4587.149	ppb	4.973	7009	5000	91.7	90	110	
Ti	47	2	45	55.873	ppb	6.717	717	50	111.7	90	110	>+\-10%
V	51	2	72	42.052	ppb	0.510	23039	50	84.1	90	110	>+\-10%
Cr	52	2	72	43.418	ppb	1.612	29678	50	86.8	90	110	>+\-10%
Mn	55	2	72	50.051	ppb	3.051	14208	50	100.1	90	110	
Fe	57	2	72	4419.661	ppb	1.445	58586	5000	88.4	90	110	>+\-10%
Co	59	2	72	42.780	ppb	3.563	50412	50	85.6	90	110	>+\-10%
Ni	60	2	72	44.007	ppb	3.672	14635	50	88.0	90	110	>+\-10%
Cu	63	2	72	43.616	ppb	0.103	40494	50	87.2	90	110	>+\-10%
Zn	66	2	72	42.745	ppb	2.048	5521	50	85.5	90	110	>+\-10%
As	75	2	72	43.769	ppb	2.350	3625	50	87.5	90	110	>+\-10%
Se	78	1	72	42.936	ppb	0.313	5024	50	85.9	90	110	>+\-10%
Sr	88	2	72	47.482	ppb	2.713	14738	50	95.0	90	110	
Zr	90	2	72	654.445	ppb	19.491	2140	50	1308.9	90	110	>+\-10%
Nb	93	2	72	78.998	ppb	1.124	128709	100	79.0	90	110	>+\-10%
Mo	95	2	115	40.642	ppb	1.707	20796	50	81.3	90	110	>+\-10%
Pd	105	2	115	41.166	ppb	1.180	33351	50	82.3	90	110	>+\-10%
Ag	107	2	115	41.528	ppb	1.213	70926	50	83.1	90	110	>+\-10%
Cd	111	2	115	43.028	ppb	3.507	9931	50	86.1	90	110	>+\-10%
Sn	120	2	115	44.036	ppb	2.135	28490	50	88.1	90	110	>+\-10%
Sb	121	2	115	44.405	ppb	3.876	24846	50	88.8	90	110	>+\-10%
Ba	137	2	115	43.769	ppb	2.683	8697	50	87.5	90	110	>+\-10%
W	182	2	165	42.736	ppb	0.741	119337	50	85.5	90	110	>+\-10%
Pt	195	2	165	42.449	ppb	1.211	95690	50	84.9	90	110	>+\-10%
Tl	205	2	165	44.984	ppb	0.765	242931	50	90.0	90	110	>+\-10%
Pb	208	2	165	45.555	ppb	1.649	327466	50	91.1	90	110	
Th	232	2	165	45.849	ppb	1.149	400470	50	91.7	90	110	
U	238	2	165	45.880	ppb	0.422	435200	50	91.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	265226	0.96	549626	48.26	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12391443	0.27	22416142	55.28	60	120	IS Failed
Sc (IS)	45	2	HMI He	492927	0.46	833519	59.14	60	120	IS Failed
Sc (IS)	45	3	No Gas	21277824	0.32	37013496	57.49	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4980277	0.37	8765589	56.82	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	582703	0.28	961800	60.58	60	120	
In Internal Standard	115	2	HMI He	2175919	0.73	3323973	65.46	60	120	
Ho-165	165	2	HMI He	11600899	0.60	16978678	68.33	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5424511
Data File Name	331_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:28:00-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-21.306	ppb	-38.6	1452095	10	
Be	9	1	6	0.391	ppb	59.2	57	0.5	
B	11	1	6	1.424	ppb	142.1	1037	0.5	>RL
Na	23	1	45	-110.985	ppb	-2.1	218150	25	
Na	23	2	45	-107.390	ppb	-5.8	16173	25	
Mg	24	2	45	10.924	ppb	26.4	1233	25	
Al	27	2	45	14.454	ppb	37.6	267	15	
K	39	1	45	253.217	ppb	10.6	4611991	50	>RL
K	39	2	45	61.106	ppb	19.7	8506	50	>RL
Ca	40	1	45	-2.538	ppb	-50.3	56353	50	
Ca	44	2	45	-9.757	ppb	-98.4	23	25	
Ti	47	2	45	0.498	ppb	173.2	7	0.5	
V	51	2	72	0.339	ppb	52.2	1140	1	
Cr	52	2	72	0.160	ppb	24.6	240	1	
Mn	55	2	72	2.456	ppb	12.7	780	0.5	>RL
Fe	57	2	72	76.924	ppb	2.7	1157	25	>RL
Co	59	2	72	0.128	ppb	21.9	187	0.5	
Ni	60	2	72	0.438	ppb	24.7	260	1	
Cu	63	2	72	0.637	ppb	24.1	1167	1	
Zn	66	2	72	0.238	ppb	80.1	233	5	
As	75	2	72	0.051	ppb	191.1	17	1	
Se	78	1	72	0.010	ppb	528.5	13	1	
Sr	88	2	72	-0.006	ppb	-1933.9	40	0.5	
Zr	90	2	72	10.200	ppb	3.1	90	1	>RL
Nb	93	2	72	4.090	ppb	7.8	7429	2	>RL
Mo	95	2	115	0.242	ppb	42.4	153	0.5	
Pd	105	2	115	0.035	ppb	49.3	37	1	
Ag	107	2	115	0.022	ppb	79.9	53	1	
Cd	111	2	115	0.022	ppb	187.8	10	0.5	
Sn	120	2	115	0.267	ppb	28.7	287	1	
Sb	121	2	115	0.401	ppb	39.8	270	0.6	
Ba	137	2	115	0.156	ppb	46.9	47	0.5	
W	182	2	165	0.269	ppb	17.3	1550	1	
Pt	195	2	165	0.009	ppb	223.0	60	1	
Tl	205	2	165	0.017	ppb	6.9	223	0.1	
Pb	208	2	165	0.154	ppb	8.0	1743	0.5	
Th	232	2	165	0.059	ppb	23.1	787	1	
U	238	2	165	0.111	ppb	5.5	1217	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	279567	1.13	549626	50.86	60	120	IS Failed
Sc (IS)	45	1	HMI H2	12529489	0.68	22416142	55.89	60	120	IS Failed
Sc (IS)	45	2	HMI He	513182	0.93	833519	61.57	60	120	
Sc (IS)	45	3	No Gas	21845304	1.04	37013496	59.02	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4986634	0.54	8765589	56.89	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	602609	1.17	961800	62.65	60	120	
In Internal Standard	115	2	HMI He	2306359	2.47	3323973	69.39	60	120	
Ho-165	165	2	HMI He	11853373	0.54	16978678	69.81	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-2-C
Data File Name	332SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:31:49-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	333.388	ppb	333.388	2.33	82000	500000	
Li	7	2	45	306.835	ppb	306.835	14.16	4514	500000	
Li	7	3	45	286.702	ppb	286.702	2.17	2523288	50000	
Be	9	1	6	18.709	ppb	18.709	8.48	2017	2000	
B	11	1	6	108.551	ppb	108.551	4.58	12062	2000	
Na	23	1	45	2846.813	ppb	2846.813	1.21	4303972	2000	
Na	23	2	45	2541.458	ppb	2541.458	1.27	313188	400000	
Mg	24	2	45	207170.410	ppb	207170.410	0.83	10545714	400000	
Al	27	2	45	393369.802	ppb	393369.802	0.55	5505451	400000	
K	39	1	45	109231.506	ppb	109231.506	0.76	157352011	400000	
K	39	2	45	111290.555	ppb	111290.555	0.82	2929469	400000	
Ca	40	1	45	70488.398	ppb	70488.398	1.07	151059381	400000	
Ca	44	2	45	71807.724	ppb	71807.724	1.19	105901	400000	
Ti	47	2	45	16808.543	ppb	16808.543	1.27	209076	4000	
V	51	2	72	861.140	ppb	861.140	0.88	414889	2000	
Cr	52	2	72	2519.258	ppb	2519.258	1.64	1567987	5000	
Mn	55	2	72	14793.487	ppb	14793.487	0.80	3823009	10000	
Fe	57	2	72	680492.421	ppb	680492.421	0.59	8233599	400000	
Co	59	2	72	428.401	ppb	428.401	0.90	461344	2000	
Ni	60	2	72	2473.719	ppb	2473.719	0.58	746778	5000	
Cu	63	2	72	835.644	ppb	835.644	1.31	700308	5000	
Zn	66	2	72	1165.821	ppb	1165.821	0.44	132975	5000	
As	75	2	72	365.682	ppb	365.682	2.11	27605	2000	
Se	78	1	72	5.077	ppb	5.077	6.22	531	2000	
Sr	88	2	72	843.149	ppb	843.149	1.14	238651	4000	
Zr	90	2	72	22052.127	ppb	22052.127	0.86	64307	1000	>LDR
Nb	93	2	72	11.221	ppb	11.221	4.69	17154	200	
Mo	95	2	115	16.253	ppb	16.253	6.73	7659	2000	
Pd	105	2	115	0.234	ppb	0.234	31.05	180	100	
Ag	107	2	115	7.668	ppb	7.668	5.70	12052	100	
Cd	111	2	115	6.487	ppb	6.487	4.05	1380	2000	
Sn	120	2	115	5.402	ppb	5.402	3.35	3294	2000	
Sb	121	2	115	1.442	ppb	1.442	15.57	770	1000	
Ba	137	2	115	3369.113	ppb	3369.113	0.78	614885	5000	
W	182	2	165	9.516	ppb	9.516	3.01	25385	100	
Pt	195	2	165	0.022	ppb	0.022	73.98	83	100	
Tl	205	2	165	7.740	ppb	7.740	0.99	39150	2000	
Pb	208	2	165	373.895	ppb	373.895	0.21	2507208	5000	
Th	232	2	165	158.827	ppb	158.827	0.46	1295524	2000	
U	238	2	165	18.887	ppb	18.887	1.11	167469	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	228142	2.02	549626	41.51	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11634004	0.69	22416142	51.90	60	120	IS Failed
Sc (IS)	45	2	HMI He	478083	0.36	833519	57.36	60	120	IS Failed
Sc (IS)	45	3	No Gas	20835489	0.34	37013496	56.29	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4370136	0.57	8765589	49.86	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	532801	0.96	961800	55.40	60	120	IS Failed
In Internal Standard	115	2	HMI He	2001629	1.14	3323973	60.22	60	120	
Ho-165	165	2	HMI He	10838760	0.27	16978678	63.84	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-3-C
Data File Name	333SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:35:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	313.138	ppb	313.138	1.65	77831	500000	
Li	7	2	45	328.035	ppb	328.035	2.52	4524	500000	
Li	7	3	45	261.138	ppb	261.138	2.69	2418723	50000	
Be	9	1	6	18.525	ppb	18.525	5.38	1917	2000	
B	11	1	6	79.613	ppb	79.613	2.86	8653	2000	
Na	23	1	45	2826.466	ppb	2826.466	0.76	4175687	2000	
Na	23	2	45	2445.731	ppb	2445.731	0.25	294188	400000	
Mg	24	2	45	200187.320	ppb	200187.320	1.35	9912634	400000	
Al	27	2	45	375525.901	ppb	375525.901	0.61	5112487	400000	
K	39	1	45	101480.233	ppb	101480.233	0.72	143035508	400000	
K	39	2	45	101323.584	ppb	101323.584	0.62	2595018	400000	
Ca	40	1	45	55501.700	ppb	55501.700	0.39	116170688	400000	
Ca	44	2	45	55597.205	ppb	55597.205	2.34	79764	400000	
Ti	47	2	45	15948.674	ppb	15948.674	1.15	192977	4000	
V	51	2	72	882.074	ppb	882.074	0.90	414158	2000	
Cr	52	2	72	2616.789	ppb	2616.789	0.59	1587413	5000	
Mn	55	2	72	14334.058	ppb	14334.058	0.94	3610219	10000	
Fe	57	2	72	738406.775	ppb	738406.775	0.86	8707086	400000	
Co	59	2	72	434.512	ppb	434.512	1.11	456038	2000	
Ni	60	2	72	2598.259	ppb	2598.259	0.99	764429	5000	
Cu	63	2	72	854.580	ppb	854.580	0.71	697995	5000	
Zn	66	2	72	1051.605	ppb	1051.605	1.15	116913	5000	
As	75	2	72	388.105	ppb	388.105	1.40	28554	2000	
Se	78	1	72	5.579	ppb	5.579	7.37	567	2000	
Sr	88	2	72	776.810	ppb	776.810	0.25	214297	4000	
Zr	90	2	72	19340.229	ppb	19340.229	2.19	54971	1000	>LDR
Nb	93	2	72	5.622	ppb	5.622	8.35	8620	200	
Mo	95	2	115	17.765	ppb	17.765	2.67	8099	2000	
Pd	105	2	115	0.214	ppb	0.214	45.17	160	100	
Ag	107	2	115	5.853	ppb	5.853	4.67	8900	100	
Cd	111	2	115	5.734	ppb	5.734	10.32	1180	2000	
Sn	120	2	115	5.800	ppb	5.800	3.50	3414	2000	
Sb	121	2	115	1.193	ppb	1.193	9.95	620	1000	
Ba	137	2	115	3340.555	ppb	3340.555	1.80	589547	5000	
W	182	2	165	8.682	ppb	8.682	1.53	23094	100	
Pt	195	2	165	0.013	ppb	0.013	41.53	63	100	
Tl	205	2	165	7.265	ppb	7.265	0.86	36548	2000	
Pb	208	2	165	361.696	ppb	361.696	1.43	2411738	5000	
Th	232	2	165	163.302	ppb	163.302	0.60	1324541	2000	
U	238	2	165	19.302	ppb	19.302	0.85	170182	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	218661	0.99	549626	39.78	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11361095	0.29	22416142	50.68	60	120	IS Failed
Sc (IS)	45	2	HMI He	465069	0.48	833519	55.80	60	120	IS Failed
Sc (IS)	45	3	No Gas	20748198	0.56	37013496	56.06	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4255042	0.68	8765589	48.54	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	519246	0.28	961800	53.99	60	120	IS Failed
In Internal Standard	115	2	HMI He	1935786	1.40	3323973	58.24	60	120	IS Failed
Ho-165	165	2	HMI He	10777984	0.40	16978678	63.48	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-4-C
Data File Name	334SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:39:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	319.463	ppb	319.463	1.66	77688	500000	
Li	7	2	45	309.666	ppb	309.666	30.17	4271	500000	
Li	7	3	45	292.108	ppb	292.108	2.57	2451092	50000	
Be	9	1	6	19.185	ppb	19.185	7.59	1904	2000	
B	11	1	6	75.647	ppb	75.647	10.18	7916	2000	
Na	23	1	45	2935.970	ppb	2935.970	0.51	4277266	2000	
Na	23	2	45	2625.330	ppb	2625.330	1.08	303797	400000	
Mg	24	2	45	209158.605	ppb	209158.605	0.08	10025852	400000	
Al	27	2	45	389740.428	ppb	389740.428	0.74	5136135	400000	
K	39	1	45	103175.188	ppb	103175.188	0.47	143786558	400000	
K	39	2	45	106564.666	ppb	106564.666	1.43	2641467	400000	
Ca	40	1	45	56067.382	ppb	56067.382	0.26	116085188	400000	
Ca	44	2	45	57886.458	ppb	57886.458	1.26	80390	400000	
Ti	47	2	45	16596.607	ppb	16596.607	2.00	194376	4000	
V	51	2	72	901.609	ppb	901.609	0.45	413612	2000	
Cr	52	2	72	2699.736	ppb	2699.736	1.63	1600122	5000	
Mn	55	2	72	14465.921	ppb	14465.921	0.91	3559855	10000	
Fe	57	2	72	730287.498	ppb	730287.498	0.59	8413924	400000	
Co	59	2	72	434.726	ppb	434.726	0.91	445799	2000	
Ni	60	2	72	2705.159	ppb	2705.159	0.18	777637	5000	
Cu	63	2	72	878.115	ppb	878.115	0.25	700763	5000	
Zn	66	2	72	1081.139	ppb	1081.139	1.87	117433	5000	
As	75	2	72	395.497	ppb	395.497	0.80	28432	2000	
Se	78	1	72	5.125	ppb	5.125	3.31	519	2000	
Sr	88	2	72	823.220	ppb	823.220	1.20	221884	4000	
Zr	90	2	72	20506.387	ppb	20506.387	0.66	56948	1000	>LDR
Nb	93	2	72	5.002	ppb	5.002	3.74	7546	200	
Mo	95	2	115	15.850	ppb	15.850	7.92	7032	2000	
Pd	105	2	115	0.206	ppb	0.206	42.65	150	100	
Ag	107	2	115	5.786	ppb	5.786	2.80	8566	100	
Cd	111	2	115	5.672	ppb	5.672	4.60	1137	2000	
Sn	120	2	115	4.971	ppb	4.971	5.09	2860	2000	
Sb	121	2	115	1.441	ppb	1.441	12.56	723	1000	
Ba	137	2	115	3474.618	ppb	3474.618	0.58	596900	5000	
W	182	2	165	8.498	ppb	8.498	1.26	22453	100	
Pt	195	2	165	0.013	ppb	0.013	127.03	63	100	
Tl	205	2	165	7.695	ppb	7.695	1.23	38421	2000	
Pb	208	2	165	340.995	ppb	340.995	0.39	2257012	5000	
Th	232	2	165	164.198	ppb	164.198	0.94	1321956	2000	
U	238	2	165	19.359	ppb	19.359	0.47	169424	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	209661	0.85	549626	38.15	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11238481	0.82	22416142	50.14	60	120	IS Failed
Sc (IS)	45	2	HMI He	450188	0.75	833519	54.01	60	120	IS Failed
Sc (IS)	45	3	No Gas	20080788	0.57	37013496	54.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4232187	0.58	8765589	48.28	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	507338	0.36	961800	52.75	60	120	IS Failed
In Internal Standard	115	2	HMI He	1884036	0.56	3323973	56.68	60	120	IS Failed
Ho-165	165	2	HMI He	10698422	0.53	16978678	63.01	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-15-C
Data File Name	335SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:43:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	167.461	ppb	167.461	0.50	57049	500000	
Li	7	2	45	172.559	ppb	172.559	6.04	3280	500000	
Li	7	3	45	135.414	ppb	135.414	7.26	1801033	50000	
Be	9	1	6	10.639	ppb	10.639	11.85	1017	2000	
B	11	1	6	64.887	ppb	64.887	3.44	6615	2000	
Na	23	1	45	3093.401	ppb	3093.401	0.24	4197061	2000	
Na	23	2	45	2710.210	ppb	2710.210	1.21	298438	400000	
Mg	24	2	45	369689.022	ppb	369689.022	1.07	16906370	400000	
Al	27	2	45	243283.121	ppb	243283.121	1.02	3058997	400000	
K	39	1	45	70330.462	ppb	70330.462	0.33	92787359	400000	
K	39	2	45	72651.349	ppb	72651.349	1.81	1720002	400000	
Ca	40	1	45	761496.169	ppb	761496.169	0.26	1473750325	400000	
Ca	44	2	45	756360.889	ppb	756360.889	0.36	1001836	400000	
Ti	47	2	45	12345.823	ppb	12345.823	0.96	137971	4000	
V	51	2	72	676.236	ppb	676.236	2.13	293614	2000	
Cr	52	2	72	917.467	ppb	917.467	1.08	514452	5000	
Mn	55	2	72	9569.159	ppb	9569.159	0.66	2227558	10000	
Fe	57	2	72	499381.699	ppb	499381.699	0.66	5442576	400000	
Co	59	2	72	209.302	ppb	209.302	0.95	203041	2000	
Ni	60	2	72	713.818	ppb	713.818	1.59	194160	5000	
Cu	63	2	72	9016.646	ppb	9016.646	0.82	6802422	5000	
Zn	66	2	72	5432.728	ppb	5432.728	0.91	557558	5000	
As	75	2	72	1505.830	ppb	1505.830	0.77	102372	2000	
Se	78	1	72	2.810	ppb	2.810	16.84	271	2000	
Sr	88	2	72	1451.738	ppb	1451.738	0.70	370116	4000	
Zr	90	2	72	11244.022	ppb	11244.022	3.50	29552	1000	>LDR
Nb	93	2	72	6.987	ppb	6.987	2.80	9791	200	
Mo	95	2	115	20.303	ppb	20.303	1.11	8743	2000	
Pd	105	2	115	0.213	ppb	0.213	28.26	150	100	
Ag	107	2	115	536.844	ppb	536.844	1.31	770547	100	>LDR
Cd	111	2	115	141.560	ppb	141.560	3.64	27448	2000	
Sn	120	2	115	46.135	ppb	46.135	1.78	25087	2000	
Sb	121	2	115	28.380	ppb	28.380	2.92	13358	1000	
Ba	137	2	115	3991.017	ppb	3991.017	0.75	665577	5000	
W	182	2	165	686.724	ppb	686.724	2.50	1670349	100	>LDR
Pt	195	2	165	0.013	ppb	0.013	100.98	60	100	
Tl	205	2	165	3.930	ppb	3.930	1.72	18704	2000	
Pb	208	2	165	14764.769	ppb	14764.769	0.39	92851600	5000	
Th	232	2	165	83.251	ppb	83.251	0.75	637095	2000	
U	238	2	165	10.218	ppb	10.218	0.38	85039	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	201584	0.79	549626	36.68	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10509701	0.85	22416142	46.88	60	120	IS Failed
Sc (IS)	45	2	HMI He	429531	0.75	833519	51.53	60	120	IS Failed
Sc (IS)	45	3	No Gas	19105974	0.32	37013496	51.62	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3964570	0.59	8765589	45.23	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	479927	0.96	961800	49.90	60	120	IS Failed
In Internal Standard	115	2	HMI He	1829059	1.21	3323973	55.03	60	120	IS Failed
Ho-165	165	2	HMI He	10167159	0.34	16978678	59.88	60	120	IS Failed

Sample Report

Sample Table

Sample Name	280-116297-B-16-C
Data File Name	336SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:52:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	115.072	ppb	115.072	5.55	52319	500000	
Li	7	2	45	87.115	ppb	87.115	23.17	2890	500000	
Li	7	3	45	100.837	ppb	100.837	2.29	1645948	50000	
Be	9	1	6	8.139	ppb	8.139	11.98	763	2000	
B	11	1	6	53.612	ppb	53.612	6.34	5471	2000	
Na	23	1	45	2499.225	ppb	2499.225	4.00	3494255	2000	
Na	23	2	45	2160.276	ppb	2160.276	0.98	251788	400000	
Mg	24	2	45	329486.934	ppb	329486.934	1.26	15623212	400000	
Al	27	2	45	212697.605	ppb	212697.605	0.54	2773049	400000	
K	39	1	45	59953.005	ppb	59953.005	3.68	80580092	400000	
K	39	2	45	63811.085	ppb	63811.085	2.04	1567071	400000	
Ca	40	1	45	669840.173	ppb	669840.173	5.18	1311570327	400000	
Ca	44	2	45	685292.520	ppb	685292.520	1.03	941138	400000	
Ti	47	2	45	10727.163	ppb	10727.163	1.08	124300	4000	
V	51	2	72	585.203	ppb	585.203	1.40	266590	2000	
Cr	52	2	72	940.848	ppb	940.848	0.99	553261	5000	
Mn	55	2	72	8788.659	ppb	8788.659	0.32	2145619	10000	
Fe	57	2	72	470397.891	ppb	470397.891	0.50	5376526	400000	
Co	59	2	72	185.057	ppb	185.057	1.56	188280	2000	
Ni	60	2	72	648.678	ppb	648.678	0.93	185057	5000	
Cu	63	2	72	7999.199	ppb	7999.199	0.73	6328917	5000	
Zn	66	2	72	4745.961	ppb	4745.961	0.74	510835	5000	
As	75	2	72	1300.534	ppb	1300.534	0.31	92724	2000	
Se	78	1	72	2.529	ppb	2.529	21.39	248	2000	
Sr	88	2	72	1247.653	ppb	1247.653	1.12	333584	4000	
Zr	90	2	72	8832.956	ppb	8832.956	0.95	24362	1000	>LDR
Nb	93	2	72	5.790	ppb	5.790	7.53	8586	200	
Mo	95	2	115	40.756	ppb	40.756	0.97	18707	2000	
Pd	105	2	115	0.180	ppb	0.180	12.83	137	100	
Ag	107	2	115	625.004	ppb	625.004	0.97	957223	100	>LDR
Cd	111	2	115	133.778	ppb	133.778	1.75	27685	2000	
Sn	120	2	115	67.223	ppb	67.223	3.89	38949	2000	
Sb	121	2	115	34.279	ppb	34.279	3.95	17203	1000	
Ba	137	2	115	3335.154	ppb	3335.154	1.12	593461	5000	
W	182	2	165	625.492	ppb	625.492	0.77	1561877	100	>LDR
Pt	195	2	165	0.029	ppb	0.029	9.25	93	100	
Tl	205	2	165	3.408	ppb	3.408	1.66	16661	2000	
Pb	208	2	165	18053.135	ppb	18053.135	0.38	116540309	5000	
Th	232	2	165	73.877	ppb	73.877	0.70	580361	2000	
U	238	2	165	9.013	ppb	9.013	1.30	77016	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	198072	2.53	549626	36.04	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10643406	2.91	22416142	47.48	60	120	IS Failed
Sc (IS)	45	2	HMI He	445374	1.03	833519	53.43	60	120	IS Failed
Sc (IS)	45	3	No Gas	18675048	0.37	37013496	50.45	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4034502	2.76	8765589	46.03	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	503303	0.63	961800	52.33	60	120	IS Failed
In Internal Standard	115	2	HMI He	1951626	1.17	3323973	58.71	60	120	IS Failed
Ho-165	165	2	HMI He	10436620	0.48	16978678	61.47	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-17-C
Data File Name	337SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:55:55-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	102.771	ppb	102.771	11.22	50188	500000	
Li	7	2	45	52.572	ppb	52.572	38.67	2647	500000	
Li	7	3	45	76.380	ppb	76.380	24.10	1699598	50000	
Be	9	1	6	9.333	ppb	9.333	9.51	877	2000	
B	11	1	6	57.064	ppb	57.064	7.17	5795	2000	
Na	23	1	45	2349.497	ppb	2349.497	0.24	3251144	2000	
Na	23	2	45	1980.664	ppb	1980.664	1.04	229820	400000	
Mg	24	2	45	325924.767	ppb	325924.767	1.07	15246360	400000	
Al	27	2	45	192327.099	ppb	192327.099	0.03	2473670	400000	
K	39	1	45	54414.521	ppb	54414.521	0.35	72280102	400000	
K	39	2	45	56145.977	ppb	56145.977	1.98	1361086	400000	
Ca	40	1	45	678096.836	ppb	678096.836	0.46	1306694274	400000	
Ca	44	2	45	664819.993	ppb	664819.993	0.40	900736	400000	
Ti	47	2	45	9469.630	ppb	9469.630	1.52	108251	4000	
V	51	2	72	504.422	ppb	504.422	1.83	226829	2000	
Cr	52	2	72	761.363	ppb	761.363	1.27	441759	5000	
Mn	55	2	72	8386.574	ppb	8386.574	1.33	2020024	10000	
Fe	57	2	72	378654.938	ppb	378654.938	0.89	4270067	400000	
Co	59	2	72	159.805	ppb	159.805	1.00	160415	2000	
Ni	60	2	72	550.261	ppb	550.261	2.44	154891	5000	
Cu	63	2	72	8403.762	ppb	8403.762	1.17	6560050	5000	
Zn	66	2	72	4900.509	ppb	4900.509	0.93	520417	5000	
As	75	2	72	1420.370	ppb	1420.370	0.81	99913	2000	
Se	78	1	72	2.435	ppb	2.435	23.00	237	2000	
Sr	88	2	72	1152.302	ppb	1152.302	1.60	303974	4000	
Zr	90	2	72	9191.618	ppb	9191.618	0.37	25010	1000	>LDR
Nb	93	2	72	6.243	ppb	6.243	5.14	9100	200	
Mo	95	2	115	20.193	ppb	20.193	3.72	9057	2000	
Pd	105	2	115	0.110	ppb	0.110	45.72	83	100	
Ag	107	2	115	644.428	ppb	644.428	0.52	963455	100	>LDR
Cd	111	2	115	150.384	ppb	150.384	1.15	30374	2000	
Sn	120	2	115	25.499	ppb	25.499	3.36	14478	2000	
Sb	121	2	115	30.986	ppb	30.986	1.23	15186	1000	
Ba	137	2	115	3359.423	ppb	3359.423	0.85	583533	5000	
W	182	2	165	738.690	ppb	738.690	1.47	1850572	100	>LDR
Pt	195	2	165	0.011	ppb	0.011	159.84	57	100	
Tl	205	2	165	3.188	ppb	3.188	3.16	15643	2000	
Pb	208	2	165	16580.887	ppb	16580.887	0.95	107399061	5000	
Th	232	2	165	78.797	ppb	78.797	1.31	621079	2000	
U	238	2	165	11.270	ppb	11.270	1.92	96586	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	198274	0.89	549626	36.07	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10464474	0.63	22416142	46.68	60	120	IS Failed
Sc (IS)	45	2	HMI He	439354	0.34	833519	52.71	60	120	IS Failed
Sc (IS)	45	3	No Gas	20286628	0.80	37013496	54.81	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3988543	0.21	8765589	45.50	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	496577	0.45	961800	51.63	60	120	IS Failed
In Internal Standard	115	2	HMI He	1905009	0.51	3323973	57.31	60	120	IS Failed
Ho-165	165	2	HMI He	10472673	1.21	16978678	61.68	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-18-C
Data File Name	338SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T07:59:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	164.290	ppb	164.290	8.14	56357	500000	
Li	7	2	45	140.048	ppb	140.048	11.37	3144	500000	
Li	7	3	45	124.144	ppb	124.144	5.32	1806948	50000	
Be	9	1	6	12.539	ppb	12.539	13.56	1133	2000	
B	11	1	6	77.861	ppb	77.861	2.39	7399	2000	
Na	23	1	45	3372.292	ppb	3372.292	2.87	4515510	2000	
Na	23	2	45	2862.735	ppb	2862.735	1.19	319068	400000	
Mg	24	2	45	394316.180	ppb	394316.180	1.21	18331298	400000	
Al	27	2	45	243248.753	ppb	243248.753	1.09	3109155	400000	
K	39	1	45	73113.968	ppb	73113.968	2.12	95673509	400000	
K	39	2	45	72506.381	ppb	72506.381	1.11	1745067	400000	
Ca	40	1	45	872292.707	ppb	872292.707	2.27	1676761255	400000	
Ca	44	2	45	837284.383	ppb	837284.383	1.53	1127328	400000	
Ti	47	2	45	11856.949	ppb	11856.949	1.32	134701	4000	
V	51	2	72	679.039	ppb	679.039	0.61	304458	2000	
Cr	52	2	72	1006.718	ppb	1006.718	0.55	582892	5000	
Mn	55	2	72	10644.726	ppb	10644.726	0.14	2558636	10000	
Fe	57	2	72	545785.832	ppb	545785.832	0.47	6142158	400000	
Co	59	2	72	215.959	ppb	215.959	1.09	216331	2000	
Ni	60	2	72	877.523	ppb	877.523	0.97	246459	5000	
Cu	63	2	72	12109.071	ppb	12109.071	1.31	9433140	5000	
Zn	66	2	72	6505.316	ppb	6505.316	0.73	689372	5000	
As	75	2	72	1697.523	ppb	1697.523	0.33	119161	2000	
Se	78	1	72	2.968	ppb	2.968	2.32	288	2000	
Sr	88	2	72	1508.716	ppb	1508.716	0.39	397173	4000	
Zr	90	2	72	11214.671	ppb	11214.671	2.04	30440	1000	>LDR
Nb	93	2	72	5.475	ppb	5.475	3.57	8023	200	
Mo	95	2	115	37.179	ppb	37.179	1.39	16751	2000	
Pd	105	2	115	0.142	ppb	0.142	30.67	107	100	
Ag	107	2	115	585.597	ppb	585.597	1.77	880161	100	>LDR
Cd	111	2	115	172.277	ppb	172.277	2.25	34978	2000	
Sn	120	2	115	50.073	ppb	50.073	3.01	28514	2000	
Sb	121	2	115	33.864	ppb	33.864	4.38	16679	1000	
Ba	137	2	115	4493.725	ppb	4493.725	1.91	784691	5000	
W	182	2	165	827.928	ppb	827.928	1.35	2064354	100	>LDR
Pt	195	2	165	0.012	ppb	0.012	118.33	60	100	
Tl	205	2	165	4.032	ppb	4.032	0.93	19666	2000	
Pb	208	2	165	23439.561	ppb	23439.561	0.70	151110790	5000	
Th	232	2	165	81.671	ppb	81.671	0.31	640728	2000	
U	238	2	165	12.932	ppb	12.932	3.96	110294	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	190847	2.12	549626	34.72	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10441508	1.91	22416142	46.58	60	120	IS Failed
Sc (IS)	45	2	HMI He	436650	0.87	833519	52.39	60	120	IS Failed
Sc (IS)	45	3	No Gas	19583280	0.11	37013496	52.91	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3999045	2.55	8765589	45.62	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	495544	0.30	961800	51.52	60	120	IS Failed
In Internal Standard	115	2	HMI He	1915458	1.69	3323973	57.63	60	120	IS Failed
Ho-165	165	2	HMI He	10422836	0.36	16978678	61.39	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-19-B
Data File Name	339SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T08:03:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.544	ppb	-10.544	-64.60	40088	500000	
Li	7	2	45	-55.941	ppb	-55.941	-10.47	2080	500000	
Li	7	3	45	-24.617	ppb	-24.617	-48.72	1318715	50000	
Be	9	1	6	9.783	ppb	9.783	12.38	940	2000	
B	11	1	6	20.877	ppb	20.877	4.64	2560	2000	
Na	23	1	45	905.339	ppb	905.339	1.29	1505257	2000	
Na	23	2	45	709.952	ppb	709.952	1.71	102035	400000	
Mg	24	2	45	494555.347	ppb	494555.347	1.16	23992621	400000	
Al	27	2	45	70917.638	ppb	70917.638	0.68	945989	400000	
K	39	1	45	19792.451	ppb	19792.451	0.37	29628783	400000	
K	39	2	45	19679.253	ppb	19679.253	0.86	498655	400000	
Ca	40	1	45	1039876.254	ppb	1039876.254	0.18	2080425836	400000	
Ca	44	2	45	1060211.597	ppb	1060211.597	1.06	1489700	400000	
Ti	47	2	45	3657.866	ppb	3657.866	2.16	43362	4000	
V	51	2	72	209.127	ppb	209.127	1.95	98861	2000	
Cr	52	2	72	256.423	ppb	256.423	0.94	155718	5000	
Mn	55	2	72	3848.158	ppb	3848.158	0.68	969667	10000	
Fe	57	2	72	139169.505	ppb	139169.505	0.37	1641869	400000	
Co	59	2	72	37.302	ppb	37.302	2.68	39191	2000	
Ni	60	2	72	125.448	ppb	125.448	0.49	37015	5000	
Cu	63	2	72	16539.021	ppb	16539.021	1.07	13505637	5000	
Zn	66	2	72	5613.622	ppb	5613.622	0.95	623618	5000	
As	75	2	72	2513.236	ppb	2513.236	1.68	184929	2000	
Se	78	1	72	0.865	ppb	0.865	23.62	95	2000	
Sr	88	2	72	1074.364	ppb	1074.364	2.29	296486	4000	
Zr	90	2	72	1261.929	ppb	1261.929	0.85	3634	1000	
Nb	93	2	72	1.926	ppb	1.926	3.53	3277	200	
Mo	95	2	115	11.682	ppb	11.682	2.77	5501	2000	
Pd	105	2	115	0.037	ppb	0.037	75.50	33	100	
Ag	107	2	115	1341.899	ppb	1341.899	0.18	2103407	100	>LDR
Cd	111	2	115	302.716	ppb	302.716	2.09	64101	2000	
Sn	120	2	115	3.678	ppb	3.678	5.70	2267	2000	
Sb	121	2	115	76.540	ppb	76.540	3.96	39282	1000	
Ba	137	2	115	2617.208	ppb	2617.208	1.69	476613	5000	
W	182	2	165	485.256	ppb	485.256	1.51	1255487	100	
Pt	195	2	165	-0.006	ppb	-0.006	-45.75	23	100	
Tl	205	2	165	1.685	ppb	1.685	3.34	8593	2000	
Pb	208	2	165	14596.856	ppb	14596.856	0.88	97623252	5000	
Th	232	2	165	34.168	ppb	34.168	0.71	278213	2000	
U	238	2	165	10.002	ppb	10.002	2.52	88533	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	202658	0.58	549626	36.87	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10864304	0.31	22416142	48.47	60	120	IS Failed
Sc (IS)	45	2	HMI He	455643	0.38	833519	54.67	60	120	IS Failed
Sc (IS)	45	3	No Gas	20019481	0.58	37013496	54.09	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4166750	0.19	8765589	47.54	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	519479	0.37	961800	54.01	60	120	IS Failed
In Internal Standard	115	2	HMI He	1997292	0.78	3323973	60.09	60	120	
Ho-165	165	2	HMI He	10812849	0.63	16978678	63.68	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-20-B
Data File Name	340SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T08:07:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-6.438	ppb	-6.438	-139.67	39831	500000	
Li	7	2	45	-14.770	ppb	-14.770	-265.20	2257	500000	
Li	7	3	45	-28.623	ppb	-28.623	-43.77	1294360	50000	
Be	9	1	6	8.373	ppb	8.373	18.31	783	2000	
B	11	1	6	19.559	ppb	19.559	5.15	2370	2000	
Na	23	1	45	929.572	ppb	929.572	1.13	1510284	2000	
Na	23	2	45	742.915	ppb	742.915	2.11	102210	400000	
Mg	24	2	45	478759.988	ppb	478759.988	0.98	22487260	400000	
Al	27	2	45	73866.741	ppb	73866.741	1.02	953950	400000	
K	39	1	45	19135.473	ppb	19135.473	0.45	28273461	400000	
K	39	2	45	19368.122	ppb	19368.122	1.09	475251	400000	
Ca	40	1	45	986940.546	ppb	986940.546	0.35	1940623438	400000	
Ca	44	2	45	1018911.439	ppb	1018911.439	0.26	1386194	400000	
Ti	47	2	45	4149.762	ppb	4149.762	2.73	47635	4000	
V	51	2	72	213.597	ppb	213.597	0.99	98279	2000	
Cr	52	2	72	242.900	ppb	242.900	1.66	143593	5000	
Mn	55	2	72	3832.710	ppb	3832.710	0.98	940142	10000	
Fe	57	2	72	139951.954	ppb	139951.954	1.20	1607360	400000	
Co	59	2	72	41.420	ppb	41.420	0.84	42363	2000	
Ni	60	2	72	130.289	ppb	130.289	4.07	37416	5000	
Cu	63	2	72	17243.214	ppb	17243.214	0.92	13706935	5000	
Zn	66	2	72	5461.720	ppb	5461.720	0.87	590647	5000	
As	75	2	72	2541.529	ppb	2541.529	1.65	182046	2000	
Se	78	1	72	1.316	ppb	1.316	29.98	135	2000	
Sr	88	2	72	1040.583	ppb	1040.583	0.82	279558	4000	
Zr	90	2	72	1349.877	ppb	1349.877	3.60	3781	1000	
Nb	93	2	72	2.326	ppb	2.326	10.56	3754	200	
Mo	95	2	115	13.217	ppb	13.217	7.03	5938	2000	
Pd	105	2	115	0.048	ppb	0.048	58.05	40	100	
Ag	107	2	115	1215.307	ppb	1215.307	2.17	1818431	100	>LDR
Cd	111	2	115	292.695	ppb	292.695	3.73	59166	2000	
Sn	120	2	115	3.719	ppb	3.719	9.73	2187	2000	
Sb	121	2	115	84.521	ppb	84.521	3.21	41408	1000	
Ba	137	2	115	2650.991	ppb	2650.991	0.69	460870	5000	
W	182	2	165	452.070	ppb	452.070	0.56	1133686	100	
Pt	195	2	165	0.007	ppb	0.007	264.48	50	100	
Tl	205	2	165	1.670	ppb	1.670	7.91	8256	2000	
Pb	208	2	165	14281.338	ppb	14281.338	0.43	92572219	5000	
Th	232	2	165	33.318	ppb	33.318	0.83	262941	2000	
U	238	2	165	8.135	ppb	8.135	2.28	69808	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	197033	1.23	549626	35.85	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10677860	0.29	22416142	47.63	60	120	IS Failed
Sc (IS)	45	2	HMI He	441171	0.98	833519	52.93	60	120	IS Failed
Sc (IS)	45	3	No Gas	19861680	0.19	37013496	53.66	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4042159	0.65	8765589	46.11	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	505699	0.60	961800	52.58	60	120	IS Failed
In Internal Standard	115	2	HMI He	1906643	0.78	3323973	57.36	60	120	IS Failed
Ho-165	165	2	HMI He	10479586	0.44	16978678	61.72	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5424513
Data File Name	341_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T08:13:06-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	240CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	308.262	ppb	2.304	72401	500	61.7	90	110	>+\-10%
Li	7	2	45	298.963	ppb	8.116	3874	500	59.8	90	110	>+\-10%
Li	7	3	45	280.732	ppb	2.088	2298630	500	56.1	90	110	>+\-10%
Be	9	1	6	50.162	ppb	3.905	4788	50	100.3	90	110	
B	11	1	6	48.270	ppb	2.341	5088	50	96.5	90	110	
Na	23	1	45	4322.670	ppb	0.639	5808973	5000	86.5	90	110	>+\-10%
Na	23	2	45	3845.744	ppb	1.854	399137	5000	76.9	90	110	>+\-10%
Mg	24	2	45	4360.731	ppb	1.373	193116	5000	87.2	90	110	>+\-10%
Al	27	2	45	4681.339	ppb	1.704	56893	5000	93.6	90	110	
K	39	1	45	4878.145	ppb	0.681	9859436	5000	97.6	90	110	
K	39	2	45	4753.069	ppb	1.321	113817	5000	95.1	90	110	
Ca	40	1	45	5179.335	ppb	1.058	10203227	5000	103.6	90	110	
Ca	44	2	45	5284.068	ppb	11.400	6789	5000	105.7	90	110	
Ti	47	2	45	45.710	ppb	9.132	493	50	91.4	90	110	
V	51	2	72	41.120	ppb	0.990	19921	50	82.2	90	110	>+\-10%
Cr	52	2	72	44.014	ppb	1.900	26579	50	88.0	90	110	>+\-10%
Mn	55	2	72	49.269	ppb	2.910	12356	50	98.5	90	110	
Fe	57	2	72	4421.914	ppb	1.887	51783	5000	88.4	90	110	>+\-10%
Co	59	2	72	43.288	ppb	2.373	45068	50	86.6	90	110	>+\-10%
Ni	60	2	72	44.376	ppb	1.900	13036	50	88.8	90	110	>+\-10%
Cu	63	2	72	49.941	ppb	3.419	40892	50	99.9	90	110	
Zn	66	2	72	46.476	ppb	8.645	5288	50	93.0	90	110	
As	75	2	72	45.713	ppb	2.102	3344	50	91.4	90	110	
Se	78	1	72	43.068	ppb	3.361	4445	50	86.1	90	110	>+\-10%
Sr	88	2	72	51.041	ppb	1.734	13994	50	102.1	90	110	
Zr	90	2	72	348.722	ppb	6.960	1030	50	697.4	90	110	>+\-10%
Nb	93	2	72	83.558	ppb	1.812	120246	100	83.6	90	110	>+\-10%
Mo	95	2	115	40.857	ppb	2.182	19264	50	81.7	90	110	>+\-10%
Pd	105	2	115	42.626	ppb	1.553	31817	50	85.3	90	110	>+\-10%
Ag	107	2	115	52.387	ppb	2.407	82431	50	104.8	90	110	
Cd	111	2	115	46.079	ppb	1.609	9797	50	92.2	90	110	
Sn	120	2	115	44.294	ppb	0.987	26406	50	88.6	90	110	>+\-10%
Sb	121	2	115	46.007	ppb	3.536	23718	50	92.0	90	110	
Ba	137	2	115	46.906	ppb	5.538	8586	50	93.8	90	110	
W	182	2	165	45.899	ppb	1.749	117367	50	91.8	90	110	
Pt	195	2	165	42.425	ppb	1.636	87613	50	84.9	90	110	>+\-10%
Tl	205	2	165	47.117	ppb	0.872	233118	50	94.2	90	110	
Pb	208	2	165	52.811	ppb	1.454	347758	50	105.6	90	110	
Th	232	2	165	48.262	ppb	1.655	386149	50	96.5	90	110	
U	238	2	165	47.968	ppb	1.039	416854	50	95.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	201953	1.51	549626	36.74	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10641926	1.06	22416142	47.47	60	120	IS Failed
Sc (IS)	45	2	HMI He	414847	0.46	833519	49.77	60	120	IS Failed
Sc (IS)	45	3	No Gas	19147592	0.22	37013496	51.73	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4393085	0.11	8765589	50.12	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	514806	0.36	961800	53.53	60	120	IS Failed
In Internal Standard	115	2	HMI He	2005100	1.39	3323973	60.32	60	120	
Ho-165	165	2	HMI He	10629199	1.69	16978678	62.60	60	120	

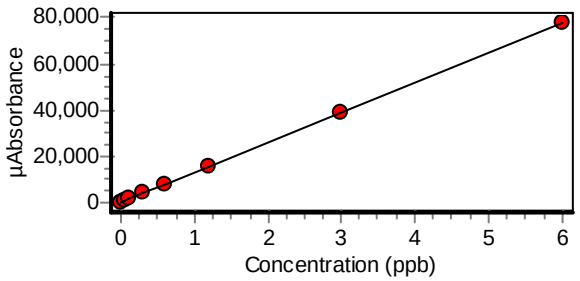
Report Generated By CETAC QuickTrace
Analyst: diazl
Worksheet file: C:\Program Files\QuickTrace\Worksheets\2018\11-Nov\181112bc.wsz
Date Started: 11/12/2018 10:15:35 AM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
IC 280-437200/1-A	STD	11/12/18 12:46:22 pm	0.000	307	1.01		1.00	1.00	1.00
IC 280-437200/2-A	STD	11/12/18 12:48:34 pm	0.060	869	1.57		1.00	1.00	1.00
IC 280-437200/3-A	STD	11/12/18 12:50:48 pm	0.120	1779	2.19		1.00	1.00	1.00
IC 280-437200/4-A	STD	11/12/18 12:53:01 pm	0.300	4313	2.49		1.00	1.00	1.00
IC 280-437200/5-A	STD	11/12/18 12:55:16 pm	0.600	8287	2.08		1.00	1.00	1.00
IC 280-437200/6-A	STD	11/12/18 12:57:31 pm	1.200	16131	2.13		1.00	1.00	1.00
IC 280-437200/7-A	STD	11/12/18 12:59:46 pm	3.000	39227	2.12		1.00	1.00	1.00
IC 280-437200/8-A	STD	11/12/18 01:02:02 pm	6.000	77427	2.29		1.00	1.00	1.00

Calibration

Equation: A = 397.681 + 12868.760C
R2: 0.99994
SEE: 232.6305
Flags: C



ICV 280-437200/9-A	ICV	11/12/18 01:04:46 pm	2.431	31683	2.12		1.00	1.00	1.00
% Recovery 101.30									
ICB 280-437200/10-A	ICB	11/12/18 01:07:03 pm	0.005	465	7.56	s	1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
CRA 280-437200/11-A	CRDL	11/12/18 01:09:16 pm	0.110	1811	2.56		1.00	1.00	1.00
% Recovery 91.54									
CCV 280-437200/12-A	CCV	11/12/18 01:11:32 pm	3.048	39620	2.12		1.00	1.00	1.00
% Recovery 101.60									
CCB 280-437200/13-A	CCB	11/12/18 01:13:44 pm	-0.016	191	1.51		1.00	1.00	1.00
MB 280-435637/1-B	UNK	11/12/18 01:15:56 pm	-0.021	122	5.05	s	1.00	1.00	1.00
LCS 280-435637/2-B	UNK	11/12/18 01:18:08 pm	2.987	38831	2.52		1.00	1.00	1.00
280-116089-C-14-K	UNK	11/12/18 01:20:21 pm	-0.014	222	3.59		1.00	1.00	1.00
280-116180-M-3-C	UNK	11/12/18 01:22:34 pm	-0.020	138	2.72		1.00	1.00	1.00
280-116180-M-3-D MS	UNK	11/12/18 01:24:47 pm	3.037	39480	2.26		1.00	1.00	1.00
280-116180-M-3-E MSD	UNK	11/12/18 01:27:00 pm	3.041	39525	2.31		1.00	1.00	1.00
MB 280-437194/1-A	UNK	11/12/18 01:29:14 pm	-0.024	92	6.16		1.00	1.00	1.00
LCS 280-437194/2-A	UNK	11/12/18 01:31:28 pm	3.029	39371	2.10		1.00	1.00	1.00
LCSD 280-437194/3-A	UNK	11/12/18 01:33:43 pm	2.995	38934	2.21		1.00	1.00	1.00
280-116195-F-7-C	UNK	11/12/18 01:35:58 pm	-0.022	114	1.02		1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 01:38:13 pm	3.117	40512	2.18		1.00	1.00	1.00
% Recovery 103.91									
CCB 280-437200/13-A	CCB	11/12/18 01:40:25 pm	-0.016	194	1.30		1.00	1.00	1.00
280-116195-F-8-C	UNK	11/12/18 01:42:40 pm	-0.015	209	1.15		1.00	1.00	1.00
280-116195-F-9-C	UNK	11/12/18 01:44:56 pm	-0.021	121	1.74		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-116195-F-10-C	UNK	11/12/18 01:47:07 pm	-0.017	178	1.70		1.00	1.00 1.00
280-116226-D-3-D	UNK	11/12/18 01:49:19 pm	-0.005	329	1.85		1.00	1.00 1.00
280-116226-B-4-A	UNK	11/12/18 01:51:32 pm	-0.019	154	1.34		1.00	1.00 1.00
280-116226-D-5-B	UNK	11/12/18 01:53:44 pm	-0.017	181	1.73		1.00	1.00 1.00
280-116226-D-6-B	UNK	11/12/18 01:55:57 pm	-0.015	205	1.76		1.00	1.00 1.00
280-116258-A-4-C	UNK	11/12/18 01:58:10 pm	-0.007	301	21.09	s	1.00	1.00 1.00
280-116258-A-4-C SD@5	UNK	11/12/18 02:00:23 pm	-0.019	158	1.19		1.00	1.00 1.00
280-116258-A-4-D MS	UNK	11/12/18 02:02:37 pm	2.525	32888	2.49		1.00	1.00 1.00
CCV 280-437200/12-A % Recovery 102.32	CCV	11/12/18 02:04:52 pm	3.070	39900	2.07		1.00	1.00 1.00
CCB 280-437200/13-A	CCB	11/12/18 02:07:04 pm	-0.021	134	4.22		1.00	1.00 1.00
280-116258-A-4-E MSD	UNK	11/12/18 02:09:18 pm	2.455	31988	2.50		1.00	1.00 1.00
280-116258-A-4-C PDS	UNK	11/12/18 02:11:33 pm	2.419	31525	2.67		1.00	1.00 1.00
280-116259-D-1-G	UNK	11/12/18 02:13:47 pm	-0.047	-210	12.49		1.00	1.00 1.00
MB 280-437199/1-A	UNK	11/12/18 02:16:02 pm	-0.026	58	9.39		1.00	1.00 1.00
LCS 280-437199/2-A	UNK	11/12/18 02:18:13 pm	3.015	39198	1.95		1.00	1.00 1.00
280-116420-C-1-C	UNK	11/12/18 02:20:25 pm	-0.026	67	17.22		1.00	1.00 1.00
280-116420-C-1-D MS	UNK	11/12/18 02:22:37 pm	2.760	35922	2.03		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116420-C-1-E MSD	UNK	11/12/18 02:24:50 pm	2.761	35933	2.05		1.00	1.00	1.00
280-116420-C-2-E	UNK	11/12/18 02:27:03 pm	-0.030	11	152.23		1.00	1.00	1.00
280-116420-C-3-E	UNK	11/12/18 02:29:16 pm	-0.021	122	7.93	s	1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 02:31:31 pm	3.129	40661	2.01		1.00	1.00	1.00
% Recovery 104.29									
CCB 280-437200/13-A	CCB	11/12/18 02:33:43 pm	-0.015	199	6.90	s	1.00	1.00	1.00
MB 280-437198/1-A	UNK	11/12/18 02:35:56 pm	-0.022	118	2.47		1.00	1.00	1.00
LCS 280-437198/2-A	UNK	11/12/18 02:38:10 pm	3.154	40990	2.08		1.00	1.00	1.00
LCSD 280-437198/3-A	UNK	11/12/18 02:40:24 pm	3.077	39995	2.09		1.00	1.00	1.00
280-116258-A-1-C	UNK	11/12/18 02:42:38 pm	-0.016	191	6.33	s	1.00	1.00	1.00
280-116258-A-3-C	UNK	11/12/18 02:44:53 pm	-0.012	243	4.03		1.00	1.00	1.00
280-116258-A-5-C	UNK	11/12/18 02:47:08 pm	-0.014	217	1.35		1.00	1.00	1.00
280-116258-A-6-C	UNK	11/12/18 02:49:20 pm	-0.015	204	3.72		1.00	1.00	1.00
280-116268-B-1-B	UNK	11/12/18 02:51:32 pm	-0.025	81	14.04		1.00	1.00	1.00
280-116268-B-2-B	UNK	11/12/18 02:53:44 pm	-0.025	82	11.04		1.00	1.00	1.00
280-116268-B-3-B	UNK	11/12/18 02:55:57 pm	-0.023	96	3.99		1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 02:58:12 pm	3.106	40366	2.02		1.00	1.00	1.00
% Recovery 103.53									
CCB 280-437200/13-A	CCB	11/12/18 03:00:24 pm	-0.015	204	6.99	s	1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116268-B-4-B	UNK	11/12/18 03:02:37 pm	-0.024	93	16.73		1.00	1.00	1.00
280-116270-E-1-C	UNK	11/12/18 03:04:50 pm	-0.023	97	8.32		1.00	1.00	1.00
280-116270-C-8-C	UNK	11/12/18 03:07:03 pm	-0.021	124	5.58	s	1.00	1.00	1.00
280-116270-E-9-C	UNK	11/12/18 03:09:17 pm	-0.025	76	14.82		1.00	1.00	1.00
280-116270-E-9-C SD@5	UNK	11/12/18 03:11:31 pm	-0.017	185	1.44		1.00	1.00	1.00
280-116270-E-9-D MS	UNK	11/12/18 03:13:45 pm	3.113	40453	2.14		1.00	1.00	1.00
280-116270-E-9-E MSD	UNK	11/12/18 03:15:59 pm	3.091	40181	2.20		1.00	1.00	1.00
280-116270-E-9-C PDS	UNK	11/12/18 03:18:14 pm	2.872	37350	1.87		1.00	1.00	1.00
280-116270-G-12-C	UNK	11/12/18 03:20:27 pm	-0.030	15	283.10		1.00	1.00	1.00
280-116270-G-13-C	UNK	11/12/18 03:22:39 pm	-0.022	120	11.20	s	1.00	1.00	1.00
CCV 280-437200/12-A % Recovery 104.87	CCV	11/12/18 03:24:55 pm	3.146	40884	2.21		1.00	1.00	1.00
CCB 280-437200/13-A	CCB	11/12/18 03:27:07 pm	-0.014	214	10.70	s	1.00	1.00	1.00
280-116270-E-14-C	UNK	11/12/18 03:29:19 pm	-0.023	99	12.48		1.00	1.00	1.00
280-116478-E-1-D	UNK	11/12/18 03:31:31 pm	-0.021	122	5.00		1.00	1.00	1.00
280-116478-E-2-B	UNK	11/12/18 03:33:44 pm	-0.023	99	10.47		1.00	1.00	1.00
LB 280-435602/1-C	UNK	11/12/18 03:35:57 pm	-0.024	93	1.65		1.00	1.00	1.00
LCS 280-435602/2-D	UNK	11/12/18 03:38:11 pm	3.240	42093	1.04		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
LCSD 280-435602/6-C	UNK	11/12/18 03:40:24 pm	3.217	41800	1.00		1.00	1.00	1.00
280-116219-E-1-E	UNK	11/12/18 03:42:38 pm	-0.030	5	107.17		1.00	1.00	1.00
280-116219-E-1-E SD@5	UNK	11/12/18 03:44:53 pm	-0.016	191	3.71		1.00	1.00	1.00
280-116219-E-1-F MS	UNK	11/12/18 03:47:07 pm	3.254	42274	1.08		1.00	1.00	1.00
280-116219-E-1-G MSD	UNK	11/12/18 03:49:22 pm	3.242	42119	1.05		1.00	1.00	1.00
CCV 280-437200/12-A % Recovery 104.71	CCV	11/12/18 03:51:37 pm	3.141	40824	2.30		1.00	1.00	1.00
CCB 280-437200/13-A	CCB	11/12/18 03:53:49 pm	-0.015	201	16.47	s	1.00	1.00	1.00
280-116219-E-1-E PDS	UNK	11/12/18 03:56:02 pm	3.260	42356	1.15		1.00	1.00	1.00
280-116232-B-1-L	UNK	11/12/18 03:58:15 pm	-0.029	25	41.62		1.00	1.00	1.00
280-116232-B-2-H	UNK	11/12/18 04:00:28 pm	-0.024	93	1.44		1.00	1.00	1.00
MB 280-437197/1-A	UNK	11/12/18 04:02:41 pm	-0.025	80	16.89		1.00	1.00	1.00
LCS 280-437197/2-A	UNK	11/12/18 04:04:54 pm	3.142	40836	2.30		1.00	1.00	1.00
280-116218-P-1-G	UNK	11/12/18 04:07:07 pm	0.489	6692	1.94		1.00	1.00	1.00
280-116218-P-1-G SD@5	UNK	11/12/18 04:09:20 pm	0.094	1605	0.66		1.00	1.00	1.00
280-116218-P-1-H MS	UNK	11/12/18 04:11:34 pm	2.765	35977	2.77		1.00	1.00	1.00
280-116218-P-1-I MSD	UNK	11/12/18 04:13:48 pm	2.878	37430	2.26		1.00	1.00	1.00
280-116218-P-1-G PDS	UNK	11/12/18 04:16:02 pm	2.752	35814	2.38		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
CCV 280-437200/12-A	CCV	11/12/18 04:18:18 pm	3.084	40080	2.72		1.00	1.00	1.00
% Recovery 102.79									
CCB 280-437200/13-A	CCB	11/12/18 04:20:30 pm	-0.021	123	41.50	s	1.00	1.00	1.00
280-116218-P-3-C	UNK	11/12/18 04:22:44 pm	0.401	5555	2.02		1.00	1.00	1.00
280-116218-P-4-J	UNK	11/12/18 04:24:59 pm	0.293	4162	2.06		1.00	1.00	1.00
280-116218-P-4-K MS	UNK	11/12/18 04:27:12 pm	2.573	33504	2.30		1.00	1.00	1.00
280-116218-P-4-L MSD	UNK	11/12/18 04:29:25 pm	2.501	32579	2.30		1.00	1.00	1.00
280-116218-P-5-C	UNK	11/12/18 04:31:38 pm	0.209	3089	1.63		1.00	1.00	1.00
280-116228-D-1-C	UNK	11/12/18 04:33:52 pm	-0.033	-21	165.65		1.00	1.00	1.00
280-116228-D-3-C	UNK	11/12/18 04:36:05 pm	-0.024	91	23.57		1.00	1.00	1.00
280-116228-D-5-C	UNK	11/12/18 04:38:18 pm	-0.081	-640	5.08		1.00	1.00	1.00
280-116228-D-7-C	UNK	11/12/18 04:40:31 pm	-0.103	-930	5.03		1.00	1.00	1.00
280-116228-D-10-C	UNK	11/12/18 04:42:45 pm	-0.083	-674	3.31		1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 04:45:01 pm	3.072	39932	2.84		1.00	1.00	1.00
% Recovery 102.40									
CCB 280-437200/13-A	CCB	11/12/18 04:47:13 pm	-0.102	-915	19.96		1.00	1.00	1.00
280-116233-D-1-C	UNK	11/12/18 04:49:27 pm	-0.079	-614	5.91		1.00	1.00	1.00
280-116233-D-2-C	UNK	11/12/18 04:51:41 pm	-0.084	-689	6.57		1.00	1.00	1.00
280-116233-D-3-C	UNK	11/12/18 04:53:55 pm	-0.084	-679	3.88		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116233-D-4-C	UNK	11/12/18 04:56:10 pm	0.010	527	0.56		1.00	1.00	1.00
280-116233-D-5-C	UNK	11/12/18 04:58:23 pm	-0.060	-380	8.60		1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 05:00:39 pm	3.017	39224	3.04		1.00	1.00	1.00
% Recovery 100.57									
CCB 280-437200/13-A	CCB	11/12/18 05:02:51 pm	-0.035	-47	448.78		1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 06:15:44 pm	2.956	38442	1.73		1.00	1.00	1.00
% Recovery 98.54									
CCB 280-437200/13-A	CCB	11/12/18 06:17:56 pm	-0.014	223	0.80		1.00	1.00	1.00
280-116228-D-5-C	UNK	11/12/18 06:20:09 pm	-0.025	71	1.38		1.00	1.00	1.00
280-116228-D-7-C	UNK	11/12/18 06:22:23 pm	-0.026	63	6.39		1.00	1.00	1.00
280-116228-D-10-C	UNK	11/12/18 06:24:36 pm	-0.026	62	8.14		1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 06:26:52 pm	2.985	38812	2.31		1.00	1.00	1.00
% Recovery 99.50									
CCB 280-437200/13-A	CCB	11/12/18 06:29:04 pm	-0.013	225	0.78		1.00	1.00	1.00
280-116233-D-1-C	UNK	11/12/18 06:31:18 pm	-0.005	332	1.07		1.00	1.00	1.00
280-116233-D-2-C	UNK	11/12/18 06:33:32 pm	-0.024	86	8.43		1.00	1.00	1.00
280-116233-D-3-C	UNK	11/12/18 06:35:47 pm	-0.020	141	1.18		1.00	1.00	1.00
280-116233-D-4-C	UNK	11/12/18 06:38:02 pm	0.032	805	2.39		1.00	1.00	1.00
280-116233-D-5-C	UNK	11/12/18 06:40:15 pm	-0.007	314	2.26		1.00	1.00	1.00
CCV 280-437200/12-A	CCV	11/12/18 06:42:31 pm	3.000	39007	2.38		1.00	1.00	1.00
% Recovery 100.01									

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
CCB 280-437200/13-A	CCB	11/12/18 06:44:43 pm	-0.013	225	2.66		1.00	1.00	1.00

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	35.00	90.00	55.00	4	1.50	50	253.65

ASX Pump Rate (%)
100

Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

Baseline Correction

#1 Start time (s)	#1 End time (s)	#2 Start time (s)	#2 End time (s)
20.00	24.00		

Standby Mode

Enabled: Yes

Standby Options: pump off, gas off, lamp off

Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

Calibration

Settings

Algorithm	Through blank	Weighted fit	Cal. Type	Racalibration rate	Reslope rate	Reslope standard
Linear	No	No	Normal	0	0	N/A

Limits

Calibration slope		Reslope		Coeff. of Determination
Lower (%)	Upper (%)	Lower (%)	Upper (%)	
20	150	75	125	0.99500

Error action: Flag and continue

QC

GLP Override: Yes

QC Tests

CCB

Concentration (ppb)
0.0600

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICB

Concentration (ppb)
0.0600

Failure flag: Z

Error action for manually inserted QC: Stop analysis

CCV

Concentration (ppb)	Low Limit %	High Limit %
3.0000	80.0000	120.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICV

Concentration (ppb)	Low Limit %	High Limit %
2.4000	94.6000	105.4000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

CRDL

Concentration (ppb)	Low Limit %	High Limit %
0.1200	50.0000	150.0000

Failure flag: Y

Error action for manually inserted QC: Stop analysis

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
FWGmw-018-181001-GW	280-116270-1
LL2mw-264-181001-GW	280-116270-4
CBPmw-008-181001-GW	280-116270-5
CBPmw-009-181001-GW	280-116270-6
LL1mw-089-181001-GW	280-116270-7
FWGmw-020-181001-GW	280-116270-9
LL3mw-234-181001-GW	280-116270-10
LL4mw-200-181001-GW	280-116270-15

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: FWGmw-018-181001-GW
Lab Sample ID: 280-116270-1
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 09:30
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0050	0.010	0.0050	0.0020	mg/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL2mw-264-181001-GW
Lab Sample ID: 280-116270-4
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 14:00
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0050	0.010	0.0050	0.0020	mg/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: CBPmw-008-181001-GW
Lab Sample ID: 280-116270-5
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 10:25
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0050	0.010	0.0050	0.0020	mg/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: CBPmw-009-181001-GW
Lab Sample ID: 280-116270-6
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 08:50
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0022	0.010	0.0050	0.0020	mg/L	J		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL1mw-089-181001-GW
Lab Sample ID: 280-116270-7
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 12:25
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0050	0.010	0.0050	0.0020	mg/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: FWGmw-020-181001-GW
Lab Sample ID: 280-116270-9
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 10:00
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0050	0.010	0.0050	0.0020	mg/L	U		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL3mw-234-181001-GW
Lab Sample ID: 280-116270-10
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 11:15
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0023	0.010	0.0050	0.0020	mg/L	J		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL4mw-200-181001-GW
Lab Sample ID: 280-116270-15
Lab Name: TestAmerica Denver
Job No.: 280-116270-1
SDG ID.:
Matrix: Water
Date Sampled: 10/26/2018 14:50
Reporting Basis: WET
Date Received: 10/27/2018 08:50

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0050	0.010	0.0050	0.0020	mg/L	U		1	9012B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Analyst: RK Batch Start Date: 11/08/2018

Reporting Units: mg/L Analytical Batch No.: 436904

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	14:12	Cyanide, Total	0.106	0.100	106	90-110		CN ICV Daily_01221
15	ICB	14:14	Cyanide, Total	0.0050				U	
89	CCV	16:09	Cyanide, Total	0.210	0.200	105	90-110		CN CAL 1 ppm_01454
90	CCB	16:10	Cyanide, Total	0.0050				U	
104	CCV	16:35	Cyanide, Total	0.211	0.200	105	90-110		CN CAL 1 ppm_01454
105	CCB	16:37	Cyanide, Total	0.0050				U	
119	CCV	16:58	Cyanide, Total	0.213	0.200	106	90-110		CN CAL 1 ppm_01454
120	CCB	16:59	Cyanide, Total	0.0050				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 436904	Date: 11/08/2018 16:29		Prep Batch: 436821		Date: 11/08/2018 09:55		
9012B	MB 280-436821/5-A	Cyanide, Total	0.0050	U	mg/L	0.010	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436904	Date: 11/08/2018 16:40		Prep Batch: 436821		Date: 11/08/2018 09:55						
9012B	280-116270-1	Cyanide, Total	0.0050	U	mg/L						
9012B	280-116270-1 MS	Cyanide, Total	0.106		mg/L	0.100	106	83-116			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436904	Date: 11/08/2018 16:41		Prep Batch: 436821		Date: 11/08/2018 09:55						
9012B	280-116270-1 MSD	Cyanide, Total	0.101		mg/L	0.100	101	83-116	5	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436904	Date: 11/08/2018 16:26		Prep Batch: 436821			Date: 11/08/2018 09:55					
						LCS Source: CN ICV Int_00510					
9012B	LCS 280-436821/3-A	Cyanide, Total	0.106		mg/L	0.100	106	83-116	9	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436904	Date: 11/08/2018 16:28		Prep Batch: 436821			Date: 11/08/2018 09:55					
						LCSD Source: CN ICV Int_00510					
9012B	LCSD 280-436821/4-A	Cyanide, Total	0.0970		mg/L	0.100	97	83-116	9	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LOW LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436904	Date: 11/08/2018 16:25		Prep Batch: 436821			Date: 11/08/2018 09:55					
						LCS Source: CN 10ppm_00320					
9012B	LLCS 280-436821/2-A	Cyanide, Total	0.101		mg/L	0.100	101	44-167			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
HIGH LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436904	Date: 11/08/2018 16:23		Prep Batch: 436821			Date: 11/08/2018 09:55					
						LCS Source: CN 10ppm_00320					
9012B	HLCS 280-436821/1-A	Cyanide, Total	0.346		mg/L	0.350	99	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B DL Date: 08/01/2018 00:00

Prep Method: 9012B

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116270-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.002

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
HLCS 280-436821/1-A	11/08/2018 09:55	436821		50	50
LLCS 280-436821/2-A	11/08/2018 09:55	436821		50	50
LCS 280-436821/3-A	11/08/2018 09:55	436821		50	50
LCSD 280-436821/4-A	11/08/2018 09:55	436821		50	50
MB 280-436821/5-A	11/08/2018 09:55	436821		50	50
280-116270-1	11/08/2018 09:55	436821		50	50
280-116270-1 MS	11/08/2018 09:55	436821		50	50
280-116270-1 MSD	11/08/2018 09:55	436821		50	50
280-116270-4	11/08/2018 09:55	436821		50	50
280-116270-5	11/08/2018 09:55	436821		50	50
280-116270-6	11/08/2018 09:55	436821		50	50
280-116270-7	11/08/2018 09:55	436821		50	50
280-116270-9	11/08/2018 09:55	436821		50	50
280-116270-10	11/08/2018 09:55	436821		50	50
280-116270-15	11/08/2018 09:55	436821		50	50

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/08/2018 13:53 End Date: 11/08/2018 18:38

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			13:53																									
ZZZZZZ			13:54																									
ZZZZZZ			13:56																									
ZZZZZZ			13:57																									
IC 280-436904/5			13:59	X																								
IC 280-436904/6			14:00	X																								
IC 280-436904/7			14:02	X																								
IC 280-436904/8			14:03	X																								
IC 280-436904/9			14:05	X																								
IC 280-436904/10			14:06	X																								
IC 280-436904/11			14:08	X																								
ZZZZZZ			14:09																									
ZZZZZZ			14:11																									
ICV 280-436904/14	1		14:12	X																								
ICB 280-436904/15	1		14:14	X																								
ZZZZZZ			14:15																									
ZZZZZZ			14:17																									
ZZZZZZ			14:18																									
ZZZZZZ			14:20																									
ZZZZZZ			14:21																									
ZZZZZZ			14:23																									
ZZZZZZ			14:24																									
ZZZZZZ			14:26																									
ZZZZZZ			14:27																									
ZZZZZZ			14:29																									
ZZZZZZ			14:30																									
ZZZZZZ			14:32																									
ZZZZZZ			14:33																									
CCV 280-436904/29			14:35																									
CCB 280-436904/30			14:37																									
ZZZZZZ			14:38																									
ZZZZZZ			14:40																									
ZZZZZZ			14:41																									
ZZZZZZ			14:43																									
ZZZZZZ			14:44																									
ZZZZZZ			14:46																									
ZZZZZZ			14:47																									
ZZZZZZ			14:49																									
ZZZZZZ			14:50																									
ZZZZZZ			14:52																									
ZZZZZZ			14:53																									
ZZZZZZ			14:55																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/08/2018 13:53 End Date: 11/08/2018 18:38

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			14:56																									
CCV 280-436904/44			14:58																									
CCB 280-436904/45			14:59																									
ZZZZZZ			15:01																									
ZZZZZZ			15:02																									
ZZZZZZ			15:04																									
ZZZZZZ			15:05																									
ZZZZZZ			15:07																									
ZZZZZZ			15:08																									
ZZZZZZ			15:10																									
ZZZZZZ			15:11																									
ZZZZZZ			15:13																									
ZZZZZZ			15:18																									
ZZZZZZ			15:19																									
ZZZZZZ			15:21																									
ZZZZZZ			15:22																									
CCV 280-436904/59			15:24																									
CCB 280-436904/60			15:25																									
ZZZZZZ			15:27																									
ZZZZZZ			15:28																									
ZZZZZZ			15:30																									
ZZZZZZ			15:31																									
ZZZZZZ			15:33																									
ZZZZZZ			15:34																									
ZZZZZZ			15:36																									
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									
ZZZZZZ			15:40																									
ZZZZZZ			15:42																									
ZZZZZZ			15:43																									
ZZZZZZ			15:45																									
CCV 280-436904/74			15:46																									
CCB 280-436904/75			15:48																									
ZZZZZZ			15:49																									
ZZZZZZ			15:51																									
ZZZZZZ			15:52																									
ZZZZZZ			15:54																									
ZZZZZZ			15:55																									
ZZZZZZ			15:57																									
ZZZZZZ			15:58																									
ZZZZZZ			16:00																									
ZZZZZZ			16:01																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/08/2018 13:53 End Date: 11/08/2018 18:38

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			16:03	
ZZZZZZ			16:04	
ZZZZZZ			16:06	
ZZZZZZ			16:07	
CCV 280-436904/89	1		16:09	X
CCB 280-436904/90	1		16:10	X
ZZZZZZ			16:12	
ZZZZZZ			16:17	
ZZZZZZ			16:19	
ZZZZZZ			16:20	
ZZZZZZ			16:22	
HLCS 280-436821/1-A	1	T	16:23	X
LLCS 280-436821/2-A	1	T	16:25	X
LCS 280-436821/3-A	1	T	16:26	X
LCSD 280-436821/4-A	1	T	16:28	X
MB 280-436821/5-A	1	T	16:29	X
280-116270-1	1	T	16:31	X
ZZZZZZ			16:32	
ZZZZZZ			16:34	
CCV 280-436904/104	1		16:35	X
CCB 280-436904/105	1		16:37	X
ZZZZZZ			16:38	
280-116270-1 MS	1	T	16:40	X
280-116270-1 MSD	1	T	16:41	X
280-116270-4	1	T	16:43	X
280-116270-5	1	T	16:44	X
280-116270-6	1	T	16:46	X
280-116270-7	1	T	16:47	X
280-116270-9	1	T	16:49	X
280-116270-10	1	T	16:50	X
280-116270-15	1	T	16:52	X
ZZZZZZ			16:53	
ZZZZZZ			16:55	
ZZZZZZ			16:56	
CCV 280-436904/119	1		16:58	X
CCB 280-436904/120	1		16:59	X
ZZZZZZ			17:01	
ZZZZZZ			17:31	
ZZZZZZ			17:32	
ZZZZZZ			17:34	
ZZZZZZ			17:35	
ZZZZZZ			17:37	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/08/2018 13:53 End Date: 11/08/2018 18:38

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			17:39																									
ZZZZZZ			17:40																									
ZZZZZZ			17:42																									
ZZZZZZ			17:43																									
ZZZZZZ			17:45																									
ZZZZZZ			17:46																									
ZZZZZZ			17:48																									
CCV 280-436904/134			17:49																									
CCB 280-436904/135			17:51																									
ZZZZZZ			17:52																									
ZZZZZZ			17:54																									
ZZZZZZ			17:55																									
ZZZZZZ			18:00																									
ZZZZZZ			18:02																									
ZZZZZZ			18:03																									
ZZZZZZ			18:05																									
ZZZZZZ			18:06																									
ZZZZZZ			18:08																									
ZZZZZZ			18:09																									
ZZZZZZ			18:11																									
ZZZZZZ			18:12																									
ZZZZZZ			18:14																									
CCV 280-436904/149			18:15																									
CCB 280-436904/150			18:17																									
ZZZZZZ			18:18																									
ZZZZZZ			18:26																									
ZZZZZZ			18:27																									
ZZZZZZ			18:29																									
ZZZZZZ			18:30																									
ZZZZZZ			18:32																									
ZZZZZZ			18:33																									
CCV 280-436904/158			18:35																									
CCB 280-436904/159			18:36																									
ZZZZZZ			18:38																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436821 Batch Start Date: 11/08/18 13:33 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date: 11/08/18 17:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	SulfideCheck	ChlorineCheck	DistillpHCheck	CN 10ppm 00320
HLCS 280-436821/1		9012B, 9012B		50 mL	50 mL				1.75 mL
LLCS 280-436821/2		9012B, 9012B		50 mL	50 mL				0.5 mL
LCS 280-436821/3		9012B, 9012B		50 mL	50 mL				
LCSD 280-436821/4		9012B, 9012B		50 mL	50 mL				
MB 280-436821/5		9012B, 9012B		50 mL	50 mL				
280-116270-J-1	FWGmw-018-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-J-1 MS	FWGmw-018-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-J-1 MSD	FWGmw-018-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-A-4	LL2mw-264-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-A-5	CBPmw-008-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-A-6	CBPmw-009-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-C-7	LL1mw-089-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-J-9	FWGmw-020-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-A-10	LL3mw-234-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116270-A-15	LL4mw-200-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00510					
HLCS 280-436821/1		9012B, 9012B							
LLCS 280-436821/2		9012B, 9012B							
LCS 280-436821/3		9012B, 9012B		0.5 mL					
LCSD 280-436821/4		9012B, 9012B		0.5 mL					
MB 280-436821/5		9012B, 9012B							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436821 Batch Start Date: 11/08/18 13:33 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date: 11/08/18 17:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00510					
280-116270-J-1	FWGmw-018-181001-GW	9012B, 9012B	T						
280-116270-J-1 MS	FWGmw-018-181001-GW	9012B, 9012B	T	0.5 mL					
280-116270-J-1 MSD	FWGmw-018-181001-GW	9012B, 9012B	T	0.5 mL					
280-116270-A-4	LL2mw-264-181001-GW	9012B, 9012B	T						
280-116270-A-5	CBPmw-008-181001-GW	9012B, 9012B	T						
280-116270-A-6	CBPmw-009-181001-GW	9012B, 9012B	T						
280-116270-C-7	LL1mw-089-181001-GW	9012B, 9012B	T						
280-116270-J-9	FWGmw-020-181001-GW	9012B, 9012B	T						
280-116270-A-10	LL3mw-234-181001-GW	9012B, 9012B	T						
280-116270-A-15	LL4mw-200-181001-GW	9012B, 9012B	T						

Batch Notes	
Acetate Buffer ID	Acetate Buffer_00005
Balance ID	M19170
Batch Comment	DA training RK
Cadmium Carbonate ID	CAD CHL CN_00004
Distillation End Time	11/08/2018 17:15
Distillation Start Time	11/08/2018 13:33
Indicator Reagent ID	METHYL RED_00016
Magnesium Chloride Reagent ID Number	CN Mag Chl_00084
Sodium Hydroxide ID	2% NaOH_00356
Pipette/Syringe/Dispenser ID	1000nxn, 5000elj
Sulfamic Acid ID	CN SULFAMIC_00094
Sulfuric Acid Reagent ID Number	SulfuricAcid_00223
WAD Releasing Agent ID	10% Acetic_00019

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436821 Batch Start Date: 11/08/18 13:33 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date: 11/08/18 17:15

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436904 Batch Start Date: 11/08/18 13:53 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01454	CN ICV Daily 01221		
ICV 280-436904/14		9012B		50 mL	50 mL		50 mL		
ICB 280-436904/15		9012B		50 mL	50 mL				
CCV 280-436904/89		9012B		50 mL	50 mL	10 mL			
CCB 280-436904/90		9012B		50 mL	50 mL				
HLCS 280-436821/1-A		9012B		50 mL	50 mL				
LLCS 280-436821/2-A		9012B		50 mL	50 mL				
LCS 280-436821/3-A		9012B		50 mL	50 mL				
LCSD 280-436821/4-A		9012B		50 mL	50 mL				
MB 280-436821/5-A		9012B		50 mL	50 mL				
280-116270-J-1-A	FWGmw-018-181001-GW	9012B	T	50 mL	50 mL				
CCV 280-436904/104		9012B		50 mL	50 mL	10 mL			
CCB 280-436904/105		9012B		50 mL	50 mL				
280-116270-J-1-B MS	FWGmw-018-181001-GW	9012B	T	50 mL	50 mL				
280-116270-J-1-C MSD	FWGmw-018-181001-GW	9012B	T	50 mL	50 mL				
280-116270-A-4-A	LL2mw-264-181001-GW	9012B	T	50 mL	50 mL				
280-116270-A-5-A	CBPmw-008-181001-GW	9012B	T	50 mL	50 mL				
280-116270-A-6-A	CBPmw-009-181001-GW	9012B	T	50 mL	50 mL				
280-116270-C-7-A	LL1mw-089-181001-GW	9012B	T	50 mL	50 mL				
280-116270-J-9-A	FWGmw-020-181001-GW	9012B	T	50 mL	50 mL				
280-116270-A-10-A	LL3mw-234-181001-GW	9012B	T	50 mL	50 mL				
280-116270-A-15-A	LL4mw-200-181001-GW	9012B	T	50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116270-1

SDG No.:

Batch Number: 436904 Batch Start Date: 11/08/18 13:53 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01454	CN ICV Daily 01221		
CCV 280-436904/119		9012B		50 mL	50 mL	10 mL			
CCB 280-436904/120		9012B		50 mL	50 mL				

Batch Notes	
Batch Comment	DA trained RK
Buffer Reagent ID	CN Buffer_00118
Chloramine-T ID	CN Chlor-T_01007
Sodium Hydroxide ID	1% NaOH_00363
Pipette/Syringe/Dispenser ID	1000nxn, 5000elj
Pyridine-Barbituric Acid ID	CN Pyr/ Barb_00203

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Run Results Report

Facility Name
Facility Location
Department
Operator Name RK
Operator ID RK
Platform FS III/IV/3100
Software Rev Code 222
Data system ID 57

Result path C:\FLOW_4\C110818.RST
Sample table path C:\FLOW_4\c110818.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 08-Nov-18
Time acquired 18:43

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
08-Nov-18	13:53	107	Sync	344575	384.003	
08-Nov-18	13:54	0	Carryover	274	-0.319	LO
08-Nov-18	13:56	0	Carryover	71	-0.545	LO
08-Nov-18	13:57	0	Baseline	0	-0.625	BL
08-Nov-18	13:59	101	CAL 0.00 ppb	204	-0.397	LO
08-Nov-18	14:00	102	CAL 10.0 ppb	9682	10.183	
08-Nov-18	14:02	103	CAL 20.0 ppb	18300	19.802	
08-Nov-18	14:03	104	CAL 50.0 ppb	45425	50.081	
08-Nov-18	14:05	105	CAL 100 ppb	90758	100.682	
08-Nov-18	14:06	106	Cal 200 ppb	179418	199.649	
08-Nov-18	14:08	107	Cal 400 ppb	358906	400.000	
08-Nov-18	14:09	0	BLK	-138	-0.779	LO
08-Nov-18	14:11	0	Baseline	0	-0.625	BL
08-Nov-18	14:12	108	ICV 100 ppb	95570	106.055	
08-Nov-18	14:14	0	ICB	-7	-0.633	LO
08-Nov-18	14:15	0	Baseline	0	-0.625	BL
08-Nov-18	14:17	113	xHLCS 280-436703/1-A	268084	298.620	
08-Nov-18	14:18	114	xLLCS 280-436703/2-A	172463	191.885	
08-Nov-18	14:20	115	LCS 280-436703/3-A	96162	106.715	
08-Nov-18	14:21	116	MB 280-436703/4-A	1531	1.084	
08-Nov-18	14:23	117	x280-116218-T-1-A	5931	5.996	
08-Nov-18	14:24	118	280-116218-T-1-B MS	94072	104.382	
08-Nov-18	14:26	119	280-116218-T-1-C MSD	89920	99.747	
08-Nov-18	14:27	120	x280-116218-U-3-A	5969	6.038	
08-Nov-18	14:29	121	x280-116218-V-4-A	8813	9.213	UM
08-Nov-18	14:30	122	280-116218-V-4-B MS	115569	128.378	
08-Nov-18	14:32	0	BLK	13	-0.611	LO
08-Nov-18	14:33	0	baseline	0	-0.625	BL
08-Nov-18	14:35	109	CCV 200PPB	183838	204.582	
08-Nov-18	14:37	0	CCB	90	-0.524	LO
08-Nov-18	14:38	0	Baseline	0	-0.625	BL
08-Nov-18	14:40	123	280-116218-V-4-C MSD	99068	109.959	
08-Nov-18	14:41	124	x280-116218-V-5-A	9004	9.426	
08-Nov-18	14:43	125	280-115259-I-13-B	6593	6.734	
08-Nov-18	14:44	126	280-116007-E-6-B	1574	1.132	
08-Nov-18	14:46	127	280-116007-E-7-B	3643	3.442	
08-Nov-18	14:47	128	280-116007-E-16-B	1395	0.932	
08-Nov-18	14:49	129	280-116195-G-5-A	1098	0.601	
08-Nov-18	14:50	130	280-116195-G-6-A	2227	1.861	
08-Nov-18	14:52	131	280-116195-G-7-A	1002	0.494	
08-Nov-18	14:53	132	280-116195-G-8-A	1528	1.081	
08-Nov-18	14:55	0	BLK	48	-0.571	LO
08-Nov-18	14:56	0	baseline	0	-0.625	BL
08-Nov-18	14:58	109	CCV 200PPB	185053	205.939	
08-Nov-18	14:59	0	CCB	117	-0.494	LO
08-Nov-18	15:01	0	Baseline	0	-0.625	BL

Result path C:\FLOW_4\C110818.RST
Sample table path C:\FLOW_4\c110818.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 08-Nov-18
Time acquired 18:43

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
08-Nov-18	15:02	133	280-116195-G-9-A	2964	2.684	
08-Nov-18	15:04	134	280-116195-G-10-A	6875	7.050	
08-Nov-18	15:05	135	280-116198-T-1-A	9716	10.220	
08-Nov-18	15:07	136	280-116248-N-7-A	1617	1.180	
08-Nov-18	15:08	137	280-116276-H-4-A	2181	1.810	
08-Nov-18	15:10	138	280-116276-H-5-A	1160	0.670	
08-Nov-18	15:11	139	280-116259-E-1-A	3211	2.959	
08-Nov-18	15:13	140	280-116306-B-11-A	1453	0.997	
08-Nov-18	15:18	141	HLCS 280-436703/1-A	304130	338.857	
08-Nov-18	15:19	142	LLCS 280-436703/2-A	98709	109.558	
08-Nov-18	15:21	0	BLK	41	-0.579	LO
08-Nov-18	15:22	0	baseline	0	-0.625	BL
08-Nov-18	15:24	109	CCV 200PPB	184591	205.423	
08-Nov-18	15:25	0	CCB	87	-0.528	LO
08-Nov-18	15:27	0	Baseline	0	-0.625	BL
08-Nov-18	15:28	143	HLCS 280-436820/1-A	314595	350.538	
08-Nov-18	15:30	144	LLCS 280-436820/2-A	89376	99.140	
08-Nov-18	15:31	145	LCS 280-436820/3-A	94794	105.188	
08-Nov-18	15:33	146	MB 280-436820/4-A	1239	0.758	
08-Nov-18	15:34	147	280-116297-A-15-E	2748	2.442	
08-Nov-18	15:36	148	280-116297-A-15-F MS	86084	95.465	
08-Nov-18	15:37	149	280-116297-A-15-G MS	87905	97.498	
08-Nov-18	15:39	150	280-116297-B-16-E	2897	2.609	
08-Nov-18	15:40	151	280-116297-A-17-E	3571	3.361	
08-Nov-18	15:42	152	280-116297-A-18-E	3295	3.053	
08-Nov-18	15:43	0	BLK	25	-0.597	LO
08-Nov-18	15:45	0	baseline	0	-0.625	BL
08-Nov-18	15:46	109	CCV 200PPB	184809	205.666	
08-Nov-18	15:48	0	CCB	59	-0.559	LO
08-Nov-18	15:49	0	Baseline	0	-0.625	BL
08-Nov-18	15:51	153	280-116297-A-19-D	1489	1.037	
08-Nov-18	15:52	154	280-116297-A-20-D	1528	1.081	
08-Nov-18	15:54	155	280-116297-A-21-D	1181	0.693	
08-Nov-18	15:55	156	280-116297-A-22-E	1300	0.826	
08-Nov-18	15:57	157	280-116306-B-1-E	2333	1.980	
08-Nov-18	15:58	158	280-116306-A-2-D	1353	0.885	
08-Nov-18	16:00	159	280-116306-B-3-D	1224	0.741	
08-Nov-18	16:01	160	280-116306-A-4-D	1956	1.559	
08-Nov-18	16:03	201	280-116306-A-12-E	3894	3.722	
08-Nov-18	16:04	202	280-116306-B-13-D	4192	4.055	
08-Nov-18	16:06	0	BLK	-5	-0.630	LO
08-Nov-18	16:07	0	baseline	0	-0.625	BL
08-Nov-18	16:09	109	CCV 200PPB	188880	210.210	
08-Nov-18	16:10	0	CCB	122	-0.489	LO
08-Nov-18	16:12	0	Baseline	0	-0.625	BL
08-Nov-18	16:17	203	280-116306-A-14-D	24772	27.026	
08-Nov-18	16:19	204	280-116306-A-15-I	10453	11.044	
08-Nov-18	16:20	205	280-116306-A-15-J MS	13542	14.492	
08-Nov-18	16:22	206	280-116306-A-15-K MS	6114	6.200	
08-Nov-18	16:23	207	HLCS 280-436821/1AA	310274	345.715	
08-Nov-18	16:25	208	LLCS 280-436821/2-A	91457	101.463	
08-Nov-18	16:26	209	LCS 280-436821/3-A	95528	106.007	
08-Nov-18	16:28	210	LCSD 280-436821/4-A	87438	96.976	
08-Nov-18	16:29	211	MB 280-436821/5-A	1731	1.308	
08-Nov-18	16:31	212	280-116270-J-1-A	1827	1.414	
08-Nov-18	16:32	0	BLK	-40	-0.669	LO
08-Nov-18	16:34	0	baseline	0	-0.625	BL

Result path C:\FLOW_4\C110818.RST
Sample table path C:\FLOW_4\c110818.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 08-Nov-18
Time acquired 18:43

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
08-Nov-18	16:35	109	CCV 200PPB	189326	210.709	
08-Nov-18	16:37	0	CCB	3	-0.621	LO
08-Nov-18	16:38	0	Baseline	0	-0.625	BL
08-Nov-18	16:40	213	280-116270-J-1-B MS	95802	106.313	
08-Nov-18	16:41	214	280-116270-J-1-C MSD	90854	100.790	
08-Nov-18	16:43	215	280-116270-A-4-A	1924	1.523	
08-Nov-18	16:44	216	280-116270-A-5-A	1267	0.789	
08-Nov-18	16:46	217	280-116270-A-6-A	2570	2.244	
08-Nov-18	16:47	218	280-116270-C-7-A	1314	0.842	
08-Nov-18	16:49	219	280-116270-J-9-A	1375	0.910	
08-Nov-18	16:50	220	280-116270-A-10-A	2633	2.314	
08-Nov-18	16:52	221	280-116270-A-15-A	1452	0.996	
08-Nov-18	16:53	222	280-116180-U-3-A	2026	1.636	
08-Nov-18	16:55	0	BLK	-13	-0.640	LO
08-Nov-18	16:56	0	baseline	0	-0.625	BL
08-Nov-18	16:58	109	CCV 200PPB	191108	212.698	
08-Nov-18	16:59	0	CCB	-55	-0.686	LO
08-Nov-18	17:01	0	Baseline	0	-0.625	BL
08-Nov-18	17:31	223	280-116226-I-3-A	2829	2.533	
08-Nov-18	17:32	224	280-116226-G-4-A	2564	2.237	
08-Nov-18	17:34	225	280-116226-I-5-A	2490	2.155	
08-Nov-18	17:35	226	280-116226-I-6-A	1540	1.094	
08-Nov-18	17:37	227	280-116289-G-3-A	16260	17.526	
08-Nov-18	17:39	228	280-116289-G-4-A	5568	5.590	
08-Nov-18	17:40	229	280-116289-G-4-B MS	97023	107.676	
08-Nov-18	17:42	230	280-116289-G-4-C MSD	96735	107.355	
08-Nov-18	17:43	231	280-116289-I-5-A	1592	1.152	
08-Nov-18	17:45	232	280-116289-C-6-A	1581	1.140	
08-Nov-18	17:46	0	BLK	22	-0.600	LO
08-Nov-18	17:48	0	baseline	0	-0.625	BL
08-Nov-18	17:49	109	CCV 200PPB	194936	216.970	
08-Nov-18	17:51	0	CCB	136	-0.473	LO
08-Nov-18	17:52	0	Baseline	0	-0.625	BL
08-Nov-18	17:54	233	280-116289-C-7-A	3462	3.240	
08-Nov-18	17:55	234	280-116203-K-1-A	7030	7.222	
08-Nov-18	18:00	235	HLCS 280-436884/1-A	305257	340.115	
08-Nov-18	18:02	236	LLCS 280-436884/2-A	88671	98.353	
08-Nov-18	18:03	237	LCS 280-436884/3-A	90369	100.248	
08-Nov-18	18:05	238	MB 280-436884/4-A	1375	0.910	
08-Nov-18	18:06	239	280-116195-G-4-B	2454	2.115	
08-Nov-18	18:08	240	280-116195-G-4-C MS	91549	101.566	
08-Nov-18	18:09	241	280-116195-G-4-D MSD	90066	99.910	
08-Nov-18	18:11	242	280-116195-G-3-D	2002	1.610	
08-Nov-18	18:12	0	BLK	9	-0.615	LO
08-Nov-18	18:14	0	baseline	0	-0.625	BL
08-Nov-18	18:15	109	CCV 200PPB	195520	217.623	
08-Nov-18	18:17	0	CCB	-1	-0.626	LO
08-Nov-18	18:18	0	Baseline	0	-0.625	BL
08-Nov-18	18:26	243	280-116218-T-1-A	4765	4.694	
08-Nov-18	18:27	244	280-116218-U-3-A	4125	3.980	
08-Nov-18	18:29	245	280-116218-V-4-A	4381	4.265	
08-Nov-18	18:30	246	280-116218-V-5-A	3339	3.103	
08-Nov-18	18:32	0	BLK	22	-0.600	LO
08-Nov-18	18:33	0	baseline	0	-0.625	BL
08-Nov-18	18:35	109	CCV 200PPB	194763	216.777	
08-Nov-18	18:36	0	CCB	37	-0.583	LO
08-Nov-18	18:38	0	Baseline	0	-0.625	BL

Peak Table:Cyanide, Total

File name: C:\FLOW_4\C110818.RST
Date: 08-Nov-18
Operator: RK

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
1	107	Sync	1	SYNC	1	1	344575	384.002991	
2	0	Carryover	1	CO	1	1	274	-0.318656	LO
3	0	Carryover	2	CO	1	1	71	-0.544983	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
5	101	CAL 0.00 ppb	1	C	1	1	204	-0.397271	LO
6	102	CAL 10.0 ppb	1	C	1	1	9682	10.182997	
7	103	CAL 20.0 ppb	1	C	1	1	18300	19.802088	
8	104	CAL 50.0 ppb	1	C	1	1	45425	50.080807	
9	105	CAL 100 ppb	1	C	1	1	90758	100.682327	
10	106	Cal 200 ppb	1	C	1	1	179418	199.648926	
11	107	Cal 400 ppb	1	C	1	1	358906	400.000153	
12	0	BLK	1	BLNK	1	1	-138	-0.778569	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
14	108	ICV 100 ppb	1	CCV	1	1	95570	106.054504	
15	0	ICB	1	U	1	1	-7	-0.633091	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
17	113	xHLCS 280-436703/1-A 1	U		1	1	268084	298.620453	
18	114	xLLCS 280-436703/2-A 1	U		1	1	172463	191.884872	
19	115	LCS 280-436703/3-A 1	U		1	1	96162	106.715256	
20	116	MB 280-436703/4-A 1	U		1	1	1531	1.084381	
21	117	x280-116218-T-1-A 1	U		1	1	5931	5.995943	
22	118	280-116218-T-1-B MS 1	U		1	1	94072	104.381920	
23	119	280-116218-T-1-C MSD 1	U		1	1	89920	99.746994	
24	120	x280-116218-U-3-A 1	U		1	1	5969	6.038346	
25	121	x280-116218-V-4-A 1	U		1	1	8813	9.212819	UM
26	122	280-116218-V-4-B MS 1	U		1	1	115569	128.378311	
27	0	BLK	1	BLNK	1	1	13	-0.610785	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
29	109	CCV 200PPB	1	CCV	1	1	183838	204.582230	
30	0	CCB	1	U	1	1	90	-0.524309	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
32	123	280-116218-V-4-C MSD 1	U		1	1	99068	109.959106	
33	124	x280-116218-V-5-A 1	U		1	1	9004	9.426351	
34	125	280-115259-I-13-B 1	U		1	1	6593	6.734490	
35	126	280-116007-E-6-B 1	U		1	1	1574	1.132354	
36	127	280-116007-E-7-B 1	U		1	1	3643	3.441912	
37	128	280-116007-E-16-B 1	U		1	1	1395	0.932111	
38	129	280-116195-G-5-A 1	U		1	1	1098	0.600670	
39	130	280-116195-G-6-A 1	U		1	1	2227	1.861238	
40	131	280-116195-G-7-A 1	U		1	1	1002	0.493809	
41	132	280-116195-G-8-A 1	U		1	1	1528	1.081212	
42	0	BLK	1	BLNK	1	1	48	-0.570727	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
44	109	CCV 200PPB	1	CCV	1	1	185053	205.938965	
45	0	CCB	1	U	1	1	117	-0.493793	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
47	133	280-116195-G-9-A 1	U		1	1	2964	2.683777	
48	134	280-116195-G-10-A 1	U		1	1	6875	7.049611	
49	135	280-116198-T-1-A 1	U		1	1	9716	10.220492	
50	136	280-116248-N-7-A 1	U		1	1	1617	1.180184	
51	137	280-116276-H-4-A 1	U		1	1	2181	1.810083	
52	138	280-116276-H-5-A 1	U		1	1	1160	0.669838	
53	139	280-116259-E-1-A 1	U		1	1	3211	2.959102	
54	140	280-116306-B-11-A 1	U		1	1	1453	0.996801	
55	141	HLCS 280-436703/1-A 1	U		1	1	304130	338.856689	
56	142	LLCS 280-436703/2-A 1	U		1	1	98709	109.558304	
57	0	BLK	1	BLNK	1	1	41	-0.578937	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
59	109	CCV 200PPB	1	CCV	1	1	184591	205.423233	
60	0	CCB	1	U	1	1	87	-0.527867	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
62	143	HLCS 280-436820/1-A 1	U		1	1	314595	350.538422	
63	144	LLCS 280-436820/2-A 1	U		1	1	89376	99.140205	
64	145	LCS 280-436820/3-A 1	U		1	1	94794	105.187675	
65	146	MB 280-436820/4-A 1	U		1	1	1239	0.758006	
66	147	280-116297-A-15-E 1	U		1	1	2748	2.442364	
67	148	280-116297-A-15-F MS 1	U		1	1	86084	95.465439	
68	149	280-116297-A-15-G MS 1	U		1	1	87905	97.497643	
69	150	280-116297-B-16-E 1	U		1	1	2897	2.609175	
70	151	280-116297-A-17-E 1	U		1	1	3571	3.360857	

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
71	152	280-116297-A-18-E	1	U	1	1	3295	3.053210	
72	0	BLK	1	BLNK	1	1	25	-0.597239	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
74	109	CCV 200PPB	1	CCV	1	1	184809	205.666000	
75	0	CCB	1	U	1	1	59	-0.558879	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
77	153	280-116297-A-19-D	1	U	1	1	1489	1.036806	
78	154	280-116297-A-20-D	1	U	1	1	1528	1.081291	
79	155	280-116297-A-21-D	1	U	1	1	1181	0.693248	
80	156	280-116297-A-22-E	1	U	1	1	1300	0.826194	
81	157	280-116306-B-1-E	1	U	1	1	2333	1.979927	
82	158	280-116306-A-2-D	1	U	1	1	1353	0.885451	
83	159	280-116306-B-3-D	1	U	1	1	1224	0.741245	
84	160	280-116306-A-4-D	1	U	1	1	1956	1.558974	
85	201	280-116306-A-12-E	1	U	1	1	3894	3.722113	
86	202	280-116306-B-13-D	1	U	1	1	4192	4.054651	
87	0	BLK	1	BLNK	1	1	-5	-0.630148	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
89	109	CCV 200PPB	1	CCV	1	1	188880	210.210480	
90	0	CCB	1	U	1	1	122	-0.488574	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
92	203	280-116306-A-14-D	1	U	1	1	24772	27.026224	
93	204	280-116306-A-15-I	1	U	1	1	10453	11.043515	
94	205	280-116306-A-15-J MS	1	U	1	1	13542	14.491643	
95	206	280-116306-A-15-K MS	1	U	1	1	6114	6.200209	
96	207	HLCS 280-436821/1AA	1	U	1	1	310274	345.715210	
97	208	LLCS 280-436821/2-A	1	U	1	1	91457	101.462868	
98	209	LCS 280-436821/3-A	1	U	1	1	95528	106.007187	
99	210	LCSD 280-436821/4-A	1	U	1	1	87438	96.976494	
100	211	MB 280-436821/5-A	1	U	1	1	1731	1.307667	
101	212	280-116270-J-1-A	1	U	1	1	1827	1.414149	
102	0	BLK	1	BLNK	1	1	-40	-0.669498	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
104	109	CCV 200PPB	1	CCV	1	1	189326	210.708527	
105	0	CCB	1	U	1	1	3	-0.620955	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
107	213	280-116270-J-1-B MS	1	U	1	1	95802	106.313248	
108	214	280-116270-J-1-C MSD	1	U	1	1	90854	100.789948	
109	215	280-116270-A-4-A	1	U	1	1	1924	1.522839	
110	216	280-116270-A-5-A	1	U	1	1	1267	0.789425	
111	217	280-116270-A-6-A	1	U	1	1	2570	2.244029	
112	218	280-116270-C-7-A	1	U	1	1	1314	0.841859	
113	219	280-116270-J-9-A	1	U	1	1	1375	0.910139	
114	220	280-116270-A-10-A	1	U	1	1	2633	2.314107	
115	221	280-116270-A-15-A	1	U	1	1	1452	0.996325	
116	222	280-116180-U-3-A	1	U	1	1	2026	1.636374	
117	0	BLK	1	BLNK	1	1	-13	-0.639752	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
119	109	CCV 200PPB	1	CCV	1	1	191108	212.697586	
120	0	CCB	1	U	1	1	-55	-0.686005	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
122	223	280-116226-I-3-A	1	U	1	1	2829	2.533360	
123	224	280-116226-G-4-A	1	U	1	1	2564	2.236977	
124	225	280-116226-I-5-A	1	U	1	1	2490	2.154594	
125	226	280-116226-I-6-A	1	U	1	1	1540	1.094432	
126	227	280-116289-G-3-A	1	U	1	1	16260	17.525732	
127	228	280-116289-G-4-A	1	U	1	1	5568	5.590136	
128	229	280-116289-G-4-B MS	1	U	1	1	97023	107.675957	
129	230	280-116289-G-4-C MSD	1	U	1	1	96735	107.354538	
130	231	280-116289-I-5-A	1	U	1	1	1592	1.151769	
131	232	280-116289-C-6-A	1	U	1	1	1581	1.139677	
132	0	BLK	1	BLNK	1	1	22	-0.600167	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
134	109	CCV 200PPB	1	CCV	1	1	194936	216.969849	
135	0	CCB	1	U	1	1	136	-0.473476	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
137	233	280-116289-C-7-A	1	U	1	1	3462	3.240025	
138	234	280-116203-K-1-A	1	U	1	1	7030	7.222165	
139	235	HLCS 280-436884/1-A	1	U	1	1	305257	340.115356	
140	236	LLCS 280-436884/2-A	1	U	1	1	88671	98.352829	
141	237	LCS 280-436884/3-A	1	U	1	1	90369	100.248337	
142	238	MB 280-436884/4-A	1	U	1	1	1375	0.909546	
143	239	280-116195-G-4-B	1	U	1	1	2454	2.115015	
144	240	280-116195-G-4-C MS	1	U	1	1	91549	101.565575	
145	241	280-116195-G-4-D MSD	1	U	1	1	90066	99.909988	

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
146	242	280-116195-G-3-D	1	U	1	1	2002	1.609891	
147	0	BLK	1	BLNK	1	1	9	-0.615208	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
149	109	CCV 200PPB	1	CCV	1	1	195520	217.622620	
150	0	CCB	1	U	1	1	-1	-0.626077	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL
152	243	280-116218-T-1-A	1	U	1	1	4765	4.693905	
153	244	280-116218-U-3-A	1	U	1	1	4125	3.979823	
154	245	280-116218-V-4-A	1	U	1	1	4381	4.265281	
155	246	280-116218-V-5-A	1	U	1	1	3339	3.102923	
156	0	BLK	1	BLNK	1	1	22	-0.600016	LO
B	0	baseline	1	RB	1	1	0	-0.624740	BL
158	109	CCV 200PPB	1	CCV	1	1	194763	216.776703	
159	0	CCB	1	U	1	1	37	-0.583021	LO
B	0	Baseline	1	RB	1	1	0	-0.624740	BL

Cyanide, Total:Calibration 1: Peak 5-160

File name: C:\FLOW_4\C110818.RST
Date: 08-Nov-18
Operator: RK

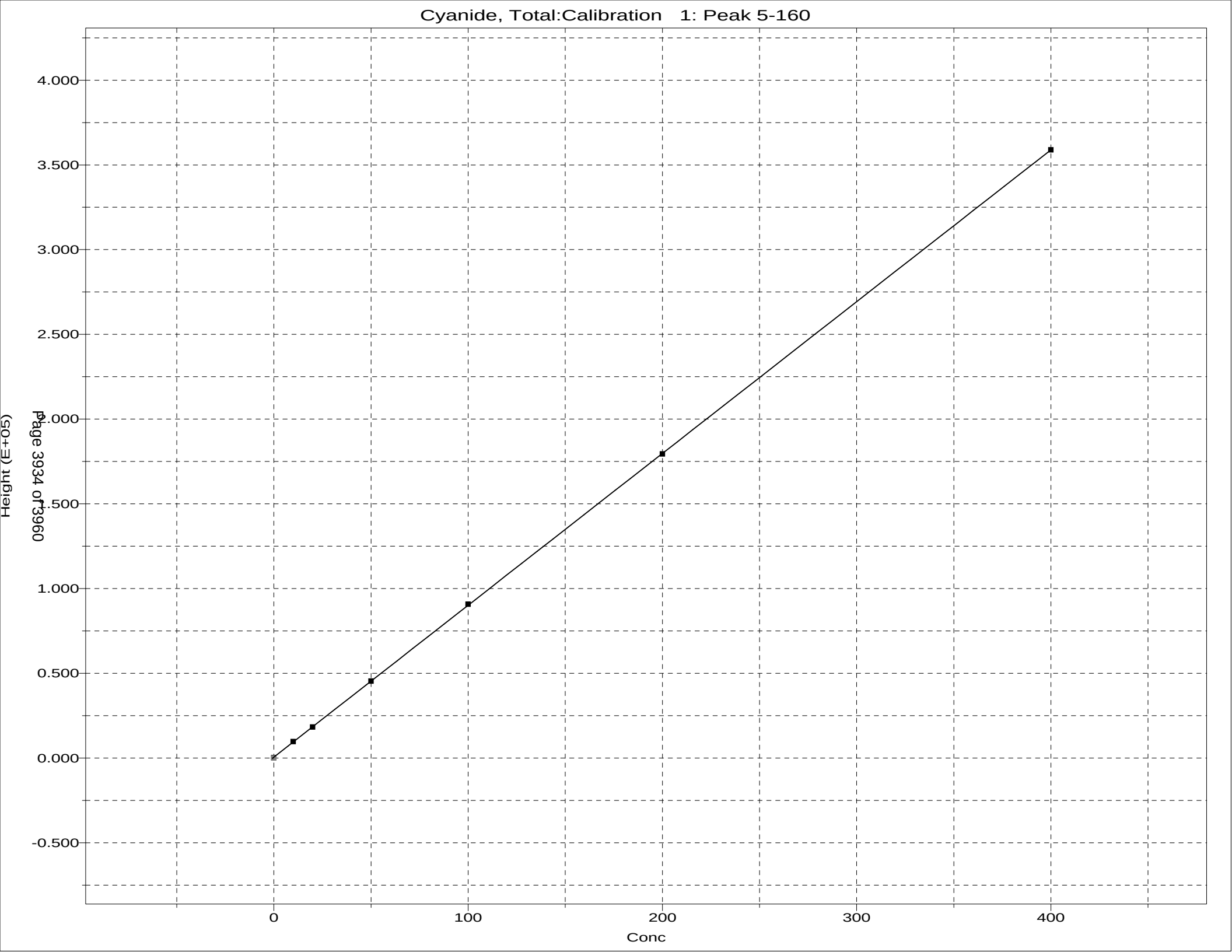
*	Name	Conc	Height
*	CAL 0.00 ppb	0.000000	203.781891
*	CAL 10.0 ppb	10.000000	9682.284180
*	CAL 20.0 ppb	20.000000	18299.701172
*	CAL 50.0 ppb	50.000000	45425.375000
*	CAL 100 ppb	100.000000	90757.554688
*	Cal 200 ppb	200.000000	179418.359375
*	Cal 400 ppb	400.000000	358906.218750

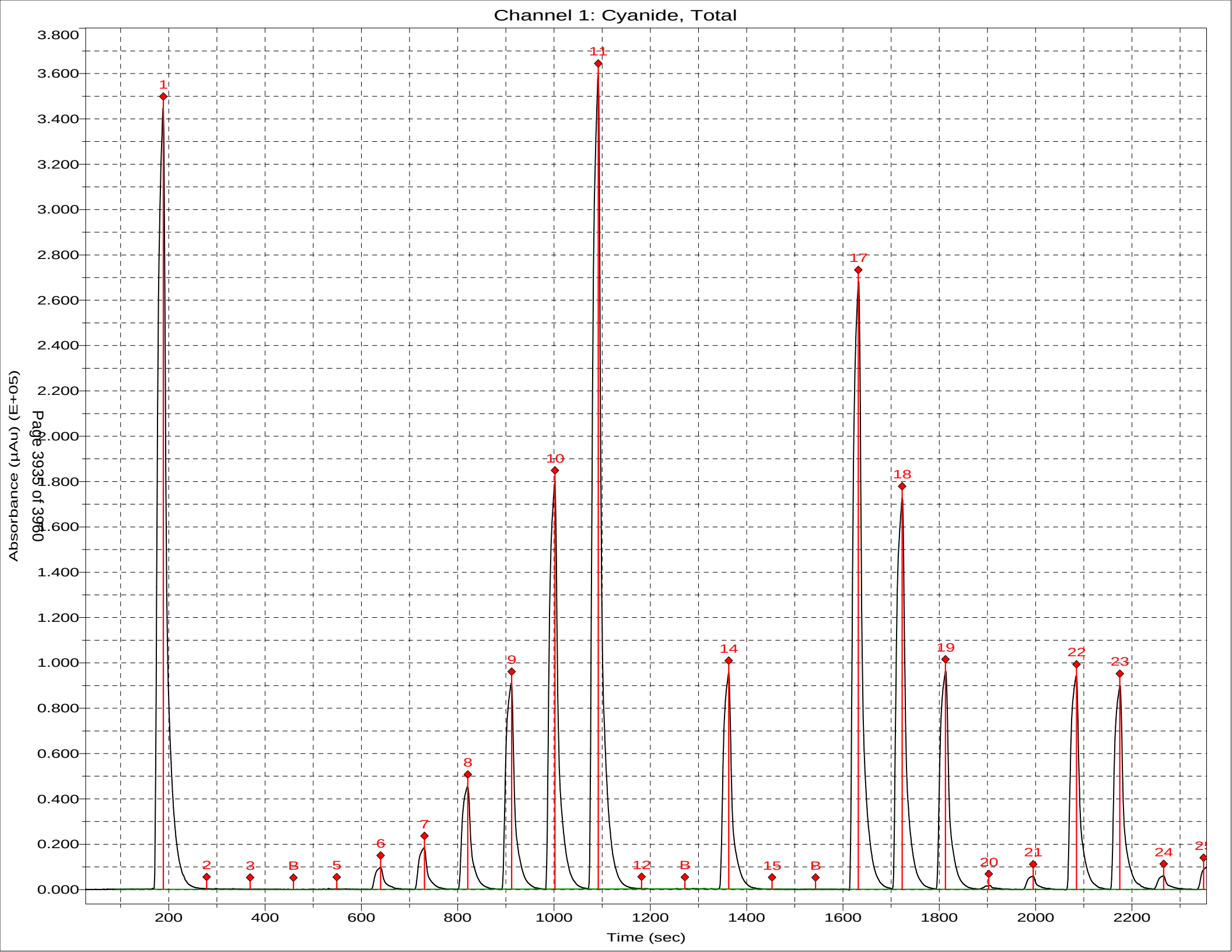
Calib Coef:
y=bx+a
a: (intercept) 5.5968e+02
b: 8.9587e+02

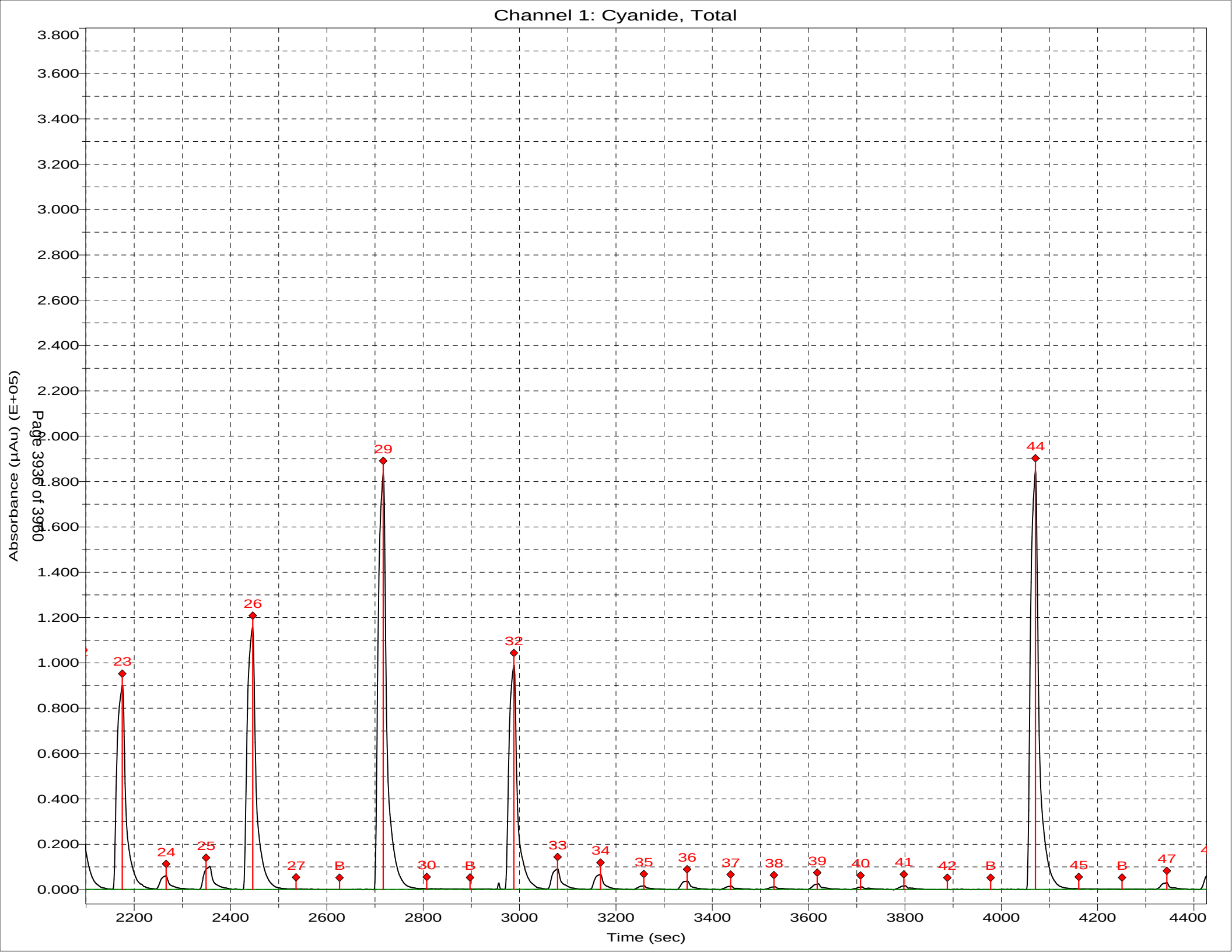
Corr Coef: 0.999997

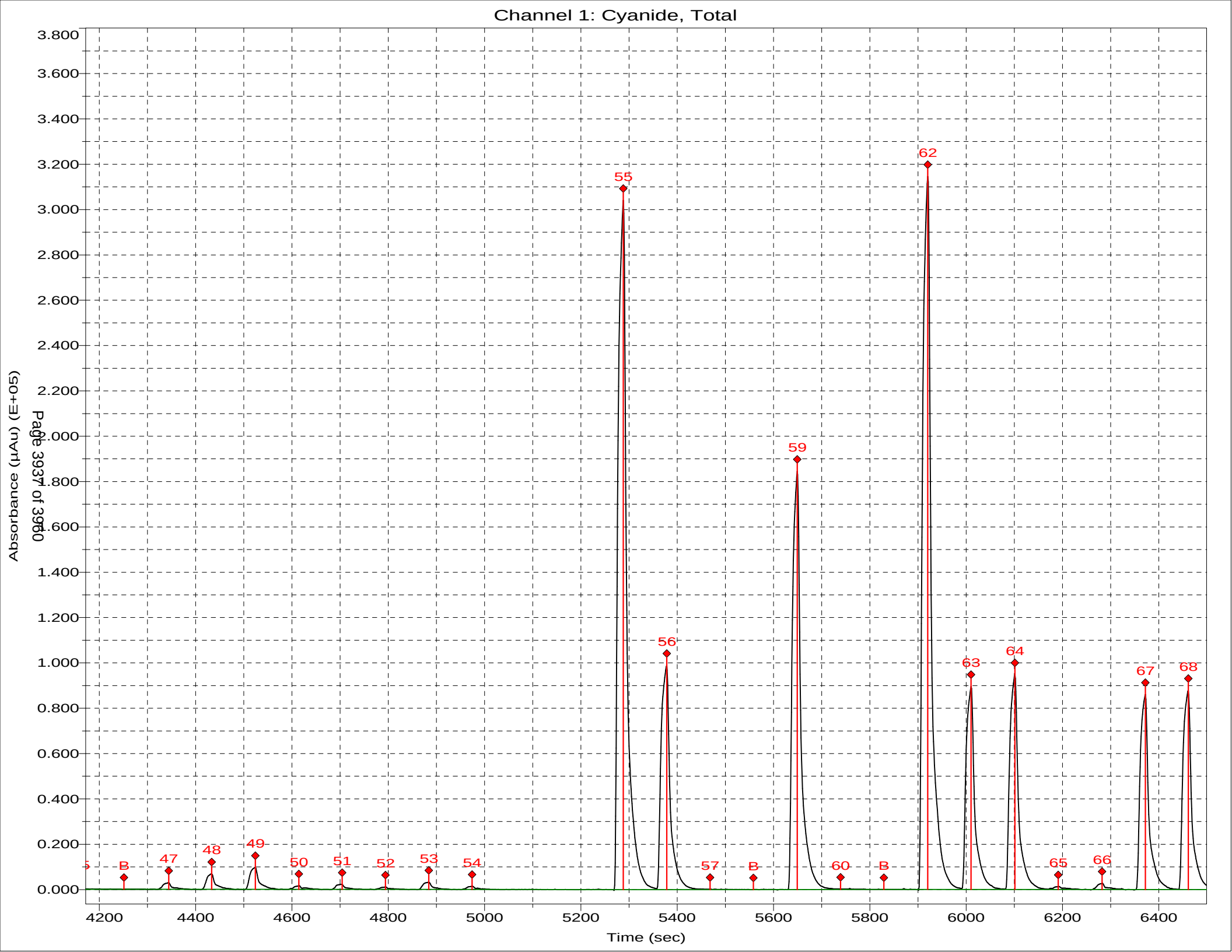
Carryover: 0.0796%

No Drift Peaks


Cyanide, Total:Calibration 1: Peak 5-160
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
-0.500
Height (E+05)
0
100
200
300
400
Conc


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec)
Page 3935 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
1
2
3
B
5
6
7
8
9
10
11
12
B
14
15
B
17
18
19
20
21
22
23
24


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec)
Page 3936 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
2200
2400
2600
2800
3000
3200
3400
3600
3800
4000
4200
4400
23
24
25
26
27
B
29
30
B
32
33
34
35
36
37
38
39
40
41
42
B
44
45
B
47


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec)
Page 3937 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
4200
4400
4600
4800
5000
5200
5400
5600
5800
6000
6200
6400
B
47
48
49
50
51
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53
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55
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57
B
59
B
62
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64
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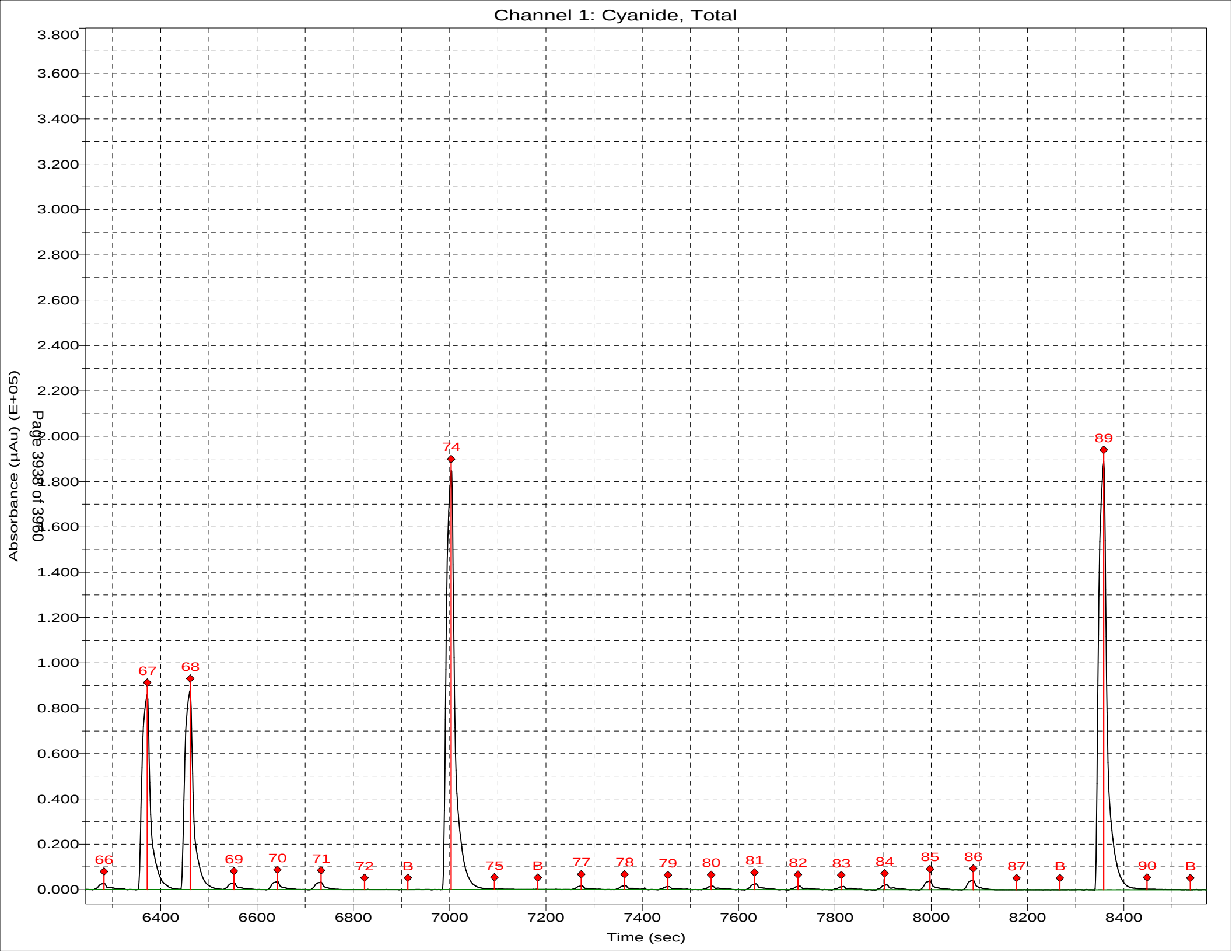
66
67
68


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec)
Page 3938 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
6400
6600
6800
7000
7200
7400
7600
7800
8000
8200
8400
66
67
68
69
70
71
72
B
74
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B
77
78
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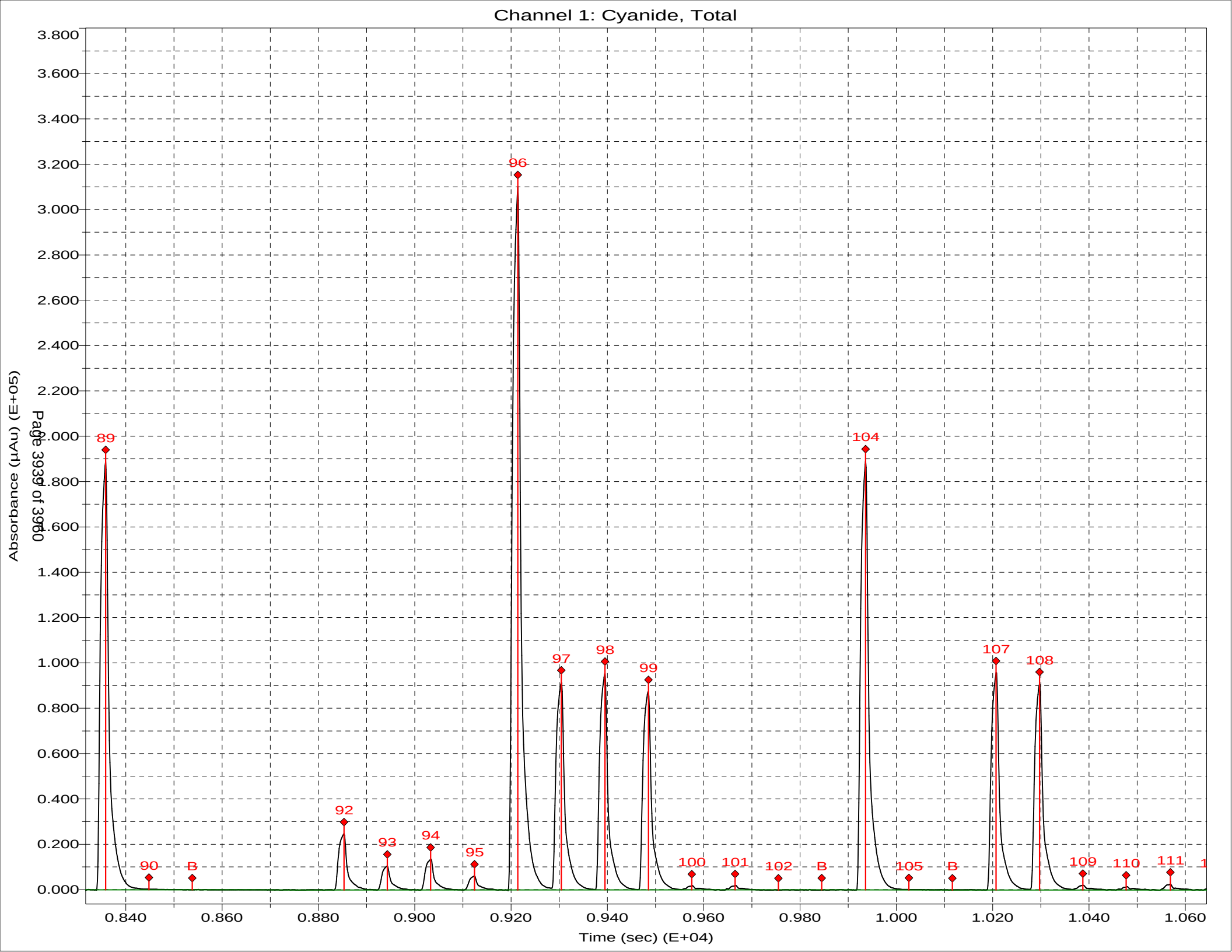
80
81
82
83
84
85
86
87
B
89
90
B


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec) (E+04)
Page 3939 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0.840
0.860
0.880
0.900
0.920
0.940
0.960
0.980
1.000
1.020
1.040
1.060
89
90
B
92
93
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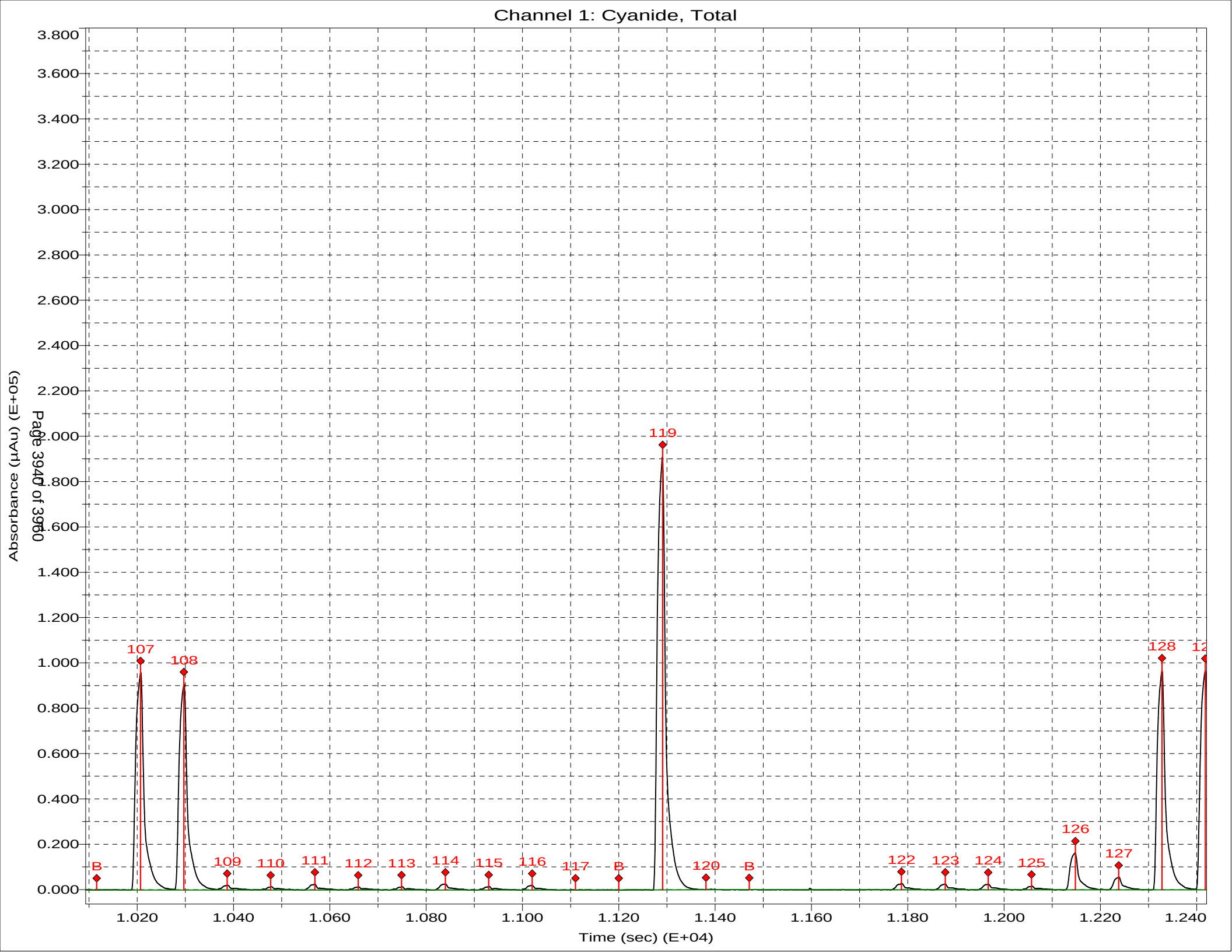
96
97
98
99
100
101
102
B
104
105
B
107
108
109
110
111


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec) (E+04)
Page 3940 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
1.020
1.040
1.060
1.080
1.100
1.120
1.140
1.160
1.180
1.200
1.220
1.240
B
107
108
109
110
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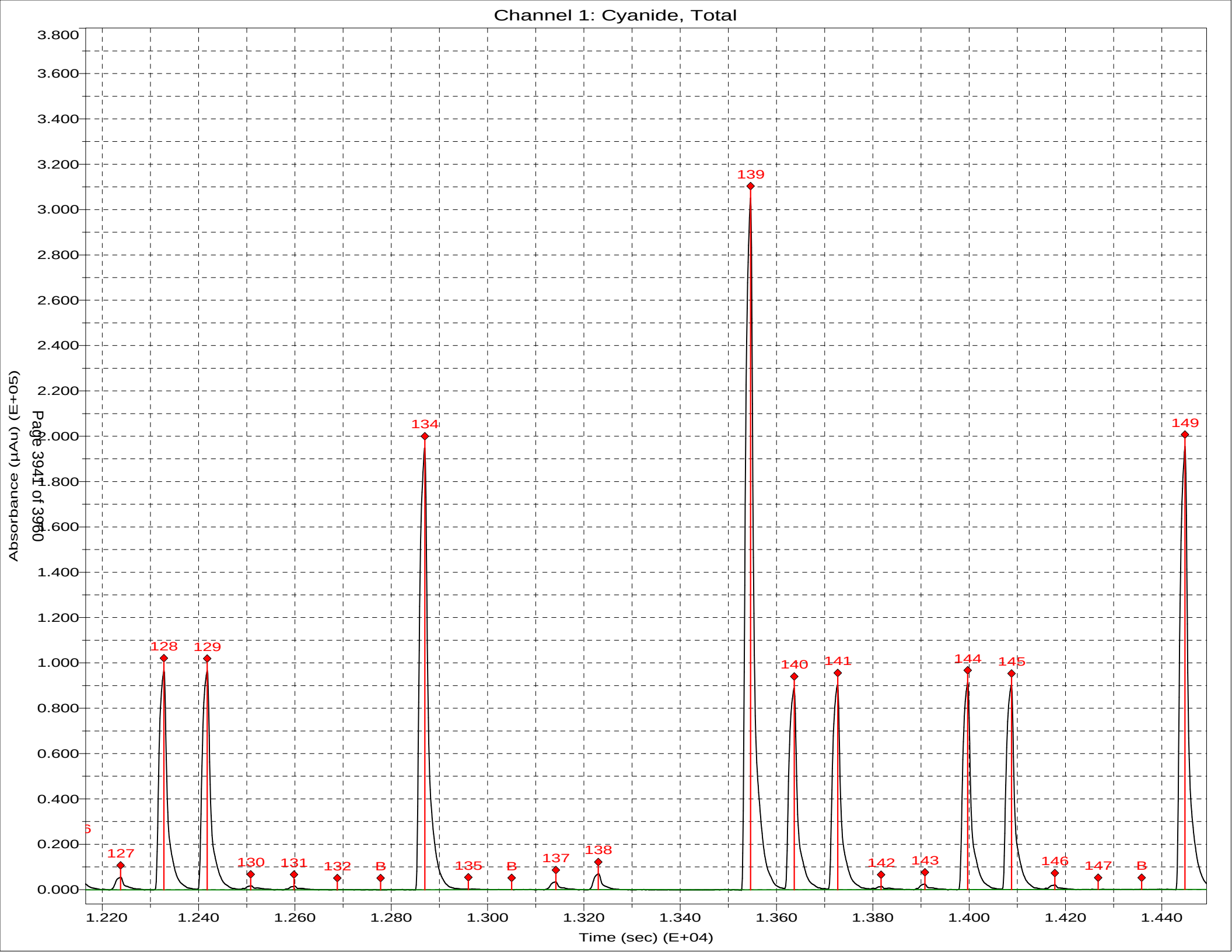
113
114
115
116
117
B
119
120
B
122
123
124
125
126
127
128


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec) (E+04)
Page 3941 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
1.220
1.240
1.260
1.280
1.300
1.320
1.340
1.360
1.380
1.400
1.420
1.440
127
128
129
130
131
132
B
134
135
B
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139
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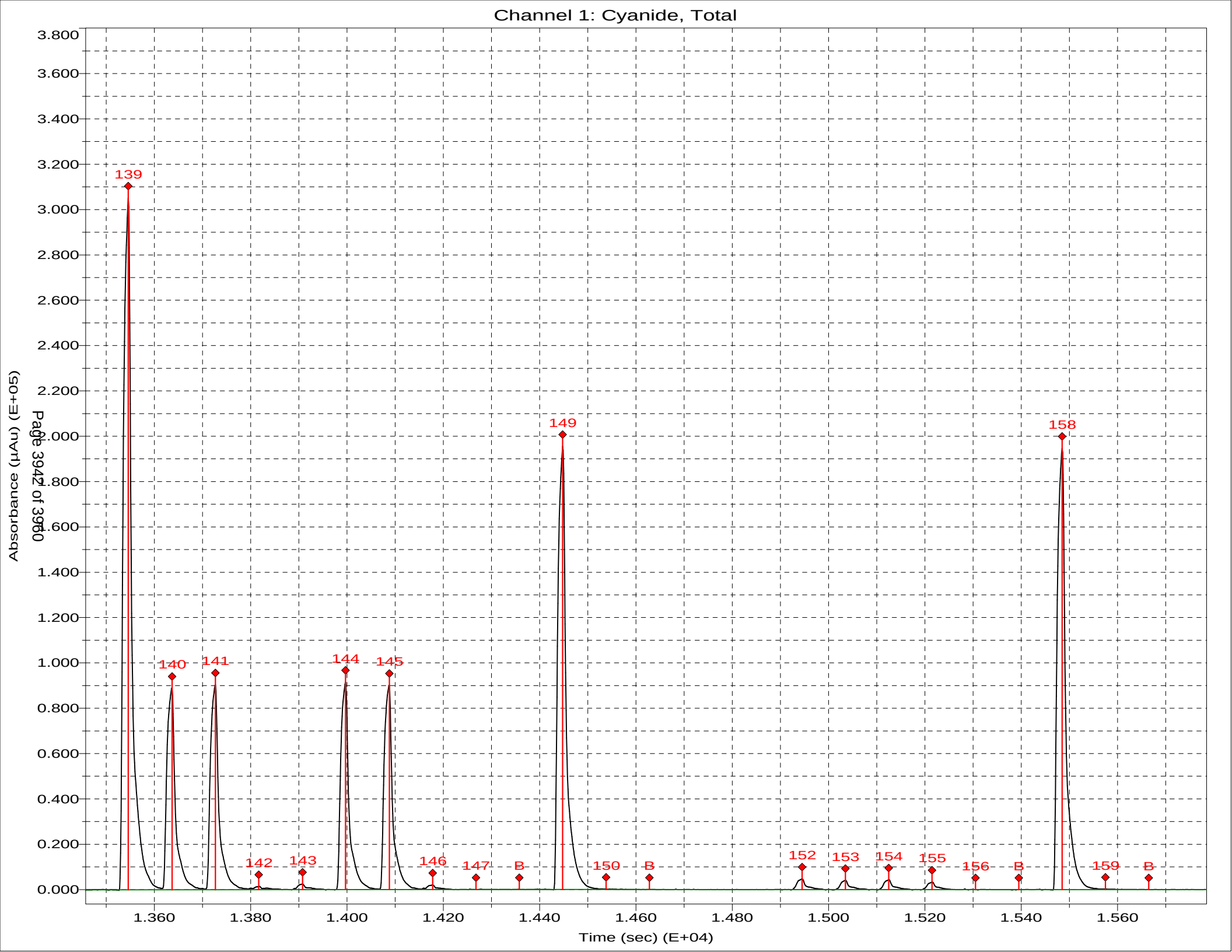
142
143
144
145
146
147
B
149


Channel 1: Cyanide, Total
Absorbance (µAu) (E+05)
Time (sec) (E+04)
Page 3942 of 3960
3.800
3.600
3.400
3.200
3.000
2.800
2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
1.360
1.380
1.400
1.420
1.440
1.460
1.480
1.500
1.520
1.540
1.560
139
140
141
142
143
144
145
146
147
B
149
150
B
152
153
154
155
156
B
158
159
B

Shipping and Receiving Documents

Chain of Custody Record

(2)

leidos

COC No.: RVAAP-026-TA

Page 1 of 1 Date: 10/26/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Roman Ross

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No	Sample ID	Site Type	Depth	Date	Time	Matrix	Requested Parameters: VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	FWGmw-018-181001-GW	GW	NA	10/26/18	0930	W	3	2	2	2		2	1	1							13	
	FWGTB-181000-TB	TB	NA	10/24/18	0930		2														2	

280-116270 Chain of Custody

15

Relinquished by	Date	Received by	Date
Signature	10/26/18	Signature	10-27-18
Printed Name: Heather Adams	Time: 1500	Printed Name: Krista Dunlap	Time: 0850
Company: Leidos		Company: TA Den	
Relinquished by	Date	Received by	Date
Signature		Signature	
Printed Name	Time	Printed Name	Time
Company		Company	

Notes:
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

Total Number of Containers: 13

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier
NA 10/27/18

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

0.3, 2.1, 4.1, 1.0, 4.3, 0.8, 0.5 + 0.7 IR #9 JD 10/27/18

(1)

Chain of Custody Record

leidos

COC No.: RVAAP-053-TA

Page 1 of 1 Date: 10/26/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

RYAN LAURICH

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (Phthalates) (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL2mw-264-181001-GW	GW	NA	10/26/18	1400	W								1							1	

Requested Parameters

Relinquished by	Date	Received by	Date	Notes:	Total Number of Containers: 1	Shipment Method: Courier
Signature	10/26/18	Signature	10-27-18	A. Cool, 4C	E. NaOH/Zn Acetate, pH>9, Cool 4C	
HEATHER ADAMS	Time 1500	KRISTA DUNLAP	Time 0850	B. HCl, pH<2, Cool, 4C		
Printed Name		Printed Name		C. HNO3, pH<2, Cool, 4C		
Leidos		TADEN		D. NaOH, pH>12, Cool 4C		
Company		Company		1. SW 8260	Notes:	
Relinquished by	Date	Received by	Date	2. SW 8270		
Signature		Signature		3. SW 8270SIM		
	Time		Time	4. SW 8082		
Printed Name		Printed Name		5. SW 8081		
Company		Company		6. SW 8330		
				7. SW 6010		
				8. SW 9012		
				9. SW 9034		
				10. SW 9056		
				11. SW 6860		
				12. EPA 353.2		
				13. SW 7196		

Temperature Blank

Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos

White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-001-TA

Page 1 of 1 Date: 10/26/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

RYAN LAUNICH

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	NO. OF CONTAINERS	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	CBPmw-008-181001-GW	10/26/18	1025	W								1							1	

Requested Parameters

Relinquished by: [signature] Date: 10-27-18 Time: 0850
Printed Name: HEATHER ADAMS
Company: Leidos

Relinquished by: KRISTA DUNLAP Date: 10/29/18 Time: 1500
Printed Name: DADEN
Company:

Relinquished by
Signature
Printed Name
Company
Date
Time

Notes:
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

Total Number of Containers: 1

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 8860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

Temperature Blank
Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

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Chain of Custody Record

leidos

COC No.: RVAAP-002-TA

Page 1 of 1 Date: 10/26/18

(1)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

TL Ryan Lunch

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	CBPmw-009-181001-GW	10/26/18	0850	W								1							1	

Requested Parameters

Relinquished by
Signature
HEATHER ADAMS
Printed Name
Leidos
Company

Date 10/26/18
Time 1540

Relinquished by
Signature
KRISTA DUNAR
Printed Name
TADEN
Company

Date 10-27-18
Time 0850

Notes:
Total Number of Containers: 1
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

Temperature Blank
Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-051-TA

Page 1 of 1 Date: 10/26/18

(3)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

RYAN LAURICH

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (Phthalates) (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL1mw-089-181001-GW	GW	NA	10/26/18	1225	W		2						1							3	

Requested Parameters

Relinquished by
Signature
HEATHER ADAMS
Printed Name
Leidos
Company
Date 10/26/18
Time 1500

Received by
Signature
KRISTA DUNLAP
Printed Name
TADEN
Company
Date 10-27-18
Time 0850

Relinquished by
Signature
Printed Name
Company
Date
Time

Received by
Signature
Printed Name
Company
Date
Time

Notes: Total Number of Containers: 3

A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-024-TA

Page 1 of 1 Date: 10/25/18

(4)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)
Jackie Mitchell Jackie Mitchell

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (phthalates)(2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers
	FWGmw-016-181001-GW	GW	N/A	10/25/18	1540	W		2		2			1								5

Requested Parameters

OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS

jm 10/25/18

Relinquished by	Date	Received by	Date	Notes:	Total Number of Containers: 5
Signature	10/26/18	Signature	10-27-18	A. Cool, 4C	E. NaOH/Zn Acetate, pH>9, Cool 4C
NEATHA ADAMS	Time	KRISTA DUNLAP	Time	B. HCl, pH<2, Cool, 4C	
Printed Name	1500	Printed Name	0850	C. HNO3, pH<2, Cool, 4C	
Leidos		TADEN		D. NaOH, pH>12, Cool 4C	
Company		Company		1. SW 8260	Notes:
Relinquished by	Date	Received by	Date	2. SW 8270	
Signature		Signature		3. SW 8270SIM	
Printed Name	Time	Printed Name	Time	4. SW 8082	
Company		Company		5. SW 8081	
				6. SW 8330	
				7. SW 6010	
				8. SW 9012	
				9. SW 9034	
				10. SW 9056/SM2320	
				11. SW 6860	
				12. EPA 353.2	
				13. SW 7196	

Shipment Method: Courier

Temperature Blank

Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-028-TA

Page 1 of 1 Date: 10/26/18

(3)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Jackie Mitchell Jackie Mitchell 10/26/18

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	FWGmw-020-181001-GW	GW	N/A	10/26/18	~~0955~~ 1600	W	3	2	2	2		2	1	1					1		14	Cr6 filtered
																						Trip Blank with sample listed on COC RVAAP-026-TA/FWGTB.181026

Requested Parameters

Jm 10/26/18

Jm 10/26/18

Relinquished by	Date	Received by	Date	Notes:	Total Number of Containers: 14	Shipment Method: Courier
Signature	10/26/18	Signature	10-27-18	A. Cool, 4C	D. NaOH, pH>12, Cool 4C	
HEATHER ADAMS	Time	KRISTA DUNLAP	Time	A1. Field filtered, Cool, 4C	E. NaOH/Zn Acetate, pH>9, Cool 4C	
Printed Name	1500	Printed Name	0850	B. HCl, pH<2, Cool, 4C		
Leidos		TADEN		C. HNO3, pH<2, Cool, 4C		
Company		Company		1. SW 8260	Notes:	
Relinquished by	Date	Received by	Date	2. SW 8270		
Signature		Signature		3. SW 8270SIM		
Printed Name	Time	Printed Name	Time	4. SW 8082		
Company		Company		5. SW 8081		
				6. SW 8330		
				7. SW 6010		
				8. SW 9012		
				9. SW 9034		
				10. SW 9056/SM2320		
				11. SW 6860		
				12. EPA 353.2		
				13. SW 7196		

Temperature Blank

Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-056-TA

Page 1 of 1 Date: 10/26/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Gabrielle Gromofsky

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL3mw-234-181001-GW	GW	NA	10/26/18	1115	W								1							1	

Requested Parameters

Relinquished by	Date	Received by	Date	Notes: Total Number of Containers: 1	Shipment Method: Courier
Signature	10/26/18	Signature	10-27-18	A. Cool, 4C; B. HCl, pH<2, Cool, 4C; C. HNO3, pH<2, Cool, 4C; D. NaOH, pH>12, Cool 4C; E. NaOH/Zn Acetate, pH>9, Cool 4C	
HEATHER ADAMS	Time 1500	KRISTA DUNLAP	Time 0850	1. SW 8260; 2. SW 8270; 3. SW 8270SIM; 4. SW 8082; 5. SW 8081; 6. SW 8330; 7. SW 6010; 8. SW 9012; 9. SW 9034; 10. SW 9056; 11. SW 6860; 12. EPA 353.2; 13. SW 7196	Notes:
Printed Name		Printed Name			
Leidos		TADEN			
Company		Company			
Relinquished by	Date	Received by	Date		
Signature		Signature			
Printed Name	Time	Printed Name	Time		
Company		Company			

Temperature Blank

Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-057-TA

Page 1 of 1 Date: 10/26/18

(6)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Eli Rogatz Eli Rogatz

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL3mw-237-181001-GW	N/A	N/A	10/26/18	1310	W				2											2	

Requested Parameters

Relinquished by	Date	Received by	Date	Notes: Total Number of Containers: 2	Shipment Method: Courier
Signature	10/26/18	Signature	10-27-18	A. Cool, 4C; E. NaOH/Zn Acetate, pH>9, Cool 4C	
Heather Adams	Time 1500	Krista Dunlap	Time 0850	B. HCl, pH<2, Cool, 4C; C. HNO3, pH<2, Cool, 4C; D. NaOH, pH>12, Cool 4C	
Printed Name		Printed Name		1. SW 8260; 2. SW 8270; 3. SW 8270SIM; 4. SW 8082; 5. SW 8081; 6. SW 8330; 7. SW 6010; 8. SW 9012; 9. SW 9034; 10. SW 9056; 11. SW 8880; 12. EPA 353.2; 13. SW 7196	Notes:
Leidos		TADEN			
Company		Company			
Relinquished by	Date	Received by	Date		
Signature		Signature			
	Time		Time		
Printed Name		Printed Name			
Company		Company			

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-058-TA

Page 1 of 1 Date: 10/26/18

(1)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Gabrielle Gromelsky

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (Phthalates) (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL3mw-244-181001-GW	GW	NA	10/26/18	0850	W		2		2	2		1						1		8	CR+6 field filtered

Requested Parameters

Relinquished by	Date	Received by	Date	Notes:	Total Number of Containers: 8	Shipment Method: Courier
Signature	10/26/18	Signature	10-27-18	A. Cool, 4C	D. NaOH, pH>12, Cool 4C	
Printed Name: NEATHER ADAMS	Time: 1500	Printed Name: KRISTA DUNLAP	Time: 0850	A1. Field filtered, Cool, 4C	E. NaOH/Zn Acetate, pH>9, Cool 4C	
Leidos		TADEN		B. HCl, pH<2, Cool, 4C		
Company		Company		C. HNO3, pH<2, Cool, 4C		
Relinquished by	Date	Received by	Date	1. SW 8260	Notes:	
Signature		Signature		2. SW 8270		
Printed Name	Time	Printed Name	Time	3. SW 8270SIM		
Company		Company		4. SW 8082		
				5. SW 8081		
				6. SW 8330		
				7. SW 6010		
				8. SW 9012		
				9. SW 9034		
				10. SW 9056		
				11. SW 6860		
				12. EPA 353.2		
				13. SW 7196		

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-075-TA

Page 1 of 1 Date: 10/26/18

(8)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Roman Zosi

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (Phthalates) (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	SCFmw-004-181001-GW	GW	MA	10/26/18	1335	W		2		2	2		1								7	

Requested Parameters

Relinquished by
Signature
Printed Name
Leidos
Company

Date 10/26/18
Time 1500

Received by
Signature
KRISTA DUNLAP
Printed Name
TAPE
Company

Date 10-27-18
Time 0850

Relinquished by
Signature
Printed Name
Company

Date
Time

Received by
Signature
Printed Name
Company

Date
Time

Notes:
Total Number of Containers: 7
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-049-TA

Page 1 of 1 Date: 10/26/18

(4)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Jackie Mitchell

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (Phthalates) (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers
	LL1mw-087-181001-GW	GW	N/A	10/26/18	1330	W		2		2			1								5

Requested Parameters

OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS

QAS 10/26/18

Relinquished by	Date	Received by	Date	Notes: Total Number of Containers: 5	Shipment Method: Courier
Signature	10/26/18	Signature	10/26/18	A. Cool, 4C; B. HCl, pH<2, Cool, 4C; C. HNO3, pH<2, Cool, 4C; D. NaOH, pH>12, Cool 4C; E. NaOH/Zn Acetate, pH>9, Cool 4C	
Printed Name	Time	Printed Name	Time	1. SW 8260; 2. SW 8270; 3. SW 8270SIM; 4. SW 8082; 5. SW 8081; 6. SW 8330; 7. SW 6010; 8. SW 9012; 9. SW 9034; 10. SW 9056; 11. SW 6850; 12. EPA 353.2; 13. SW 7196	
NEATHER ADAMS	1500	RICK ROBISON	1500	Notes:	
Company		Company			
Leidos					
Relinquished by	Date	Received by	Date		Temperature Blank
Signature		Signature	10-27-18		Lab:
Printed Name	Time	Printed Name	Time		Leidos 8866 Commons Drive Twinsburg, OH 44087 (330) 405-5802
Company		Company			
		KRISTA DUNLAP TADEN	0850		

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-061-TA

Page 1 of 1 Date: 10/26/18

(1)

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Gabrielle Gravenstine

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL4mw-200-181001-GW	GW	NA	10/26/18	1450	W								1							1	

Requested Parameters

Relinquished by
Signature
HEATHER ADAMS
Printed Name
Leidos
Company
Date 10/26/18
Time 1500

Received by
Signature
Printed Name RICK ROBISON
Company
Date 10/26/18
Time

Relinquished by
Signature
Printed Name
Company
Date
Time

Received by
Signature
Printed Name KRISTA DUNLAP
TADEN
Company
Date 10-27-18
Time 0850

Notes:
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

Total Number of Containers: 1

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-028-TA

Page 1 of 1 Date: 10/26/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Jackie Mitchell Jackie Mitchell jm 10/26/18

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	FWGmw-020-181001-GW	GW	N/A	10/26/18	~~0955~~ 1600	W	3	2	2	2		2	1	1					1		14	Cr6 filtered
																						Trip Blank with sample listed on COC RVAAP-026-TA/FWGTB-181026TB

jm 10/26/18

280-116270 Chain of Custody

jm 10/26/18

Relinquished by	Date	Received by	Date	Time
Signature	10/26/18	Signature	10/26/18	
Printed Name: HEATHER ADAMS	Time: 1500	Printed Name: RICK ROBISON	Time: 1500	
Company: Leidos		Company		
Relinquished by: TAI 248	Date: 10/26/18	Received by: POP	Date: 10/26/18	
Signature	Time: 1600	Signature	Time: 1608	
Printed Name: ROBISON		Printed Name: TAC		
Company		Company		

Notes: Total Number of Containers: 14

A. Cool, 4C
A1. Field filtered, Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

Temperature Blank

Lab:
Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-058-TA

Page 1 of 1 Date: 10/26/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Gabrielle Gromofsky

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (Phthalates) (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Nitrate (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	LL3mw-244-181001-GW	GW	NA	10/26/18	0850	W		2		2	2		1						1		8	CR+6 field filtered

Requested Parameters

Relinquished by	Date	Received by	Date	Notes:	Total Number of Containers: 8	Shipment Method: Courier
Signature	10/26/18	Signature Test America	10/26/18	A. Cool, 4C	D. NaOH, pH>12, Cool 4C	
Printed Name HEATHER ADAMS	Time 1500	Printed Name RICK ROBISON	Time 1500	A1. Field filtered, Cool, 4C	E. NaOH/Zn Acetate, pH>9, Cool 4C	
Company Leidos		Company		B. HCl, pH<2, Cool, 4C		
Relinquished by Signature	Date 10/26/18	Received by Signature	Date 10/26/18	C. HNO3, pH<2, Cool, 4C		
Printed Name ROBISON	Time 1608	Printed Name TAC	Time 1608	1. SW 8260	Notes:	Temperature Blank
Company		Company		2. SW 8270		
				3. SW 8270SIM		Lab:
				4. SW 8082		Leidos
				5. SW 8081		8866 Commons Drive
				6. SW 8330		Twinsburg, OH 44087
				7. SW 6010		(330) 405-5802
				8. SW 9012		
				9. SW 9034		
				10. SW 9056		
				11. SW 6860		
				12. EPA 353.2		
				13. SW 7196		

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 280-116270**
Canton Facility

Client LEIDOS Site Name ~ Cooler unpacked by: POP

Cooler Received on 10/26/18 Opened on 10/26/18

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.9 °C) Observed Cooler Temp. 2.3 °C Corrected Cooler Temp. 3.2 °C
   IR GUN #36 (CF +0.6°C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC849161**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #____ Yes No
16. Was a LL Hg or Me Hg trip blank present? ____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: TB

18. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.
Sample(s) ____ were received in a broken container.
Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.
Time preserved: ____ Preservative(s) added/Lot number(s): ____

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-116270-1

Login Number: 116270
List Number: 1
Creator: Diffendall, Jessica L

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	